UNION ELECTRIC COMPANY
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ST. LOUIS, MISSOURI

DONALD F. SCHNELL
VICE PRESIDENT

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May 11, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Denton: ULNRC-816

DOCKET NUMBER 50-483
CALLAWAY PLANT, UNIT 1
CALLAWAY TECHNICAL SPECIFICATIONS

References:
1) D. G. Eisenhut letter to D. F. Schnell dated March 8, 1984
2) ULNRC-787 dated April 5, 1984
3) ULNRC-792 dated April 9, 1984
4) D. G. Eisenhut letter to D. F. Schnell dated May 3, '1984

Attachments:
1) Summary Listing of those pages transmitted by Reference 4 on which UE concurs.
2) Specifications resolved subsequent to Reference 4.
3) Status of Specifications pursuant to Reference 2.

Reference 1 transmitted the Callaway Technical Specifications in final draft form. Reference 3 transmitted Union Electric Company's confirmation, with exceptions, that the draft accurately reflected the plant design and operating program as described in the FSAR and other information on our docket. Reference 2 requested appeals on three specifications.

Reference 4 transmitted numerous changes made to the Callaway Technical Specifications since the issuance of Reference 3. During review of Reference 4, continuing review of all technical specifications, and in meetings with the staff, Union Electric Company has identified and included as attachments to this letter those changes necessary to ensure the Callaway Technical Specifications accurately reflect the plant design and operating program.

Attachment 1 is a summary list of changes transmitted by Reference 4 with which Union Electric concurs.

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Attachment 2 is a summary list and attached specifications of those items resolved between Union Electric and the staff subsequent to Reference 4.

Attachment 3 is a summary list, status, and attached specifications (as appropriate) for those appeal items identified in Reference 2.

Except as noted herein and in Reference 3, in my judgement, the Callaway Technical Specifications accurately reflect the plant design and operating program as described in the FSAR and other information on our docket.

Very truly yours,

Donald F. Schnell

DFS/bjk

Attachments

cc: J. J. Holonich

STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

Donald F. Schnell, of lawful age, being first duly sworn upon oath says that he is Vice President-Nuclear and an officer of Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By Donald F. Schnell
Donald F. Schnell
Vice President
Nuclear

SUBSCRIBED and sworn to before me this 11th day of May, 1984.

Barbara J. Pfaff
BARBARA J. PFAFF
NOTARY PUBLIC, STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1985
ST. LOUIS COUNTY

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Item	Page	Agree	Open	Issue
1	IV	x		Editorial
2	V	x		Editorial
3	VI	x		Editorial
4	IX	x		Removal of Bit Spec
5	XIV	x		Editorial
6	XV	x		Deletion of Bit Spec
7	XX	x		Editorial
8	XXI	x		Editorial
9	2-7	x		P-10 Setpoint Change
10	B2-2	x		Editorial (RSB)
11	B2-6	x		Editorial (RSB)
12	3/4 1-7	x		Boration System
13	3/4 1-8	x		Added Cop Footnote
14	3/4 1-9	x		Editorial (RSB)
15	3/4 1-10	x		Editorial (RSB)
16	3/4 1-11	x		Boration System
17	3/4 1-12	x		Boration System
18	3/4 1-13	x		Boration System
19	3/4 1-14	x		Editorial
20	3/4 1-18	x		Editorial
21	3/4 1-20	x		Editorial
22	3/4 1-21	x		Editorial
23	3/4 2-8	x		Flow Uncertainties
24	3/4 2-9	x		Flow Uncertainties
25	3/4 2-10	x		Flow Uncertainty Surveillance
26	3/4 3-2	x		SRM (RSB)
27	3/4 3-6	x		SRM Action Statements (RSB)
28	3/4 3-14	x		Change ## to # (RSB)
29	3/4 3-16	x		*Added Mode 4 to Item 4.a & b (RSB)
30	3/4 3-17	x		Delete Mode 3 from Item 5.a Change Action
31	3/4 3-19	x		Add Solid State Load Sequencer
32	3/4 3-20	x		Deleted Original ## Footnote
33	3/4 3-21	x		Added Action Statements
34	3/4 3-24	x		Editorial
35	3/4 3-29 30 - 31	x		Added Stm Line Neg High Rt (RSB)
36	3/4 3-40	x		Change in ### Note
37	3/4 3-44	x		Change in Acceleration Level
38	3/4 3-45	x		Change in ACOT
39	3/4 3-52	x		Change in Action Statement
40	3/4 3-53	x		Reg Guide 1.97 Instrumentation
41	3/4 3-54	x		Reg Guide 1.97 Instrumentation
42	3/4 3-55	x		Reg Guide 1.97 Instrumentation
43	3/4 3-56	x		Reg Guide 1.97 Instrumentation
44	3/4 3-60	x		Fire Detection Instrumentation
45	3/4 3-70	x		Editorial
46	3/4 3-73	x		Editorial
47	3/4 3-75			Added Note 5

*Subsequently changed to an Attachment 2 item. See Items 1 and 2 of Attachment 2.

Item	Page	Agree	Open	Issue
48	3/4 4-10	x		Added Footnote
49	3/4 4-15	x		Editorial
50	3/4 4-20	x		Change Valve Nomenclature
51	3/4 4-21	x		Editorial (RSB)
52	3/4 4-29	x		Added Figure 3.4-4 to Surv. (RSB)
53	3/4 4-35	x		RHR Suction Reliefs
54	3/4 5-3	x		Change in Footnote (RSB)
55	3/4 5-8	x		Change in Surveillance (RSB)
56	3/4 5-10	x		Bit Removal
57	3/4 6-2	x		Reduced Pressure Testing
58	3/4 6-3	x		Reduced Pressure Testing
59	3/4 6-5	x		Change 0.1 La to .05 La
60	3/4 6-13	x		Change Surv. Accept. Criteria
61	3/4 6-16	x		Removal of 3.0.4
62	3/4 6-20	x		Editorial
63	3/4 6-29	x		Editorial
64	3/4 6-30	x		Added Action Statement
65	3/4 7-28	x		No Change
66	3/4 7-36	x		Editorial
67	3/4 8-1	x		Editorial
68	3/4 8-2	x		Moved Surv.
69	3/4 8-6	x		Editorial
70	3/4 8-8	x		RHR Suction Relief Issue
71	3/4 8-10	x		Editorial
72	3/4 8-12	x		RHR Suction Relief Issue
73	3/4 8-15	x		Editorial
74	3/4 8-17 thru 8-46	x		Ckt Bkr Issue
75	3/4 10-4	x		Editorial
76	3/4 11-6	x		Radwaste
77	3/4 11-9	x		Added Note
78	3/4 11-11	x		Added Note
79	B3/4 1-2	x		Duration System
80	B3/4 1-3	x		RHR Suction Relief
81	B3/4 2-5	x		Flow Uncertainties
82	B3/4 4-1	x		6 Hours (RSB)
83	B3/4 4-2	x		Editorial
84	B3/4 4-3	x		Editorial
85	B3/4 4-4	x		Editorial
86	B3/4 4-15 thru 4-17	x		Add Cold Overpressure Gases
87	B3/4 5-1 thru 5-2	x		Bit Deletion
88	B3/4 7-2	x		Added Stmt to AFW Bases (RSB)
89	B3/4 10-1	x		Editorial
90	B3/4 6-3	x		Org Chart Management
91	B3/4 6-4	x		" " "

Item	Page	Agree	Open	Issue
1	3/4 3-16	x		Deletion of Mode 4 Reqmt. for Item 4
2	3/4 3-26	x		Condensate Storage Tank Level Setpoint
3	3/4 3-35	x		Deletion of Mode 4 Reqmt. for Item 4.e
4	3/4 3-59	x		Fire Detection Instrumentation
5	3/4 3-72	x		Deletion of ACOT for 3.e
6	3/4 3-73	x		Deletion of ACOT for 4.e
7	3/4 4-2	x		Reqmt. for 2 Operating RCP's for Mode 3
8	3/4 4-10	x		PORV Specification (RSB)
9	3/4 4-34	x		Editorial
10	3/4 5-6	x		SI Pump Flow Rate
11				(deleted)
12	3/4 7-6	x		Condensate Storage Tank Level
13	3/4 7-15	x		Containment Ventilation Specification
14	3/4 7-31	x		Fire Detection Flow Tests
15	3/4 8-9	x		Battery Charger (PSB)
16	3/4 8-13, 14	x		Battery Charger (PSB)
17	3/4 7-30	x		Fire Suppression System

TABLE 3.3- (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
3. Containment Isolation (continued)					
2) Automatic Actuation Logic and Actuation Relays (SSPS)	2	1	2	1, 2, 3, 4	17
3) Automatic Actuation Logic and Actuation Relays (BOP ESFAS)	2	1	2	1, 2, 3, 4	17
4) Phase "A" Isolation	See Item 3.a. for all Phase "A" Isolation initiating functions and requirements.				
4. Steam Line Isolation					
a. Manual Initiation					
1) Individual	1/steam line	1/steam line	1/operating steam line	1, 2, 3#, ##	23
2) System	2	1	2	1, 2, 3#, ##	22 ~~18~~
b. Automatic Actuation Logic and Actuation Relays (SSPS)	2	1	2	1, 2, 3#, ##	21 ~~14~~
c. Containment Pressure-High-2	3	2	2	1, 2, 3	15*
d. Steam Line Pressure-Low	3/steam line	2/steam line any steam line	2/steam line	1, 2, 3##	15*
e. Steam Line Pressure-Negative Rate-High	3/steam line	2/steam line any steam line	2/steam line	3##, ##	15*

CALLAWAY - UNIT 1

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TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
6. Auxiliary Feedwater (Continued)					
e. Safety Injection-Start Motor-Driven Pumps	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
f. Loss-of-Offsite Power-Start Turbine-Driven Pump	N.A.	N.A.	N.A.	N.A.	N.A.
g. Trip of All Main Feedwater Pumps-Start Motor-Driven Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
h. Auxiliary Feedwater Pump Suction Pressure-Low (Transfer to ESW)	N.A.	N.A.	N.A.	21.71 psia ≥ ~~23.4~~	20.64 psia ≥ ~~21.72~~
7. Automatic Switchover to Containment Sump					
a. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	N.A.
b. RWST Level-Low-Low Coincident with Safety Injection	3.4	1.21	2.0	≥36%	≥35.2%
	See Item 1. above for Safety Injection Trip Setpoints and Allowable Values.				
8. Loss of Power					
a. 4 kV Undervoltage -Loss of Voltage	N.A.	N.A.	N.A.	83V (120V Bus) w/1s delay	83+0,-8.3V (120V Bus) w/1+0.2,-0.5s delay

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Steam Line Isolation								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
c. Containment Pressure-High-2	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
d. Steam Line Pressure-Low	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2, 3
e. Steam Line Pressure-Negative Rate-High	S	R	M	N.A.	N.A.	N.A.	N.A.	3, #
5. Feedwater Isolation & Turbine Trip								
a. Automatic Actuation Logic and Actuation Relay	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q(3)	1, 2
b. Steam Generator Water Level-High-High	S	R	M	N.A.	N.A.	N.A.	N.A.	1, 2
c. Safety Injection	See Item 1. above for all Safety Injection Surveillance Requirements.							
6. Auxiliary Feedwater								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3
b. Automatic Actuation Logic and Actuation Relays (SSPS)	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

INSTRUMENT LOCATION	ZONE	TOTAL NUMBER OF INSTRUMENTS* HEAT (x/y)	FLAME (x/y)	SMOKE (x/y)
1406-Comp. Cool. Pmp. & Ht. Exch. A.	104			0/1
1406 Comp. Cool. Pmp. & Ht. Exch. A	118			2/0
1408-Aux. Bldg. 2026' Corridor #2	104			0/9
1408-Aux. Bldg. 2026' Corridor #2	118			5/0
1409-Elec. Pene. Rm. B	106			0/4(1)
1409-Elec. Pene. Rm. B	113			0/4(1)
1410-Elec. Pene. Rm. A	107			0/8(1)
1410-Elec. Pene. Rm. A	114			0/8(1)
1413-Aux. Shutdown Pnl. Rm.	118			4/0
1501-Ctrl. Rm. A/C & Filt. Units B.	110			10/0
1504-Ctmt. Purge Exh. & Mech. Equip. B	108			18/0
1506-Ctmt. Purge Sup. AHU Rm. A	109			19/0
1507-Personnel Hatch Area	108			3/0
1508-Main Steam Iso. Valve Rm. #2	115		1/6	
1508-Main Steam Iso. Valve Rm. #1	115		1/6	
1512-Ctrl. Rm. A/C & Filt. Units A	110			10/0
1513-Ctrl. Bldg. Vent Sup. A/C Unit Rm.	109			3/0
Aux. Bldg. Duct 2047'6"	119			1/0
Containment**	201	1/0(2)		
Containment**	202	2/0(2)		
Containment**	203	1/0(2)		
Containment**	204	1/0(2)		
Containment**	206	3/0(2)		
Containment**	215	1/0(2)		
Containment**	216	1/0(2)		
Containment**	217	1/0(2)		
Containment**	218	1/0(2)		
Containment**	219			4/0
Containment**	220	1/0(2)		
3101-Ctrl. Bldg. 1974' Pipe Space	300			11/0
3105-Ctrl. Bldg. Elec. Chase S. 1974'	300			1/0
3106-Ctrl. Bldg. Elec. Chase N. 1974'	300			1/0
-Area Above Access Control	301			12/0
3229-Ctrl. Bldg. Elec. Chase S. 1984'	300			1/0
3230-Ctrl. Bldg. Elec. Chase N. 1984'	300			1/0
3301-ESF Swgr. Rm. #1	314			0/7(1)
3301-ESF Swgr. Rm. #1	315			0/7(1)
3302-ESF Swgr. Rm. #2	316			0/5(1)
3302-ESF Swgr. Rm. #2	317			0/5(1)
3305-Ctrl. Bldg. Elec. Chase S. 2000'	301			1/0
3306-Ctrl. Bldg. Elec. Chase N. 2000'	301			1/0
3403-Non-Vit. Swgr. & Xfmr. Rm. #1	304			0/1(1)
3403-Non-Vit. Swgr. & Xfmr. Rm. #1	305			0/1(1)
3404-Switchboard Rm. #4	321			0/2(1)
3404-Switchboard Rm. #4	322			0/2(1)
3405-Battery Rm. #4	303			2/0
3407-Battery Rm. #1	303			2/0

TABLE 4.3-9

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. WASTE GAS HOLDUP SYSTEM Explosive Gas Monitoring System					
a. Inlet Hydrogen Monitor.	D	N.A.	Q(4)	M	**
b. Outlet Hydrogen Monitor	D	N.A.	Q(4)	M	**
c. Inlet Oxygen Monitor	D	N.A.	Q(5)	M	**
d. Outlet Oxygen Monitor	D	N.A.	Q(6)	M	**
2. Unit Vent System					
a. Noble Gas Activity Monitor Providing Alarm (GT-RE-21)	D	M	R(3)	Q(2)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Flow Rate Monitor	D	N.A.	R(7)	Q	*
e. Sampler Flow Rate Monitor	D	N.A.	R	Q	*
3. Containment Purge System					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release (GT-RE-22, GT-RE-33)	D	P	R(3)	Q(1)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Flow Rate	N.A.	N.A.	R(7)	N.A.	*
e. Sampler Flow Rate Monitor	D	N.A.	R	~~Q~~ N.A.	*

TABLE 4.3-9 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. Radwaste Building Vent System					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release (GH-RE-10)	D, P	M, P	R(3)	Q(1)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Flow Rate	N.A.	N.A.	R(7)	N.A.	*
e. Sampler Flow Rate Monitor	D	N.A.	R	~~Q~~ N.A.	*

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HOT STANDBY

LIMITING CONDITION FOR OPERATION

3.4.1.2 At least ~~two~~ three of the reactor coolant loops listed below shall be OPERABLE and at least ~~one~~ two of these reactor coolant loops shall be in operation:*

a. Reactor Coolant Loop A and its associated steam generator and reactor coolant pump,

b. Reactor Coolant Loop B and its associated steam generator and reactor coolant pump,

c. Reactor Coolant Loop C and its associated steam generator and reactor coolant pump, and

d. Reactor Coolant Loop D and its associated steam generator and reactor coolant pump.

APPLICABILITY: MODE 3.

ACTION:

a. With less than the above required reactor coolant loops OPERABLE, restore the required loops to OPERABLE status within 72 hours or be in HOT SHUTDOWN within the next 12 hours.

b. SEE INSERT

c ~~b.~~ With no reactor coolant loop in operation, suspend all operations involving a reduction in boron concentration of the Reactor Coolant System and immediately initiate corrective action to return the required reactor coolant loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.2.1 At least the above required reactor coolant pumps, if not in operation, shall be determined OPERABLE once per 7 days by verifying correct breaker alignments and indicated power availability.

4.4.1.2.2 The required steam generators shall be determined OPERABLE by verifying secondary side wide range water level to be greater than or equal to 10% at least once per 12 hours.

4.4.1.2.3 At least ~~one~~ two reactor coolant loops shall be verified in operation and circulating reactor coolant at least once per 12 hours.

*All reactor coolant pumps may be deenergized for up to 1 hour provided: (1) no operations are permitted that would cause dilution of the Reactor Coolant System boron concentration, and (2) core outlet temperature is maintained at least 10°F below saturation temperature.

Insert for Specification 3.4.2.2 Action b.

With only one reactor coolant loop in operation, restore at least two reactor coolant loops to operation in 72 hours or be in HOT SHUTDOWN within the next 12 hours.

3/4.4.4 RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.4 All power-operated relief valves (PORVs) and their associated block valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.*

ACTION:

a. With one or more PORV(s) inoperable, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) and remove power from the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SEE INSERT

b. With one or more block valve(s) inoperable, within 1 hour: restore the block valve(s) to OPERABLE status, or close the block valve(s) and remove power from the block valve(s), or close the PORV and remove power from its associated solenoid valve; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.4.1 In addition to the requirements of Specification 4.0.5, each PORV shall be demonstrated OPERABLE at least once per 18 months by performance of a CHANNEL CALIBRATION.

4.4.4.2 Each block valve shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel unless the block valve is closed with power removed in order to meet the requirements of ACTION b or c in Specification 3.4.4.

*With all RCS cold leg temperatures above 368°F.

Insert for Specification 3.4.4

ACTION:

a. With one or more PORV(s) inoperable because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s); otherwise be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one PORV inoperable due to causes other than excessive seat leakage, within 1 hour either restore the PORV to OPERABLE status or close the associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With both PORV(s) inoperable due to causes other than excessive seat leakage, within 1 hour either restore each of the PORV(s) to OPERABLE status or close their associated block valve(s) and remove power from the block valve(s) and be in HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

d. With one or more block valve(s) inoperable, within 1 hour: 1) restore the block valve(s) to OPERABLE status, or close the block valve(s) and remove power from the block valve(s), or close the PORV and remove power from its associated solenoid valve; and 2) apply the ACTION of b or c above, as appropriate for the isolated PORV(s).

e. The provisions of Specification 3.0.4 are not applicable.

LIMITING CONDITION FOR OPERATION

3.4.9.3 At least one of the following Overpressure Protection Systems shall be OPERABLE:

a. Two residual heat removal (RHR) suction relief valves each with a Setpoint of 450 psig ± 1%, or

b. Two power-operated relief valves (PORVs) with Setpoints which do not exceed the limit established in Figure 3.4-4, or

c. The Reactor Coolant System (RCS) depressurized with an RCS vent of greater than or equal to 2 square inches.

APPLICABILITY: MODE 3 when the temperature of any RCS cold leg is less than or equal to 368°F, MODES 4 and 5, and MODE 6 with the reactor vessel head on.

ACTION:

a. With one PORV and one RHR suction relief valve inoperable, either restore two PORVs or two RHR suction relief valves to OPERABLE status within 7 days or depressurize and vent the RCS through at least a 2 square inch vent within the next 8 hours.

b. With both PORVs ~~or~~ and both RHR suction relief valves inoperable, depressurize and vent the RCS through at least a 2 square inch vent within 8 hours.

c. In the event the PORVs, or the RHR suction relief valves, or the RCS vent(s) are used to mitigate an RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the PORVs, or the RHR suction relief valves, or RCS vent(s) on the transient, and any corrective action necessary to prevent recurrence.

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS (Continued)

h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:

1) For centrifugal charging pump lines, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 346 gpm, and

b) The total pump flow rate is less than or equal to 550 gpm.

2) For Safety Injection pump lines, with a single pump running:

a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 462 gpm, and

b) The total pump flow rate is less than or equal to ~~650~~ 655 gpm.

i. By performing a flow test, during shutdown, following completion of modifications to the RHR subsystems that alter the subsystem flow characteristics and verifying that for RHR pump lines, with a single pump running:

1) The sum of the injection line flow rates is greater than or equal to 3800 gpm, and

2) The total pump flow rate is less than or equal to 5500 gpm.

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CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with a contained water volume of at least ~~212,700~~ 281,000 gallons.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the CST inoperable, within 4 hours either:

a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or

b. Demonstrate the OPERABILITY of the Essential Service Water (ESW) System as a backup supply to the auxiliary feedwater pumps and restore the CST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The CST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The ESW System shall be demonstrated OPERABLE at least once per 12 hours by verifying that the ESW System is in operation whenever the ESW System is the supply source for the auxiliary feedwater pumps.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 18 months, or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the Control Room Emergency Ventilation System satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 2000 cfm ± 10% for the Filtration System and 2000 cfm ± 10% for the Pressurization System with 500 cfm ± 10% going through the Pressurization System filter adsorber unit;

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%; and

3) Verifying a system flow rate of 2000 cfm ± 10% for the Filtration System and 2000 cfm ± 10% for the Pressurization System with 500 cfm ± 10% going through the Pressurization System filter adsorber unit during system operation when tested in accordance with ANSI N510-1975.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%;

e. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 5.4 inches Water Gauge while operating the system at a flow rate of 2000 cfm ± 10% for the Filtration System and 500 cfm ± 10% for the Pressurization System filter adsorber unit;

2) Verifying that on a Control Room Ventilation Isolation test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks;

3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to ~~1/8~~ 1/4 inch Water Gauge ~~at less than or equal to a pressurization flow of 400 cfm~~ relative to ~~adjacent areas~~ the outside atmosphere during system operation; and

4) Verifying that the Pressurization System filter adsorber unit heaters dissipate 15 ± 2 kW in the Pressurization System when tested in accordance with ANSI N510-1975.

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.10.2 The following Spray and/or Sprinkler Systems shall be OPERABLE:

a. Wet Pipe Sprinkler Systems

Building	Elevation	Area Protected
Auxiliary	2000/2026	North Electric Cable Chase
Auxiliary	1988/2000/2026	South Electric Cable Chase
Control	1974 - 2073	Vertical Electrical Chases
Control	1974	Pipe Space and Tank Room
Control	1992	Cable Area Above Access Control

b. Pre-Action Sprinkler Systems

Building	Elevation	Area Protected
Auxiliary	1974	Cable Trays*
Auxiliary	2000	Cable Trays*
Auxiliary	2026	Cable Trays*
Control	2032	Lower Cable Spreading Room
Control	2073	Upper Cable Penetration Area
Reactor	2026	North Cable Penetration Area
Reactor	2026	South Cable Penetration Area
Diesel Gen. (E)	2000	East Diesel Generator Room
Diesel Gen. (W)	2000	West Diesel Generator Room

c. Water Sprays Systems

Building	Elevation	Area Protected
Auxiliary	2000	Auxiliary Feedwater Pump Turbine
ESF Transformer	Grade	Transformer XNB01*
ESF Transformer	Grade	Transformer XNB02*

APPLICABILITY: Whenever equipment protected by the Spray/Sprinkler System is required to be OPERABLE.

ACTION:

a. With one or more of the above required Spray and/or Sprinkler Systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged; for other areas, establish an hourly fire watch patrol.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

*Areas contain redundant systems or components which could be damaged.

SURVEILLANCE REQUIREMENTS

4.7.10.2 Each of the above required Spray and/or Sprinkler Systems shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path is in its correct position;

b. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel;

c. At least once per 18 months:

1) By performing a system functional test which includes simulated automatic actuation of the system, and:

a) Verifying that the automatic valves in the flow path actuate to their correct positions on a Simulated Fire test signal, and

b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

2) By a visual inspection of the dry pipe spray and sprinkler headers to verify their integrity, and

3) By a visual inspection of each nozzle's spray area to verify the spray pattern is not obstructed.

d. At least once per 3 years by performing an air or water flow test through each open head spray/sprinkler header and verifying each open head spray/sprinkler nozzle is unobstructed.

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3/4.8.2 D.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 As a minimum, the following D.C. electrical sources shall be OPERABLE:

a. 125-Volt Battery Bank NK11 and NK13, and its associated Full Capacity Chargers NK21 and NK23, or

b. 125-Volt Battery Bank NK12 and NK14, and its associated Full Capacity Chargers NK22 and NK24.

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

ACTION:

a. With one of the required battery banks and/or its associated charger inoperable, restore the inoperable battery bank and associated charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

~~b. With one of the required full capacity chargers inoperable, demonstrate the OPERABILITY of its associated battery bank by performance of Specification 4.8.2.1a.1) within 1 hour, and at least once per 8 hours thereafter. If any Category A limit in Table 4.8-2 is not met, declare the battery inoperable.~~

SURVEILLANCE REQUIREMENTS

4.8.2.1 Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1) The parameters in Table 4.8-2 meet the Category A limits, and

2) The total battery terminal voltage is greater than or equal to 134 volts on float charge.

3/4.8.3 ONSITE POWER DISTRIBUTION

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.3.1 The following electrical busses shall be energized in the specified manner with tie breakers open between redundant busses within the unit:

a. Division #1 A.C. Emergency Busses consisting of:

1) 4160-Volt Emergency Bus #NB01, and
2) 480-Volt Emergency Busses #NG01, NG03 and NG05E.

b. Division #2 A.C. Emergency Busses consisting of:

1) 4160-Volt Emergency Bus #NB02, and
2) 480-Volt Emergency Busses #NG02, NG04 and NG06E.

c. 120-Volt A.C. Vital Bus #NN01 energized from its associated inverter connected to D.C. Bus #NK01,

d. 120-Volt A.C. Vital Bus #NN02 energized from its associated inverter connected to D.C. Bus #NK02,

e. 120-Volt A.C. Vital Bus #NN03 energized from its associated inverter connected to D.C. Bus #NK03,

f. 120-Volt A.C. Vital Bus #NN04 energized from its associated inverter connected to D.C. Bus #NK04,

g. 125-Volt D.C. Bus #NK01 energized from Battery #NK11 and Charger #NK21,

h. 125-Volt D.C. Bus #NK02 energized from Battery #NK12 and Charger #NK22,

i. 125-Volt D.C. Bus #NK03 energized from Battery #NK13 and Charger #NK23, and

j. 125-Volt D.C. Bus #NK04 energized from Battery #NK14 and Charger #NK24.

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

ACTION:

a. With one of the required divisions of A.C. emergency busses not fully energized, reenergize the division within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one A.C. vital bus either not energized from its associated inverter, or with the inverter not connected to its associated D.C. bus: (1) reenergize the A.C. vital bus within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and (2) reenergize the A.C. vital bus from its associated inverter connected to its associated D.C. bus within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

c. With one D.C. bus not energized from its associated battery bank or charger, reenergize the D.C. bus from its associated battery bank and charger within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.3.1 The specified busses shall be determined energized in the required manner at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

Item	Page	Agree	Open	Issue
1	3/4 6-8 thru 6-10	x		Structural Integrity
2	3/4 6-18 thru 6-29	x		Provisions of 3.0.4

Status of Appeal Items

Containment Vessel Structural Integrity (Spec. 3/4 6.1-6)

SNUPPS presented its appeal to the staff on April 27, 1984. Although we have not received formal notification of the results, we were informed by Mr. Tom Novak via telecon on 5-4-84 that we would be issued Specification 3.6.1.6 Attachment 3. We further understand that this specification is to be the subject of CRGR review in the reasonably near future. Aside from possible participation in the CRGR review process, we consider this item resolved.

Overpressure Protection Systems (use of RHR suction relief valves - Spec. 3/4 4.9.3

This issue was resolved during meetings between the SNUPPS utilities and the Reactor Systems Branch.

Containment Isolation Valves (exemption of the provisions of 3.0.4 - Spec. 3/4 6.3)

We were informed by the staff that the change we requested was subject to CRGR review before it could be issued, but that exemption from the provisions of Spec. 3.0.4 could be granted on a valve-by-valve basis. This issue was resolved during a telecon between UE and the staff on May 9, 1984. We have dropped the appeal and have submitted marked up specifications in Attachment 3. It is our belief that our original proposed specification offers less potential operating restrictions while maintaining an equivalent margin of safety and therefore should be presented to the CRGR for review.

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

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

ACTION:

a. With more than one tendon with an observed lift-off force between the predicted lower limit and 90% of the predicted lower limit or with one tendon below 90% of the predicted lower limit, restore the tendon(s) to the required level of integrity within 15 days and perform an engineering evaluation of the containment and provide a Special Report to the Commission within 30 days in accordance with Specification 6.9.2 or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With any abnormal degradation of the structural integrity other than ACTION a. at a level below the acceptance criteria of Specification 4.6.1.6, restore the containment vessel to the required level of integrity within 72 hours and perform an engineering evaluation of the containment and provide a Special Report to the Commission within 15 days in accordance with Specification 6.9.2 or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.6.1 Containment Vessel Tendons. The containment vessel tendons' structural integrity shall be demonstrated at the end of 1, 3, and 5 years following the initial containment vessel structural integrity test and at 5-year intervals thereafter. The tendons' structural integrity shall be demonstrated by:

a. Determining that a random but representative sample of at least 11 tendons (4 inverted U and 7 hoop) each have an observed lift-off force within predicted limits for each. For each subsequent inspection one tendon from each group may be kept unchanged to develop a history and to correlate the observed data. If the observed lift-off force of any one tendon in the original sample population lies between the predicted lower limit and 90% of the predicted lower limit, two tendons, one on each side of this tendon should be checked for their lift-off forces. If both of these adjacent tendons are found to be within their predicted limits, all three tendons should be restored to the required level of integrity. This single deficiency may be considered unique and acceptable. Unless there is abnormal degradation of the containment vessel during the first three inspections, the sample population for subsequent inspections shall include at least 6 tendons (3 inverted U and 3 hoop);

SURVEILLANCE REQUIREMENTS (Continued)

b. Performing tendon detensioning, inspections, and material tests on a previously stressed tendon from each group (inverted U and hoop). A randomly selected tendon from each group shall be completely detensioned in order to identify broken or damaged wires and determining that over the entire length of the removed wire that:

1) The tendon wires are free of corrosion, cracks, and damage,

2) There are no changes in the presence or physical appearance of the sheathing filler-grease, and

3) A minimum tensile strength of 240,000 psi (guaranteed ultimate strength of the tendon material) exists for at least three wire samples (one from each end and one at mid-length) cut from each removed wire. Failure of any one of the wire samples to meet the minimum tensile strength test is evidence of abnormal degradation of the containment vessel structure.

c. Performing tendon retensioning of those tendons detensioned for inspection to their observed lift-off force with a tolerance limit of +6%. During retensioning of these tendons, the changes in load and elongation should be measured simultaneously at a minimum of three approximately equally spaced levels of force between zero and the seating force. If the elongation corresponding to a specific load differs by more than 5% from that recorded during installation, an investigation should be made to ensure that the difference is not related to wire failures or slip of wires in anchorages;

d. Assuring the observed lift-off stresses adjusted to account for elastic losses exceed the average minimum design value given below:

Inverted U		139 ksi
Hoop:	Cylinder	147 ksi
	Dome	134 ksi

e. Verifying the OPERABILITY of the sheathing filler grease by assuring:

1) No voids in excess of 5% of the net duct volume,

2) Minimum grease coverage exists for the different parts of the anchorage system, and

3) The chemical properties of the filler material are within the tolerance limits as specified by the manufacturer.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.1.6.2 End Anchorages and Adjacent Concrete Surfaces. The structural integrity of the end anchorages of all tendons inspected pursuant to Specification 4.6.1.6.1 and the adjacent concrete surfaces shall be demonstrated by determining through inspection that no apparent changes have occurred in the visual appearance of the end anchorage or the concrete crack patterns adjacent to the end anchorages. Inspections of the concrete shall be performed during the Type A containment leakage rate tests (reference Specification 4.6.1.2) while the containment vessel is at its maximum test pressure.

4.6.1.6.3 Containment Vessel Surfaces. The structural integrity of the exposed accessible interior and exterior surfaces of the containment vessel, including the liner plate, shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of these surfaces. This inspection shall be performed prior to the Type A containment leakage rate test to verify no apparent changes in appearance or other abnormal degradation.

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TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
1. Phase "A" Isolation (active)				
P-62	** BB HV-8026	PRT Nitrogen Iso Valve	C	10
P-62	** BB HV-8027	PRT Nitrogen Iso Valve	C	10
P-24	BG HV-8100	Seal Water Return CTMT Iso Valve	C	10
P-24	BG HV-8112	Seal Water Return CTMT Iso Valve	C	10
P-23	BG HV-8152	Letdown System CTMT Iso Valve	C	10
P-23	BG HV-8160	Letdown System CTMT Iso Valve	C	10
P-25	BL HV-8047	Reactor Makeup Water CTMT Iso Valve	C	10
P-21	** EJ HCV-8825	RHR to SI Test Line Iso Valve	A	10
P-82	** EJ HCV-8890A	RHR A to SI Pumps Test Line Iso Valve	A	13
P-27	** EJ HCV-8890B	RHR B to SI Pumps Test Line Iso Valve	A	13
P-49	** EM HV-8823	SI/Accumulator Injection Test Line Iso Valve	A	10
P-48	** EM HV-8824	Safety Injection Pump B Test Line Iso Valve	A	10

** The provisions of Specification 3.0.4 are not applicable.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
1. Phase "A" Isolation (active) - (Continued)				
P-88	** EM HV-8843	Boron Injection Upstream Test Line Iso	A	10
P-92	** EM HV-8871	SI Test Line to RWST Iso Valve	C	10
P-87	** EM HV-8881	Safety Injection Pump Test Line Iso Valve	A	10
P-92	** EM HV-8964	SI Test Line System Outside CTMT Iso	C	10
P-99	GS HV-3	Hydrogen Analyzer B Inlet Iso	A,C	5
P-99	GS HV-4	Hydrogen Analyzer B Inlet Iso	A,C	5
P-99	GS HV-5	Hydrogen Analyzer B Inlet Iso	A,C	5
P-56	GS HV-8	Hydrogen Analyzer B Disch Iso	A,C	5
P-56	GS HV-9	Hydrogen Analyzer B Disch Iso	A,C	5
P-101	GS HV-12	Hydrogen Analyzer A Inlet Iso	A,C	5
P-101	GS HV-13	Hydrogen Analyzer A Inlet Iso	A,C	5
P-101	GS HV-14	Hydrogen Analyzer A Inlet Iso	A,C	5
P-97	GS HV-17	Hydrogen Analyzer A Disch Iso	A,C	5
P-97	GS HV-18	Hydrogen Analyzer A Disch Iso	A,C	5

** The provisions of Specification 3.0.4 are not applicable.

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
1. Phase "A" Isolation (active) - (Continued)				
P-101	GS HV-31	Sample Line to CTMT Atmos Monitor	A,C	5
P-101	GS HV-32	Sample Line to CTMT Atmos Monitor	A,C	5
P-97	GS HV-33	Hydrogen Sample Return From PASS	A,C	5
P-97	GS HV-34	Hydrogen Sample Return From PASS	A,C	5
P-99	GS HV-36	Sample Line to CTMT Atmos Monitor	A,C	5
P-99	GS HV-37	Sample Line to CTMT Atmos Monitor	A,C	5
P-56	GS HV-38	Sample Return CTMT Atmos Monitor	A,C	5
P-56	GS HV-39	Sample Return CTMT Atmos Monitor	A,C	5
P-44	HB HV-7126	RCDT Vent Inside CTMT	C	10
P-26	HB HV-7136	RCDT Pumps Disch Hdr Outside CTMT Iso	C	10
P-44	HB HV-7150	RCDT Vent Outside CTMT	C	10
P-26	HB HV-7176	RCDT Pumps Disch Hrd Inside CTMT Iso	C	10
P-30	KA FV-29	Reactor Bldg Instr Air Supply Outside CTMT Iso	C	5
P-32	LF FV-95	CTMT Normal Sumps to Floor Drain Tank Inside CTMT Iso	C	30

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
1. Phase "A" Isolation (active) - (Continued)				
P-32	LF FV-96	CTMT Normal Sumps to Floor Drain Tank Outside CTMT Iso	C	4
P-93	** SJ HV-5	PZR/RCS Liquid Sample Inner CTMT Iso	C	5
P-93	** SJ HV-6	PZR/RCS Liquid Sample Outer CTMT Iso	C	5
P-69	** SJ HV-12	PZR Vapor Sample Outer CTMT Iso	C	5
P-69	** SJ HV-13	PZR Vapor Sample Inner CTMT Iso	C	5
P-95	** SJ HV-18	Accumulator Sample Inner CTMT Iso	C	5
P-95	** SJ HV-19	Accumulator Sample Outer CTMT Iso	C	5
P-93	** SJ HV-127	PZR/RCS Liquid Sample Outer CTMT Iso	C	5
P-64	** SJ HV-128	PZR/RCS Liquid Sample Inner CTMT Iso	A,C	5
P-64	** SJ HV-129	PZR/RCS Liquid Sample Outer CTMT Iso	A,C	5
P-64	** SJ HV-130	PZR/RCS Liquid Sample Outer CTMT Iso Valve	A,C	5
P-57	** SJ HV-131	PASS Discharge to RCDT	A,C	5
P-57	** SJ HV-132	PASS Discharge to RCDT	A,C	5
2. Phase "A" Isolation (passive)*				
P-58	** EM HV-8888	Accumulator Tank Fill Line Iso Valve	C	5 ~~N.A.~~

** The provisions of Specification 3.0.4 are not applicable.
*May be opened on an intermittent basis under administrative control.

TABLE 3.6-1 (Continued)
CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
2. Phase "A" Isolation (passive)* - (Continued)				
P-16	** EN HV-01	CTMT Recirc Sump to CTMT Spray Pump A Iso	A	30 ~~N.A.~~
P-13	** EN HV-07	CTMT Recirc Sump to CTMT Spray Pump B Iso	A	30 ~~N.A.~~
P-45	** EP HV-8880	CTMT Nitrogen Supply Iso Valve	C	10 ~~N.A.~~
P-65	** GS HV-20	Hydrogen Purge Inner CTMT Iso	C	5 ~~N.A.~~
P-65	** GS HV-21	Hydrogen Purge Outer CTMT Iso	C	5 ~~N.A.~~
P-67	** KC HV-253	Fire Protection System Hdr Outer CTMT Iso	C	30 ~~N.A.~~
3. Phase "B" Isolation (active)				
P-74	EG HV-58	CCW to RCS Iso	C	30
P-75	EG HV-59	CCW Return From RCS Iso	C	30
P-75	EG HV-60	CCW Return From RCS Iso	C	30
P-76	EG HV-61	CCW Return From RCS Iso	C	30
P-76	EG HV-62	CCW Return From RCS Iso	C	30
4. Containment Purge Isolation (active)				
V-161	# GT HZ-4	CTMT Mini-Purge Supply Outside CTMT Iso	C	3
V-161	# GT HZ-5	CTMT Mini-Purge Supply Inside CTMT Iso	C	3

*May be opened on an intermittent basis under administrative control.

** The provisions of Specification 3.0.4 are not applicable.

The provisions of Specification 3.0.4 are not applicable provided the penetration is isolated by two passive devices.

TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
4. Containment Purge Isolation (active) - (Continued)				
V-160 #	GT HZ-11	CTMT Mini-Purge Exh Inside CTMT Iso	C	3
V-160 #	GT HZ-12	CTMT Mini-Purge Exh Outside CTMT Iso	C	3
5. Containment Purge Isolation (passive)				
V-161 #	GT HZ-6	CTMT S/D Purge Supply Outside CTMT Iso	C	10 ~~N.A.~~
V-161 #	GT HZ-7	CTMT S/D Purge Supply Inside CTMT Iso	C	10 ~~N.A.~~
/-160 #	GT HZ-8	CTMT S/D Purge Exh Inside CTMT Iso	C	10 ~~N.A.~~
V-160 #	GT HZ-9	CTMT S/D Purge Exh Outside CTMT Iso	C	10 ~~N.A.~~
6. Remote Manual				
P-41	BB HV-8351A	RCP A Seal Water Supply	C	N.A.
P-22	BB HV-8351B	RCP B Seal Water Supply	C	N.A.
P-39	BB HV-8351C	RCP C Seal Water Supply	C	N.A.
P-40	BB HV-8351D	RCP D Seal Water Supply	C	N.A.
P-79	BB PV-8702A	RCS Hot Leg 1 to RHR Pump A Suction	A	N.A.

** The provisions of Specification 3.0.4 are not applicable.
# The provisions of Specification 3.0.4 are not applicable provided the penetration is isolated by two passive devices.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
6. Remote Manual - (Continued)				
P-52	8B PV-8702B	RCS Hot Leg 4 to RHR Pump B Suction	A	N.A.
P-15 **	EJ HV-23	PASS Sump Sample CTMT Iso	C	5 ~~N.A.~~
P-15 **	EJ HV-25	PASS Sump Sample CTMT Iso	C	5 ~~N.A.~~
P-14 **	EJ HV-24	PASS Sump Sample CTMT Iso	C	5 ~~N.A.~~
P-14 **	EJ HV-26	PASS Sump Sample CTMT Iso	C	5 ~~N.A.~~
P-71	EF HV-31	ESW Supply To Containment Coolers	C	N.A.
P-28	EF HV-32	ESW Supply To Containment Coolers	C	N.A.
P-71	EF HV-33	ESW Supply To Containment Coolers	C	N.A.
P-28	EF HV-34	ESW Supply To Containment Coolers	C	N.A.
P-73	EF HV-45	ESW Return From Containment Coolers	C	N.A.
P-29	EF HV-46	ESW Return From Containment Coolers	C	N.A.
P-73	EF HV-47	ESW Return From Containment Coolers	C	N.A.

** The provisions of Specification 3.0.4 are not applicable.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
6. Remote Manual - (Continued)				
P-29	EF HV-48	ESW Return From Containment Coolers	C	N.A.
P-73	EF HV-49	ESW Return From Containment Coolers	C	N.A.
P-29	EF HV-50	ESW Return From Containment Coolers	C	N.A.
P-74	EG HV-127*	CCW Supply to RCP	C	N.A.
P-75	EG HV-130*	CCW Return from RCP	C	N.A.
P-75	EG HV-131*	CCW Return From RCP	C	N.A.
P-76	EG HV-132*	CCW Return From RCP Thermal Barriers	C	N.A.
P-76	EG HV-133*	CCW from RCP Thermal Barrier	C	N.A.
P-79	EJ HV-8701A	RCS Hot Leg 1 to RHR Pump A Suction	A	N.A.
P-52	EJ HV-8701B	RCS Hot Leg 4 to RHR Pump B Suction	A	N.A.
P-82	EJ HV-8809A	RHR Pump A Cold Leg Injection Iso Valve	A	N.A.
P-27	EJ HV-8809B	RHR Pump B Cold Leg Injection Iso Valve	A	N.A.
P-15	EJ HV-8811A	CTMT Recirc Sump to RHR Pump A Sucion	A	N.A.

*These valves were assumed to be closed during the accident analysis, and are normally closed but may be opened on an intermittent basis under adminstrative control.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
6. Remote Manual - (Continued)				
P-14	EJ HV-8811B	CTMT Recirc Sump to RHR Pump B Sucion	A	N.A.
P-21	EJ HV-8840	RHR Hot Leg Recirc Iso Valve	A	N.A.
P-87	EM HV-8802A*	SI Pump A Disch Hot Leg Iso Valve	A	N.A.
P-48	EM HV-8802B*	SI Pump B Disch Hot Leg Iso Valve	A	N.A.
P-49	EM HV-8835	SI Pumps Disch to Cold Leg Iso Valve	A	N.A.
P-89	EN HV-6	CTMT Spray Pump A Disch Iso Valve	A	N.A.
P-66	EN HV-12	CTMT Spray Pump B Discharge Iso Valve	A	N.A.
7. Active for SIS				
P-80	BG HV-8105	CVCS Charging Line	C	10 ~~N.A.~~
P-88	EM HV-8801A	Boron Injection to RCS Cold Legs	A	N.A.
P-88	EM HV-8801B	Boron Injection to RCS Cold Legs	A	N.A.
8. Hand-Operated and Check Valves				
P-41	BB V-118	RCP A Seal Water Supply	C	N.A.
P-22	BB V-148	RCP B Seal Water Supply	C	N.A.
P-39	BB V-178	RCP C Seal Water Supply	C	N.A.
P-40	BB V-208	RCP D Seal Water Supply	C	N.A.

*These valves were assumed to be closed during the accident analysis and are normally closed but may be opened on an intermittent basis under administrative control.

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TABLE 3.6-1 (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
8. Hand-Operated and Check Valves - (Continued)				
P-24	BG V-135	RCP Seal Water Return	C	N.A.
P-80	BG 8381	CVCS Charging Line	C	N.A.
P-25	BL 8046	Reactor Makeup Water Supply	C	N.A.
P-78	BM V-045	Steam Generator Drain Line Iso Valve	C	N.A.
P-78	BM V-046	Steam Generator Drain Line Iso Valve	C	N.A.
P-53	EC V-083	Refueling Pool Supply From Fuel Pool Cleanup	C	N.A.
P-53	EC V-084	Refueling Pool Supply From Fuel Pool Cleanup	C	N.A.
P-54	EC V-087	Refueling Pool Return to Fuel Pool Cooling	C	N.A.
P-54	EC V-088	Refueling Pool Return to Fuel Pool Cooling	C	N.A.
P-55	EC V-095	Refueling Pool Skimmers To Fuel Pool Cooling Loop	C	N.A.
P-55	EC V-096	Refueling Pool Skimmers To Fuel Pool Cooling Loop	C	N.A.
P-74	EG V-204	CCW Supply to RCP	C	N.A.
P-82	EJ 8818A	RHR Pump to Cold Leg 1 Injection	A	N.A.
P-82	EJ 8818B	RHR Pump to Cold Leg 2 Injection	A	N.A.

TABLE 3.6-I (Continued)

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
8. Hand-Operated and Check Valves - (Continued)				
P-27	EJ 8818C	RHR Pump to Cold Leg 3 Injection	A	N.A.
P-27	EJ 8818D	RHR Pump to Cold Leg 4 Injection	A	N.A.
P-21	EJ 8841A	RHR Pump Disch to RCS Hot Leg 2	A	N.A.
P-21	EJ 8841B	RHR Pump Disch to RCS Hot Leg 3	A	N.A.
P-87	EM V-001	SI Pump Hot Leg 1 Injection	A	N.A.
P-87	EM V-002	SI Pump Hot Leg 2 Injection	A	N.A.
P-48	EM V-003	SI Pump Hot Leg 3 Injection	A	N.A.
P-48	EM V-004	SI Pump Hot Leg 4 Injection	A	N.A.
P-58	EM V-006	Accumulator Fill Line From SI Pumps	C	N.A
P-49	EM V-010	SI Pump Disch to Cold Leg 1	A	N.A.
P-49	EM V-020	SI Pump Disch to Cold Leg 2	A	N.A.
P-49	EM V-030	SI Pump Disch to Cold Leg 3	A	N.A.
P-49	EM V-040	SI Pump Disch to Cold Leg 4	A	N.A.
P-88	EM 8815	BIT to RCS Cold Leg Injection	A	N.A.
P-89	EN V-013	CTMT Spray Pump A to CTMT Spray Nozzles	A	N.A.

TABLE 3.6-1

CONTAINMENT ISOLATION VALVES

PENETRATIONS	VALVE NUMBER	FUNCTION	TYPE LEAK TEST REQUIRED	MAXIMUM ISOLATION TIME (Seconds)
9. Other Automatic				
P-1	**AB-HV-11	Mn. Stm. ISOL.	A	5
P-2	**AB-HV-14	Mn. Stm. ISOL.	A	5
P-3	**AB-HV-17	Mn. Stm. ISOL.	A	5
P-4	**AB-HV-20	Mn. Stm. ISOL.	A	5
P-5	**AE-FV-42	Mn. FW ISOL.	A	5
P-6	**AE-FV-39	Mn. FW ISOL.	A	5
P-7	**AE-FV-40	Mn. FW ISOL.	A	5
P-8	**AE-FV-41	Mn. FW ISOL.	A	5
P-9	**BM-HV-4	SG Blowdn. ISOL.	A	10
P-10	**BM-HV-1	SG Blowdn. ISOL.	A	10
P-11	**BM-HV-2	SG Blowdn. ISOL.	A	10
P-12	**BM-HV-3	SG Blowdn. ISOL.	A	10

**The provisions of Specification 3.0.4 are not applicable.