TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

January 17, 1984

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Chief
Licensing Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Ms. Adensam:

In the Matter of the Application of	)	Docket Nos. 50-390
Tennessee Valley Authority	)	50-391

Please refer to my letter to you dated November 7, 1983 which provided TVA's responses to several of the items concerning the Watts Bar Nuclear Plant (WBN) equipment qualification program for which the NRC had requested additional information/clarification.

A conference call was held between TVA, NRC, and EG&G representatives on December 12, 1983 to discuss several aspects of the referenced TVA submittal. During this conference call, TVA was requested to provide the following information to supplement its previous submittal; (1) a list of the electrical equipment included in the WBN electrical equipment qualification program which has been identified as Category 'C,' as defined by the guidelines of Appendix E to NUREG-0588, and the equipment's corresponding function(s), (2) a list of the electrical equipment located inside containment which could be subjected to post-LOCA submergence, and (3) a revised table 3.11 of the Environmental Qualification (EQ) report which clearly identifies, for the electrical equipment required to operate for less than one hour, the actual time margin applied during qualification testing. NRC noted that submittal of this information would be required before an audit of the qualification files could be performed.

A subsequent conference call was held between TVA/NRC representatives on January 10, 1984 to further discuss the NRC's informal request for additional information and its impact upon the scheduling of the audit. To expedite the scheduling of the audit, it was agreed that TVA would submit the following information; (1) a draft list (approximately 95-percent complete) of the Category 'C' electrical equipment, (2) a list of the electrical equipment located inside containment which would be subjected to post-LOCA submergence, and (3) verification that the minimum one-hour time margin was applied for the applicable equipment identified in table 3.11 of the EQ report; also, justifications for any exceptions to the minimum one-hour time margin application. TVA noted that the complete list of Category 'C' equipment along with the identification of the equipment's function(s) would be available for NRC review at the time of the audit. It was also noted, by NRC, that a conference call would be scheduled approximately one week after NRC receipt of the requested information to discuss any outstanding issues and to establish a date for the NRC audit.

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Director of Nuclear Reactor Regulation January 17, 1984

In accordance with the January 10, 1984 conference call, enclosed is additional information on the WBN equipment qualification program.

If you have any questions concerning this matter, please get in touch with D. B. Ellis at FTS 858-2681.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

L. M. Mills, Manager
Nuclear Licensing

Sworn to and subscribed before me
this 17th day of January 1984

Paulette H. White

Notary Public
My Commission Expires 9-5-84

Enclosure
cc: U.S. Nuclear Regulatory Commission (Enclosure)
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Category "C" Component List

Component	Function
1,2-PT -001-001C	SG 1 MAIN STEAM PRESS
1,2-HS -001-004B	SG 1 MAIN STM HDR ISO VLV TEST TR-A
1,2-HS -001-004D	SG 1 MAIN STM HDR ISO VLV TEST TR-B
1,2-ZS -001-004F	SG 1 MAIN STM ISOL VLV TR-A TEST SOL VLV POS
1,2-ZS -001-004J	SG 1 MAIN STM ISOL VLV TR-A TEST SOL VLV POS
1,2-FCV -001-007 (LS)	SG 1 BLOWDOWN FLOW CONTROL VLV
1,2-PT -001-008C	SG 2 MAIN STEAM PRESS
1,2-HS -001-011B	SG 2 MAIN STM HDR ISO VLV TEST TR-A
1,2-HS -001-011D	SG 2 MAIN STM HDR ISO VLV TEST TR-B
1,2-ZS -001-011F	SG 2 MAIN STM ISOL VLV TR-A TEST SOL VLV POS
1,2-FCV -001-014 (LS)	SG 2 BLOWDOWN HDR FLOW CONTROL VLV
1,2-PT -001-019C	SG 3 MAIN STEAM PRESS
1,2-FCV -001-022	SG 3 MAIN STM HDR ISOLATION VLV
1,2-HS -001-022B	SG 3 MAIN STM HDR ISO VLV TEST TR-A
1,2-HS -001-022D	SG 3 MAIN STM HDR ISO VLV TEST TR-B
1,2-ZS -001-022F	SG 3 MAIN STM ISOL VLV TR-A TEST SOL VLV POS
1,2-ZS -001-022J	SG 3 MAIN STM ISOL VLV TR-B TEST SOL VLV POS
1,2-FCV -001-025 (LS)	SG 3 BLOWDOWN HDR FLOW CONTROL VLV
1,2-PT -001-026C	SG 4 MAIN STEAM PRESS
1,2-FCV -001-029	SG 4 MAIN STM HDR ISOLATION VLV
1,2-HS -001-029B	SG 4 MAIN STM HDR ISO VLV TEST TR-A
1,2-HS -001-029D	SG 4 MAIN STM HDR ISO VLV TEST TR-B
1,2-ZS -001-029F	SG 4 MAIN STM ISOL VLV TR-A TEST SOL VLV POS
1,2-ZS -001-029J	SG 4 MAIN STM ISOL VLV TR-B TEST SOL VLV POS
1,2-FCV -001-032 (LS)	SG 4 BLOWDOWN HDR FLOW CONTROL VLV

Component	Function
0-FCV -026-126	HPFP TR-A HDR FLOW CONT VALVE TO AUX BLDG
0-HS -026-126B	HPFP AUX BLDG TR-A HDR VALVE
0-FCV -026-127	HPFP TR-B HDR FLOW CONT VALVE TO AUX BLDG
0-HS -026-127B	HPFP TR-B HDR FLOW CONT SW

Component	Function
1,2-FS -030-074A/B	LOWER COMPT COOL UNIT A-A FLOW
1,2-HS -030-074B	LOWER COMPT COOL UNIT A-A
1,2-FS -030-074C/D	LOWER COMPT COOL UNIT A-A FLOW
1,2-FS -030-074D/C	LOWER COMPT COOL UNIT A-A FLOW
1,2-FS -030-075A/B	LOWER COMPT COOL UNIT B-B
1,2-HS -030-075B	LOWER COMPT COOL UNIT B-B
1,2-FS -030-075C/D	LOWER COMPT COOL UNIT B-B FLOW
1,2-FS -030-075D/C	LOWER COMPT COOL UNIT B-B FLOW
1,2-FS -030-077A/B	LOWER COMPT COOL UNIT C-A
1,2-HS -030-077B	LOWER COMPT COOL UNIT C-A
1,2-FS -030-077C/D	LOWER COMPT COOL UNIT C-A FLOW
1,2-FS -030-077D/C	LOWER COMPT COOL UNIT C-A FLOW
1,2-FS -030-078A/B	LOWER COMPT COOL UNIT D-B
1,2-HS -030-078B	LOWER COMPT COOL UNIT D-B
1,2-FS -030-078C/D	LOWER COMPT COOL UNIT D-B FLOW
1,2-FS -030-078D/C	LOWER COMPT COOL UNIT D-B FLOW
1,2-TS -030-080	CRD COOL UNIT TEMP CONT
1,2-FS -030-080A/B	CRD COOL UNIT D-B FLOW ALM
1,2-HS -030-080B	CRD COOL UNIT D-B FAN CNTL
1,2-FS -030-080B/A	CRD COOL UNIT D-B FLOW
1,2-TCO -030-081 (LS)	CRD COOL UNIT D-B SUCT DMPR
1,2-TSV -030-081	CRD COOL UNIT D-B SUCT DMPR
1,2-TCO -030-082 (LS)	CRD COOL UNIT D-B RM DIV DMPR
1,2-TSV -030-082	CRD COOL UNIT D-B RM DIV DMPR
1,2-TS -030-083	CRD COOL UNIT TEMP CONT
1,2-FS -030-083A/B	CRD COOL UNIT A-A FLOW ALM
1,2-HS -030-083B	CRD COOL UNIT A-A FAN CNTL
1,2-FS -030-083B/A	CRD COOL UNIT A-A FLOW
1,2-TCO -030-084 (LS)	CRD COOL UNIT A-A SUCT DMPR
1,2-TSV -030-084	CRD COOL UNIT A-A SUCT DMPR
1,2-TCO -030-085 (LS)	CRD COOL UNIT A-A RM DIV DMPR
1,2-TSV -030-085	CRD COOL UNIT A-A RM DIV DMPR
1,2-TS -030-088	CRD COOL UNIT TEMP CONT
1,2-FS -030-088A/B	CRD COOL UNIT C-A FLOW ALM
1,2-HS -030-088B	CRD COOL UNIT C-A FAN CNTL
1,2-FS -030-088B/A	CRD COOL UNIT C-A FLOW
1,2-TCO -030-089 (LS)	CRD COOL UNIT C-A SUCT DMPR
1,2-TSV -030-089	CRD COOL UNIT C-A SUCT DMPR
1,2-TCO -030-090 (LS)	CRD COOL UNIT C-A RM DIV DMPR
1,2-TSV -030-090	CRD COOL UNIT C-A RM DIV DMPR
1,2-TS -030-092	CRD COOL UNIT TEMP CONT
1,2-FS -030-092A/B	CRD COOL UNIT B-B FLOW ALM
1,2-HS -030-092B	CRD COOL UNIT B-B FAN CNTL
1,2-FS -030-092B/A	CRD COOL UNIT B-B FLOW
1,2-TCO -030-093 (LS)	CRD COOL UNIT B-B SUCT DMPR
1,2-TSV -030-093	CRD COOL UNIT B-B SUCT DMPR

Component	Function
1,2-TCO -030-094 (LS)	CRD COOL UNIT B-B RM DIV DMPR
1,2-TSV -030-094	CRD COOL UNIT B-B RM DIV DMPR
2-ZS -030-157A	AUX BLDG GAS TMT FAN B-B EXH DMPR POS SW
2-ZS -030-157B	AUX BLDG GAS TMT FAN B-B EXH DMPR POS SW
1,2-TS -030-175	RHR PUMP RM CLRS FAN A-A
1,2-TS -030-176	RHR PUMP RM CLRS FAN B-B
1,2-TS -030-177	CS PUMP RM CLRS FAN A-A
1,2-TS -030-178	CS PUMP RM CLRS FAN B-B
1,2-TS -030-179	SIS PUMP RM CLRS FAN B-B
1,2-TS -030-180	SIS PUMP RM CLRS FAN A-A
1,2-TS -030-182	CHG PUMP RM CLRS FAN B-B
1,2-TS -030-183	CHG PUMP RM CLRS FAN A-A
2-TS -030-200	EMERG GAS TMT SYS CLRS FAN A-A
2-TS -030-207	EMERG GAS TMT SYS CLRS FAN B-B
1,2-PT -030-310	CONTAINMENT PRESSURE TRANSMITER
1,2-PT -030-311	CONTAINMENT PRESSURE TRANSMITER
1,2-MTR -030-074	LOWER COMPT COOLER UNIT A-A
1,2-MTR -030-075	LOWER COMPT COOLER UNIT B-B
1,2-MTR -030-077	LOWER COMPT COOLER UNIT C-A
1,2-MTR -030-078	LOWER COMPT COOLER UNIT D-B
1,2-MTR -030-080/1	CRD COOLER UNIT D-B
1,2-MTR -030-080/2	CRD COOLER UNIT D-B
2-MTR -030-083	CRD MECHANICAL COOLER FAN A-A MOTOR
1,2-MTR -030-083/1	CRD COOLER UNIT A-A
1,2-MTR -030-083/2	CRD COOLER UNIT A-A
1,2-MTR -030-088/1	CRD COOLER UNIT C-A
1,2-MTR -030-088/2	CRD COOLER UNIT C-A
1,2-MTR -030-092/1	CRD COOLER UNIT B-B
1,2-MTR -030-092/2	CRD COOLER UNIT B-B

Component	Function
0-LS -031-071	SHTDN BD RM CHILL A-A COMP TK LEVEL
0-PDIS-031-101	SHTDN BD RMS A&B CHIL A-A PMP DIF PRESS
0-PDIS-031-131	SHTDN BD RMS A&B CHIL B-B PMP DIFF P
0-LS -031-147	SHTDN BD RM CHILLER B-B COMP TK
0-PDIS-031-161	MCR CHILLER A-A PUMP DIFF PRESS
0-LS -031-170	MCR CHILLER A-A COMP TK LEVEL
0-PDIS-031-186	MCR CHILLER B-B PUMP DIFF PRESS
0-LS -031-195	MCR CHILLER B-B COMP TK LEVEL
0-LS -031-116	SHTDN BD RM A&B CHILLER A-A MAKEUP WATER
0-LS -031-146	SHTDN BD RM A&B CHILLER B-B MAKEUP WATER
0-LS -031-173	MCR CHILLER A-A MAKEUP WATER
0-LS -031-198	MCR CHILLER B-B MAKEUP WATER

Component	Function
1,2-HS -043-002A	LOCA CNTMT ISOLATION RESET SW
1,2-FCV -043-054D (LS)	STM GEN NO. 1 SAMPLE CNTMT ISOLATION VLV
1,2-FCV -043-056D (LS)	STM GEN NO. 2 SAMPLE CNTMT ISOLATION VLV
1,2-FCV -043-059D (LS)	STM GEN NO. 3 SAMPLE CNTMT ISOLATION VLV
1,2-FCV -043-063D (LS)	STM GEN NO. 4 SAMPLE CNTMT ISOLATION VLV
1,2-PDS -043-200	LOCA H2 CNTMT MONITOR PRESS DIFF SWITCH
1,2-PDS -043-210	LOCA H2 CNTMT MONITOR PRESS DIFF SWITCH
1,2-FCV -043-201A (LS)	LOCA H2 MONITOR CNTMT ISOL
1,2-FCV -043-202A (LS)	LOCA H2 MONITOR CNTMT ISOL
1,2-FCV -043-207B (LS)	LOCA H2 MONITOR CNTMT ISOL
1,2-FCV -043-208B (LS)	LOCA H2 MONITOR CNTMT ISOL

Component	Function
1,2-FCV -062-059	EXCESS LETDOWN DIV FLOW CONT
1,2-FSV -062-059	EXCESS LETDOWN DIV FLOW CONT
1,2-FSV -062-069A	RC LOOP 3 LETDOWN FLOW
1,2-FSV -062-070	RC LOOP 3 LETDOWN FLOW
1,2-FCV -062-076 (LS)	REGEN HT EXCH LETDOWN ISO VLV
1,2-TCV -062-079 (LS)	LETDOWN FLOW TEMP DIVERSION CONT VLV
1,2-TSV -062-079	LETDOWN FLOW TEMP DIVERSION CONT
1,2-FCV -062-084 (LS)	CHARGING FLOW TO RCS SPRAY
1,2-FSV -062-084	CHARGING FLOW TO RCS SPRAY
1,2-FCV -062-085 (LS)	CHARGING FLOW RCS CL LOOP 1
1,2-FSV -062-085	CHARGING FLOW RCS CL LOOP 1
1,2-FCV -062-086 (LS)	CHARGING FLOW RCS CL LOOP 4
1,2-FSV -062-086	CHARGING FLOW RCS CL LOOP 4
1,2-LSV -062-118A	DIVERSION FLOW TO HOLDUP TANKS
1,2-LSV -062-118B	DIVERSION FLOW TO HOLDUP TANKS
1,2-HS -062-138B	EMERGENCY BORATION FLOW CONT VLV
1,2-FSV -062-140A	BORIC ACID TO BLENDER FLOW CONT
1,2-FSV -062-140B	BORIC ACID TO BLENDER FLOW CONT
1,2-HS -062-230B	BA TRANS PUMP 1A-A CONTROL
1,2-HS -062-232B	BA TRANS PUMP 1B-B CONTROL
1,2-HS -062-239	BORIC ACID TANK A CONT
1,2-TIT -062-239	BORIC ACID TANK NO. A TEMP CONT
1,2-HS -062-239A	BORIC ACID TANK A HTR A CNTL
1,2-HS -062-239B	BORIC ACID TANK A TEMP ALARM
1,2-HS -062-239D	BORIC ACID TANK A LO TEMP ALARM
0-HS -062-243	BA TANK C HTR A CONTROL
0-TIT -062-243	BA TANK C HTR A TEMP CONT
0-TS -062-243A	BORIC ACID TANK C HTR A CNTL
0-TS -062-243B	BORIC ACID TANK C HIGH TEMP ALM
0-TS -062-243D	BORIC ACID TANK C LOW TEMP ALM
1,2-PS -062-244	AUX OIL PUMP B-B CHG B-B CNTL
1,2-HS -062-245	BA TANK A HTR B CONT
1,2-TIT -062-245	BA TANK A HTR B TEMP CONT
1,2-TS -062-245A	BORIC ACID TANK A HTR B CNTL
1,2-TS -062-245B	BORIC ACID TANK A TEMP HIGH
1,2-TS -062-245D	BORIC ACID TANK A TEMP LOW
0-HS -062-246	BA TANK C HTR B CONT
0-TIT -062-246	BA TANK C HTR B TEMP CONT
0-TS -062-246A	BORIC ACID TANK C HTR B CNTL
0-TS -062-246B	BORIC ACID TANK C HIGH TEMP ALM
0-TS -062-246D	BORIC ACID TANK C LOW TEMP ALM
1,2-PS -062-247	AUX OIL PUMP A-A CHG PUMP A-A CNTL
1,2-FSV -062-059 (LS)	EXCESS LETDOWN DIV FLOW CONT
1,2-FSV -062-140B (LS)	BORIC ACID MAKEUP
1,2-FSV -062-079	EXCESS LETDOWN DIVERSION FLOW CONTROL
1,2-TCV -062-118A (LS)	DIVERSION FLOW TO HOLDUP TANKS

Component	Function
1,2-TCV -062-118B (LS)	DIVERSION FLOW TO HOLDUP TANKS
1,2-HTR -062-239	BORIC ACID HEATERS
0-HTR -062-243	BORIC ACID HEATERS
1,2-HTR -062-245	BORIC ACID HEATERS
0-HTR -062-246	BORIC ACID HEATERS
1,2-HTR -062-AOP-A	AUX OIL PUMPS FOR CENTRIFUGAL CHARGING PUMPS
1,2-HTR -062-AOP-B	AUX OIL PUMPS FOR CENTRIFUGAL CHARGING PUMPS

Component	Function
1,2-FCV -063-067	SIS ACCUM TK 4 FLOW ISOLATION VLV
1,2-FCV -063-080	SIS ACCUM TK 3 FLOW ISOL VLV
1,2-ZS -063-080B	SIS ACCUM TK 3 FLOW ISOLATION VLV
1,2-FCV -063-098	SIS ACCUM TK 2 FLOW ISOL VLV
1,2-ZS -063-098B	SIS ACCUM TK 2 FLOW ISOL VLV
1,2-FCV -063-118	SIS ACCUM TK 1 FLOW ISOLATION VLV
1,2-ZS -063-118B	SIS ACCUM TK 1 FLOW ISOL VLV
1,2-ZS -063-036	SIS BORON INJ TANK SWT
1,2-ZS -063-037B	SIS BORON INJ TANK SWT

Component	Function
2-FCV -065-007 (LS)	EGTS TRAIN A UNIT 2 SUCT
2-FCV -065-008 (LS)	EGTS TRAIN A UNIT 2 SUCT
2-FCV -065-009 (LS)	EGTS TRAIN A UNIT 2 SUCT
2-ME -065-016	EGTS TRAIN A MOISTURE LEVEL
0-MM -065-016	EGTS TRAIN A MOISTURE LEVEL
2-FCV -065-029 (LS)	EGTS TRAIN B UNIT 2 SUCT
0-ME -065-036	EGTS TRAIN B MOISTURE LEVEL
0-MM -065-036	EGTS TRAIN B MOISTURE LEVEL
0-FCV -065-043 (LS)	EGTS TRAIN B FAN B-B ISLN VLV
0-FCV -065-047A (LS)	EGTS TRAIN B DECAY COOL VLV A
0-FCV -065-047B (LS)	EGTS TRAIN B DECAY COOL VLV B
2-FCV -065-050 (LS)	EGTS TRAIN B UNIT 2 SUCT
0-FCV -065-051 (LS)	EGTS TRAIN B UNIT 1 SUCT
1,2-HS -065-080	CNTMT ANNULUS DP
1,2-PCV -065-081 (LS)	SHIELD BLDG VENT & CNTMT ANNULUS ISOL VLV
1,2-HS -065-082	CNTMT ANNULUS DP
1,2-PCV -065-083 (LS)	SHIELD BLDG VENT & CNTMT ANNULUS ISOL VLV
1,2-PCV -065-086 (LS)	EGTS CNTMT ANNULUS ISOL VLV
1,2-PCV -065-087 (LS)	EGTS CNTMT ANNULUS ISOL VLV
1,2-HS -065-090	CNTMT ANNULUS DP
1,2-HS -065-097	CNTMT ANNULUS DP
0-FCV -065-045 (LS)	SHIELD BLDG EXH A
0-FCV -065-046 (LS)	SHIELD BLDG EXH B
2-FCO -065-009 (LS)	EGTS TRAIN A UNIT 2 SUCT
2-FCO -065-029 (LS)	EGTS TRAIN B UNIT 2 SUCT
2-FCO -065-050 (LS)	EGTS TRAIN B UNIT 2 SUCT
2-FCV -065-028A (LS)	EGTS TRA DECAY COOLING

Component	Function
1,2-TCV -067-084 (LS)	LOWER CNTMT VENT CLR A TEMP CONT VLV
1,2-TIC -067-084	LOWER CNTMT VENT CLR A TEMP
1,2-TM -067-084	LOWER CNTMT VENT CLR A TEMP
1,2-TSV -067-084	LOWER CNTMT VENT CLR A TEMP CONT VLV
1,2-TCV -067-085 (LS)	CONTROL ROD DRIVE VENT CLR A TEMP CONT VLV
1,2-TIC -067-085	CONTROL ROD DRIVE VENT CLR A TEMP
1,2-TM -067-085	CONTROL ROD DRIVE VENT CLR A TEMP
1,2-TSV -067-085	CONTROL ROD DRIVE VENT CLR A TEMP CONT VLV
1,2-TCV -067-086 (LS)	RC PUMP MOTOR CLRS A SUPPLY CONTROL VLV
1,2-TCV -067-092 (LS)	LWR CNTMT VENT CLR C TEMP CONT VLV
1,2-TIC -067-092	LWR CNTMT VENT CLR C TEMP
1,2-TM -067-092	LWR CNTMT VENT CLR C TEMP
1,2-TSV -067-092	LWR CNTMT VENT CLR C TEMP CONT VLV
1,2-TCV -067-093 (LS)	CONTROL ROD DRIVE VENT CLR C TEMP CONT VLV
1,2-TIC -067-093	CONTROL ROD DRIVE VENT CLR C TEMP
1,2-TM -067-093	CONTROL ROD DRIVE VENT CLR C TEMP
1,2-TSV -067-093	CONTROL ROD DRIVE VENT CLR C TEMP CONT VLV
1,2-TCV -067-094 (LS)	RC PUMP 3 MON CLR SUPPLY CONTROL VLV
1,2-TCV -067-100 (LS)	LWR CNTMT VENT CLR B TEMP CONT VLV
1,2-TIC -067-100	LWR CNTMT VENT CLR B TEMP
1,2-TM -067-100	LWR CNTMT VENT CLR B TEMP
1,2-TSV -067-100	LWR CNTMT VENT CLR B TEMP CONT VLV
1,2-TCV -067-101 (LS)	CONTROL ROD DRIVE VENT CLR B TEMP CONT VLV
1,2-TIC -067-101	CONTROL ROD DRIVE VENT CLR B TEMP
1,2-TM -067-101	CONTROL ROD DRIVE VENT CLR B TEMP
1,2-TSV -067-101	CONTROL ROD DRIVE VENT CLR B TEMP CONT VLV
1,2-TCV -067-102 (LS)	RC PUMP 2 MON CLR SUPPLY CONTROL VLV
1,2-TCV -067-108 (LS)	LWR CNTMT VENT CLR D TEMP CONT VLV
1,2-TIC -067-108	LWR CNTMT VENT CLR D TEMP
1,2-TM -067-108	LWR CNTMT VENT CLR D TEMP
1,2-TSV -067-108	LWR CNTMT VENT CLR D TEMP CONT VLV
1,2-TCV -067-109 (LS)	CONTROL ROD DRIVE VENT CLR D TEMP CONT VLV
1,2-TIC -067-109	CONTROL ROD DRIVE VENT CLR D TEMP
1,2-TM -067-109	CONTROL ROD DRIVE VENT CLR D TEMP
1,2-TSV -067-109	CONTROL ROD DRIVE VENT CLR D TEMP CONT VLV
1,2-TCV -067-110 (LS)	RC PUMP 4 MON CLR SUPPLY CONTROL VLV
0-HS -067-205B	STA SER & CNTLAIR CMPR SUP HDRLA ISOL VLV
0-HS -067-208B	STA SER & CONT AIR SUP HDR 1B ISOL VLV
1-FSV -067-213	SPENT FUEL & TB BSTR PMP SPCE CLR A SUP VLV
1-FSV -067-215	SPENT FUEL & TB BSTR PMP SPCE CLR B SUP VLV

Component	Function
1,2-FT -068-006A	RCS LOOP 1 COOLANT FLOW
1,2-FT -068-006B	RCS LOOP 1 COOLANT FLOW
1,2-FT -068-006D	RCS LOOP 1 COOLANT FLOW
1,2-FT -068-029A	RCS LOOP 2 COOLANT FLOW
1,2-FT -068-029B	RCS LOOP 2 COOLANT FLOW
1,2-FT -068-029D	RCS LOOP 2 COOLANT FLOW
1,2-FT -068-048A	RCS LOOP 3 COOLANT FLOW
1,2-FT -068-048B	RCS LOOP 3 COOLANT FLOW
1,2-FT -068-048D	RCS LOOP 3 COOLANT FLOW
1,2-PT -068-066	RCS LOOP 4 HOT LEG PRESS.
1,2-PS -068-066A	RCS LP 4 HL AUX CONT RHR VALVE INTERLOCK
1,2-PS -068-066D	RCS LP 4 HL AUX CONT RHR VALVE INTERLOCK
1,2-PS -068-068A	RCS LP 4 HL AUX CONT RHR VALVE INTERLOCK
1,2-PS -068-068D	RCS LP 4 HL AUX CONT RHR VALVE INTERLOCK
1,2-FT -068-071A	RCS LOOP 4 COOLANT FLOW
1,2-FT -068-071B	RCS LOOP 4 COOLANT FLOW
1,2-FT -068-071D	RCS LOOP 4 COOLANT FLOW
1,2-LT -068-321	RCS PRZR LEVEL
1,2-PCV -068-334 (LS)	RCS PRZR PWR RELIEF VALVE
2-PCV -068-340A (LS)	RCS PRZR PWR RELIEF VALVE
1,2-PCV -068-340B (LS)	RCS PRZR PRESS
1,2-PCV -068-340D (LS)	RCS PRZR PRESS
1,2-PCV -068-340	RCS PRZR PDRV
1,2-TE -068-398	REACTOR VESSEL HEAD VENT TEMP
1,2-HTR -068-341A/A1-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A2-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A3-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A4-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A5-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A6-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341A/A7-A	PRZR HEATER BACKUP GROUP A-A
1,2-HTR -068-341D/B1-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B2-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B3-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B4-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B5-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B6-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341D/B7-B	PRZR HEATER BACKUP GROUP B-B
1,2-HTR -068-341H/C1-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341H/C2-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341H/C3-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341H/C4-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341H/C5-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341H/C6-B	PRZR HEATER BACKUP GROUP C-B
1,2-HTR -068-341F/D1-A	PRZR HEATER BACKUP GROUP D-A
1,2-HTR -068-341F/D2-A	PRZR HEATER BACKUP GROUP D-A

Component	Function
1,2-HTR -068-341F/D3-A	PRZR HEATER BACKUP GROUP D-A
1,2-HTR -068-341F/D4-A	PRZR HEATER BACKUP GROUP D-A
1,2-HTR -068-341F/D5-A	PRZR HEATER BACKUP GROUP D-A
1,2-HTR -068-341F/D6-A	PRZR HEATER BACKUP GROUP D-A

Component	Function
1,2-HS -070-004B	MISC EQUIP HDR INLET VLV SW
2-PT -070-017C	CCS HTX B INLET PRESS XMTR
1,2-FIS -070-081	THRM BARRIER SUP HDR FLOW SW PMP ON
1,2-FT -070-081A	THRM BARRIER RET HDR FLOW TRANS
1,2-FT -070-081B	THRM BARRIER RET HDR FLOW TRANS
1,2-FT -070-081D	THRM BARRIER RET HDR FLOW TRANS
1,2-FT -070-081E	THRM BARRIER RET HDR FLOW TRANS
1,2-HS -070-087B	RC PMP THRM BAR RET CONTMNT ISOL VLV SW
1,2-HS -070-089B	RC PMP OIL CLR RET CONTMNT ISOL VLV SW
1,2-HS -070-090B	RC PMP THRM BAR RET CONTMNT ISOL VLV SW
1,2-HS -070-130B	THRM BARR BST PMP B-B MOTOR CONTROL
1,2-HS -070-131B	THRM BARR BST PMP A-A MOTOR CONTROL
1,2-HS -070-133B	RC PMP THRM BAR CONT ISOL VLV SW
1,2-HS -070-134B	RC PMP THRM BAR CONT ISOL VLV SW
1,2-FCV -070-139	RC PMP OIL CLR HDR CONT ISOL VLV
1,2-HS -070-143B	EXCESS LTDN HTX CONT INLET ISOL VLV SW
1,2-HS -070-168B	BA GAS STRP EVP PKG A FLOW CONT VLV SW
1,2-HS -070-183B	SAMPLE HTX HDR OUTLET VLV SW
0-HS -070-206B	COND DEMIN WASTE EVAP BLDG RETURN
0-HS -070-111	AUX WASTE EVAP PKG OUTLET VALVE
THERMAL BARRIER BOOSTER PUMP MOTOR	
070-1A-A	THERMAL BARRIER COOLING
070-2A-A	THERMAL BARRIER COOLING
070-1B-B	THERMAL BARRIER COOLING
070-2B-B	THERMAL BARRIER COOLING

Component	Function
2-ZS -072-044	CSS VALVE FCV-72-44 TRAIN A

Component	Function
1,2-FCV -074-009	RHR SYSTEM ISOLATION BYPASS VALVE
1,2-HS -074-009	RHR SYSTEM ISOLATION BYPASS CNTL
1,2-TS -074-043	RHR RETURN LINE PIPE BREAK DETECTOR
1,2-TS -074-044	RHR RETURN LINE PIPE BREAK DETECTOR
1,2-TS -074-045	RHR RETURN LINE PIPE BREAK DETECTOR
1,2-TS -074-046	RHR RETURN LINE PIPE BREAK DETECTOR

Component	Function
2-FCV -077-010 (LS)	RCDT PUMP DISCHARGE VALVE FLOW CONTROL
2-FCV -077-017 (LS)	RCDT TO GA FLOW CONTROL
2-FCV -077-019 (LS)	RCDT TO VENT HDR FLOW CONTROL
2-FCV -077-020 (LS)	RCDT N2 SUPPLY FLOW CONTROL
1,2-FCV -077-128	REAC BLDG SUMP DISCHARGE FLOW CONTROL
1,2-LI -077-410	REAC BLDG AUX FL&EQ DR SUMP LEVEL INDICATOR
1,2-LI -077-411	REAC BLDG AUX FL&EQ DR SUMP LEVEL INDICATOR

Component	Function
0-HS -078-019	REFUELING WATER PURIFICATION PUMP A-A MOTOR SWITCH
0-HS -078-020	REFUELING WATER PURIFICATION PUMP B-B MOTOR SWITCH
0-MTR -078-019A	REFUELING WATER PURIFICATION PUMP A-A MOTOR
0-MTR -078-020B	REFUELING WATER PURIFICATION PUMP B-B MOTOR

Component	Function
1,2-FCV -087-017	CHGNG PMP RECIRC VALVE FLOW CONTROL
1,2-HS -087-017B	POSITIVE DISPLACEMENT PUMP RECIRC VALVE

Category "C" Component List

Component	Function
1,2-FS -090-106A	CNTMT BLDG LWR COMPT AIR MON PART LO FLOW
1,2-FS -090-106B	CNTMT BLDG LWR COMPT MON IODINE LOW FLOW
1,2-FS -090-112A	CNTMT BLDG UP COMPT MON PART LOW FLOW
1,2-HS -090-112B	CNTMT BLDG UP COMPT MON FAN B

Component	Function
1,2-NM -092-031A(NM-31A)	NEUTRON MON SYS SOURCE RANGE PREAMP
1,2-NM -092-031A(NM-32A)	NEUTRON MON SYS SOURCE RANGE PREAMP
1,2-NMB -092-NE31	SOURCE RANGE DETECTORS
1,2-NMB -092-NE32	SOURCE RANGE DETECTORS
1,2-NMB -092-NE35	INTERMEDIATE RANGE DETECTORS
1,2-NMB -092-NE36	INTERMEDIATE RANGE DETECTORS

Component	Function
1,2-HTR -268-001	HYDROGEN IGNITORS
1,2-HTR -268-002	HYDROGEN IGNITORS
1,2-HTR -268-003	HYDROGEN IGNITORS
1,2-HTR -268-004	HYDROGEN IGNITORS
1,2-HTR -268-005	HYDROGEN IGNITORS
1,2-HTR -268-006	HYDROGEN IGNITORS
1,2-HTR -268-007	HYDROGEN IGNITORS
1,2-HTR -268-008	HYDROGEN IGNITORS
1,2-HTR -268-009	HYDROGEN IGNITORS
1,2-HTR -268-010	HYDROGEN IGNITORS
1,2-HTR -268-025	HYDROGEN IGNITORS
1,2-HTR -268-026	HYDROGEN IGNITORS
1,2-HTR -268-027	HYDROGEN IGNITORS
1,2-HTR -268-028	HYDROGEN IGNITORS
1,2-HTR -268-029	HYDROGEN IGNITORS
1,2-HTR -268-030	HYDROGEN IGNITORS
1,2-HTR -268-031	HYDROGEN IGNITORS
1,2-HTR -268-032	HYDROGEN IGNITORS
1,2-HTR -268-033	HYDROGEN IGNITORS
1,2-HTR -268-034	HYDROGEN IGNITORS
1,2-HTR -268-035	HYDROGEN IGNITORS
1,2-HTR -268-036	HYDROGEN IGNITORS
1,2-HTR -268-037	HYDROGEN IGNITORS
1,2-HTR -268-038	HYDROGEN IGNITORS
1,2-HTR -268-039	HYDROGEN IGNITORS
1,2-HTR -268-040	HYDROGEN IGNITORS
1,2-HTR -268-041	HYDROGEN IGNITORS
1,2-HTR -268-042	HYDROGEN IGNITORS
1,2-HTR -268-043	HYDROGEN IGNITORS
1,2-HTR -268-044	HYDROGEN IGNITORS
1,2-HTR -268-045	HYDROGEN IGNITORS
1,2-HTR -268-046	HYDROGEN IGNITORS
1,2-HTR -268-047	HYDROGEN IGNITORS
1,2-HTR -268-049	HYDROGEN IGNITORS
1,2-HTR -268-050	HYDROGEN IGNITORS
1,2-HTR -268-051	HYDROGEN IGNITORS
1,2-HTR -268-052	HYDROGEN IGNITORS
1,2-HTR -268-053	HYDROGEN IGNITORS
1,2-HTR -268-054	HYDROGEN IGNITORS
1,2-HTR -268-055	HYDROGEN IGNITORS
1,2-HTR -268-056	HYDROGEN IGNITORS
1,2-HTR -268-057	HYDROGEN IGNITORS
1,2-HTR -268-058	HYDROGEN IGNITORS
1,2-HTR -268-059	HYDROGEN IGNITORS
1,2-HTR -268-060	HYDROGEN IGNITORS
1,2-HTR -268-061	HYDROGEN IGNITORS

Component	Function
1,2-HTR -268-062	HYDROGEN IGNITORS
1,2-HTR -268-063	HYDROGEN IGNITORS
1,2-HTR -268-064	HYDROGEN IGNITORS

WATTS BAR NUCLEAR PLANT
UNITS 1 AND 2

LIST OF ELECTRICAL EQUIPMENT
LOCATED INSIDE CONTAINMENT WHICH
COULD BE SUBJECTED TO POST-LOCA SUBMERGENCE

AFT[illegible] [illegible]DENT PER TAB[illegible] 3.11-1, OR 3.11-1A IN FSAR

[illegible]-CLASS 1E EQUIPMENT
INSIDE CONTAINMEN[illegible] [illegible]W EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET NO. 1 REV 0
PREPARER/[illegible] [illegible] 10-3
REVIEWER/DATE M.D. Black

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ./FLOOR EL.	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1&2	FT-1-21B-E (L-183/A) *	SG 3 MAIN STM HDR FLOW CHAN. 2 FT-533	1-R-7	R-Z0/716		X
1&2	LT-3-38-E (L-183/A) *	STM GEN NO.1 LEVEL XMTR LT-519	1-R-5	R-Z0/716		X
1&2	LT-3-42-G (L-185/A) *	STM GEN NO.1 LEVEL XMTR LT-517	1-R-12	R-Z 284/716		X
1&2	LT-3-55-G (L-185/A) *	STM GEN NO.2 LEVEL XMTR LT-527	1-R-12	R-Z 284/716		X
1&2	LT-3-56-G (L-185/B)	STM GEN NO.2 LEVEL XMTR LT-502	1-R-13	R-Z 284/716		X
1&2	LT-3-93-D (L-182/B) *	STM GEN NO.3 LEVEL XMTR LT-539	1-R-1	R-Z 180/716		X
1&2	LT-3-51-D (L-182/A) *	STM GEN NO.2 LEVEL XMTR LT-529	1-R-1	R-Z 180/716		X
1&2	LT-3-94-F (L-184/A) *	STM GEN NO.3 LEVEL XMTR LT-538	1-R-11	R-Z 243/716		X
1&2	LT-3-106-E (L-183/B) *	STM GEN NO.4 LEVEL XMTR LT-549	1-R-5	R-Z0/716		X
1&2	LT-3-107-F (L-184/A) *	STM GEN NO.4 LEVEL XMTR LT-548	1-R-11	R-Z 243/716		X
1&2	LT-3-111-F (L-177)	STM GEN NO.4 LEVEL XMTR LT-504	1-R-10	R-Z 305/716		X
1&2	LT-3-173-B (L-178) ✓	STM GEN NO.2 LEVEL XMTR	1-PNL-278-11B	R-Z 72/716	X	
1&2	LT-3-174-B (L-178) ✓	STM GEN NO.1 LEVEL XMTR	1-PNL-278-11B	R-Z 72/716	X	

NEB 8 1028 270

NEB 8 1204 272

P. 12 OF 27

[redacted] CLASS 1E EQUIPMENT
INSIDE CONTAINMENT [redacted] EL 723.8 INSIDE
CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

PREPARED BY: [redacted] DATE 10-3-8
REVIEWED BY: [illegible] DATE [illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ. / FLOOR EL.	CRANE WALL INSIDE	CRANE WALL OUTSI
1&2	TS-30-80-B ✓	CRD COOL UNIT TEMP CONT	(U1) 1-BD-212-B2 (U2) 2-BD-212-B2 } CONTROL VOLTAGE BUS	R-Z 325/703	X	
1&2	FS-30-80A/B-A ✓	CRD COOL UNIT D-B FLOW ALARM	PNL-275-R75	R-Z 335/703	X	
1&2	HS-30-80B-B ✓	CRD COOL UNIT D-B FAN CNTL	(U1) 1-BD-212-B2-B (U2) 2-BD-212-B2-B } CONTROL VOLTAGE BUS	R-Z 315/703	X	
1&2	FS-30-80B/A-A ✓	CRD COOL UNIT D-B FLOW	"	R-Z 335/703	X	
1&2	TSV-30-81-B ✓	CRD COOL UNIT D-B SUCT DMPR	(U1) 0-BD-236-2-E (U2) 0-BD-236-4-G (LOCAL ARC SUPPRESSION CKT)	R-Z 353/703	X	
1&2	LIMIT SW ON TCO-30-81-B ✓	CRD COOL UNIT D-B SUCT DMPR	"	R-Z 353/703	X	
1&2	TSV-30-82-B ✓	CRD COOL UNIT D-B RM DIV DMPR	(U1) 0-BD-236-2-E (U2) 0-BD-236-4-G (LOCAL ARC SUPPRESSION CKT)	R-Z 346/703	X	
1&2	LIMIT SW ON TCO-30-82-B ✓	"	"	R-Z 346/703	X	
1&2	TS-30-83-A ✓	CRD COOL UNIT TEMP CONTROL	(U1) 1-BD-212-A1-A (U2) 2-BD-212-A1-A } CONTROL VOLTAGE BUS	R-Z 38/703	X	
1&2	FS-30-83A/B-A ✓	CRD COOL UNIT A-A FLOW ALM	PNL-275-R75	R-Z 335/703	X	
1&2	HS-30-83B-A ✓	CRD COOL UNIT A-A FAN CNTL	(U1) 1-BD-212-A1-A (U2) 2-BD-212-A1-A } CONTROL VOLTAGE BUS	R-Z 132/703	X	
1&2	FS-30-83B/A-A ✓	CRD COOL UNIT A-A FLOW	"	R-Z 325/703	X	
1&2	TSV-30-84-A ✓	CRD COOL UNIT A-A SUCT DMPR	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 12/703	X	

NEB 81 10 28 270 P. 13 of 37
FILE 0112 04 72

CLASS 1E EQUIPMENT
INSIDE CONTAINMENT [illegible] EL 723.8 INSIDE
CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET NO [illegible] REV. 0
PREPARED BY [illegible] DATE 10-3
REVIEWED BY [illegible] DATE M.D. Black 19

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1&2	LIMIT SW ON TCO-30-84-A ✓	CRD COOL UNIT A-A SUCT DMPR	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F	R-Z 12/703	X	
1&2	TSV-30-85-A ✓	CRD COOL UNIT A-A RM DIV DMPR	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 16/703	X	
1&2	LIMIT SW ON TCO-30-85-A ✓	"	"	"	X	
1&2	TS-30-88-A ✓	CRD COOL UNIT TEMP CONT	(U1) 1-BD-212-A2 (U2) 2-BD-212-A2 } CONTROL VOLTAGE BUS	R-Z 214/703	X	
1&2	FS-30-88A/B-A ✓	CRD COOL UNIT C-A FLOW ALM	PNL-275-R75	R-Z 204/703	X	
1&2	HS-30-88B-A ✓	CRD COOL UNIT C-A FAN CNTL	(U1) 1-BD-212-A2-A (U2) 2-BD-212-A2-A } CONTROL VOLTAGE BUS	R-Z 221/703	X	
1&2	FS-30-88B/A-A ✓	CRD COOL UNIT C-A FLOW	(U1) 1-BD-212-A2 (U2) 2-BD-212-A2 } CONTROL VOLTAGE BUS	R-Z 204/703	X	
1&2	TSV-30-89-A ✓	CRD COOL UNIT C-A SUCT DMPR	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 187/703	X	
1&2	LIMIT SW ON TCO-30-89-A ✓	"	"	"	X	
1&2	TSV-30-90-A ✓	CRD COOL UNIT C-A RM DIV DMPR	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 192/703	X	
1&2	LIMIT SW ON TCO-30-90-A ✓	"	"	"	X	
1&2	TS-30-92-B ✓	CRD COOL UNIT TEMP CONT	(U1) 1-BD-212-B1-B (U2) 2-BD-212-B1-B } CONTROL VOLTAGE BUS	R-Z 141/703	X	
1&2	FS-30-92A/B-B ✓	CRD COOL UNIT B-B RM DIV DMPR	PNL-275-R75	R-Z 150/703	X	

NEB 8-1 1028 270 P.14 of 27
RIC 0112 04 2512

[redacted]- CLASS 1E EQUIPMENT
INSIDE CONTAINMENT [redacted] EL 723.8 INSIDE
CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

PREPARER/PRINT [redacted] D Lw 10-3-
REVIEWER/PRINT [redacted] Mark 10/3/

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSID
1&2	HS-30-92B-B ✓	CRD COOL UNIT B-B FAN CNTL	(U1) 1-BC-212-B1-B (U2) 2-BD-212-B1-B } CONTROL VOLTAGE BUS	RZ135/703	X	
1&2	FS-30-92B/A-A ✓	CRD COOL UNIT B-B FLOW	"	RZ150/703	X	
1&2	TSV-30-93-B ✓	CRD COOL UNIT B-B SUCT DMPR	(U1) 0-BD-236-2-E (U2) 0-BD-236-4-G (LOCAL ARC SUPPRESSION CKT)	RZ166/703	X	
1&2	LIMIT SW ON TCO-30-93-B ✓	"	"	"	X	
1&2	TSV-30-94-B ✓	CRD COOL UNIT B-B RM DIV DMPR	(U1) 0-BD-236-2-E (U2) 0-BD-236-4-G (LOCAL ARC SUPPRESSION CKT)	R-Z-161/703	X	
1&2	LIMIT SW ON TCO-30-94-B ✓	"	"	"	X	
1&2	MTR-30-92/1-B	CRD MECH CLR FAN B-B MTR 1	(U1) 1-BD-212-B1/2C-B (U2) 2-BD-212-B1/2C-B	R-Z135/703	X	
1&2	MTR-30-92/2-B	" MTR 2	(U1) 1-BD-212-B1/10D-B (U2) 2-ED-212-B1/10D-B	"	X	
1&2	MTR-30-83/1-A	CRD MECH CLR FAN A-A MTR 1	(U1) 1-BD-212-A1/7B-A (U2) 2-BD-212-A1/7B-A	R-Z 50/703	X	
1&2	MTR-30-83/2-A	" MTR 2	(U1) 1-BD-212-A1/2B-A (U2) 2-BD-212-A1/2B-A	"	X	
1&2	MTR-30-88/1-A	CRD MECH CLR FAN C-A MTR 1	(U1) 1-BD-212-A2/2B-A (U2) 2-BD-212-A2/2B-A	R-ZZ21/703	X	
1&2	MTR-30-88/2-A	" MTR 2	(U1) 1-BD-212-A2/8A-A (U2) 2-BD-212-A2/8A-A	"	X	

NEB 811028 270 P. 15 of 67
INPO 9012042 72

AFTER [illegible] DE[illegible]T PER TABLE[illegible]1-[illegible], [illegible]R 3.11-1A IN FSAR

[illegible] CLASS 1E EQUIPMENT
INSIDE CONTAINMENT [illegible] EL 723.8 INSIDE
CRANE WALL @ EL 717.7 OUTSIDE CRANE WALL

PREPARER/[illegible] [illegible] 10-3
REVIEWER/DATE [illegible] 10/6

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ/FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSI
1&2	MTR-30-80/1-B	CRD MECH CLR FAN D-B MTR 1	(U1) 1-BD-212-B2/7B-B (U2) 2-BD-212-B2/7B-B	R-Z 315/703	X	
1&2	MTR-30-80/2-B	" MTR 2	(U1) 1-BD-212-B2/2C-B (U2) 2-BD-212-B2/3C-B	"	X	
1&2	FSV-62-59-B ✓	EXCESS LETDOWN DIV FLOW CONT 8143	(U1) 0-BD-236-2-E (U2) 0-BD-236-4-G	R-Z 115/703		X
1&2	LIMIT SW ON FCV-62-59-B ✓	" "	" (LOCAL ARC SUPPRESSION CKT)	"		X
1&2	FSV-62-69-A	RC LOOP 3 LCV-460 LETDOWN FLOW	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 132/716	X	
1&2	LIMIT SW ON FCV-62-69-A	"	"	"	X	
1&2	FSV-62-72-A * ✓	REGEN HT EXCH LETDOWN ISOL VLV A	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 47/703		X
1&2	LIMIT SW ON FCV-62-72-A * ✓	"	"	"		X
1&2	FSV-62-73-A * ✓	REGEN HT EXCH LETDOWN ISOL VLV B	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 48/703		X
1&2	LIMIT SW ON FCV-62-73-A * ✓	"	"	"		X
1&2	FSV-62-74-A * ✓	REGEN HT EXCH LETDOWN ISOL VLV C	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F (LOCAL ARC SUPPRESSION CKT)	R-Z 49/703		X
1&2	LIMIT SW ON FCV-62-74-A * ✓	"	"	"		X
1&2	FSV-62-76-A *	REGEN HT EXCH LETDOWN ISOL VLV	" (LOCAL ARC SUPPRESSION CKT)	R-Z 48/703		X

NEB 811028 270
NEB 811204 272

AFTER [illegible]MENT PER TABLE [illegible] 3.11-1A IN FSAR

[redacted] CLASS 1E EQUIPMENT INSIDE CONTAINMENT [illegible] EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

PREPARER/[illegible] Rev 10-3-
REVIEWER/DATE M.N. Blood 10/5/

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AX / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1&2	LIMIT SW ON * FCV-62-76-A	RECEN HT EXCH LETDOWN ISOL VLV	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F	R-Z48/703		X
1&2	FT-68-6A-D * (L-226)	RCS LOOP 1 FT-414 COOLANT FLOW	1-R-1	R-Z315/703		X
1&2	FT-68-6B-E * (L-227)	" FT-415	1-R-5	R-Z75/703		X
1&2	FT-68-6D-F * (L-228)	" FT-416	1-R-9	R-Z195/703		X
1&2	FT-68-48A-D * (L-226) ✓	RCS LOOP 3 FT-434 COOLANT FLOW	1-R-1	R-Z315/703		X
1&2	FT-68-48B-E * (L-227) ✓	" FT-435	1-R-5	R-Z76/703		X
1&2	FT-68-48D-F * ✓ (L-228)	" FT-436	1-R-9	R-Z195/703		X
1&2	FT-68-71A-D * ✓ (L-226)	RCS LOOP 4 FT-444 COOLANT FLOW	1-R-1	R-Z310/703		X
1&2	FT-68-71B-E ✓* (L-227)	" FT-445	1-R-5	R-Z76/703		X
1&2	FCV-74-1-A ✓ *	RHR SYS MOV 8702 ISOLATION VLV	(U) 1-MCC-213-A1/10D-A (2) 2-MCC-213-A1/10D-A	R-Z355/703	X	

NEB '81 10 28 270
NEB '81 12 04 272

AFTER [illegible]DENT PER TABLE [illegible]1-[illegible] OR 3.11-1A IN FSAR

[illegible] - CLASS 1E EQUIPMENT
INSIDE CONTAINMENT [illegible] EL [illegible] EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

PREPARER / [illegible] 10-3-
REVIEWER / DATE [illegible] 10/4/81

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1&2	HS-74-1B-A *	RHR SYS ISOL VLV SW	(U1) 1-MCC-213-A1/10D-A (U2) 2-MCC-213-A1/10D-A	RZ 354/703	X	
1&2	FCV-74-9-B	RHR SYS ISOL MOV 8704 BYPASS VLV	(U1) 1-MCC-213-B1/5C-B (U2) 2-MCC-213-B1/5C-B	R-Z 345/703	X	
1&2	HS-74-9-B *	RHR SYS ISOL BYPASS CNTL	"	R-Z 345/703	X	
1&2	LIMIT SW ON FCV-87-7-A ✓*	TEST LINE ISOL VLV FLOW CONTROL	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F	R-Z 225/703		X
1&2	FSV-87-7-A ✓*	"	" (LOCAL ARC SUPPRESSION CKT)	"		X
1&2	LIMIT SW ON FCV-87-8-A ✓ *	" 9984B	(U1) 0-BD-236-1-D (U2) 0-BD-236-3-F	"		X
1&2	FSV-87-8-A ✓*	"	" (LOCAL ARC SUPPRESSION CKT)	"		X
1&2	FT-68-29A-D ✓* (L-226)	RCS LOOP 2 FT-424 COOLANT FLOW	1-R-1	R-Z 315/703		X

NEB '811028 270
NEB '811204 272

P. 18 OF 27

AFTER [redacted] DIT PER TABLE [redacted]-1 & 3.11-1A IN FSAR

[redacted] - CLASS 1E [redacted]UIPMENT INSIDE CONTAINMENT - [redacted]OW EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET No 8 REV 0
PREPARED / DATE [redacted] 10-3-
REVIEWED / DATE M.D. Black 10/5/[redacted]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CONTAINMENT INSIDE	CONTAINMENT OUTSIDE
1&2	FT-68-29B-E ✓* (L-227)	RCS LOOP 2 COOLANT FLOW FT-425	1-R-5	R-Z 76/703		X
1&2	FT-68-29D-F ✓* (L-228)	" FT-426	1-R-9	R-Z 195/703		X
1&2	FT-68-71D-F ✓* (L-228)	RCS LOOP 4 COOLANT FLOW FT-446	1-R-9	"		X
1&2	TE-68-18-E * △	RCS LOOP 1 COLD LEG TEMP TE-413B	Box 4399 01 Box 4395 01 ALL BOXES UNDER FLOOR 1-PNL-99-R2	R-Z 57/716	X	
1&2	TE-68-41-E △ *	RCS LOOP 2 COLD LEG TEMP TE-423B	1-PNL-99-R6	R-Z 125/716	X	
1&2	TE-68-60-E △ *	RCS LOOP 3 COLD LEG TEMP TE-433B	"	R-Z 234/716	X	
1&2	TE-68-83-E △ *	RCS LOOP 4 COLD LEG TEMP TE-443B	"	R-Z 306/716	X	
1&2	TE-68-44A-F △ *	RCS LP 3 HL RTD MAN TEMP TE-430A	1-PNL-99-R10	R-Z 203/716	X	
1&2	TE-68-44B-F △ *	" TE-431A	"	"	X	
1&2	TE-68-2A-D △ *	RCS LP 1 HL RTD MAN TEMP TE-410A	1-PNL-99-R2	R-Z 28/716	X	
1&2	TE-68-2B-D △ *	" TE-411A	"	"	X	
1&2	TE-68-14A-D △ *	RCS LP 1 COLD LEG RTD MAN TE-411B	"	R-Z 49/716	X	
1&2	TE-68-14B-D △ *	" TE-410B	"	"	X	

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P. 10 of 27

AFTER [illegible] CIDENT PER TABLE [illegible].11 OR 3.11-1A IN FSAR

[illegible] - CLASS 1E [illegible] ONENT

INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET [illegible] 9 [illegible] 0

PREPARED/REV. [illegible] Swadley 10-3

REVIEWED/REV. M.D. Black 10/4/8[illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CONDITION INSIDE
1&2	TE-68-25A-E Δ*	RCS LP 2 HL TE-420A RTD MAN TEMP	↓ 1-PNL-99-R6	R-Z152/716	X
1&2	TE-68-25B-E Δ*	" TE-421A	"	"	X
1&2	TE-68-37A-E Δ*	RCS LOOP 2 COLD LEG RTD MAN TEMP TE-421B	"	R-Z133/716	X
1&2	TE-68-37B-E Δ*	" TE-420B	"	"	X
1&2	TE-68-56A-F Δ*	RCS LOOP 3 CL RTD MAN TE-431B	1-PNL-99-R10	R-Z225/716	X
1&2	TE-68-56B-F Δ*	" TE-430B	"	"	X
1&2	TE-68-67A-G Δ*	RCS LP 4 HL RTD MAN TEMP TE-440A	1-PNL-99-R13	R-Z345/716	X
1&2	TE-68-67B-G Δ*	" TE-441A	"	"	X
1&2	TE-68-79A-G Δ*	RCS LP 4 COLD LEG RTD MAN TE-441B TE-441B	"	R-Z317/716	X
1&2	TE-68-79B-G Δ*	" TE-440B	"	"	X
1&2	TE-68-1-D Δ*	RCS LOOP 1 HOT LEG TEMP TE-413A	1-PNL-99-R2	R-Z24/716	X
1&2	TE-68-24-D Δ*	RCS LOOP 2 HOT LEG TEMP TE-423A	"	R-Z156/716	X
1&2	TE-68-43-D Δ*	RCS LOOP 3 HOT LEG TEMP TE-433A	"	R-Z200/716	X

NEB 8110280270 P.20 OF 27

* ITEM REQD TO OPERATE AFTER [illegible] DEPT PER TABLE [illegible]11-1 OR 3.11-1A IN FSAR

WATTS BAR NUCLEAR PLANT

[illegible]-CLASS [illegible] EQUIPMENT

INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET NO 10[illegible] REV 0

PREPARER/DATE [illegible] 10-3-81

REVIEWER/DATE M.D. Black [illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1&2	TE-68-65-D ▷*	RCS LOOP 4 TE-443A HOT LEG TEMP	1-PNL-99-R2	RZ 340/716	X	
1&2	LT-3-172-A ✓* (L-417)	SG 3 LEVEL TRANSMITTER	1-PNL-278-L11A	RZ 62/716	X	
1&2	LT-3-175-A ✓* (L-417)	SG 4 LEVEL TRANSMITTER	1-PNL-278-L11A	RZ 62/716	X	
1&2	LT-3-173 B ✓* (L-178)	SG 2 LEVEL TRANSMITTER	1-PNL-278-L11B	RZ 72/716	X	
1&2	LT-3-174 B ✓* (L-178)	SG 1 LEVEL TRANSMITTER	1-PNL-278-L11B	"	X	
1&2	PT-68-322-G * (L-64)	RCS PRZR PT-457 PRESSURE	1-R-28	RZ 75/716	X	
1&2	RE-90-273-A	LWR INS CNTMT POST ACD AREA MON	1-BD-235-1-D (BRK 35) 2-BD-235-3-F (BRK 45)	RZ 177/716	X	
1&2	RE-90-274-B	"	1-BD-235-2-E (BRK 35) 2-BD-235-4-G (BRK 47)	RZ 3/716	X	
1&2	NMD-92-NE31-D ✓	NEUTRON MONITORING DETECTOR & TRIAX CONNECTORS	1-BD-235-1-D (BRK 28)	RZ 180/716	X	
1&2	NMD-92-NE35-D ✓	" "	1-BD-235-1-D (BRK 28)	"	X	
1&2	NMD-92-NE32-E ✓	"	1-BD-235-2-E (BRK 28)	RZ 0/716	X	
1&2	NMD-92-NE36-E ✓	"	1-BD-235-2-E (BRK 28)	"	X	
1&2	NMD-92-NE41A-D	"	1-BD-235-1-D (BRK 28)	RZ 135/716	X	

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NEB 81120427

WATTS BAR NUCLEAR PLANT
[redacted] CLASS [redacted] EQUIPMENT
INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE
CRANE WALL & EL 717.7 OUTSIDE CRANE WALL

SHEET No 11 [redacted] R 0
PREPARER / DATE [illegible] 10-3-
REVIEWER / DATE M.D. Black [illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	LOCATION AZ / FLOOR EL	CRANE WALL INSIDE	CRANE WALL OUTSI
1&2	NMD-92-NE42A-E ✓	NEUTRON MONITORING DETECTOR & TRIAX CONNECTORS	1-BD-235-2-E (BRK 28)	RZ 315/716	X	
1&2	NMD-92-NE43A-F ✓	"	1-BD-235-3-F (BRK 46)	RZ 225/716	X	
1&2	NMD-92-NE44A-G ✓	"	1-BD-235-4-G (BRK 47)	RZ 45/716	X	

NEB 811028 270 P. 22 OF 27
NEB 811204 272

* ITEMS REQ. TO OPERATE AFTER ACCIDENT PER TABLE 3.11-1 OR 3.11-1A IN FSAR

WATTS BAR NUCLEAR PLANT

CLASS 1E EQUIPMENT
INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE CRANE WALL EL 717.7 OUTSIDE CRANE WALL

SHEET NO. 12 REV. 0
PREPARER/DATE [illegible] 2-11-82
REVIEWER/DATE M.D. [illegible] 2/13/82

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	FLOOR EL.	CRANE WALL INSIDE	CRANE WALL OUTSIDE
1	(TS-30-83B, FS-30-80B/A, HS-30-83B) BOX 493	LOCAL CONTROL STATION	125V BATT BD I	702.78	X	
1	(TSV-30-81,82, TCO-30-81,82) BOX 528	ARC SUPPRESSION CKT	0-BD-236-2-E	702.78	X	
1	(TSV-30-84,85, TCO-30-84,85) BOX 522	"	0-BD-236-1-D	702.78	X	
1	(TSV-30-90,89, TCO-30-90,89) BOX 526	"	D-BD-236-1-D	702.78	X	
1	(TSV-30-93,94, TCO-30-93,94) BOX 524	"	0-BD-236-2-E	702.78	X	
1	(FSV-62-59, FCV-62-59) BOX 56	"	0-BD-236-2-E	702.78		X
1	(FSV-62-69, FCV-62-69) BOX 656	"	0-BD-236-1-D	(EL 724.5) 716.00		X
1	(FSV-62-72,73,74,76) (FCV-62-72,73,74,76) BOX 394 *	"	0-BD-236-1-D	702.78		X
1	(FSV-87-8,7, FCV-87-7,8) BOX 691 *	"	0-BD-236-1-D	702.78		X
1	(TS-30-92B, FS-30-88B/A, HS-30-92) BOX 495	LOCAL CONTROL STA.	0-BD-236-2/2-E	702.78	X	
1	(TS-30-88, FS-30-92B/A, HS-30-88) BOX 518	"	0-BD-236-1/2-D	702.78	X	
1	(TS-30-80B, FS-30-83B/A, HS-30-80B) BOX 520	"	0-BD-236-2/2-E	702.78	X	

* ITEM RE[illegible] TO OPERATE AFTER [illegible] T PER TABLE [illegible]-1 OR 3.11-1A IN FSAR

CLASS I[illegible] EQUIPMENT
INSIDE CONTAINM[illegible] - ELOW EL 723.8 INSIDE CRANE WALL EL 7[illegible] OUTSIDE CRANE WALL

SHEET NO. 15 REV. 0
PREPARER/DATE [illegible] 2-11-8[illegible]
REVIEWER/DATE [illegible] 2/13/8[illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	FLOOR EL.	CRANE WALL INSIDE	CRANE WALL OUTSIDE
2	(TS-30-83B, FS-30-80B/A, HS-30-83B) BOX 494	LOCAL CONTROL STATION	0-BD-236-4-G	702.78	X	
2	(TSV-30-81, 82 TCO-30-81, 82) BOX 529	ARC SUPPRESSION CKT	0-BD-236-4-G	702.78	X	
2	(TSV-30-84, 85 TCO-30-84, 85) BOX 523	"	0-BD-236-3-F	702.78	X	
2	(TSV-30-90, 89 TCO-30-90, 89) BOX 527	"	0-BD-236-3-F	702.78	X	
2	(TSV-30-93, 94, TCO-30-93, 94) BOX 525	"	0-BD-236-4-G	702.78	X	
2	(FSV-62-59, FCV-62-59) BOX 59	"	0-BD-236-4-G	702.78	X	
2	(FSV-62-69, FCV-62-69) BOX 657	"	0-BD-236-3-F	702.78		X
2	(FSV-62-72, 73, 74, 76 FCV-62-72, 73, 74, 76) BOX 395 *	"	0-BD-236-3-F	(EEL 724.5) 716.00		X
2	(FSV-87-7, 8, FCV-87-7, 8) BOX 692 *	"	0-BD-236-3-F	702.78		X
2	(TS-30-92B, FS-30-88B/A, HS-30-92) BOX 517	LOCAL CONTROL STATION	0-BD-236-4 G	702.78	X	
2	(TS-30-88, FS-30-92B/A, HS-30-88) BOX 519	"	0-BD-236-3-F	702.78	X	
	(TS-30-80B, FS-30-83B/A, HS-30-80B) BOX 521	"	0-BD-236-4-G	702.78	X	

DATE 1/12/82

WATTS BAR NUCLEAR PLANT

NON-CLASS 1E EQUIPMENT
INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE
CRANE WALL EL 717.7 OUTSIDE CRANE WALL

* ITEM REQD TO OPERATE AFTER ACCIDENT PER TABLE 3.11-1 OR 3.11-1A IN FSAR

SHEET NO. 21 REV. 0
PREPARER/DATE JW Sanders
REVIEWER/DATE M.O. Black

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	FLOOR EL.	CRANE INSIDE	CRANE O
1&2	LT-63-60 (L-177)	SIS ACCUM TANK 4 LEVEL XMTR	1-R-22	R-Z 305/716		
1&2	PT-63-61 (L-185)	SIS ACCUM TANK 4 PRESSURE XMTR	1-R-22	R-Z 284/716		
1&2	PdT-62-47 (L-185)	RCP 4 PRESS DP NO 1 SEAL	1-R-22	R-Z 284/716		
1&2	MT-30-241 (L-185)	LOWER COMPT MSTRE LOOP MSTRE TRANSMITTER	1-M-7	R-Z 284/716		
1&2	PdT-70-126 (L-185)	RC PMP 4 THRM BAR DIFF PRESS	1-R-126	R-Z 284/716		
1&2	PT-3-37 (L-183)	STM GEN #1 FW SUP PRESS XMTR	1-R-126	R-Z 0/716		
1&2	PdT-62-8 (L-183)	RCP NO. 1 DP ACROSS NO. 1 SEAL	1-R-14	R-Z 0/716		
1&2	PdT-62-21 (L-182)	RCP 2 DP ACROSS NO. 1 SEAL	1-R-17	R-Z 180/716		
1&2	PDT-70-104 (L-351A)	RC PMP 2 THRM BAR DIFF PRESS XMTR	1-R-126	R-Z 119/703		
1&2	FT-70-105 (L-351A)	RC PMP 2 THRM BAR OUTLET FLOW XMTR	1-R-126	R-Z 119/703		
1&2	FT-70-106 (L-351A)	RC PMP 2 OIL CLR OUTLET FLOW XMTR	1-R-126	R-Z 119/703		
1&2	FT-70-108 (L-351A)	RC PMP 2 LWR OIL CLR OUTLET FLOW XMTR	1-R-126	R-Z 119/703		

Pg 22.6 of 27

WATTS BAR [illegible] PLANT
NON-CLASS[illegible] EQUIPMENT
INSIDE CONTAINMENT - BELOW EL 723.8 INSIDE
CRANE WALL EL 717.7 OUTSIDE CRANE WALL

[illegible] RE[illegible] TO OPERATE
A[illegible]ER ACCIDENT PER
TABLE 3.11-1 OR 3.11-1A
IN FSAR

SHEET NO. 2 [illegible]
PREPARER/DATE JWS / [illegible]
REVIEWER/DATE [illegible]

UNIT	COMPONENT	FUNCTION	POWER SUPPLY	FLOOR EL.	CRANE W[illegible] INSIDE	OUT[illegible]
1&2	LT-63-82 (L-176)	SIS ACCUM TANK 4 LEVEL XMTR	1-R-20	R-Z 310/716		X
1&2	PT-63-62 (L-176)	SIS ACCUM TANK 4 PRESSURE XMTR	1-R-20	R-Z 310/716		X
1&2	FT-70-96 (L-191A)	RC PUMP 3 OIL COOLER OUTLET FLOW XMTR	1-R-126	R-Z 238/716		X
1&2	PT-3-92 (L-191A)	STEAM GENERATOR NO.3 FEEDWATER SUPPLY PRESS XMTR	1-R-126	R-Z 238/716		X
1&2	FT-70-98 (L-191B)	RC PMP 3 LOWER OIL COOLER OUTLET FLOW XMTR	1-R-126	R-Z 238/716		X
1&2	PT-63-86 (L-174)	SIS ACCUM TK 3 PRESSURE XMTR	1-R-22	R-Z 234/716		X
1&2	PT-63-83C (L-174)	SIS ACCUM TK 3 RRESSURE XMTR	1-L-11A	R-Z 234/716		X
1&2	(FCV-77-3) BOX 1661	ARC SUPPRESSION CKT	0-L-2	R-Z 275/703		X

Pg 27 of 27

WATTS BAR NUCLEAR PLANT
UNITS 1 AND 2

MINIMUM ONE-HOUR TIME MARGIN APPLICATION

NRC REQUEST FOR VERIFICATION OF ONE-HOUR MARGIN ON ALL CATEGORY A AND B ELECTRICAL EQUIPMENT FOR WBN

The operating time listed in Table 3.11 of the Environmental Qualification report is the time required for the component to perform its intended safety function which is by definition the operability time. The components' actual operating time or demonstrated time is documented in the EQS. The minimum time margin of one hour for all equipment has been achieved with the exception of the following equipment:

FCV-1-15
FCV-1-16

FCV-67-87
FCV-67-95
FCV-67-103
FCV-67-111

The motor operated valves listed above are equipped with Limitorque operators which have been demonstrated to operate for 5 minutes. After 5 minutes, the critical temperature is exceeded and the operator is assumed to fail. A justification for the 5-minute time margin is as follows:

a. Justification for FCV-1-15, -16

These valves are designed to provide steam flow to the auxiliary feedwater (AFW) turbine driven pump. FCV-1-15 provides steam flow from steam generator loop 1 and FCV-1-16 provides steam flow from steam generator loop 4. Under normal operating conditions FCV-1-15 is open and FCV-1-16 is closed. If steam generator loop 1 should blow down due to a large steam line break, the motive power to the turbine driven pump will be lost, and the automatic controls will close FCV-1-15 and open FCV-1-16 after a 1-minute delay to provide the turbine driven pump with an alternate steam supply. The valves are designed to stroke open and close in 30 seconds. Thus, the valves will function for approximately 1 minute and 30 seconds with over 3 minutes to spare before failure is expected. Therefore, TVA concludes that the valves will operate for all events to perform their intended safety function.

b. Justification for FCV-67-87, -95, -103, -111

These valves are located inside containment and are designed to isolate the ERCW flow to the lower containment ventilation coolers upon receipt of a phase B containment isolation signal. In addition, redundant motor operated isolation valves are provided outside containment which will also close upon receipt of a phase B containment isolation signal. The valves are designed to close in approximately 3 minutes and thus have 2 minutes to spare before failure is expected. Since the valves are required to operate for approximately 3 minutes and are qualified for 5 minutes and redundant isolation valves are provided outside containment, the containment integrity will not be violated (which is the primary reason for qualifying these valves) for any design basis event. Therefore, TVA concludes that these valves are adequately qualified to perform their intended safety function.

General

All equipment or components were qualified for the 0588 events that would create a harsh environment in the location of that equipment. The 0588 events were evaluated to determine which breaks would produce the most severe environment in the location of that eqiupment. Having defined the harsh environment, the equipment's required operating time was then determined solely by the safety function performed by the equipment. For example, the containment isolation valves must close immediately upon receipt of a phase A or B isolation signal which would be initiated immediately in the event of a large LOCA. If the valves did not close within a very short time period, then the valves did not perform the intended safety function which was to maintain containment integrity. In this case, the valves are required to operate for a very short time period, then the valves did not perform the intended safety function which was to maintain containment integrity. In this case, the valves are required to operate for a very short time and not fail open for a relatively long time period after valve closure. However, if any valve was required to operate later in the event, the required operating time was extended to insure that the component will be available to perform its intended safety function.

All components which do not have to function after the required operating time, but could fail in a particular mode that would prevent system safety function, were categorized as B. For this class of equipment the failure modes were identified and the equipment qualified to ensure that this failure mode will not occur and prevent the safety system from accomplishing its safety function.