ATTACHMENT A-1

Beaver Valley Power Station, Unit No. 1
Proposed Technical Specification Change No. 160/20 Revision 1

Revise the Technical Specification as follows:

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TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
1. Manual	
a. Safety Injection (ECCS)	Not Applicable
Feedwater Isolation	Not Applicable
Reactor Trip (SI)	Not Applicable
Containment Isolation-Phase "A"	Not Applicable
Containment Vent and Purge Isolation	Not Applicable
Auxiliary Feedwater Pumps	Not Applicable
Rx Plant River water System	Not Applicable
b. Containment Quench Spray Pumps	Not Applicable
Containment Quench Spray Valves	Not Applicable
Containment Isolation-Phase "B"	Not Applicable
c. Containment Isolation-Phase "A"	Not Applicable
d. Control Room Ventilation Isolation	Not Applicable
2. Containment Pressure-High	
a. Safety Injection (ECCS)	≤ 27.0*
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	~~≤ 13.0(1)~~ ≤ 10.0(1)
d. Containment Isolation-Phase "A"	≤ 22.0(3)/33.0(2) ≤ 30.0(2)
e. Auxiliary Feedwater Pumps	Not Applicable
f. Rx Plant River Water System	≤ 77.0(3)/110.0(2)

1) Feedwater Regulating Valves
2) Feedwater Bypass Valves

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
~~2.~~ 3. Pressurizer ~~Containment~~ Pressure-Low	
a. Safety Injection (ECCS)	≤ 27.0*/27.0#
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation 1) Feedwater Regulating Valves 2) Feedwater Bypass Valves	~~≤ 13.0(1)~~ ≤ 10.0 (1) ≤ 10.0 (1)
d. Containment Isolation-Phase "A"	≤ 22.0(3)
e. Auxiliary Feedwater Pumps	Not Applicable
f. Rx Plant River Water System	≤ 77.0(3)/110.0(2)

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
4. Steam Line Pressure-Low	
a. Safety Injection (ECCS)	≤ 27.0#/37.0##
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation 1) Feedwater Regulating Valves 2) Feedwater Bypass Valves	~~≤ 13.0(1)~~ ≤ 10.0(1) ≤ 30.0(1)
d. Containment Isolation-Phase "A"	≤ 22.0(3)/33.0(2)
e. Auxiliary Feedwater Pumps	Not Applicable
f. Rx Plant River Water System	≤ 77.0(3)/110.0(2)
g. Steam Line Isolation	≤ 8.0
5. Containment Pressure--High-High	
a. Containment Quench Spray	≤ 85.0(2)
b. Containment Isolation-Phase (B)	Not Applicable
c. Control Room Ventilation Isolation	≤ 22.0(3)/77.0(2)
6. Steam Generator Water Level--High-High	
a. Turbine Trip-Reactor Trip (Above P-9)	≤ 2.5
b. Feedwater Isolation 1) Feedwater Regulating Valves 2) Feedwater Bypass Valves	~~≤ 13.0(1)~~ ≤ 10.0(1) ≤ 30.0(1)
7. Containment Pressure--Intermediate High-High	
a. Steam Line Isolation	≤ 8.0
8. Steamline Pressure Rate--High Negative	
a. Steamline Isolation	≤ 8.0
9. Loss of Power	
a. 4.16kv Emergency Bus Undervoltage (Loss of Voltage)	≤ 1.3
b. 4.16kv and 480v Emergency Bus Undervoltage (Degraded Voltage)	≤ 95

TABLE 3.3-5 (Continued)

TABLE NOTATION

* Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps and Low Head Safety Injection pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST valves open, then VCT valves close) is not included.

\# Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST) (RWST valves open, then VCT valves close) is included.

\#\# Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST) (RWST valves open, then VCT valves close) is included.

(1) ~~Feedwater system overall response time shall include verification of valve stroke times applicable to the feedwater regulating and bypass valves.~~ Feedwater isolation includes signal response and valve closure time.

(2) Diesel generator starting and sequence loading delays included.

(3) Diesel generator starting and sequence loading delays not included.

REPORTABLE EVENT

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

CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

1.8.1 All penetrations required to be closed during accident conditions are either:

a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or

b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except ~~as provided in Table 3.6-1 of Specification 3.6.3.1.~~ for valves that are open under administrative control as permitted by Specification 3.6.3.1.

1.8.2 All equipment hatches are closed and sealed.

1.8.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3., and

1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2.

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.

CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that:

1. All penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except ~~as provided in Table 3.6-1 of Specification 3.6.3.1.~~ for valves that are open under administrative control as permitted by Specification 3.6.3.1.

2. All equipment hatches are closed and sealed.

b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.

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* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

PROPOSED

CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$, 0.10 percent by weight of the containment air per 24 hours at P_a, (40.0 psig), or

b. A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests ~~as identified in Table 3.6-1,~~ when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50*:

a. A Type-A test (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10-month intervals during shutdown at P_a (40.0 psig).

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* Exemption to Appendix J of 10 CFR 50, Section III.D.1(a), granted on December 5, 1984.

PROPOSED

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 ~~The~~ Each containment isolation valve~~s~~* ~~specified in Table 3.6-1~~ shall be OPERABLE~~ with isolation times as shown in Table 3.6-1~~.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) ~~specified in Table 3.6-1~~ inoperable, either:

a. Restore the inoperable valve(s) to OPERABLE* status within 4 hours, or

b. Isolate the affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate the affected penetration within 6 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 ~~The~~ Each containment isolation valve~~s~~* ~~specified in Table 3.6-1~~ shall be demonstrated OPERABLE*:

a. At least once per 92 days by:

1. Cycling each OPERABLE power operated or automatic valve testable during plant operation through at least one complete cycle of full travel.

* Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

SURVEILLANCE REQUIREMENTS (Continued)

2. Cycling each weight or spring loaded check valve testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is > 1.2 psid but less than 6.1 psid.

b. Immediately prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the applicable cycling test, above, and verification of isolation time.

4.6.3.1.2 Each containment isolation valve ~~specified in Table 3.6-1~~ shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

d. Cycling each power operated or automatic valve through at least one complete cycle of full travel and measuring the isolation time.

e. Cycling each weight or spring loaded check valve not testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.

f. Cycling each manual valve not locked, sealed or otherwise secured in the closed position through at least one complete cycle of full travel.

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	
1-D	CCR to RHS Hx 1A & RHS Pump 1A Seal Cooler	(1)MOV-1CC-112A2	N/A	(1)1CCR-247	N/A	
2-D	CCR from RHS Hx 1B & RHS Pump 1B Seal Cooler	(1)MOV-1CC-112B3	N/A	(1)1CCR-252	N/A	
3	Spare					
4-D	CCR to RHS Hx 1A & RHS Pump 1A Seal Cooler	(1)MOV-1CC-112A3	N/A	(1)1CCR-251	N/A	
5-D	CCR from RHS Hx 1B & RHS Pump 1B Seal Cooler	(1)MOV-1CC-112B2	N/A	(1)1CCR-248	N/A	
6-B	Spare					
7-A	High Head SI to Hot Legs	(3)(2)1SI-83	N/A	(3)(2)MOV-1SI-869A	N/A	I
8-C	CCR to RCP 1B & 1C Thermal Barriers	(B)TV-1CC-107D1	<60 ~~20~~	(B)TV-1CC-107D2	<60 ~~20~~	II
9-B	CCR from Shroud Coolers	(B)TV-1CC-111D1	<60 ~~20~~	(B)TV-1CC-111D2	<60 ~~20~~	II
10-B	Spare					
11-B	Air Recirc. Cooling Water-Out	(B)TV-1CC-110D	<60 ~~30~~	(B)TV-1CC-110F2 (B)TV-1CC-110F1	<60 ~~30~~ <60 ~~30~~	III
12-A	Spare					
13-D	Deluge System to CNMT Hose Reels	1FP-827	N/A	(A)TV-1FP-107	N/A	I
14-D	Air Recirc. Cooling water-In	(B)TV-1CC-110E3	<60 ~~30~~	(B)TV-1CC-110E2	<60 ~~30~~	II
15-A	Coolant System Charging	(3)(2)1CH-31	N/A	(3)(2)MOV-1CH-289	15	I
16-B	CCR to Shroud Coolers	(B)TV-1CC-111A2	<60 ~~20~~	(B)TV-1CC-111A1	<60 ~~20~~	II

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TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME*(SEC)
17-A	CCR to RCP 1B	(B)TV-1CC-103B1	<60 ~~20~~	(B)TV-1CC-103B	<60 ~~20~~
18-A	CCR to RCP 1C	(B)TV-1CC-103C1	<60 ~~20~~	(B)TV-1CC-103C	<60 ~~20~~
19-A	RCP's Seal Water Return	(A)MOV-1CH-378 1CH-369	<60 ~~15~~ N/A	(A)MOV-1CH-381	<60 ~~15~~
20-C	SI Accum. Makeup	1SI-42	N/A	(1)1SI-41	N/A
21-B	Spare				
22-B	Spare				
23-B	Spare				
24-SgD	RHS to RWST	1RH-14 1RH-16	N/A N/A	1RH-15	N/A
25-B	CCR from RCP 1B & 1C Motors	(B)TV-1CC-105D1	<60 ~~20~~	(B)TV-1CC-105D2	<60 ~~20~~
26-C	CCR from RCP 1A Thermal Barrier	(B)TV-1CC-107E1	<60 ~~10~~	(B)TV-1CC-107E2	<60 ~~10~~
27-C	CCR from RCP 1A Motor	(B)TV-1CC-105E1	<60 ~~14~~	(B)TV-1CC-105E2	<60 ~~14~~
28-A	RCS Letdown	(A)TV-1CH-200A (A)TV-1CH-200B (A)TV-1CH-200C (1)MOV-1CH-142 RV-1CH-203	<60 ~~7.5~~ <60 ~~7.5~~ <60 ~~7.5~~ N/A N/A	(A)TV-1CH-204	<60 ~~7.5~~
29-A	Primary Drain Transfer Pump #1 Discharge	(A)TV-1DG-108A	<60 ~~5~~	(A)TV-1DG-108B	<60 ~~5~~
30-B	Spare				
31-D	Deluge System to Cable Penetration Area	1FP-804	N/A	(A)TV-1FP-105	N/A

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)
32-C	Deluge System to RHR Area	1FP-800	N/A	(A)TV-1FP-106	N/A
33-C	High Head SI to Hot Legs	(3)(2)1SI-84	N/A	(3)(2)MOV-1SI-869B	N/A
34-A	Spare				
35-A	Seal Injection Water RCP 1A	(10)(2)1CH-181	N/A	(3)(2)MOV-1CH-308A	N/A
36-A	Seal Injection Water RCP 1B	(10)(2)1CH-182	N/A	(3)(2)MOV-1CH-308B	N/A
37-A	Seal Injection Water RCP 1C	(10)(2)1CH-183	N/A	(3)(2)MOV-1CH-308C	N/A
38-A	Containment Sump Pump Discharge	(A)TV-1DA-100A	<60 ~~10~~	(A)TV-1DA-100B	<60 ~~10~~
39-C	Steam Generator 1A Blowdown	Closed System	N/A	(3)(2)(A)TV-1BD-100A	<60 ~~20~~
40-A	Steam Generator 1B Blowdown	Closed System	N/A	(3)(2)(A)TV-1BD-100B	<60 ~~20~~
41-B	Steam Generator 1C Blowdown	Closed System	N/A	(3)(2)(A)TV-1BD-100C	<60 ~~20~~
42-C	Compressed Air to Fuel Handling Equipment	(1) 1SA-15	N/A	(1) 1SA-14	N/A
43-B	Air Activity Monitor-Out	(A)TV-1CV-102-1	<60 ~~5~~	(A)TV-1CV-102	<60 ~~5~~
44-B	Air Activity Monitor-In			(A)TV-1CV-101A (A)TV-1CV-101B	<60 ~~5~~ <60 ~~5~~
45-B	Primary grade Water to PMT	1RC-72	N/A	(A)TV-1RC-519	<60 ~~12~~
46-A	Charging Fill Header	(10)(2)1CH-170	N/A	(3)(2)(1)FCV-1CH-160	N/A
47-B	Instrument Air	(1) 1IA-91	N/A	(1) 1IA-90	N/A

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PROPOSED

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)
48-B	Primary Vent Header	(A)TV-1DG-109A2	<60 ~~5~~	(A)TV-1DG-109A1	<60 ~~5~~
49-C	Nitrogen Supply to PRT	1RC-68	N/A	(A)TV-1RC-101	<60 ~~5~~
50-C	Spare				
51-C	Spare				
52-C	Spare				
53-C	Nitrogen Supply to SI Accumulators	(A)TV-1SI-101-2	5	(A)TV-1SI-101-1	5
54-B	Spare				
55-1-A	SI Accumulator Sample	(A)TV-1SS-109A1	<60 ~~20~~	(A)TV-1SS-109A2	<60 ~~20~~
55-2-A	CNMT Leakage Monitoring Open Tape			(A)TV-1LM-100A1 (A)TV-1LM-100A2	<60 ~~5~~ <60 ~~5~~
55-3-A	Spare				
55-4-A	PRT Gas Sample	(A)TV-1SS-111A1	<60 ~~20~~	(A)TV-1SS-111A2	<60 ~~20~~
56-1-A	Pressurizer Liquid Sample	(A)TV-1SS-100A1	<60 ~~20~~	(A)TV-1SS-100A2	<60 ~~20~~
56-2-A	RCS Cold Leg Sample	(A)TV-1SS-102A1	<60 ~~20~~	(A)TV-1SS-102A2	<60 ~~20~~
56-3-A	RCS Cold Leg Sample	(A)TV-1SS-105A1	<60 ~~20~~	(A)TV-1SS-105A2	<60 ~~20~~
56-4-A	STM GEN 1A Blowdown Sample	Closed System	N/A	(3)(2)(A)TV-1SS-117A	<60 ~~20~~
57-1-A	CNMT Leakage Monitoring Open Taps			(A)TV-1LM-100A1 (A)TV-1LM-100A2	<60 ~~5~~ <60 ~~5~~

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PROPOSED

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME*(SEC)
57-2-A	CNMT Leakage Monitoring Open Taps			(A)TV-1IM-100A1 (A)TV-1IM-100A2	<60 ~~5~~ <60 ~~5~~
57-3-A	Spare				
57-4-A	Spare				
58-B	CCR to RCP 1A	(B)TV-1CC-103A	<60 ~~20~~	(B)TV-1CC-103A	<60 ~~20~~
59-C	Spare				
60-SgD	Low Head SI to Hot Legs	(3)(2)1SI-13	N/A	(3)(2)MOV-1SI-890A (3)(2)1SI-451	N/A N/A
61-SgD	Low Head SI to Cold Legs	(3)(2)1SI-10 (3)(2)1SI-11 (3)(2)1SI-12	N/A N/A N/A	(3)(2)MOV-1SI-890C	N/A
62-SgD	Low Head SI to Hot Legs	(3)(2)1SI-14	N/A	(3)(2)MOV-1SI-890B (3)(2)1SI-452	N/A N/A
63-SgD	QSP Discharge 360° Header	1QS-4	N/A	(B)MOV-1QS-101B	75(4)
64-SgD	QSP Discharge 360° Header	1QS-3	N/A	(B)MOV-1QS-101A	75(4)
65	Fuel Transfer Tube	(7) Flange	N/A	(2)(6)FH-1	N/A
66-SgD	Outside RSP 2A Suction from CNMT			(B)(2)MOV-1RS-155A	75(4)
67-SgD	Outside RSP 2B Suction from CNMT			(B)(2)MOV-1RS-155B	75(4)
68-SgD	Low Head SI Pump 1A Suction from CNMT Sump			(3)(9)(2)MOV-1SI-860A	N/A
69-SgD	Low Head SI Pump 1B Suction from CNMT Sump			(3)(9)(2)MOV-1SI-860B	N/A

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DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	
70-SgD	Outside RSP 2B Discharge	1RS-101	N/A	(B)(2)MOV-1RS-156B	75(4)	
71-SgD	Outside RSP 2A Discharge	1RS-100	N/A	(B)(2)MOV-1RS-156A	75(4)	
72-SgD	Spare					
73-SgD	Main Steam Loop 1A Bypass	Closed System	N/A	(1)(2)MOV-1MS-101A	N/A	—
	Main Steam RHR Valve	Closed System	N/A	(1)(2)(6)HCV-1MS-104	N/A	—
	Main Steam Loop 1A	Closed System	N/A	(2)TV-1MS-101A	5	
	Main Steam Line Drain	Closed System	N/A	(2)TV-1MS-111A	8	
	Main Steam to Auxiliary Feed Pump	Closed System	N/A	(2)MOV-1MS-105	N/A	
	Main Steam Atmospheric Dump	Closed System	N/A	(2)(6)PCV-1MS-101A	N/A	—
	Main Steam Safety Valves	Closed System	N/A	(2)(6) Safety Valves	N/A	—
74-SgD	Main Steam Loop 1B Bypass	Closed System	N/A	(1)(2)MOV-1MS-101B	N/A	—
	Main Steam RHR Valve	Closed System	N/A	(1)(2)(6)HCV-1MS-104	N/A	—
	Main Steam Loop 1B	Closed System	N/A	(2)TV-1MS-101B	5	
	Main Steam Line Drain	Closed System	N/A	(2)TV-1MS-111B	8	
	Main Steam to Auxiliary Feed Pump	Closed System	N/A	(2)MOV-1MS-105	N/A	
	Main Steam Atmospheric Dump	Closed System	N/A	(2)(5)PCV-1MS-101B	N/A	—
	Main Steam Safety Valves	Closed System	N/A	(2)(6)Safety Valves	N/A	—
75-SgD	Main Steam Loop 1C Bypass	Closed System	N/A	(1)(2)MOV-1MS-101C	N/A	—
	Main Steam RHR Valve	Closed System	N/A	(1)(2)(6)HCV-1MS-104	N/A	—
	Main Steam Loop 1C	Closed System	N/A	(2)TV-1MS-101C	5	
	Main Steam Line Drain	Closed System	N/A	(2)TV-1MS-111C	8	
	Main Steam to Auxiliary Feed Pump	Closed System	N/A	(2)MOV-1MS-105	N/A	
	Main Steam Atmospheric Dump	Closed System	N/A	(2)(6)PCV-1MS-101C	N/A	—
	Main Steam Safety Valves	Closed System	N/A	(2)(6)Safety Valves	N/A	—
76-SgD	FW Loop 1A	Closed System	N/A	(2)MOV-1FW-156A	N/A	
	AFW Loop 1A	Closed System	N/A	(2)1FW-42	N/A	
77-SgD	FW Loop 1B	Closed System	N/A	(2)MOV-1FW-156B	N/A	
	AFW Loop 1B	Closed System	N/A	(2)1FW-43	N/A	

Beaver Valley Unit 1 3/4 6-19f
PROPOSED

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	
78-SgD	FW Loop 1C	Closed System	N/A	(2) MOV-1FW-156C	N/A	|
	AFW Loop 1C	Closed System	N/A	(2) FW-44	N/A	|
79-SgD	RW to 1A RSP Hx	Closed System	N/A	(2)MOV-1RW-104A	N/A	
80-SgD	RW to 1C RSP Hx	Closed System	N/A	(2)MOV-1RW-104C	N/A	
81-SgD	RW to 1B RSP Hx	Closed System	N/A	(2)MOV-1RW-104B	N/A	
82-SgD	RW to 1D RSP Hx	Closed System	N/A	(2)MOV-1RW-104D	N/A	
83-SgD	RW from 1A RSP Hx	Closed System	N/A	(2)MOV-1RW-105A	N/A	
				(2) 1RW-615	N/A	||
84-SgD	RW from 1C RSP Hx	Closed System	N/A	(2)MOV-1RW-105C	N/A	
				(2) 1RW-627	N/A	||
85-SgD	RW from 1B RSP Hx	Closed System	N/A	(2)MOV-1RW-105B	N/A	
				(2) 1RW-621	N/A	||
86-SgD	RW from 1D RSP Hx	Closed System	N/A	(2)MOV-1RW-105D	N/A	
				(2) 1RW-633	N/A	||
87-SgD	H2 Discharge to CNMT		N/A	1HY-111	N/A	
				1HY-197	N/A	
88-SgD	H2 Discharge to CNMT		N/A	1HY-110	N/A	
				1HY-196	N/A	
89-SgD	Main Condenser Ejector Vent	1AS-278	N/A	(B)TV-1SV-100A	<60 ~~20~~	||
90-SgD	CNMT Purge Exhaust	VS-D-5-3B	(11)(5)8	VS-D-5-3A	(11)(5)8	|
91-SgD	CNMT Purge Supply	VS-D-5-5B	(11)(5)11	VS-D-5-5A	(11)(5)8	|
				VS-D-5-6	(5) N/A	|

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)
92-A	CNMT Vacuum Pump 1B & H_2 Recomb. Suction			(A)TV-1CV-150C	<60 ~~7.5~~
				(A)TV-1CV-150D	<60 ~~7.5~~
				1HY-102	N/A
				1HY-104	N/A
93-B	CNMT Vacuum Pump 1A & H_2 Recomb. Suction			(A)TV-1CV-150A	<60 ~~7.5~~
				(A)TV-1CV-150B	<60 ~~7.5~~
				1HY-101	N/A
				1HY-103	N/A
94-C	CNMT Vacuum Ejector Suction	(11)HCV-1CV-151	N/A	(11)HCV-1CV-151-1	N/A
95-C	RVLIS	(2)(12)	N/A	(2)(12)	N/A
95-64	H_2 Analyzer - CNMT Dome	(1)SOV-1HY-102B1	N/A	(1)SOV-1HY-102B2	N/A
95-69	H_2 Analyzer - PRZR Cubicle	(1)SOV-1HY-103B1	N/A	(1)SOV-1HY-103B2	N/A
95-72	H_2 Analyzer - Discharge	(1)SOV-1HY-104B1	N/A	(1)SOV-1HY-104B2	N/A
96-B	High Head SI to Cold Legs	(3)(2)1SI-95	N/A	(3)(2)MOV-1SI-836	N/A
97-1-A	RHR Inlet Sample	(A)TV-1SS-104A1	<60 ~~20~~	(A)TV-1SS-104A2	<60 ~~20~~
97-2-A	RHR Outlet Sample	(A)TV-1SS-103A1	<60 ~~20~~	(A)TV-1SS-103A2	<60 ~~20~~
97-3-A	CNMT Leakage Monitoring Open Tape			(A)TV-11M-100A1	<60 ~~5~~
				(A)TV-11M-100A2	<60 ~~5~~
97-4-A	Steam Generator 1C Blowdown Sample	Closed System	N/A	(3)(2)(A)TV-1SS-117C	<60 ~~20~~
98-1-C	Spare				

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PROPOSED

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)
98-2-C	Spare				
98-3-C	Spare				
98-4-C	Spare				
99-C	Spare				
100-B	Spare				
101-B	Spare				
102-B	Spare				
103-A	Refueling Cavity Purification Inlet	1PC-38	N/A	1PC-37	N/A
104-A	Refueling Cavity Purification Outlet	1PC-9	N/A	1PC-10	N/A
105-1-B	Steam Generator 1B Blowdown Sample	Cloned System	N/A	(3)(2)(A)TV-1SS-117B	<60 ~~20~~
105-2-B	PRZR Vapor Sample	(A)TV-1SS-112A1	<60 ~~20~~	(A)TV-1SS-112A2	<60 ~~20~~
105-3-B	Spare				
105-4-B	Spare				
106-SgD	SI Accumulator Test Line	(A)MOV-1SI-842	<60 ~~15~~	(A)TV-1SI-889	<60 ~~7.5~~
107-C	Spare				
108-B	Spare				

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME*(SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME*(SEC)
109-C	RVLIS	(2)(12)	N/A	(2)(12)	N/A
109-44	Inlet Flow Sample - CNMT Dome	(1)SOV-1HY-102A1	N/A	(1)SOV-1HY-102A2	N/A
109-49	Inlet Flow Sample - PRZR Cubicle	(1)SOV-1HY-103A1	N/A	(1)SOV-1HY-103A2	N/A
109-52	Flow Sample Discharge	(1)SOV-1HY-104A1	N/A	(1)SOV-1HY-104A2	N/A
110-1-C	PRZR Dead Weight Calibrator PT-RC-455A	Closed System	N/A	(1)1RC-277 (1)1RC-278	N/A N/A
110-2-C	Spare				
110-3-C	Spare				
110-4-C	Spare				
111-C	Spare			(7) Flange	N/A
112-C	Spare			(7) Flange	N/A
113-1-A	BIT to Cold Legs	(3)(2)1SI-94	N/A	(3)(2)MOV-1SI-867C (3)(2)MOV-1SI-867D	15 ~~13~~(4) 15 ~~13~~(4)
Primary Containment Airlock PH-P-1					
	Equalization Valve	(1)1VS-169	N/A		
	Equalization Valve	(1)1VS-170	N/A		
	Equalization Valve			(1)1VS-167	N/A
	Equalization Valve			(1)1VS-168	N/A

DELETE

TABLE 3.6-1
CONTAINMENT PENETRATIONS

PENT NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME* (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME* (SEC)
Emergency Containment Airlock, PH-P-2					
	Equalization Valve	(1)(7)1VS-184	N/A		
	Equalization Valve			(1)(7)1VS-183	N/A

(A) Containment Isolation Phase A
(B) Containment Isolation Phase B

(1) May be opened on an intermittent basis under administrative control.

(2) Not subject to Type C leakage tests.

(3) Valves tested per specification 4.0.5.

(4) Maximum opening time.

(5) Applicability: During CORE ALTERATIONS or movement of irradiated fuel within containment.

(6) Not subject to the requirements of specification 3/4.6.3. Listed in TABLE 3.6-1 for information only. 3/4.6.1 and

(7) Tested under Type (B) testing.

(8) Not used.

(9) Auto open on Safety Injection recirculation signal.

(10) Not subject to the surveillance requirements of specification 3/4.6.3. Valves tested per specification 4.0.5.

(11) Valve will be locked shut in modes 1, 2, 3 and 4.

(12) Isolation is provided by bellows operated hydraulic isolators.

DELETE

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment ~~door~~ hatch closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Exhausting at less than or equal to 7500 cfm through OPERABLE Containment Purge and Exhaust Isolation Valves ~~with isolation times as specified in Table 3.6-1~~ to OPERABLE HEPA filters and charcoal adsorbers of the Supplemental Leak Collection and Release System (SLCRS).

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4.1 Each of the above required containment penetrations shall be determined to be in its above required condition within 150 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment.

4.9.4.2 The containment purge and exhaust system shall be demonstrated OPERABLE by:

a. Verifying the flow rate through the SLCRS at least once per 14 hours when the system is in operation.

b. Testing the Containment Purge and Exhaust Isolation Valves per the applicable portions of Specification 4.6.3.1.2, and

c. Testing the SLCRS per Specification 4.7.8.1.

3/4.6.2.3 CHEMICAL ADDITION SYSTEM

The OPERABILITY of the chemical addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH minimum volume and concentration, ensure that 1) the iodine removal efficiency of the spray water is maintained because of the increase in pH value, and 2) corrosion effects on components within containment are minimized. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analysis for a LOCA.

The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA."

3/4.6.5 SUBATMOSPHERIC PRESSURE CONTROL SYSTEM

3/4.6.5.1 STEAM JET AIR EJECTOR

The closure of the manual isolation valves in the suction of the steam jet air ejector ensures that 1) the containment internal pressure may be maintained within its operation limits by the mechanical vacuum pumps and 2) the containment atmosphere is isolated from the outside environment in the event of a LOCA. These valves are required to be closed for containment isolation.

PROPOSED

ATTACHMENT A-2

Beaver Valley Power Station, Unit No. 2
Proposed Technical Specification Change No. 160/20 Revision 1

Revise the Technical Specification as follows:

Remove Page	Insert Page
1-2	1-2
3/4 6-1	3/4 6-1
3/4 6-2	3/4 6-2
3/4 6-15	3/4 6-15
3/4 6-16	3/4 6-16
3/4 6-17	-
3/4 6-18	-
3/4 6-19	-
3/4 6-20	-
3/4 6-21	-
3/4 6-22	-
3/4 6-23	-
3/4 6-24	-
3/4 6-25	-
3/4 6-26	-
3/4 6-27	-
3/4 6-28	-
3/4 6-29	-
3/4 6-30	-
3/4 9-4	3/4 9-4
B 3/4 6-2	B 3/4 6-2

CONTAINMENT INTEGRITY (Continued)

b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except ~~as provided in Table 3.6-1 of Specification 3.6.3.1.~~ for valves that are open under administrative control as permitted by Specification 3.6.3.1.

1.8.2 All equipment hatches are closed and sealed.

1.8.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3., and

1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2.

1.8.5 The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping, or total channel steps such that the entire channel is calibrated.

CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

CHANNEL FUNCTIONAL TEST

1.11 A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

CORE ALTERATION

1.12 CORE ALTERATION shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe conservative position.

SHUTDOWN MARGIN

1.13 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be fully withdrawn.

PROPOSED

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that:

1. All penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except ~~as provided in Table 3.6-1 of Specification 3.6.3.1.~~ for valves that are open under administrative control as permitted by specification 3.6.3.1.

2. All equipment hatches are closed and sealed.

b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.

*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of $\leq L_a$, 0.10 percent by weight of the containment air per 24 hours at P_a, (44.7 psig).

b. A combined leakage rate of $< 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests ~~as identified in Table 3.6-1,~~ when pressurized to P_a (44.7 psig).

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4-1972:

a. A Type-A test (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10-month intervals during shutdown at P_a (44.7 psig).

b. If any Periodic Type A test fails to meet $0.75\ L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75\ L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75\ L_a$ at which time the above test schedule may be resumed.

PROPOSED

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 ~~The~~ Each containment isolation valve~~s~~ ~~specified in Table 3.6-1~~ shall be OPERABLE~~, with isolation times as shown in Table 3.6-1~~.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) ~~specified in Table 3.6-1~~ inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate the affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate the affected penetration within 6 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 ~~The~~ Each containment isolation valve~~s~~ ~~specified in Table 3.6-1~~ shall be demonstrated OPERABLE*:

a. At least once per 92 days by:

1. Cycling each OPERABLE power operated or automatic valve testable during plant operation through at least one complete cycle of full travel.

2. Cycling each weight or spring loaded check valve testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.

b. Immediately prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the applicable cycling test, above, and verification of isolation time.

* Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve ~~specified in Table 3.6-1~~ shall be demonstrated OPERABLE* during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.*

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

d. Cycling each power operated or automatic valve through at least one complete cycle of full travel and measuring the isolation time pursuant to Specification 4.0.5.

e. Cycling each weight or spring loaded check valve not testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.*

f. Cycling each manual valve not locked, sealed or otherwise secured in the closed position through at least one complete cycle of full travel.

~~*The specified 18 month surveillance interval during the first fuel cycle may be extended to coincide with completion of the first refueling outage.~~

PROPOSED

DELETE

TABLE 3.6-1

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
1	Comp Cool from Res Heat Exch	(1)(B)	2CCP-MOV157-2 2CCP-RV105	< 60 N/A	(1)(B)	2CCP-MOV157-1	< 60
2	Comp Cool to Res Heat Exch	(1)(B)	2CCP-MOV150-2 2CCP-RV102	< 60 N/A	(1)(B)	2CCP-MOV150-1	< 60
4	Comp Cool to Res Heat Exch	(1)(B)	2CCP-MOV151-2 2CCP-RV103	< 60 N/A	(1)(B)	2CCP-MOV151-1	< 60
5	Comp Cool from Res Heat Exch	(1)(B)	2CCP-MOV156-2 2CCP-RV104	< 60 N/A	(1)(B)	2CCP-MOV156-1	< 60
6	SPARE						
7	High Head Safety Injection	(3)(2) (13)	2SIS-83	N/A	(3)(2)	2SIS-MOV869A	N/A
9	SPARE						
11	Instrument Air	(A)	2IAC-MOV133	< 60	(A)	2IAC-MOV134	< 60
13	SPARE						
14	Chill & Service Wtr to Cont. Air Recirc Cooling coils	(B)	2SWS-MOV153-2	< 60	(B)	2SWS-MOV153-1 2SWS-RV153	< 60 N/A
15	CHARGING	(3)(2) (13)	2CHS-31	N/A	(3)(2)	2CHS-MOV289	< 10
16	SPARE						

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
17	High Head Safety Injection	(3)(2) (13)	2SIS-84	N/A	(3)(2)	2SIS-MOV869B	N/A
19	Seal Water from Reactor Coolant Pump	(A)	2CHS-MOV378 2CHS-473	< 60 N/A	(A)	2CHS-MOV381	< 60
20	Safety Injection Accumulator Makeup		2SIS-42	N/A	(1)	2SIS-41 2SIS-RV130	N/A N/A
21	Chill & Service Wtr from Cont. Air Recirc Cooling Coils	(B)	2SWS-MOV155-2	< 60	(B)	2SWS-MOV155-1 2SWS-RV155	< 60 N/A
22	SPARE						
23	SPARE						
24	Residual Heat Removal to Refueling Water Tank		2RHS-107	N/A		2RHS-15 2RHS-RV100	N/A N/A
25	Chill & Service Wtr from Cont. Air Recirc Cooling Coils	(B)	2SWS-MOV154-2	< 60	(B)	2SWS-MOV154-1 2SWS-RV154	< 60 N/A
27	Chill & Service Wtr to Cont. Air Recirc Cooling Coils	(B)	2SWS-MOV152-2	< 60	(B)	2SWS-MOV152-1 2SWS-RV152	< 60 N/A
28	Reactor Coolant Letdown	(A) (A) (A) (1)	2CHS-AOV200A 2CHS-AOV200B 2CHS-AOV200C 2CHS-HCV142 2CHS-RV203	< 60 < 60 < 60 N/A N/A	(A)	2CHS-AOV204	< 60

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PROPOSED

DELETE

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
29	Pri Dr. Trans Pump Disch	(A)	2DGS-AOV108A	< 60	(A)	2DGS-AOV108B 2DGS-RV115	< 60 N/A
30	SPARE						
31	SPARE						
32	SPARE						
33	SPARE						
34	High Head Injection Line	(3)(2)(13)	2SIS-94	N/A	(3)(2) (3)(2)	2SIS-MOV836 2SIS-MOV840	N/A N/A
35	Inj Seal Wtr to Reactor Coolant Pump	(3)(2)(13)	2CHS-474	N/A	(2)(3)	2CHS-MOV308A	N/A
35	Inj Seal Wtr to Reactor Coolant Pump	(3)(2)(13)	2CHS-476	N/A	(2)(3)	2CHS-MOV308B	N/A
37	Inj Seal Wtr to Reactor Coolant Pump	(3)(2)(13)	2CHS-475	N/A	(2)(3)	2CHS-MOV308C	N/A
38	Sump Pump Discharge	(A)	2DAS-AOV100A	< 60	(A)	2DAS-AOV100B 2DAS-RV110	< 60 N/A
39	St Gen Blowdown		Closed System	N/A	(2)	2BDG-AOV100A-1	< 60
40	St Gen Blowdown		Closed System	N/A	(2)	2BDG-AOV100B-1	< 60
41	St Gen Blowdown		Closed System	N/A	(2)	2BDG-AOV100C-1	< 60

PROPOSED

DELETE

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
42	Service Air	(1)	2SAS-15	N/A	(1)	2SAS-14	N/A
43	Air Monitor Sample		2CVS-93	N/A	(A)	2CVS-SOV102	< 50
44	Air Monitor Sample	(1)(A)	2CVS-SOV153B	< 60	(1)(A)	2CVS-SOV153A	< 60
45	Primary Grade Water		2RCS-72	N/A	(A)	2RCS-AOV519 2RCS-RV100	< 60 N/A
46	Loop Fill	(3)(2)(13)	2CHS-472	N/A	(3)(2)(1)	2CHS-FCV 160	N/A
47	SPARE						
48	Primary Vent Header	(A)	2VRS-AOV109A-2	< 60	(A)	2VRS-AOV109A-1	< 60
49	Nitrogen Supply Manifold		2RCS-68	N/A	(A)	2RCS-AOV101	< 60
50	SPARE						
51	SPARE						
52	SPARE						
53	Nitrogen Manifold	(A)	2GNS-AOV101-2	< 10	(A)	2GNS-AOV101-1	< 60

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TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO. -AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
55	Leakage Detection				(2)	2LMS-SOV953	< 60(4)
	Press Relief Tank	(1)(A)	2SSR-SOV130A-1	< 60	(1)(A)	2SSR-SOV130A-2	< 60
	Accumulator Water Sample	(A)	2SSR-AOV109A-1	< 60	(A)	2SSR-AOV109A-2 2SSR-RV117	< 60 N/A
	Hydrogen Analyzer	(1)	2HCS-SOV136A	N/A	(1)	2HCS-SOV136B	N/A
56	Cold Leg Sample	(A)	2SSR-AOV102A-1	< 60	(A)	2SSR-AOV102A-2 2SSR-RV118	< 60 N/A
	Hot Leg Sample	(1)(A)	2SSR-SOV128A-1	< 60	(1)(A)	2SSR-SOV128A-2 2SSR-RV120	< 60 N/A
	Pressurizer Liquid Space Sample	(A)	2SSR-AOV100A-1	< 60	(A)	2SSR-AOV100A-2 2SSR-RV119	< 60 N/A
	Blowdown Sample		Closed System	N/A	(2)	2SSR-AOV117A	< 60
57	Leak Detection				(2)	2LMS-SOV950	< 60(4)
	Blowdown Sample		Closed System	N/A	(2)	2SSR-AOV117B	< 60
	Pressurizer Vapor Space Sample	(A)	2SSR-AOV112A-1	< 60	(A)	2SSR-AOV112A-2 2SSR-RV121	< 60 N/A
	Hydrogen Analyzer	(1)	2HCS-SOV135A	N/A	(1)	2HCS-SOV135B	N/A
59	Instrument Air Containment		2IAC-22	N/A	(A)	2IAC-MOV130	< 60

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TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
60	Low Head Safety Injection Discharge	(3)(2) (13)	2SIS-132	N/A	(3)(2)	2SIS-MOV8888B	N/A
61	Low Head Safety Injection Discharge	(3)(2) (13)	2SIS-130	N/A	(3)(2)	2SIS-MOV8889	N/A
62	Low Head Safety Injection Discharge	(3)(2) (13)	2SIS-133	N/A	(3)(2)	2SIS-MOV8888A	N/A
63	Quench Pump Discharge		2QSS-4	N/A	(8)	2QSS-MOV101A 2QSS-RV101A	< 60 (4) N/A
64	Quench Pump Discharge		2QSS-3	N/A	(8)	2QSS-MOV101B 2QSS-RV101B	< 60 (4) N/A
65	Fuel Transfer Tube	(7)	Flange	N/A	(2)(6)	2ISC-102	N/A
66	Recirc Spray Pump Suction				(8)(2)	2RSS-MOV155A	< 60 (4)
67	Recirc Spray Pump Suction				(8)(2)	2RSS-MOV155C	< 60 (4)
68	Recirc Spray Pump Suction				(8)(2)	2RSS-MOV155D	< 60 (4)
69	Recirc Spray Pump Suction				(8)(2)	2RSS-MOV155B	< 60 (4)
70	Recirculation Pump Discharge	(2)(13)	2RSS-29	N/A	(8)(2) (6)	2RSS-MOV156A 2RSS-RV156A	< 60 (4) N/A
71	Recirculation Pump Discharge	(2)(13)	2RSS-31	N/A	(10)(8)(2) (6)	2RSS-MOV156C 2RSS-RV156C	< 60 (4) N/A

DELETE

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME (SEC)
73	Main Steam System "A"	Closed System	N/A	(2) 2MSS-~~HVV~~AOV101A	5
		Closed System	N/A	(2) 2MSS-AOV102A	N/A
		Closed System	N/A	(2) 2MSS-SOV105A	N/A
		Closed System	N/A	(2)(6) 2MSS-SV101A	N/A
		Closed System	N/A	(2)(6) 2MSS-SV102A	N/A
		Closed System	N/A	(2)(6) 2MSS-SV103A	N/A
		Closed System	N/A	(2)(6) 2MSS-SV104A	N/A
		Closed System	N/A	(2)(6) 2MSS-SV105A	N/A
	Steam Drains System	Closed System	N/A	(2) 2SDS-AOV111A-1	< 60
		Closed System	N/A	(2) 2SDS-AOV129B	< 60
	Steam Vent System	Closed System	N/A	(2)(6) 2SVS-PCV101A	N/A
		Closed System	N/A	(2)(6) 2SVS-HCV104	N/A

BEAVER VALLEY - UNIT 2

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DELETE

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME (SEC)
74	Main Steam System "B"	Closed System	N/A	(2) 2MSS-~~HVV~~AOV101B	5
		Closed System	N/A	(2) 2MSS-AOV102B	N/A
		Closed System	N/A	(2) 2MSS-SOV105B	N/A
		Closed System	N/A	(2)(6) 2MSS-SV101B	N/A
		Closed System	N/A	(2)(6) 2MSS-SV102B	N/A
		Closed System	N/A	(2)(6) 2MSS-SV103B	N/A
		Closed System	N/A	(2)(6) 2MSS-SV104B	N/A
		Closed System	N/A	(2)(6) 2MSS-SV105B	N/A
	Steam Drains System	Closed System	N/A	(2) 2SDS-AOV111B-1	< 60
		Closed System	N/A	(2) 2SDS-AOV129B	< 60
	Steam Vent System	Closed System	N/A	(2)(6) 2SVS-PCV101B	N/A
		Closed System	N/A	(2)(6) 2SVS-HCV104	N/A

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TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME (SEC)
75	Main Steam System "C"	Closed System	N/A	(2) 2MSS-~~HYV~~AOV101C	5
		Closed System	N/A	(2) 2MSS-AOV102C	N/A
		Closed System	N/A	(2) 2MSS-SOV105C	N/A
		Closed System	N/A	(2)(6) 2MSS-SV101C	N/A
		Closed System	N/A	(2)(6) 2MSS-SV102C	N/A
		Closed System	N/A	(2)(6) 2MSS-SV103C	N/A
		Closed System	N/A	(2)(6) 2MSS-SV104C	N/A
		Closed System	N/A	(2)(6) 2MSS-SV105C	N/A
	Steam Drains System	Closed System	N/A	(2) 2SDS-AOV111C-1	< 60
		Closed System	N/A	(2) 2SDS-AOV129B	< 60
	Steam Vent System	Closed System	N/A	(2)(6) 2SVS-PCV101C	N/A
		Closed System	N/A	(2)(6) 2SVS-HCV104	N/A
76	Feedwater "A"	Closed System	N/A	(2) 2FWS-HYV157A	~~5~~ 7
				~~(2) 2FWS-28~~	~~N/A~~
77	Feedwater "B"	Closed System	N/A	(2) 2FWS-HYV157B	~~5~~ 7
				~~(2) 2FWS-29~~	~~N/A~~
78	Feedwater "C"	Closed System	N/A	(2) 2FWS-HYV157C	~~5~~ 7
				~~(2) 2FWS-30~~	~~N/A~~

DELETE

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO. -AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE	MAXIMUM STROKE TIME (SEC)
79	Aux Feed "A"	~~(2) 2FWE-99~~	~~N/A~~	(2) 2FWE-HCV100E	N/A
				(2) 2FWE-HCV100F	N/A
				~~(2) 2FWE-42A~~	~~N/A~~
				~~(2) 2FWE-42B~~	~~N/A~~
80	Aux Feed "B"	~~(2) 2FWE-100~~	~~N/A~~	(2) 2FWE-HCV100C	N/A
				(2) 2FWE-HCV100D	N/A
				~~(2) 2FWE-43A~~	~~N/A~~
				~~(2) 2FWE-43B~~	~~N/A~~
83	Aux Feed "C"	~~(2) 2FWE-101~~	~~N/A~~	(2) 2FWE-HCV100A	N/A
				(2) 2FWE-HCV100B	N/A
				~~(2) 2FWE-44A~~	~~N/A~~
				~~(2) 2FWE-44B~~	~~N/A~~
87	Hydrogen Recombiner Discharge		N/A	(1) 2HCS-MOV117	N/A
				(1) 2HCS-111	N/A
88	Hydrogen Recombiner Discharge		N/A	(1) 2HCS-MOV116	N/A
				(1) 2HCS-110	N/A
89	SPARE				
90	Purge Duct Exhaust	(5) 2HVR-MOD23B	10	(14) (5) 2HVR-MOD23A	10
91	Purge Duct Supply	(5) 2HVR-MOD25B	10	(14) (5) 2HVR-MOD25A	10
				(14) (5) 2HVR-DMP206	N/A
92	Hydrogen Recombiner Isolation			(1) 2HCS-SOV114B	N/A
				(1) 2HCS-SOV113B	N/A
	Reactor Cont. Vacuum Pump Suction			(A) 2CVS-SOV151B	< 60
				(A) 2CVS-SOV152B	< 60

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TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
93	Hydrogen Recombiner Isolation				(1)	2HCS-SOV114A	N/A
					(1)	2HCS-SOV115A	N/A
	Reactor Cont. Vacuum Isolation				(A)	2CVS-SOV151A	< 60
					(A)	2CVS-SOV152A	< 60
94	Ejector Suction	(M)	2CVS-151	N/A	(M)	2CVS-151-1	N/A
96	SPARE						
97	Leakage Detection				(2)	2LMS-SOV952	< 60 (4)
	Blowdown Sample		Closed System	N/A	(2)	2SSR-AOV117C	< 60
	Liquid Sample - Cont. Sump & RHS	(1)(A)	2SSR-SOV129A-1	< 60	(1)(A)	2SSR-SOV129A-2	< 60
						2SSR-RV122	N/A
	Hydrogen Analyzer	(1)	2HCS-SOV133B	N/A	(1)	2HCS-SOV134B	N/A
98	SPARE						
99	Hose Rack Supply		2FPW-761	N/A	(A)	2FPW-AOV206	< 60
100	SPARE						
101	Reactor Cont. Deluge - Cable Pent. Area & RHS Pump		2FPW-753	N/A	(A)	2FPW-AOV205	< 60
103	Reactor Cavity Purif Inlet		2FNC-121	N/A		2FNC-38	N/A
104	Reactor Cavity Purif Outlet		2FNC-122	N/A		2FNC-9	N/A

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TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE		MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
105	Leak Detection				(2)	2LMS-SOV951	< 60 (4)
	Leak Detection					2LMS-51	N/A
						2LMS-52	N/A
	Hydrogen Analyzer	(1)	2HCS-SOV133A	N/A	(1)	2HCS-SOV134A	N/A
	Post Accident Sampling	(A)(1)	2PAS-SOV105A-1	< 60	(A)(1)	2PAS-SOV105A-1	< 60
106	Safety Inj. Test Line	(A)	2SIS-MOV842	< 60	(A)	2SIS-AOV889	< 60
						2SIS-RV175	N/A
108	SPARE						
110	SPARE						
113	Safety Injection	(3)(2)(13)	2SIS-95	N/A	(3)(2)	2SIS-MOV867C	< 10 (4)
					(3)(2)	2SIS-MOV867D	< 10 (4)
114	Recirculation Pump Discharge	(2)(13)	2RSS-32	N/A	(10)(B)(2)(6)	2RSS-MOV156D	< 60 (4)
						2RSS-RV156D	N/A
115	Recirculation Pump Discharge	(2)(13)	2RSS-30	N/A	(B)(2)(6)	2RSS-MOV156B	< 60 (4)
						2RSS-RV156B	N/A
116	Fire Protection HVR Filter B		2FPW-388	N/A	(A)	2FPW-AOV221	< 60
117	Fire Protection HVR Filter A		2FPW-382	N/A	(A)	2FPW-AOV204	< 60

TABLE 3.6-1 (Cont)

CONTAINMENT PENETRATIONS

PENT. NO.-AREA	IDENTIFICATION/DESCRIPTION	INSIDE VALVE	MAXIMUM STROKE TIME (SEC)	OUTSIDE VALVE		MAXIMUM STROKE TIME (SEC)
118	Quench Spray System	2QSS-267	N/A	(11)(B)(1)	2QSS-SOV100A	N/A
				(11)(B)(1)	2QSS-SOV100B	N/A
119	RVLIS	~~Note~~ (2)(12)	N/A		~~Note~~ (2)(12)	N/A
Primary Containment Personnel Air Lock 2 PHS-PAL 1						
	Equalizing Valve	(1)(7) 2PHS-112	N/A			
	Equalizing Valve	(1)(7) 2PHS-113	N/A			
	Equalizing Valve	(1)(7) 2PHS-101	N/A			
	Equalizing Valve			(1)(7)	2PHS-110	N/A
	Equalizing Valve			(1)(7)	2PHS-111	N/A
	Equalizing Valve			(1)(7)	2PHS-100	N/A
Emergency Containment Air Lock 2PHS-EAL 1						
	Equalizing Valve	(1)(7) 2PHS-202	N/A			
	Equalizing Valve			(1)(7)	2PHS-201	N/A

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NOTES:

(A) Containment Isolation Phase A.

(B) Containment Isolation Phase B.

(1) May be opened on an intermittent basis under administrative control.

(2) Not subject to Type C leakage tests.

(3) ~~May be leakage tested with water as the test fluid.~~ Valves tested per specification 4.0.5.

(4) Maximum opening time.

(5) Applicability: During CORE ALTERATIONS or movement of irradiated fuel within containment. ~~The provisions of Specification 3.0.4 are not applicable. The containment Purge Exhaust and Supply valves will be locked shut during operation in modes 1, 2, 3, and 4.~~

(6) Not subject to the requirements of Specification 3/4.6.3. Listed in Table 3.6-1 for information only. 3/4.6.1 and

(7) Tested under Type "B" testing.

(8) ~~Temporarily removed and penetration plugged~~ Not used

(9) Auto open on Safety Injection recirculation signal.

(10) Auto close on Safety Injection recirculation signal.

(11) Auto open on QSS switchover signal.

(12) Isolation is provided by bellows operated hydraulic isolators.

(13) Not subject to the surveillance requirements of specification 3/4.6.3. Valves tested per specification 4.0.5.

(14) Valve will be locked shut in Modes 1, 2, 3 and 4.

BEAVER VALLEY - UNIT 2

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REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment ~~door~~ hatch closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Exhausting at less than or equal to 7500 cfm through OPERABLE Containment Purge and Exhaust Isolation Valves ~~with isolation times as specified in Table 3.6-1~~ to OPERABLE HEPA filters and charcoal adsorbers of the Supplemental Leak Collection and Release System (SLCRS).

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4.1 Each of the above required containment penetrations shall be determined to be in its above required condition within 150 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment.

4.9.4.2 The containment purge and exhaust system shall be demonstrated OPERABLE by:

a. Verifying the flow rate to the SLCRS at least once per 24 hours when the system is in operation.

b. Testing the Containment Purge and Exhaust Isolation Valves per the applicable portions of Specification 4.6.3.1.2, and

c. Testing the SLCRS per Specification 4.7.8.1 with the exception of item 4.7.8.1.c.2.

3/4.6.1.4 AND 3/4.6 1.5 INTERNAL PRESSURE AND AIR TEMPERATURE (Continued)

of 45 psig and 2) ensure the containment internal pressure returns subatmospheric within 60 minutes following a LOCA. Additional operating margin is provided if the containment average air temperature is maintained above 100°F as shown on Figure 3.6-1.

The limits on the parameters of Figure 3.6-1 are consistent with the assumptions of the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 44.7 psig in the event of a LOCA. The visual and Type A leakage tests are sufficient to demonstrate this capability.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 and 3/4.6.2.2 CONTAINMENT QUENCH AND RECIRCULATION SPRAY SYSTEMS

The OPERABILITY of the containment spray systems ensures that containment depressurization and subsequent return to subatmospheric pressure will occur in the event of a LOCA. The pressure reduction and resultant termination of containment leakage are consistent with the assumptions used in the accident analyses.

3/4.6.2.3 CHEMICAL ADDITION SYSTEM

The OPERABILITY of the chemical addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH minimum volume and concentration, ensure that 1) the iodine removal efficiency of the spray water is maintained because of the increase in pH value, and 2) corrosion effects on components within containment are minimized. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for both a LOCA and major secondary system breaks.

The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

ATTACHMENT B

Beaver Valley Power Station, Unit No. 1 and 2
Proposed Technical Specification Change No. 160/20 Revision 1
REVISION TO CONTAINMENT ISOLATION VALVES

A. DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment would modify our previous submittal dated April 23, 1990 to incorporate the following changes:

1. modify the BV-1 Table 3.3-5 feedwater isolation response time,

2. correct BV-1 table 3.3-5 editorial errors,

3. delete BV-1 and BV-2 Table 3.6-1 including modification of the following:

   a. Definition 1.8 containment integrity
   b. Specification 3.6.1.1 containment integrity
   c. Specification 3.6.1.2 containment leakage
   d. Specification 3.6.3.1 containment isolation valves
   e. Specification 3.9.4 containment building penetrations
   f. Bases 3/4.6.3 containment isolation valves

4. Specification 3.9.4.a, for both units has been revised by replacing "door" with "hatch".

B. BACKGROUND

1. The BV-1 main steamline break analysis has been updated to include a total isolation time of 10 seconds for the feedwater regulating valve and 30 seconds for the feedwater bypass valve. Therefore, Table 3.3-5 has been revised to include total feedwater isolation times consisting of the signal response time and the valve closure time.

2. Two editorial errors incorporated into BV-1 table 3.3-5 in our previous submittal have been corrected. The change to page 3/4 3-26 includes correcting the listed initiating signal from "2. Containment Pressure-Low" to "3. Pressurizer Pressure-Low." The change to page 3/4 3-27 involves correcting the item number listed for the "Steam Line Pressure-Low" initiating signal from "2" to "4".

3. The NRC has issued Generic Letter 91-08 to provide guidance to plant licensees to remove component lists from the technical specifications. The generic letter includes recommended changes to applicable requirements to remove reference to the tables that list these components. This change modifies our original submittal by deleting Table 3.6-1 which lists the containment isolation valves and modifies related requirements by removing reference to the table or addresses those valves open under administrative control.

C. JUSTIFICATION

1. The main steamline break event has been re-analyzed to resolve inconsistencies and incorporate plant changes made since the analysis was last performed. Feedwater isolation is achieved by closure of the feedwater regulating valves and bypass valves. New limits for feedwater isolation response time are required to ensure the containment design criteria are satisfied, therefore, isolation of the applicable valves within the specified time satisfies this criteria.

2. The changes to BV-1 Table 3.3-5 are editorial corrections and are consistent with the current requirements.

3. Generic Letter 91-08 provides an acceptable method for removal of component lists from the technical specifications. The removal of component lists is acceptable because it does not alter existing technical specification requirements or those components to which they apply. In accordance with the generic letter, the incorporation of lists into plant procedures is subject to the change control provisions for plant procedures in the Administrative Controls Section of the technical specifications. Therefore, the change control provisions of the technical specifications provide an adequate means to control changes to the component lists, when they have been incorporated into plant procedures, without including them in the technical specifications. Related specifications that reference Table 3.6-1 have been modified by removing reference to the table and by including a note from the table which allows the opening of valves under administrative control.

4. An administrative change to Specification 3.9.4.a includes replacing "door" with "hatch" for consistency with plant terminology.

D. SAFETY ANALYSIS

1. The BV-1 main steamline break analysis uses the main feedwater isolation time to determine the mass balance in the faulted steam generator. The steam generator dryout time is based on the steam break flow and the main and auxiliary feedwater flow rates. This establishes the mass and energy release profiles used to determine the temperature and pressure in containment. The main steamline

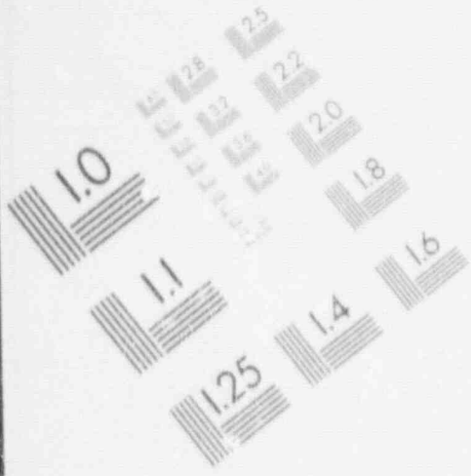
break event has been re-analyzed to resolve inconsistencies identified during preparation of a design basis document and to address plant changes made since the analysis was last performed. The plant changes were qualitatively justified at the time of installation based on available margin and sensitivities. To ensure the containment pressure and temperature design criteria are satisfied the main feedwater regulating valves were assumed to be closed within 10 seconds and the feedwater regulating bypass valves were assumed to be closed within 30 seconds. These isolation times are total actuation times consisting of signal response time and valve stroke time. Table 3.3-5 has been revised to specify these limiting feedwater isolation times with note (1) defining these times as total actuation time. The feedwater isolation times are based on the limiting accident analysis requirements since the main steamline break event assumes the minimum time for feedwater isolation. Therefore, these changes are considered safe and will not reduce the safety of the plant.

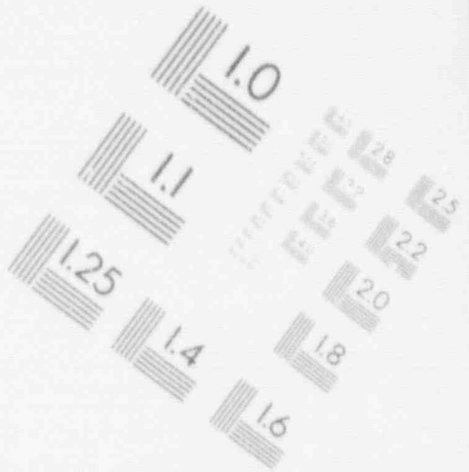
2. Editorial changes to BV-1 Table 3.3-5 have been incorporated to correct errors incorporated by our previous submittal. These changes do not add anything new and, therefore, are considered to be safe and will not affect the safety of the plant.

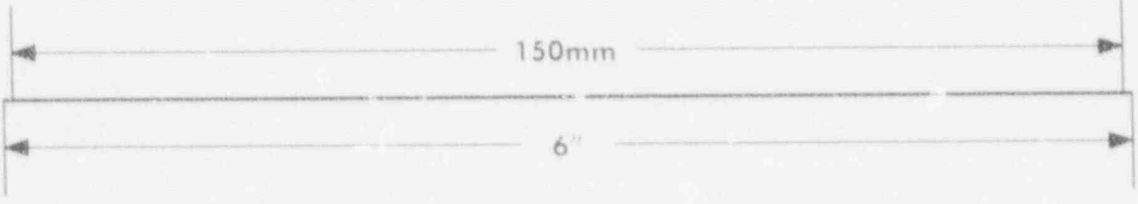
3. Table 3.6-1 has been removed from the technical specifications in accordance with the recommendations provided in Generic Letter 91-08. The generic letter provides a modification to the requirements of specification 3.6.3.1 to address operable containment isolation valves in lieu of reference to Table 3.6-1. This modification is addressed in the limiting condition for operation, action statement, and surveillance requirements. In addition, an * note has been added to the word operable to address note (1) in Table 3.6-1 "Locked or sealed closed valves may be opened on an intermittent basis under administrative control." The concept of this note has also been incorporated into Definition 1.8, Containment Integrity, and Surveillance Requirement 4.6.1.1.a to provide the operators with the capability to open those valves required for necessary plant operations and is consistent with the current use of note (1) in Table 3.6-1. Specifications 3.6.1.2.b and 3.9.4.c.2 have been modified by removing reference to Table 3.6-1. Bases section 3/4.6.3, Containment Isolation Valves, has been revised by including the considerations that constitute an acceptable administrative control for opening locked or sealed closed containment isolation valves.

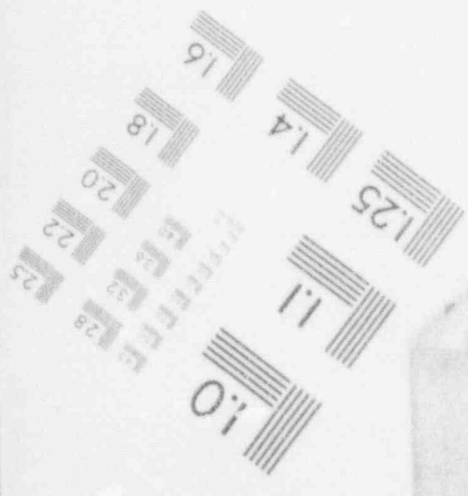
1

IMAGE EVALUATION TEST TARGET (MT-3)









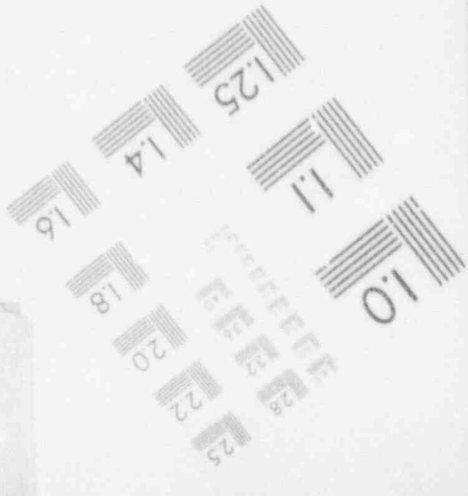


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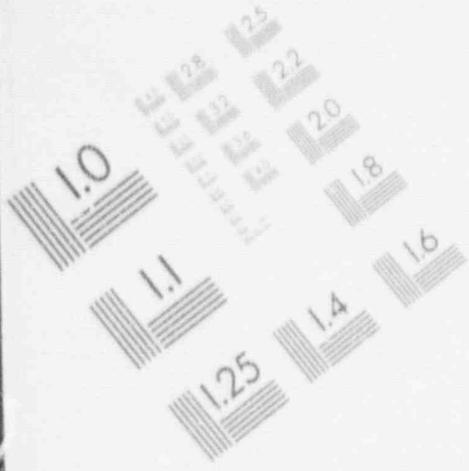
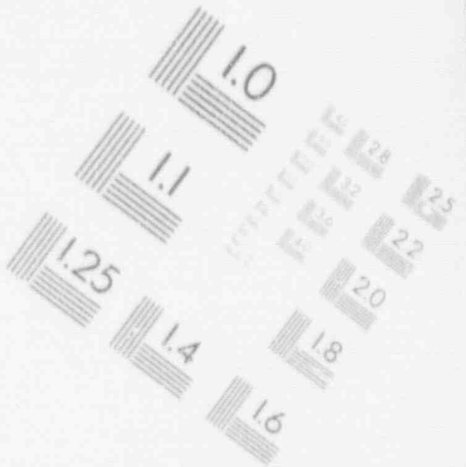
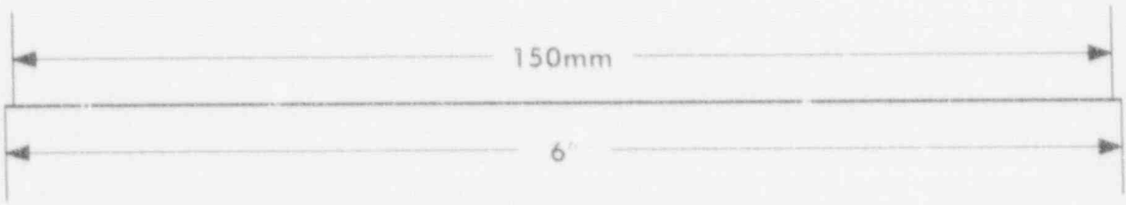
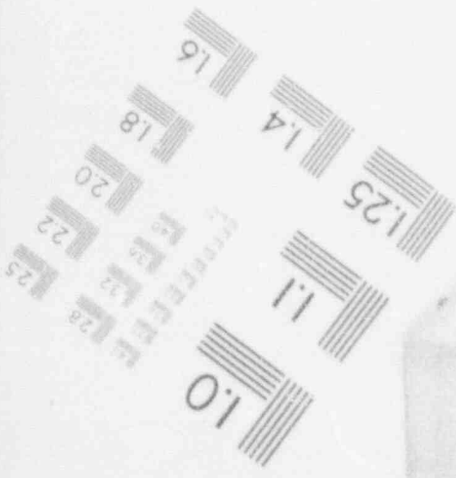
IMAGE EVALUATION TEST TARGET (MT-3)









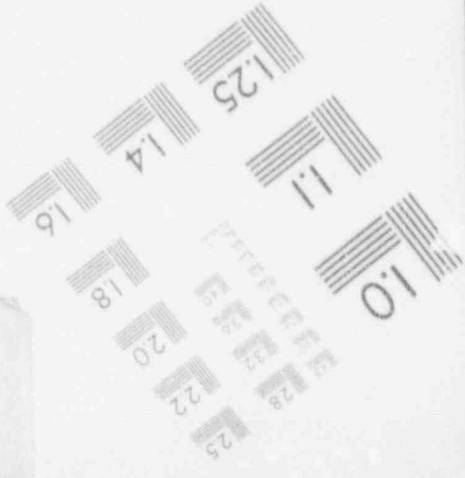


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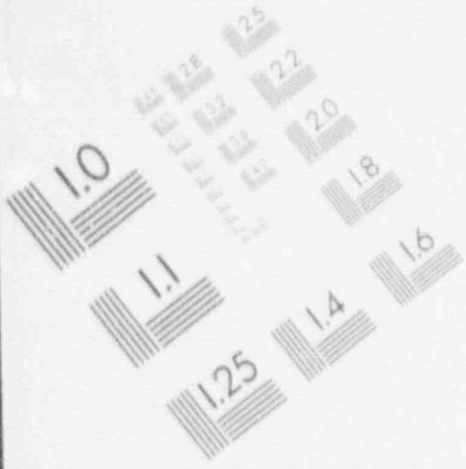
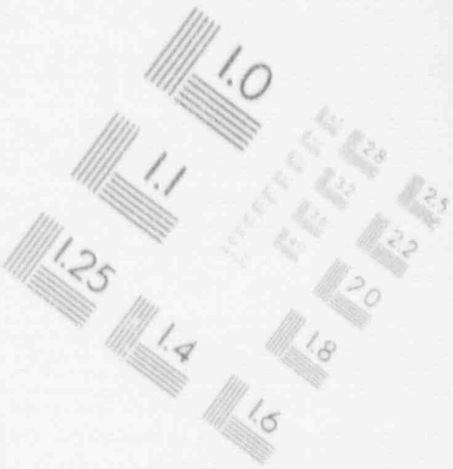
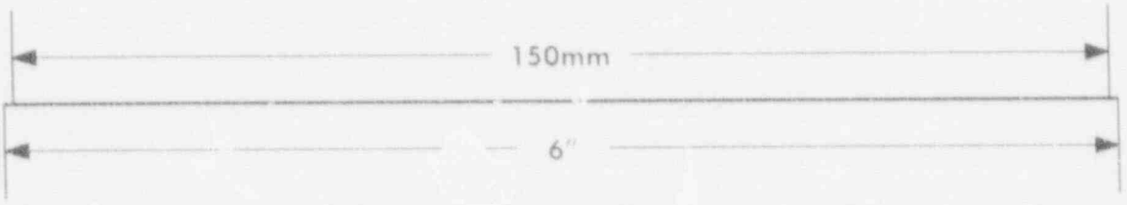
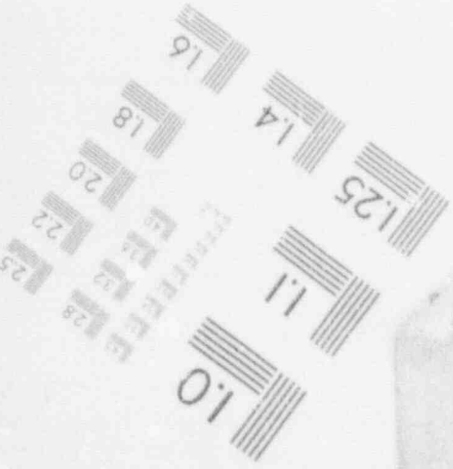
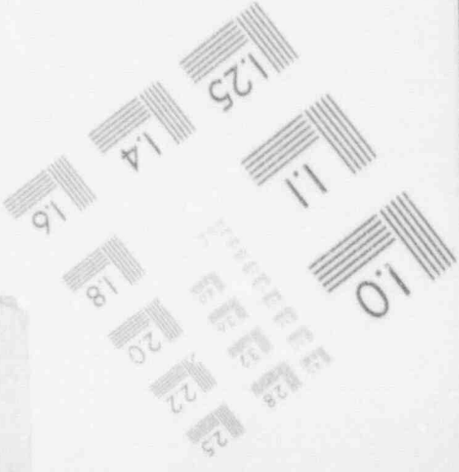
IMAGE EVALUATION
TEST TARGET (MT-3)











The other notes listed in Table 3.6-1 may be deleted also since these notes are only included for information and do not alter any technical specification requirement or affect the technical specification applicability requirements. The inservice testing (IST) requirements referenced by Specification 4.0.5 include verification of valve stroke times, therefore, removal of valve closure times included in Table 3.6-1 will not alter the technical specification requirements to verify that valve stroke times are within their limits. Removal of Table 3.6-1 and related changes do not change the technical specification applicability or requirements, only the formal location of the valve list is changed from the technical specification to a plant operating procedure that is controlled in accordance with the requirements of Administrative Control 6.8, Procedures. Therefore, these changes have been determined to be safe and will not reduce the safety of the plant.

4. The change to Specification 3.9.4.a is an administrative change and does not affect the safety of the plant.

E NO SIGNIFICANT HAZARDS EVALUATION

The no significant hazard considerations involved with the proposed amendment have been evaluated, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

> The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:
>
> (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
>
> (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
>
> (3) Involve a significant reduction in a margin of safety.

The following evaluation is provided for the no significant hazards consideration standards.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The proposed change revises our previous submittal to incorporate the following changes: 1) modify the BV-1 Table 3.3-5 feedwater isolation response time, 2) correct BV-1 Table 3.3-5 editorial errors, 3) delete BV-1 and BV-2 Table 3.6-1 including modification of the following:

a. Definition 1.8 containment integrity
b. Specification 3.6.1.1 containment integrity
c. Specification 3.6.1.2 containment leakage
d. Specification 3.6.3.1 containment isolation valves
e. Specification 3.9.4 containment building penetrations
f. Bases 3/4.6.3 containment isolation valves

1) The main steamline break event has been re-analyzed to resolve inconsistencies and to address plant changes made since the analysis was last performed. The plant changes were qualitatively justified at the time of installation based on available margin and sensitivities. To ensure the containment pressure and temperature design criteria are satisfied the main feedwater regulating valves were assumed to be closed within 10 seconds and the feedwater regulating bypass valves were assumed to be closed within 30 seconds. These isolation times are total actuation times consisting of signal response time and valve stroke time. Table 3.3-5 has been revised to specify these limiting feedwater isolation times with note (1) defining these times as total actuation times. The feedwater isolation times are based on the limiting accident analysis requirements since the main steamline break event assumes the minimum time for feedwater isolation. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Editorial changes to BV-1 table 3.3-5 have been incorporated to correct errors incorporated by our previous submittal. These changes are consistent with the current requirements and do not add anything new. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

3) Table 3.6-1 has been removed from the technical specifications in accordance with the recommendations provided in Generic Letter 91-08. The generic letter provides a modification to the requirements of specification 3.6.3.1 to address operable containment isolation valves in lieu of reference to Table 3.6-1. This modification is addressed in the limiting condition for operation, action statement, and surveillance requirements. In addition, an * note has been added to the word operable to address note (1) in

Table 3.6-1 "Locked or sealed closed valves may be opened on an intermittent basis under administrative control." The concept of this note has also been incorporated into Definition 1.8, Containment Integrity, and Surveillance Requirement 4.6.1.1.a to provide the operators with the capability to open those valves required for necessary plant operations and is consistent with the current use of note (1) in Table 3.6-1. Specifications 3.6.1.2.b and 3.9.4.c.2 have been modified by removing reference to Table 3.6-1. Bases section 3/4.6.3, Containment Isolation Valves, has been revised by including the considerations that constitute an acceptable administrative control for opening locked or sealed closed containment isolation valves.

The other notes listed in Tables 3.6-1 may be deleted also since these notes are only included for information and do not alter any technical specification requirement or affect the technical specification applicability requirements. The inservice testing (IST) requirements referenced by Specification 4.0.5 include verification of valve stroke times, therefore, removal of valve closure times included in Table 3.6-1 will not alter the technical specification requirements to verify that valve stroke times are within their limits. Removal of Table 3.6-1 and related changes do not change the technical specification applicability or requirements, only the formal location of the valve list is changed from the technical specifications to a plant operating procedure that is controlled in accordance with the requirements of Administrative Control 6.6, Procedures. Therefore, these changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

4) The change to Specification 3.9.4.a corrects the plant terminology used by replacing "door" with "hatch". This is an administrative change and therefore will not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The requirements of Specification 3.6.3.1 will continue to govern the operability of the containment isolation valves. The proposed change does not introduce any new mode of plant operation or require any physical modification to the plant. Therefore, these changes will not create the possibility of a new or different kind of accident from any accident previously evaluated in the FSAR.

3. Does the change involve a significant reduction in a margin of safety?

The proposed changes will not reduce the operability of the containment isolation valves or change the functional test requirements. The proposed changes will not affect any of the plant setpoints or margins to the accident analysis limits or technical specification limits and, therefore, will not involve a significant reduction in the margin of safety of the plant.

F. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Based on the considerations expressed above, it is concluded that the activities associated with this license amendment request satisfies the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards consideration finding is justified.

ATTACHMENT C-1

Beaver Valley Power Station, Unit No. 1
Proposed Technical Specification Change No. 100/20 Revision 1

Typed Pages:

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TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION		RESPONSE TIME IN SECONDS
1. Manual		
a.	Safety Injection (ECCS)	Not Applicable
	Feedwater Isolation	Not Applicable
	Reactor Trip (SI)	Not Applicable
	Containment Isolation-Phase "A"	Not Applicable
	Containment Vent and Purge Isolation	Not Applicable
	Auxiliary Feedwater Pumps	Not Applicable
	Rx Plant River Water System	Not Applicable
b.	Containment Quench Spray Pumps	Not Applicable
	Containment Quench Spray Valves	Not Applicable
	Containment Isolation-Phase "B"	Not Applicable
c.	Containment Isolation-Phase "A"	Not Applicable
d.	Control Room Ventilation Isolation	Not Applicable
2. Containment Pressure-High		
a.	Safety Injection (ECCS)	≤ 27.0*
b.	Reactor Trip (from SI)	≤ 3.0
c.	Feedwater Isolation	
	1) Feedwater Regulating Valves	≤ 10.0(1)
	2) Feedwater Bypass Valves	≤ 30.0(1)
d.	Containment Isolation-Phase "A"	≤ 22.0(3)/33.0(2)
e.	Auxiliary Feedwater Pumps	Not Applicable
f.	Rx Plant River Water System	≤ 77.0(3)/110.0(2)

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
3. Pressurizer Pressure-Low	
a. Safety Injection (ECCS)	≤ 27.0*/27.0#
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	
1) Feedwater Regulating Valves	≤ 10.0 (1)
2) Feedwater Bypass Valves	≤ 30.0 (1)
d. Containment Isolation-Phase "A"	≤ 22.0(3)
e. Auxiliary Feedwater Pumps	Not Applicable
f. Rx Plant River Water System	≤ 77.0(3)/110.0(2)

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
4. Steam Line Pressure-low	
a. Safety Injection (ECCS)	≤ 27.0#/37.0##
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	
1) Feedwater Regulating Valves	≤ 10.0 (1)
2) Feedwater Bypass Valves	≤ 30.0 (1)
d. Containment Isolation-Phase "A"	≤ 22.0(3)/33.0(2)
e. Auxiliary Feedwater Pumps	Not Applicable
f. Rx Plant River Water System	≤ 77.0(3)/110.0(2)
g. Steam Line Isolation	≤ 8.0
5. Containment Pressure--High-High	
a. Containment Quench Spray	≤ 85.0(2)
b. Containment Isolation-Phase "B"	Not Applicable
c. Control Room Ventilation Isolation	≤ 22.0(3)/77.0(2)
6. Steam Generator Water Level--High-High	
a. Turbine Trip-Reactor Trip (Above P-9)	≤ 2.5
b. Feedwater Isolation	
1) Feedwater Regulating Valves	≤ 10.0 (1)
2) Feedwater Bypass Valves	≤ 30.0 (1)
7. Containment Pressure--Intermediate High-High	
a. Steam Line Isolation	≤ 8.0
8. Steamline Pressure Rate--High Negative	
a. Steamline Isolation	≤ 8.0
9. Loss of Power	
a. 4.16kv Emergency Bus Undervoltage (Loss of Voltage)	≤ 1.3
b. 4.16kv and 480v Emergency Bus Undervoltage (Degraded voltage)	≤ 95

TABLE NOTATION

* Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps and Low Head Safety Injection pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST) (RWST valves open, then VCT valves close) is not included.

\# Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST) (RWST valves open, then VCT valves close) is included.

\## Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps. Sequential transfer of charging pump suction from the volume control tank (VCT) to the refueling water storage tank (RWST) (RWST valves open, then VCT valves close) is included.

(1) Feedwater isolation includes signal response and valve closure time. ||

(2) Diesel generator starting and sequence loading delays included.

(3) Diesel generator starting and sequence loading delays <u>not</u> included.

REPORTABLE EVENT

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

CONTAINMENT INTEGRITY

1.8 CONTAINMENT INTEGRITY shall exist when:

1.8.1 All penetrations required to be closed during accident conditions are either:

a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or

b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.

1.8.2 All equipment hatches are closed and sealed.

1.8.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3, and

1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2.

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping or total channel steps such that the entire channel is calibrated.

CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that:

1. All penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.

2. All equipment hatches are closed and sealed.

b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.

* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of:

1. $\leq L_a$, 0.10 percent by weight of the containment air per 24 hours at P_a, (40.0 psig), or

b. A combined leakage rate of $\leq 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests when pressurized to P_a.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in accordance with Appendix J of 10 CFR 50*:

a. A Type-A test (Overall Integrated Containment Leakage Rate) shall be conducted at 40 $\pm$ 10-month intervals during shutdown at P_a (40.0 psig).

* Exemption to Appendix J of 10 CFR 50, Section III.D.1(a), granted on December 5, 1984.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 Each containment isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, either:

a. Restore the inoperable valve(s) to OPERABLE* status within 4 hours, or

b. Isolate the affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate the affected penetration within 6 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 Each containment isolation valve shall be demonstrated OPERABLE*:

a. At least once per 92 days by:

1. Cycling each OPERABLE power operated or automatic valve testable during plant operation through at least one complete cycle of full travel.

---

* Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

SURVEILLANCE REQUIREMENTS (Continued)

2. Cycling each weight or spring loaded check valve testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens, when the differential pressure in the direction of flow is > 1.2 psid but less than 6.0 psid.

b. Immediately prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the applicable cycling test, above, and verification of isolation time.

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE* during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

d. Cycling each power operated or automatic valve through at least one complete cycle of full travel and measuring the isolation time.

e. Cycling each weight or spring loaded check valve not testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.

f. Cycling each manual valve not locked, sealed or otherwise secured in the closed position through at least one complete cycle of full travel.

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment hatch closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Exhausting at less than or equal to 7500 cfm through OPERABLE Containment Purge and Exhaust Isolation Valves to OPERABLE HEPA filters and charcoal adsorbers of the Supplemental Leak Collection and Release System (SLCRS).

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4.1 Each of the above required containment penetrations shall be determined to be in its above required condition within 150 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment.

4.9.4.2 The containment purge and exhaust system shall be demonstrated OPERABLE by:

a. Verifying the flow rate through the SLCRS at least once per 24 hours when the system is in operation.

b. Testing the Containment Purge and Exhaust Isolation Valves per the applicable portions of Specification 4.6.3.1.2, and

c. Testing the SLCRS per Specification 4.7.8.1.

3/4.6.2.3 CHEMICAL ADDITION SYSTEM

The OPERABILITY of the chemical addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH minimum volume and concentration, ensure that 1) the iodine removal efficiency of the spray water is maintained because of the increase in pH value, and 2) corrosion effects on components within containment are minimized. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analysis for a LOCA.

The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water 3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA."

3/4.6.5 SUBATMOSPHERIC PRESSURE CONTROL SYSTEM

3/4.6.5.1 STEAM JET AIR EJECTOR

The closure of the manual isolation valves in the suction of the steam jet air ejector ensures that 1) the containment internal pressure may be maintained within its operation limits by the mechanical vacuum pumps and 2) the containment atmosphere is isolated from the outside environment in the event of a LOCA. These valves are required to be closed for containment isolation.

ATTACHMENT C-2

Beaver Valley Power Station, Unit No. 2
Proposed Technical Specification Change No. 160/20 Revision 1

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CONTAINMENT INTEGRITY (Continued)

b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.

1.8.2 All equipment hatches are closed and sealed.

1.8.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3, and

1.8.4 The containment leakage rates are within the limits of Specification 3.6.1.2.

1.8.5 The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CHANNEL CALIBRATION

1.9 A CHANNEL CALIBRATION shall be the adjustment, as necessary, of the channel output such that it responds with the necessary range and accuracy to known values of the parameter which the channel monitors. The CHANNEL CALIBRATION shall encompass the entire channel including the sensor and alarm and/or trip functions, and shall include the CHANNEL FUNCTIONAL TEST. The CHANNEL CALIBRATION may be performed by any series of sequential, overlapping, or total channel steps such that the entire channel is calibrated.

CHANNEL CHECK

1.10 A CHANNEL CHECK shall be the qualitative assessment of channel behavior during operation by observation. This determination shall include, where possible, comparison of the channel indication and/or status with other indications and/or status derived from independent instrument channels measuring the same parameter.

CHANNEL FUNCTIONAL TEST

1.11 A CHANNEL FUNCTIONAL TEST shall be the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions.

CORE ALTERATION

1.12 CORE ALTERATION shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe conservative position.

SHUTDOWN MARGIN

1.13 SHUTDOWN MARGIN shall be the instantaneous amount of reactivity by which the reactor is or would be subcritical from its present condition assuming all full length rod cluster assemblies (shutdown and control) are fully inserted except for the single rod cluster assembly of highest reactivity worth which is assumed to be fully withdrawn.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 36 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

a. At least once per 31 days by verifying that:

1. All penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.

2. All equipment hatches are closed and sealed.

b. By verifying that each containment air lock is OPERABLE per Specification 3.6.1.3.

* Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

a. An overall integrated leakage rate of $\leq L_a$, 0.10 percent by weight of the containment air per 24 hours at P_a, (44.7 psig).

b. A combined leakage rate of $< 0.60\ L_a$ for all penetrations and valves subject to Type B and C tests when pressurized to P_a (44.7 psig).

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding $0.75\ L_a$ or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60\ L_a$, restore the leakage rate(s) to within the limit(s) prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4-1972:

a. A Type-A test (Overall Integrated Containment Leakage Rate) shall be conducted at 40 $\pm$ 10-month intervals during shutdown at P_a (44.7 psig).

b. If any Periodic Type A test fails to meet $0.75\ L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75\ L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75\ L_a$ at which time the above test schedule may be resumed.

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3.1 Each Containment Isolation Valve Shall Be OPERABLE*.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the isolation valve(s) inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or

b. Isolate the affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or

c. Isolate the affected penetration within 6 hours by use of at least one closed manual valve or blind flange; or

d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1.1 Each containment isolation valve shall be demonstrated OPERABLE*:

a. At least once per 92 days by:

1. Cycling each OPERABLE power operated or automatic valve testable during plant operation through at least one complete cycle of full travel.

2. Cycling each weight or spring loaded check valve testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.2 psid but less than 6.0 psid.

b. Immediately prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of the applicable cycling test, above, and verification of isolation time.

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* Locked or sealed closed valves may be opened on an intermittent basis under administrative control.

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each containment isolation valve shall be demonstrated OPERABLE* during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

a. Verifying that on a Phase A containment isolation test signal each Phase A isolation valve actuates to its isolation position.

b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.

c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

d. Cycling each power operated or automatic valve through at least one complete cycle of full travel and measuring the isolation time pursuant to Specification 4.0.5.

e. Cycling each weight or spring loaded check valve not testable during plant operation, through one complete cycle of full travel and verifying that each check valve remains closed when the differential pressure in the direction of flow is < 1.2 psid and opens when the differential pressure in the direction of flow is ≥ 1.. psid but less than 6.0 psid.

f. Cycling each manual valve not locked, sealed or otherwise secured in the closed position through at least one complete cycle of full travel.

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment hatch closed and held in place by a minimum of four bolts.

b. A minimum of one door in each airlock is closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1. Closed by an isolation valve, blind flange, or manual valve, or

2. Exhausting at less than or equal to 7500 cfm through OPERABLE Containment Purge and Exhaust Isolation Valves to OPERABLE HEPA filters and charcoal absorbers of the Supplemental Leak Collection and Release System (SLCRS).

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4.1 Each of the above required containment penetrations shall be determined to be in its above required condition within 150 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment.

4.9.4.2 The containment purge and exhaust system shall be demonstrated OPERABLE by:

a. Verifying the flow rate to the SLCRS at least once per 24 hours when the system is in operation.

b. Testing the Containment Purge and Exhaust Isolation Valves per the applicable portions of Specification 4.6.3.1.2, and

c. Testing the SLCRS per Specification 4.7.8.1 with the exception of item 4.7.8.1.c.2.

3/4.6.1.4 AND 3/4.6.1.5 INTERNAL PRESSURE AND AIR TEMPERATURE (Continued)

of 45 psig and 2) ensure the containment internal pressure returns subatmospheric within 60 minutes following a LOCA. Additional operating margin is provided if the containment average air temperature is maintained above 100°F as shown on Figure 3.6-1.

The limits on the parameters of Figure 3.6-1 are consistent with the assumptions of the accident analyses.

3/4.6.1.6 CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 44.7 psig in the event of a LOCA. The visual and Type A leakage tests are sufficient to demonstrate this capability.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 AND 3/4.6.2.2 CONTAINMENT QUENCH AND RECIRCULATION SPRAY SYSTEMS

The OPERABILITY of the containment spray systems ensures that containment depressurization and subsequent return to subatmospheric pressure will occur in the event of a LOCA. The pressure reduction and resultant termination of containment leakage are consistent with the assumptions used in the accident analyses.

3/4.6.2.3 CHEMICAL ADDITION SYSTEM

The OPERABILITY of the chemical addition system ensures that sufficient NaOH is added to the containment spray in the event of a LOCA. The limits on NaOH minimum volume and concentration, ensure that 1) the iodine removal efficiency of the spray water is maintained because of the increase in pH value, and 2) corrosion effects on components within containment are minimized. These assumptions are consistent with the iodine removal efficiency assumed in the accident analyses.

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for both a LOCA and major secondary system breaks.

The opening of locked or sealed closed containment isolation valves on an intermittent basis under administrative control includes the following considerations: (1) stationing an operator, who is in constant communication with the control room, at the valve controls, (2) instructing this operator to close these valves in an accident situation, and (3) assuring that environmental conditions will not preclude access to close the valves and that this action will prevent the release of radioactivity outside the containment.

Attachment D

Beaver Valley Power Station, Unit No. 1 and 2
Proposed technical Specification Change No. 160/20 Revision 1
DESCRIPTION OF ISOLATION VALVE CHANGES

The changes to Table 3.6-1 are identified by double side bars in Attachment A. Changes to the table are provided here for documentation purposes only since the tables are being deleted. The following provides a description of these changes and documents the applicable justification.

A review of the BV-1 accident analysis calculations and NSSS correspondence was conducted to determine those containment isolation valves where specific containment isolation valve stroke times are required. The valves applicable to penetrations 73-SGD, 74-SGD, 75-SGD, 76-SGD, 77-SGD, and 78-SGD were identified, therefore, these valve stroke times have not been changed. Valves applicable to penetrations 15-A, 53-C, 90-SGD, 91-SGD and 113-1-A will also maintain the current stroke time since the corresponding BV-2 containment isolation valve is required to have a similar stroke time. For penetrations 63-SGD, 64-SGD, 66-SGD, 67-SGD, 70-SGD and 71-SGD the current valve stroke time will be maintained since these valves stroke open on a CIB signal and Standard Review Plan 6.2.4 refers to valve closure time to satisfy containment isolation requirements. The remaining valve stroke times have been changed to < 60 seconds to be consistent with the BV-2 valve stroke requirements and the guidance provided in SRP 6.2.4 which states that "in general, (containment isolation) valve closure times should be less than one minute." The current listed stroke times for these valves are based on the vendor expected stroke time within which the valve is expected to operate.

Four manual valves; RW-615, RW-621, RW-627 and RW-633; have been added to BV-1 penetrations 83-SGD, 85-SGD, 84-SGD and 86-SGD respectively in accordance with the exemption from General Design Criterion 57 issued by the NRC dated, June 26, 1991. These valves isolate the river water radiation monitor sample lines and are located outside containment upstream of the river water containment isolation valves. Since Table 3.6-1 is being deleted, these valves will be included in the plant procedure which lists all containment isolation valves.

Table 3.6-1 note (6) has been revised for both units to include reference to Specification 3/4.6.1, in addition to Specification 3/4.6.3 now referenced, since the valves with this note are only listed to document that they are not containment isolation valves. Note (6) currently exempts these valves from the requirements of Specification 3/4.6.3 which specifically addresses containment isolation valves. Specification 3/4.6.1 also addresses containment isolation valves, therefore, exemption to this specification is consistent with the exemption to Specification 3/4.6.3.

Note (1) [May be opened on an intermittent basis under administrative control] has been added to Table 3.6-1 isolation valves for BV-1 penetrations 42-C and 47-B and BV-2 penetration 42 to provide the plants with the option to open these valves under administrative control to supply air to systems inside containment. This will allow the operators to cross-connect the BV-1 station air supply through penetration 42-C to the containment service air header and through penetration 47 to the containment air system. This is consistent with UFSAR Section 9.8.1 which states that the station air system can supply air to components within containment for service air requirements and as a backup to the containment air system. Adding note (1) to the BV-2 penetration valves will allow the operators to also cross-connect the BV-2 station service air supply through penetration 42 with the reactor containment service air header. This will allow use of air powered tools inside containment during plant repair activities.

Attachment E

Beaver Valley Power Station, Unit No.1 and 2

Proposed Technical Specification Change No. 160/20 Revision 1

UFSAR CHANGES

UFSAR Section 5.3.3

Page 5.3-4

failure. Class C penetrations, where they differ in some respects from the arrangements described in Section 5.3.2, are described in detail in Section 5.3.3.

Class D Penetrations

Class D penetration piping has a normally closed valve outside the containment, and is separated from the reactor coolant system by a closed valve or a membrane barrier. These penetrations are therefore, closed during normal operation. Class D penetrations are provided in accordance with the arrangements described in Section 5.3.1.2(a), (b) and (d) except as noted in Section 5.3.3.

5.3.2.1 Conformance to the 1971 AEC General Design Criteria

Those AEC general design criteria covering isolation of lines penetrating containment are discussed in Sections 1A.54 through 1A.57. The penetration classifications specified in Subsection 5.3.2 conform with the following 1971 General Design Criteria:

a. Lines in Class A and Class C, which are connected to the reactor coolant pressure boundary, are in conformance with General Design Criteria 55

b. Lines in Class A and Class C, which are connected to the containment atmosphere, are in conformance with General Design Criterion 56

c. Lines in Class B are in conformance with General Design Criteria 57

d. Lines in Class D are in conformance with General Design Criterion 56

e. All penetrations conform with General Design Criterion 54.

In order to provide the greatest degree of overall unit safety, it is necessary in certain cases to provide containment isolation arrangements which differ in some manner from the specific arrangements listed above. Such cases are described in detail in Section 5.3.3.

5.3.3 Description

Table 5.3-1 lists each line penetrating the containment structure and indicates the isolation criterion to which it conforms. As indicated, most isolation arrangements conform exactly with the 1971 General Design Criteria. ~~The maximum stroke time for containment isolation valves is given in the Technical Specifications.~~ The details of containment isolation arrangements which differ in some manner from the specific arrangements allowed by the General Design Criteria are indicated below: