

BALTIMORE GAS AND ELECTRIC COMPANY

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VICE PRESIDENT
SUPPLY

January 30, 1981

Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



ATTENTION: Mr. Robert W. Reid, Chief
Operating Branch #4
Division of Operating Reactors

SUBJECT: Calvert Cliffs Nuclear Power Plant
Units No. 1 and 2, Dockets No. 50-317, 50-318
Compliance with 10 CFR 50.55a

REFERENCES: (a) BG&E letter dated May 9, 1980, from
Mr. A.E. Lundvall, Jr., to Mr. R.W. Reid
(b) BG&E letter dated May 1, 1980, from
Mr. A.E. Lundvall, Jr., to Mr. R.W. Reid
(c) Questions from Mr. V. Nerses (NRC) to
Mr. S.M. Davis (BG&E) dated October 16, 1980
(d) Questions from Mr. V. Nerses (NRC) to
Mr. S.M. Davis (BG&E) dated October 27, 1980

Gentlemen:

References (a) and (b) provided information required for your review of our pump and valve inservice inspection program for Units 1 and 2 respectively. References (c) and (d) requested additional information and clarification to enable you to complete your review of our valve test program. Enclosures 1 and 2 provide the necessary information by replacing certain pages of enclosure 2 of references (a) and (b) respectively.

Should you have further questions regarding our pump and valve test program, we would be pleased to discuss them with you.

Very truly yours,

A.E. Lundvall, Jr.
Vice President - Supply

Enclosures (2)

AEL/SMD/dlp

A001
S111

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Enclosure 1

Replace pages 4, 7, 9, 13, 33, 34, 35 and 36 of enclosure 2 of letter dated May 9, 1980, from Mr. A.E. Lundvall, Jr., to Mr. R.W. Reid with enclosed revised pages dated 1/14/81.

CALVERT CLIFFS UNIT NO. 1 - INSERVICE TEST PROGRAM - VALVES

VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCK (SEE NOTES)
SI-463	SI LEAKOFF TO RWT ISO.	M-74	A-5	2	A E	NA	4, 6, 55	NA	NA
SI-352	SHUTDOWN COOLING HX RECIRC.	M-74	C-6	2	E	NA	4	NA	NA
SI-325	12 CNTMT SPRAY HEADER MANUAL ISO.	M-74	H-6	2	E	NA	4	NA	NA
SI-432	12 LPSI PP SUCT ISO.	M-74	H-11	2	E	NA	4	NA	NA
SI-491	11A SI TK. NITROGEN INLET CHECK	M-74	B-3	2	C	22	3	NA	NA
SI-440	12 LPSI PP SUCT FROM SDC HDR.	M-74	H-11	2	E	NA	4	NA	NA
SI-451	12 LPSI PP MIN FLOW RECIRC CHECK	M-74	H-11	2	C	20	7	NA	NA
SI-492	11B SI TK. NITROGEN INLET CHECK	M-74	C-3	2	C	22	3	NA	NA
SI-452	11 SHUTDOWN COOLING HX INLET XCONN	M-74	C-9	2	E	NA	4	NA	NA
SI-453	12 SHUTDOWN COOLING HX INLET XCONN	M-74	G-9	2	E	NA	4	NA	NA
SI-455	SI LEAKOFF RETURN HDR. BACKUP ISO.	M-74	A-5	2	E, A	NA	4, 6, 55	NA	NA
SI-493	12A SI TK. NITROGEN INLET CHECK	M-74	E-3	2	C	22	3	NA	NA
SI-494	12B SI TK. NITROGEN INLET CHECK	M-74	F-3	2	C	22	3	NA	NA
SI-4146	RWT OUTLET CHECK	M-74	B-11	2	C	17	1	NA	NA
SI-4147	RWT OUTLET CHECK	M-74	C-11	2	C	17	1	NA	NA
SI-4148	CNTMT SUMP OUTLET CHECK	M-74	J-7	2	C	23	8	NA	NA
SI-4149	CNTMT SUMP OUTLET CHECK	M-74	J-7	2	C	23	8	NA	NA
SI-4153	RWT RECIRC. PP DISCH. CHK.	M-74	D-13	2	C	22	9	NA	NA

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VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCK (SEE NOTES)
SI-645	12B LPSI LOOP ISO.	M-74	G-5	2	B	22	10	20.0	27
SI-646	12B HPSI LOOP ISO.	M-74	G-5	2	B	22	10	20.0	27
SI-647	12B AUX. HPSI LOOP ISO.	M-74	F-5	2	B	22	10	20.0	27
SI-648	12B CHK. VLV. LEAKAGE CONTROL	M-74	G-2	1	B	22	10	30.0	29
SI-651	SHUTDOWN COOLING RETURN ISO.	M-74	H-3	1	E. A	NA	4, 6, 55	NA	30
SI-652	SHUTDOWN CLG. RETURN ISOLATION	M-74	H-2	1	E. A	NA	4, 6, 55	NA	30
SI-653	HPSI HDR. X CONN.	M-74	E-9	2	E	NA	4	NA	NA
SI-654	HPSI HDR. ISOLATION	M-74	F-7	2	E	NA	4	NA	NA
SI-655	HPSI HDR. X CONN.	M-74	D-9	2	E	NA	4	NA	NA
SI-656	AUX. HPSI HDR. ISO.	M-74	D-8	2	E	NA	4	NA	27
SI-657	SHUTDOWN COOLING TEMP/FLOW CONTROL	M-74	E-7	2	E	NA	4	NA	NA
SI-658	LPSI SUPPLY TO SHUTDOWN COOLING	M-74	E-8	2	E	NA	4	NA	NA
SI-659	MINIMUM FLOW RETURN TO RWT	M-74	A-11	2	B	22	10	70.0	31
SI-660	MINIMUM FLOW RETURN TO RWT	M-74	A-11	2	B	22	10	70.0	31
SI-661	SI LEAKOFF RETURN TO RCDT	M-74	A-4	2	B	22	10	30.0	29
SI-662	SHUTDOWN CLG RECIRC. TO 13 HPSI PP	M-74	F-10	2	B	22	10	22.0	NA
SI-663	SHUTDOWN CLG RECIRC. TO 11 HPSI PP	M-74	C-10	2	B	22	10	20.0	NA
SI-4142	RWT OUTLET	M-74	B-11	2	B	22	10	124.0	NA

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VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCK (SEE NOTES)
CVC-186	LOOP 12B CHG. LINE CHECK VALVE	M-73	E-3	2	C	34	9	NA	NA
CVC-187	LOOP 11A CHG. LINE CHECK VALVE	M-73	F-3	2	C	27	9	NA	NA
CVC-217	11 BORIC ACID PP DISCH. CHK. VALVE	M-73	H-8	2	C	17	1, 3	NA	NA
CVC-222	12 BORIC ACID PP DISCH. CHK. VALVE	M-73	J-10	2	C	17	1, 3	NA	NA
CVC-228	CONC. B.A. TK GRAVITY FEED CHECK VLV.	M-73	J-5	2	C	35	1	NA	NA
CVC-235	B.A. PUMP DIRECT FEED CHK. VLV.	M-73	G-6	2	C	35	1	NA	NA
CVC-435	LOOP 11A CHARGE STOP BYPASS CHECK	M-73	F-3	2	C	49	1, 2	NA	NA
CVC-501-MOV	VCT OUTLET ISOLATION	M-73	E-4	2	B	58	10	30.0	29
CVC-508-MOV	12 CONC. BA TK GRAVITY FEED STOP	M-73	J-11	2	B	22	10	20.0	27
CVC-509-MOV	11 CONC. BA TANK GRAVITY FEED STOP	M-73	H-8	2	B	22	10	20.0	27
CVC-510-CV	11 BA PP RECIRC. STOP	M-73	G-8	2	B	22	10	30.0	29
CVC-511-CV	12 BA PP RECIRC. STOP	M-73	G-11	2	B	22	10	30.0	29
CVC-512-CV	MAKE-UP STOP	M-73	D-5	2	B	22	10	30.0	29
CVC-514-MOV	BORIC ACID DIRECT FEED STOP	M-73	G-6	2	B	22	10	20.0	27
CVC-515-CV	LETDOWN STOP	M-73	F-1	1	A	58	6, 10	13.0	29, 36
CVC-516-CV	LETDOWN STOP	M-73	F-2	1	A	58	6, 10	13.0	29, 36
CVC-517-CVC	AUX. SPRAY LINE STOP	M-73	D-3	1	A	58	6, 10	13.0	NA
CVC-518-CV	LOOP 12B CHG. LINE STOP	M-73	E-3	1	A	22	6, 10	53.0	NA

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VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCK (SEE NOTES)
CPA-1410	CNMT PURGE DISCH.	M-65	B-11	2	A	22	25, 10	6.0	37, 39
CPA-1411	CNMT PURGE DISCH.	M-65	B-11	2	A	22	25, 10	6.0	37, 39
CPA-1412	CNMT PURGE SUPPLY	M-65	C-11	2	A	22	25, 10	6.0	37, 39
CPA-1413	CNMT PURGE SUPPLY	M-65	C-11	2	A	22	25, 10	6.0	37, 39
RE-5291	PURGE AIR SAMPLE ISO.	M-98	A-9	2	A	22	6, 10	7.0	37
RE-5292	PURGE AIR SAMPLE ISO.	M-98	A-9	2	A	22	6, 10	7.0	37
PH-6579-MOV	UNIT 1 CONTINT HEATING OUTLET ISO.	M-71	A-3	2	A	22	6, 10	13.0	37
FW-133	11 S/G FW HDR. CHK.	M-39	H-2	2	C	40	9	NA	NA
FW-130	12 S/G FW HDR. CHK.	M-39	H-5	2	C	40	9	NA	NA
FW-4516-MOV	11 S/G FW ISO.	M-39	G-2	2	B	41	10	70.0	42
FW-4517-MOV	12 S/G FW ISO.	M-39	G-5	2	B	41	10	70.0	42
AFW-102	11 AFW PP DISCH. CHK.	M-39	E-3	2	C	43	1, 12	NA	NA
AFW-116	12 AFW PP DISCH. CHK.	M-39	F-4	2	C	43	1, 12	NA	NA
AFW-129	AFW CHK. VLV. TO 11 S/G	M-39	H-2	2	C	44	1, 12	NA	NA
AFW-130	AFW CHK. VLV. TO 12 S/G	M-39	H-5	2	C	44	1, 12	NA	NA
AFW-4511-CV	AFW REG. VLV. TO 11 S/G	M-39	H-1	2	B	22	1, 10	28.0	NA
AFW-4512-CV	AFW REG. VLV. TO 12 S/G	M-39	J-2	2	B	22	10	86.0	NA
MS-4043-CV	11 S/G MSIV	M-35	E-9	2	B	45	10	3.6	42

ENCLOSURE 2 (CONT'D)

14. MPT opening pressure setpoint is checked electrically for this power operated relief valve.
15. Opening pressure setpoint is tested with steam and hydraulic assist. Atmospheric back pressure is present before discharging.
16. Opening pressure setpoint is tested with gas. Atmospheric back pressure is present before discharging.
17. Valve is part stroke exercised in Mode 1 at 3 month intervals and full stroked in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
18. Valve cannot be stroked during operation as this would require depressurizing the reactor coolant system. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
19. Valve cannot be stroked during operation without spraying contaminated water into the containment. Valve is therefore part stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520. Relief from the requirement to full stroke exercise the valve has been sought in BG&E letter dated 11/2/77 from Lundvall to Davis.
20. Valve is full stroke tested each month in Mode 1.
21. Valve is part stroke exercised in Mode 1 each month and full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
22. Valve is full stroke exercised in Mode 1 at 3 month intervals.
23. Valve cannot be stroked during operation without flooding the containment floor. Therefore the valve is part stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520. Relief from the requirement to full stroke exercise the valve has been sought by BG&E letter dated 11/2/77 from Lundvall to Davis.
24. Valve cannot be stroked during operation without requiring operators to enter a high radiation area within the containment. Man rem exposure if the valves were stroked during operation would be 250 mrem gamma and 500 mrem neutron. Therefore, valve is full stroked exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
25. Category A valves will be leak tested at the same frequency as scheduled refueling outages but not less than once every two years. Valves will be tested by the pressure decay method.
26. Valve cannot be stroked during operation without depressurizing the safety injection tanks. Valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3410.

ENCLOSURE 2 (CONT'D)

27. Valve opens on a Safety Injection Actuation Signal.
28. Valve opens when reactor coolant system exceeds 300 psia.
29. Valve shuts on a Safety Injection Actuation Signal.
30. Valve shuts when reactor coolant system pressure exceeds 300 psia.
31. Valve shuts on a Recirculation Actuation Signal.
32. Valve opens on a Recirculation Actuation Signal.
33. Valve is tested at 60 month intervals.
34. Exercising this valve requires personnel access to high radiation areas within the containment during plant operation. Man rem exposure if the valves were stroked during operation would be greater than 100 mrem gamma and 50 mrem neutron. Therefore, the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IXV-3520.
35. Exercising this valve requires injecting concentrated boric acid directly into the reactor coolant system. The resulting rapid power decrease would unnecessarily hazard plant reliability. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.
36. Valve shuts on a chemical and volume control system isolation signal.
37. Valve shuts on a containment isolation signal.
38. Valve opens when pressurizer pressure exceeds pressure setpoint by 50 psia.
39. Valve shuts on a containment radiation signal.
40. Exercising this normally open valve would require a cessation of feedwater flow to the steam generator. Therefore the valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3410.
41. A full stroke test of this normally open valve would require a cessation of feedwater flow to the steam generator. Therefore the valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3410.
42. Valve shuts on a steam generator isolation signal.
43. Full stroke exercising of this valve during plant operation would require feeding hot steam generators with cold feedwater thereby thermally shocking the auxiliary feedwater ring within the steam generator. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.

ENCLOSURE 2 (CONT'D)

44. Exercising this valve during plant operation would require feeding hot steam generators with cold feedwater thereby thermally shocking the auxiliary feedwater ring within the steam generator. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
45. Valve cannot be full stroke tested during plant operation. Therefore the valve is partial stroke tested in Mode 1 at 3 month intervals and full stroke tested in Mode 5 as allowed by Section XI Article IWV-3410.
46. Valve shuts when steam generator blowdown radiation monitor alarms.
47. Valve returns to auto on a recirculation actuation signal.
48. Valve opens on a containment spray actuation signal.
49. Valve cannot be stroked during operation without stopping all charging pumps. This would place excessive cycles on starting and stopping charging and letdown. Therefore valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
50. Valve is normally open during plant operation. Test is conducted by applying pressure downstream of the valve and verifying that downstream pressure remains higher than upstream pressure.
51. Exercising this valve requires personnel access to high radiation areas within the containment during plant operation. Man rem exposure if the valves were stroked during operation would be 1.5 rem gamma and 500 mrem neutron. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3410. One half hour per valve.
52. Valve is normally closed during plant operation. Flow is initiated while conducting inservice test of associated equipment. Valve is verified open by observation in normal equipment operation.
53. Valve is full stroke tested on a weekly basis.
54. Valve is normally closed during plant operation. Flow is initiated through the valve while conducting the inservice test of its associated pump. Valve is verified open by observation of normal steam turbine performance.
55. Valve is locked shut during plant operation and is not required to open to perform any safety related function. Relief from the requirement to exercise the valve is currently being sought.
56. Valve is shut during plant operation and is not required to open to perform any safety related function. Relief from the requirement to exercise the valve is currently being sought.

ENCLOSURE 2 (CONT'D)

57. Exercising this valve requires isolating instrument air to the containment thereby failing numerous air operated valves. Although control of these valves is not required during an accident, it is required for normal reactor operation. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3520.
58. Valve cannot be stroked during plant operation without securing charging and letdown. As this would unnecessarily hazard plant reliability the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3410.
59. Valve is tested at 18 month intervals. The test includes a channel calibration of the actuation channel. A channel functional test, excluding valve operation, is performed within 31 days prior to entering a condition when this valve is required to serve as an MPT relief, and every 31 days thereafter when valve is required to be operable.
60. Valve opens on a safety injection actuation signal and/or under-voltage on 4KV emergency bus.
61. Valve is required to prevent draining safety injection tank when the reactor coolant system is depressurized for maintenance. Valve is locked open and power is removed from valve operator during operation. Valve position before and after operation is logged. Section XI Article IWB-3700 requires no regular testing for such valves.
62. Valve cannot be stroked during plant operation without requiring operators to enter a high radiation area within the containment. Man rem exposure if the valve was stroked during operation would be 250 mrem gamma and 500 mrem neutron. Therefore the valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3410. One hour per valve.
63. Valve cannot be stroked during plant operation without stopping RCP seal bleed off flow reducing RCP seal reliability. Valve is full stroke tested on Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3410.
64. Valve cannot be stroked during operation without inducing a pressure transient on the reactor coolant system which would reduce plant reliability. Valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3410.
65. Exercising this valve during operation requires that one salt water header be placed out of service which would simultaneously place one service water header and component cooling heat exchanger out of service, thus placing 2 containment coolers, 1 diesel generator and 1 ECCS pump room air cooler out of service and reducing the reliability of one HPSI pump, one LPSI pump, and all reactor coolant pumps. Therefore valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWB-3410.

Enclosure 2

Replace pages 4, 9, 28, 30, 31, and 33 of enclosure 2 of letter dated May 1, 1930, from Mr. A.E. Lundvall, Jr., to Mr. R.W. Reid with enclosed revised pages dated 1/14/31.

CALVERT CLIFFS UNIT NO. 2 - INSERVICE TEST PROGRAM - VALVES

VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI * CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCK (SEE NOTES)
SI-463	SI LEAKOFF TO RWT ISO.	M-462	A-5	2	A-2	NA	4,6,53	NA	NA
SI-352	SHUTDOWN COOLING HX RECIRC	M-462	C-6	2	B-2	NA	4	NA	NA
SI-325	22 CNTMT SPRAY HDR MANUAL ISO	M-462	H-5	2	B-2	NA	4	NA	NA
SI-432	22 LPSI PP SUCT ISO.	M-462	H-13	2	B-2	NA	4	NA	NA
SI-491	21B SI TK. NITROGEN INLET CHK.	M-462	B-3	2	C-1	22	3	NA	NA
SI-440	22 LPSI PP SUCT FROM SDC HDR.	M-462	G-13	2	B-2	NA	4	NA	NA
SI-451	22 LPSI PP MIN FLOW RECIRC CHK.	M-462	G-13	2	C-1	20	7	NA	NA
SI-492	21A SI TK. NITROGEN INLET CHK.	M-462	C-3	2	C-1	22	3	NA	NA
SI-452	21 SHUTDOWN COOLING HX INLET XCONN.	M-462	C-9	2	B-2	NA	4	NA	NA
SI-453	22 SHUTDOWN COOLING HX INLET XCONN	M-462	G-0	2	B-2	NA	4	NA	NA
SI-455	SI LEAKOFF RETURN HDR. BACKUP ISO.	M-462	A-5	2	A-2	NA	4,6,53	NA	NA
SI-493	22B SI TK. NITROGEN INLET CHK.	M-462	E-3	2	C-1	22	3	NA	NA
SI-494	22A SI TK. NITROGEN INLET CHK.	M-462	F-3	2	C-1	22	3	NA	NA
SI-4146	RWT OUTLET CHECK	M-462	B-11	2	C-1	17	1	NA	NA
SI-4147	RWT OUTLET CHECK	M-462	C-11	2	C-1	17	1	NA	NA
SI-4148	CNTMT SUMP OUTLET CHECK	M-462	J-8	2	C-1	23	8	NA	NA
SI-4149	CNTMT SUMP OUTLET CHECK	M-462	J-8	2	C-1	23	8	NA	NA
SI-4153	RWT RECIRC. PP DISCH. CHECK	M-462	D-13	2	C-1	22	9	NA	NA

CALVERT CLIFFS UNIT NO. 2 - INSERVICE TEST PROGRAM - VALVES

VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI * CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOC (SEE NOTE)
CVC-187	LOOP 21A CHG. LINE CHECK VALVE	M-461	F-3	2	C-1	34	9	NA	NA
CVC-217	21 BORIC ACID PP DISCH. CHK. VLV.	M-461	H-8	2	C-1	17	1,3	NA	NA
CVC-222	22 BORIC ACID PP DISCH. CHK. VLV.	M-461	G-12	2	C-1	17	1,3	NA	NA
CVC-228	CONC. B. A. TANK GRAVITY FEED CHECK VALVE	M-461	J-5	2	C-1	35	1	NA	NA
CVC-235	B.A. PUMP DIRECT FEED CHK. VLV.	M-461	G-6	2	C-1	35	1	NA	NA
CVC-501-MOV	VCT OUTLET ISO.	M-461	E-4	2	B-1	56	10	30.0	NA
CVC-508-MOV	22 CONC. BA TANK GRAVITY FEED STOP	M-461	G-13	2	B-1	22	10	20.0	27
CVC-509-MOV	21 CONC BA TANK GRAVITY FEED STOP	M-461	H-8	2	B-1	22	10	20.0	27
CVC-510-CV	21 BA PP RECIRC. STOP	M-461	G-8	2	B-1	22	10	30.0	29
CVC-511-CV	22 BA PP RECIRC. STOP	M-461	G-11	2	B-1	22	10	30.0	29
CVC-514-MOV	BORIC ACID DIRECT FEED STOP	M-461	G-6	2	B-1	22	10	20.0	27
CVC-515-CV	LETDOWN STOP	M-461	F-1	1	A-1	56	6,10	13.0	29,36
CVC-516-CV	LETDOWN STOP	M-461	F-2	1	A-1	56	6,10	13.0	29,36
CVC-517-CV	AUX. SPRAY LINE STOP	M-461	D-3	1	A-1	56	6,10	13.0	NA
CVC-518-CV	LOOP 22B CHG. LINE STOP	M-461	E-3	1	A-1	22	6,10	24.0	NA
CVC-519-CV	LOOP 21A CHG. LINE STOP	M-461	F-3	1	A-1	22	6,10	18.0	NA
CVC-505	RCP SEAL LEAKOFF ISO.	M-461	D-4	2	A-1	62	6,10	7.0	37
CVC-506	RCP SEAL LEAKOFF ISO.	M-461	D-3	2	A-1	62	6,10	7.0	37

CALVERT CLIFFS UNIT NO. 2 - INSERVICE TEST PROGRAM - VALVES

VALVE DESIGNATION	DESCRIPTION	P&ID	CO-ORD	ASME CLASS	SECTION XI * CATEGORY	TEST FREQUENCY (SEE NOTES)	TEST TYPE (SEE NOTES)	STROKE TIME (SECONDS)	INTERLOCKS (SEE NOTES)
SFP-179	21 REFUELING POOL INLET ISO.	M-58	A-8	3	A-2	NA	4,6,53	NA	NA
SFP-180	21 REFUELING POOL OUTLET	M-58	B-10	3	A-2	NA	4,6,53	NA	NA
SFP-182	21 REFUELING POOL OUTLET	M-58	C-9	3	A-2	NA	4,6,53	NA	NA
SFP-184	21 REFUELING POOL SKIMMER	M-58	B-8	3	A-2	NA	4,6,53	NA	NA
SFP-186	21 REFUELING POOL COMBINED OUTLET	M-58	C-9	3	A-2	NA	4,6,53	NA	NA
SFP-387	PLANT HEATING CNTMT INLET CHK.	Sh.2 M-71	B-11	3	AC-1	NA	4,6,54	NA	NA
SFP-142	EXT. STM CNTMT ISO.	Sh.2 M-77	B-8	3	A-2	NA	4,6,53	NA	NA
SFP-143	EXT. STM CNTMT ISO.	Sh.2 M-77	B-8	3	A-2	NA	4,6,53	NA	NA
RC-400-CV	QUENCH TANK VENT VALVE	M-460	B-11	3	B-1	64	10	15.0	NA
RC-401-CV	QUENCH TANK DRAIN VALVE	M-460	C-10	3	B-1	64	10	24.0	NA
PS-5464-CV	RC SAMPLE CUT OFF VALVE	M-66	B-9	1	A-1	22	6,10	7.0	37
DSA-4838-SV	21 DG STARTING AIR VALVE	M-69	A-10	2	B-1	49	10	10	50
DSA-4839-SV	21 DG STARTING AIR VALVE	M-69	A-10	2	B-1	49	10	10	50
CVC-512-CV	MAKE UP STOP	M-461	D-5	2	B-1	22	10	30.0	29

14. MPT opening pressure setpoint is checked electrically for this power operated relief valve.
15. Opening pressure setpoint is tested with steam and hydraulic assist. Atmospheric back pressure is present before discharging.
16. Opening pressure setpoint is tested with gas. Atmospheric back pressure is present before discharging.
17. Valve is part stroke exercised in Mode 1 at 3 month intervals and full stroked in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
18. Valve cannot be stroked during operation as this would require depressurizing the reactor coolant system. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
19. Valve cannot be stroked during operation without spraying contaminated water into the containment. Valve is therefore part stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520. Relief from the requirement to full stroke exercise the valve has been sought in BG&E letter dated 11/2/77 from Lundvall to Davis.
20. Valve is full stroke tested each month in Mode 1.
21. Valve is part stroke exercised in Mode 1 each month and full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
22. Valve is full stroke exercised in Mode 1 at 3 month intervals.
23. Valve cannot be stroked during operation without flooding the containment floor. Therefore the valve is part stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520. Relief from the requirement to full stroke exercise the valve has been sought by BG&E letter dated 11/2/77 from Lundvall to Boyd.
24. Valve cannot be stroked during operation without requiring operators to enter a high radiation area within the containment. Man rem exposure if the valves were stroked during operation would be 250 mrem gamma 500 mrem neutron. Therefore, valve is full stroked exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWV-3520.
25. Category A valves will be leak tested at the same frequency as scheduled refueling outages but not less than once every two years. Valves will be tested by the pressure decay method.
26. Valve cannot be stroked during operation without depressurizing the safety injection tanks. Valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article-3410.
27. Valve opens on a Safety Injection Actuation Signal.

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28. Valve opens when Reactor Coolant System exceeds 300 psia.
29. Valve shuts on a Safety Injection Actuation Signal.
30. Valve shuts when Reactor Coolant System pressure exceeds 300 psia.
31. Valve shuts on a Recirculation Actuation Signal.
32. Valve opens on a Recirculation Actuation Signal.
33. Valve is tested at 60 month intervals.
34. Exercising this valve requires personnel access to high radiation areas within the containment during plant operation. Man rem exposure if the valves were stroked during operation would be greater than 100 mrem gamma and 50 mrem neutron. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.
35. Exercising this valve requires injecting concentrated boric acid directly into the Reactor Coolant System. The resulting rapid power decrease would unnecessarily hazard plant reliability. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.
36. Valve shuts on a chemical and volume control system isolation signal.
37. Valve shuts on a containment isolation signal.
38. Valve opens when pressurizer pressure exceeds pressure setpoint by 50 psia.
39. Valve shuts on a containment radiation signal.
40. Exercising this normally open valve would require a cessation of feedwater flow to the steam generator. Therefore, the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.
41. A full stroke test of this normally open valve would require a cessation of feedwater flow to the steam generator. Therefore the valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3410.
42. Valve shuts on a steam generator isolation signal.
43. Full stroke exercising of this valve during plant operation would require feeding hot steam generators with cold feedwater thereby thermally shocking the auxiliary feedwater ring within the steam generator. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.
44. Exercising this valve during plant operation would require feeding hot steam generators with cold feedwater thereby thermally shocking the auxiliary feedwater ring within the steam generator. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IIV-3520.

59. Valve is tested at 18 month intervals. This test includes a channel calibration of the actuation channel. A channel functional test, excluding valve operation, is performed within 31 days prior to entering a condition when this valve is required to serve as an MPT relief, and every 31 days thereafter when valve is required to be operable.
60. Valve is required to prevent draining safety injection tank when the Reactor Coolant System is depressurized for maintenance. Valve is locked and power is removed from valve operation during operation. Valve position before and after operation is logged. Section XI Article IWR-3700 requires no regular testing for such valves.
61. Valve cannot be stroked during plant operation without requiring operators to enter a high radiation area within the containment. Man rem exposure if the valve was stroked during operation would be 250 mrem gamma and 500 mrem neutron. Therefore the valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
62. Valve cannot be stroked during plant operation without stopping RCP seal bleed-off flow reducing RCP seal reliability. Valve is full stroke tested in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
63. Valve cannot be stroked during operation without inducing a pressure transient on the Reactor Coolant System which would reduce plant reliability. Valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
64. Exercising this valve requires personnel access to high radiation areas within the containment during plant operation. Man rem exposure if the valves were stroked during operation would be 1.5 rem gamma and 500 mrem neutron. Therefore the valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
65. Exercising this valve during operation requires that one salt water header be placed out of service which would simultaneously place one service water header and component cooling heat exchanger out of service, thus placing 2 containment coolers, 1 diesel generator and 1 ECCS pump room air cooler out of service and reducing the reliability of one HPSI PUMP, one LPSI PUMP, and all reactor coolant pumps. Therefore valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
66. Exercising this valve during operation would stop cooling water flow to the Reactor Coolant Pumps and other vital equipment reducing plant reliability. Valve is full stroke exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.
67. Exercising this valve during operation would stop cooling water flow to the main turbine auxiliaries and other vital secondary plant equipment reducing plant reliability. Valve is full stroked exercised in Mode 5 at 3 month intervals as allowed by Section XI Article IWR-3410.

Enclosure 2

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