Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

NOV 1 5 1999

10 CFR 50.55(a)

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket No. 50-390
Tennessee Valley Authority)

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) SECTION XI INSERVICE TESTING PROGRAM REQUEST FOR RELIEF PV-15, REVISION 1 AND PV-16

The purpose of this letter is to request relief from ASME Section XI Code requirements. In a letter dated November 20, 1995, TVA requested relief from certain testing requirements for two essential raw cooling water (ERCW) system valves and two reactor coolant system (RCS) valves. This relief request's unique identifier was PV-15. NRC approved PV-15 in NRC's Supplemental Safety Evaluation Report (SSER) 20 (NUREG-0847) for WBN dated February 1996.

By this letter, TVA is revising PV-15 to split the systems into two separate relief requests. PV-15, Revision 1, will be a revised request for the same two RCS valves, 1-FSV-68-396-B and 1-FSV-68-397-A in PV-15, Revision 0. The ERCW system valves, 0-FSV-67-1221-A and 0-FSV-67-1223-B in PV-15, Revision 0, are being submitted as a new relief request, PV-16. This revision is needed because the revised proposed alternatives for the Code requirement are different. Therefore, pursuant to 10 CFR 50.55a(f)(5)(iii),

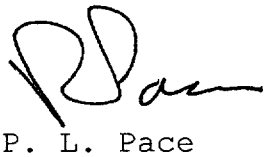
A047

TVA requests NRC's approval of the revised alternatives. TVA considers the proposed alternate testing to provide an adequate level of assurance of operational readiness and an acceptable level of quality and safety.

Enclosure 1 provides the revised relief requests PV-15, Revision 1 for the RCS valves. Enclosure 2 provides the new relief request PV-16 for the ERCW valves. Relief request PV-16 is similar to TVA's Sequoyah Nuclear Plant (SQN) relief request which was submitted to the NRC November 21, 1995 entitled "Second Ten-Year Interval Inservice Testing Program for Pumps and Valves," Relief Request RV-2. The SQN Relief Request RV-2, was approved by NRC's letter "Inservice Testing Program Relief Requests, Second Ten-Year Interval Sequoyah Nuclear Plant Units 1 and 2 (TAC NOS. M94117 and M94118) dated March 20, 1996, Section 4.2, "Valve Relief Request RV-2."

TVA requests that NRC review and approve the revised relief requests by April 30, 2000. These relief requests are needed for the third refueling outage which is schedule to begin in September 2000. If you should have any questions concerning this matter, please contact me at (423) 365-1824.

Sincerely,



P. L. Pace
Manager, Site Licensing
and Industry Affairs

Enclosures
cc See Page 3

cc: (Enclosures):
NRC Resident Inspector
Watts Bar Nuclear Plant
1260 Nuclear Plant Road
Spring City, Tennessee 37381

Mr. Robert E. Martin, Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, Maryland 20852

U.S. Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, Georgia 30303

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1

RELIEF REQUEST PV-15, Revision 1

ENCLOSURE 1

WATTS BAR NUCLEAR PLANT UNIT 1
REVISED RELIEF REQUEST
PV-15, REVISION 1

I. **Relief Request Number** - PV-15, Revision 1

II. **Affected System(s)** - Reactor Coolant System

III. **Affected Component(s)** - 1-FSV-68-396-B,
1-FSV-68-397-A

(1-47W813-1 - attached)

IV. **ASME Code Class** - 1

V. **Category** - B-Active

VI. **Function of Affected Component(s)** - The affected valves are the reactor coolant head vent throttle valves. These valves are throttled open by operator action to control the rate at which non-condensable gases and hydrogen are vented from the reactor vessel following an accident.

VII. **ASME Code Test Requirement** - OM Standard, Part 10 (OM-10), Paragraph 4.2.1.4(b), "The stroke time of all power operated valves shall be measured to at least the nearest second."

VIII. **Basis for Granting Relief** - These two valves are totally enclosed [seal welded bonnet], one-inch Target Rock solenoid valves, which prevents local confirmation of valve position. Design requirements impose a minimum stroke time limitation on these valves of not faster than 5 seconds. These valves are remotely positionable throttle valves with a thumb-wheel actuated controller that positions the valve. Restricting the stroke time to not less than 5 seconds effectively prohibits stroke timing the valve because the valve is capable of stroking considerably faster than the 5 second limit. Even if the 5 second limit did not exist, stroke timing of the valve using its thumb-wheel actuated controller would result in timing the ability of the operator to turn the thumb-wheel and not the ability of the valve to move.

An enhanced maintenance program of disassembly and inspection of valve internal parts was evaluated. This method was not considered appropriate for the following reasons:

[1] Frequent disassembly can lead to distortion of the valve parts caused by the repetitive welding process to reinstall the seal weld. This distortion could cause unacceptable operational seat leakage, binding of internal parts, and other operational problems.

[2] The physical appearance of the internal parts does not always provide clear and evident verification of acceptable valve operation.

IX. Proposed Alternative - TVA proposes to utilize an enhanced maintenance program based on the following attributes:

[1] Periodic replacement of critical valve parts [i.e., the linear voltage differential transformer (LVDT) that provides valve position indication feedback, the coil that operates the valve, and the valve's electrical terminal board] is in accordance with TVA's environmental qualification binder for the valve. The current schedule for valve part replacement is every 132 months for the LVDT, every 294 months for the coil, and every 432 months for the valve terminal board.

[2] Calibration of the valve's position control system is performed each refueling outage. This calibration involves utilizing the valve controller to position the valve at various positions and utilizing the LVDT to determine the valve stem position. These are compared to ensure valve operation is as expected.

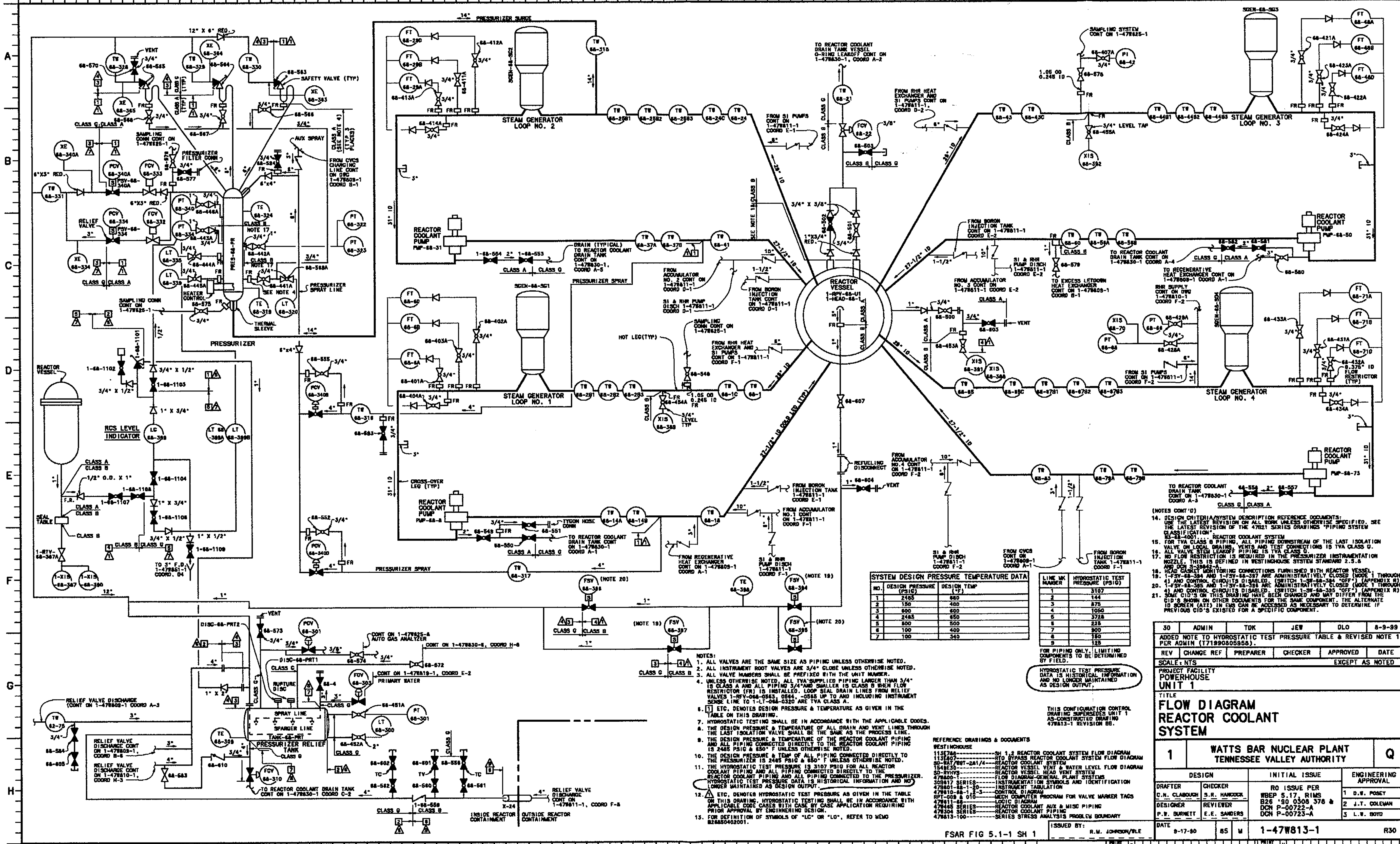
In addition to the enhanced maintenance program, tests will be conducted as follows to provide positive verification of the valve's ability to fulfill its specific function:

[1] Full stroke exercise of each valve is performed during shutdowns under the provisions of Paragraphs 4.2.1.2(f) and 4.2.1.2(g) of OM-10. This test consists of cycling the valve controller through one complete cycle and verifying [using the valve position indicator operated by the LVDT attached to the valve stem] that the valve cycles through one full cycle in response to the valve controller.

[2] During refueling outages, in addition to cycling the controller through one complete cycle and using the valve position indicator to verify valve travel, supplement the verification of valve travel by (a) ensuring no detectable flow is present through the valves with the valves closed, (b) ensuring that with each valve open flow is present, and (c) ensuring that when each valve is returned to the closed position no detectable flow is present. The presence or absence of flow is verified by monitoring a change in a process perimeter either the valve tail pipe temperature for an increase/decrease or the pressurizer

relief tank [to which the valves discharge] for a temperature increase/decrease or level increase/no change. This additional verification which is consistent with OM-10, Paragraph 4.2.1.3, Valve Obturator Movement, ensures the valve disk is still attached to the stem and is capable of controlling flow.

X. **Frequency of Proposed Alternative** - Each refueling outage.



SYSTEM DESIGN PRESSURE TEMPERATURE DATA		
NO.	DESIGN PRESSURE (PSIG)	DESIGN TEMP (°F)
1	2485	680
2	150	400
3	600	600
4	2485	650
5	500	500
6	100	400
7	100	340

LINE MK NUMBER	HYDROSTATIC TEST PRESSURE (PSIG)
1	3107
2	144
3	875
4	1050
5	3728
6	225
7	900
8	150
9	125

FOR PIPING ONLY. LIMITING COMPONENTS TO BE DETERMINED BY FIELD.

HYDROSTATIC TEST PRESSURE DATA IS HISTORICAL INFORMATION AND NO LONGER MAINTAINED AS DESIGN OUTPUT.

THIS CONFIGURATION CONTROL DRAWING SUPERSEDES UNIT 1 AS-CONSTRUCTED DRAWING 47W813-1 REVISION 88.

NOTES:

1. ALL VALVES ARE THE SAME SIZE AS PIPING UNLESS OTHERWISE NOTED.
2. ALL INSTRUMENT ROOT VALVES ARE 3/4" GLOBE UNLESS OTHERWISE NOTED.
3. ALL VALVE NUMBERS SHALL BE PREFIXED WITH THE UNIT NUMBER.
4. UNLESS OTHERWISE NOTED, ALL TVA SUPPLIED PIPING LARGER THAN 3/4" IS CLASS A AND ALL PIPING 3/4" AND SMALLER IS CLASS B WHEN FLOW RESTRICTOR (FR) IS INSTALLED. LOOP SEAL DRAIN LINES FROM RELIEF VALVES 1-RFV-068-0563, 0564, -0565 UP TO AND INCLUDING INSTRUMENT SENSE LINE TO 1-LT-068-0320 ARE TVA CLASS A.
6. [1] ETC. DENOTES DESIGN PRESSURE & TEMPERATURE AS GIVEN IN THE TABLE ON THIS DRAWING.
7. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH THE APPLICABLE CODES.
8. THE DESIGN PRESSURE & TEMPERATURE OF ALL DRAIN AND VENT LINES THROUGH THE LAST ISOLATION VALVE SHALL BE THE SAME AS THE PROCESS LINE.
9. THE DESIGN PRESSURE & TEMPERATURE OF THE REACTOR COOLANT PIPING AND ALL PIPING CONNECTED DIRECTLY TO THE REACTOR COOLANT PIPING IS 2485 PSIG & 650° F UNLESS OTHERWISE NOTED.
10. THE DESIGN PRESSURE & TEMP OF ALL PIPING CONNECTED DIRECTLY TO THE PRESSURIZER IS 2485 PSIG & 680° F UNLESS OTHERWISE NOTED.
11. THE HYDROSTATIC TEST PRESSURE IS 3107 PSIG FOR ALL REACTOR COOLANT PIPING AND ALL PIPING CONNECTED DIRECTLY TO THE REACTOR COOLANT PIPING AND ALL PIPING CONNECTED TO THE PRESSURIZER. HYDROSTATIC TEST PRESSURE DATA IS HISTORICAL INFORMATION AND NO LONGER MAINTAINED AS DESIGN OUTPUT.
12. △1 ETC. DENOTES HYDROSTATIC TEST PRESSURE AS GIVEN IN THE TABLE ON THIS DRAWING. HYDROSTATIC TESTING SHALL BE IN ACCORDANCE WITH APPLICABLE CODE CASES WITH CASE BY CASE APPLICATION REQUIRING PRIOR APPROVAL BY ENGINEERING DESIGN.
13. FOR DEFINITION OF SYMBOLS OF "LC" OR "LO", REFER TO MEMO B26850402001.

(NOTES CONT'D)

14. DESIGN CRITERIA/SYSTEM DESCRIPTION REFERENCE DOCUMENTS: USE THE LATEST REVISION ON ALL WORK UNLESS OTHERWISE SPECIFIED. SEE THE LATEST REVISION OF THE 47B21 SERIES DRAWINGS "PIPING SYSTEM CLASSIFICATION". N3-68-4001.... REACTOR COOLANT SYSTEM
15. FOR TVA CLASS B PIPING, ALL PIPING DOWNSTREAM OF THE LAST ISOLATION VALVE ON LOCAL DRAINS, VENTS AND TEST CONNECTIONS IS TVA CLASS G.
16. ALL VALVE STEM LEAKOFF PIPING IS TVA CLASS G.
17. NO FLOW RESTRICTION IS REQUIRED IN THE PRESSURIZER INSTRUMENTATION NOZZLE. THIS IS DEFINED IN WESTINGHOUSE SYSTEM STANDARD 2.5.8 AND DCN S-39842-A.
18. HEAD GASKET MONITORING CONNECTIONS FURNISHED WITH REACTOR VESSEL.
19. 1-FSV-68-394 AND 1-FSV-68-397 ARE ADMINISTRATIVELY CLOSED (MODE 1 THROUGH 4) AND CONTROL CIRCUITS DISABLED. (SWITCH 1-SW-68-394 "OFF") (APPENDIX R).
20. 1-FSV-68-395 AND 1-FSV-68-396 ARE ADMINISTRATIVELY CLOSED (MODE 1 THROUGH 4) AND CONTROL CIRCUITS DISABLED. (SWITCH 1-SW-68-395 "OFF") (APPENDIX R).
21. SOME CID'S ON THIS DRAWING HAVE BEEN CHANGED AND MAY DIFFER FROM THE CID'S SHOWN ON OTHER DOCUMENTS FOR THE SAME COMPONENT. THE ALTERNATE ID SCREEN (AII) IN EMS CAN BE ACCESSED AS NECESSARY TO DETERMINE IF PREVIOUS CID'S EXISTED FOR A SPECIFIC COMPONENT.

REFERENCE DRAWINGS & DOCUMENTS

WESTINGHOUSE

- 113E786------------SH 1,2 REACTOR COOLANT SYSTEM FLOW DIAGRAM
- 113E807------------RTD BYPASS REACTOR COOLANT SYSTEM FLOW DIAGRAM
- SD-WAT/WBT-2A1/4---REACTOR COOLANT SYSTEM
- 1548E30------------REACTOR VESSEL VENT & WATER LEVEL FLOW DIAGRAM
- SD-RVHVS-----------REACTOR VESSEL HEAD VENT SYSTEM
- 47W800-1-----------FLOW DIAGRAM-GENERAL PLANT SYSTEMS
- 30B617 SERIES------INSTRUMENTATION SYMBOLS AND IDENTIFICATION
- 47B601-68-1-20-----INSTRUMENT TABULATION
- 47W610-68-1,2-3----CONTROL DIAGRAM
- RPT-009 & 010------MECH COMPUTER PROGRAM FOR VALVE MARKER TAGS
- 47W611-68----------LOGIC DIAGRAM
- 47W465 SERIES------REACTOR COOLANT AUX & MISC PIPING
- 47W304 SERIES------REACTOR COOLANT PIPING
- 47W813-100---------SERIES STRESS ANALYSIS PROBLEM BOUNDARY

30	ADMIN	TDK	JEW	DLO	8-9-99
ADDED NOTE TO HYDROSTATIC TEST PRESSURE TABLE & REVISED NOTE 11 PER ADMIN (T71990805958).					
REV	CHANGE REF	PREPARER	CHECKER	APPROVED	DATE

SCALE: NTS EXCEPT AS NOTED

PROJECT FACILITY
POWERHOUSE
UNIT 1

TITLE

FLOW DIAGRAM REACTOR COOLANT SYSTEM

1 — WATTS BAR NUCLEAR PLANT — TENNESSEE VALLEY AUTHORITY — Q

DESIGN		INITIAL ISSUE	ENGINEERING APPROVAL
DRAFTER C.N. CLABOUGH	CHECKER S.R. HANCOCK	RO ISSUE PER WBEP 5.17, RIMS B26 '90 0308 378 & DCN P-00722-A DCN P-00723-A	1 D.W. POSEY
DESIGNER P.W. BURNETT	REVIEWER E.E. SANDERS		2 J.T. COLEMAN
			3 L.W. BOYD

DATE 9-17-90 | 85 | M | 1-47W813-1 | R30

ISSUED BY: R.M. JOHNSON/WLE

FSAR FIG 5.1-1 SH 1

PROCADAM MAINTAINED DRAWING
THIS CONFIGURATION CONTROL DRAWING IS MAINTAINED BY THE WBN CAD UNIT AND IS NOT PART OF THE TVA PROCADAM DATABASE

CONFIGURATION CONTROL DRAWING

1-47W813-1

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT UNIT 1

RELIEF REQUEST PV-16

ENCLOSURE

WATTS BAR NUCLEAR PLANT UNIT 1
REQUEST FOR RELIEF, PV-16

I. **Relief Request Number** - PV-16

II. **Affected System(s)** - Essential Raw Cooling Water

III. **Affected Component(s):** 0-FSV-67-1221-A (1-47W845-4 attached)
0-FSV-67-1223-B (1-47W845-7 attached)

IV. **ASME Code Class** - Class 3-Active

V. **Valve Category** - Category B

VI. **Function of Affected Component(s)**

Valves open to admit cooling water to the jackets and aftercooler of the auxiliary air compressors.

VII. **ASME Code Testing Requirement**

The following sections in OM Standard, Part 10:

Paragraph 4.2.1.4(a), "The limiting value(s) of full-stroke time of each power-operated valve shall be specified by the Owner,"

Paragraph 4.2.1.4(b), "The stroke time of all power operated valves shall be measured to at least the nearest second", and

Paragraph 4.2.1.9(b), "Valves with measured stroke times which do not meet the acceptance criteria of paragraph 4.2.1.8 shall be immediately retested or declared inoperable. If the valve is retested and the second set of data also does not meet the acceptance criteria, the data shall be analyzed within 96 hours to verify that the new stroke time represents acceptable valve operation, or the valve shall be declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation shall be analyzed and the results documented in the record of tests."

VIII. **Basis for Granting Relief** - These solenoid valves are mounted on the auxiliary air compressor skid. These valves are totally enclosed, solenoid actuated valves manufactured by Target Rock and have no remote position indication. The inability to see any moving parts of the valve prevents visual confirmation of valve position. This, in conjunction with the lack of remote position indication, prevents direct measurement of the stroke time of the valve.

Additionally, the air compressors have a thermostatic valve, installed in series with these solenoid valves, that modulates in response to system temperature. The thermostatic valve does

not start opening until air compressor temperatures are elevated. Until air compressor temperatures have risen sufficiently to open the thermostat, no cooling water flow exists to the compressor, even though the solenoid valves are open. Although a flow element is provided in the cooling water line, the presence of the thermostatic valve prevents use of the flow measurement as an indirect indication of solenoid valve stroke time.

As discussed in NUREG-1482," Guidelines for Inservice Testing at Nuclear Power Plants," Section 3.4, "Skid-Mounted Components and Component Subassemblies," when an individual component cannot be tested to the requirements of the OM-10, testing of the larger component [in this case, the auxiliary air compressor] ensures that the subcomponent is functioning properly. Demonstration of the ability of the auxiliary air compressors to operate without overheating will provide an adequate means for assuring operational readiness of cooling water supply valves 0-FSV-67-1221-A and 0-FSV-67-1223-B.

IX. **Proposed Alternative** - Exercise the valves to the open position by operating the auxiliary air compressor and observing the discharge air and jacket water temperatures during compressor operation to ensure the temperatures are maintained at acceptable levels. This verifies that the cooling water supply solenoid valves operate to supply ERCW cooling water to the auxiliary air compressors.

X. **Frequency of Proposed Alternative** - Quarterly.

1-47W845-4 | R | 65

AUX CONTROL AIR COMPRESSOR
(EL 737.0')
ΔP = 2 PSI @ 3.5 GPM

SPENT FUEL PIT PUMP & TB BOOSTER PUMP SPACE CLR
(EL 737.0')
ΔP = 15' @ 20 GPM

CCS PUMP & AUX FW PUMPS SPACE CLR
(EL 713.0')
ΔP = 15' @ 115 GPM
DESIGN FLOW = 102 GPM

CENTRIFUGAL CHARGING PUMP ROOM COOLER
(EL 692.0')
ΔP = 10' @ 25 GPM

SIS PUMP RM COOLER
(EL 692.0')
ΔP = 10' @ 33 GPM

CS PUMP RM COOLER
(EL 676.0')
ΔP = 15' @ 33 GPM
DESIGN FLOW = 28 GPM

RHR PUMP RM COOLER
(EL 676.0')
ΔP = 10' @ 18 GPM

PEN. RM CLR
(EL 692.0')
ΔP = 10' @ 12 GPM

PEN. RM CLR
(EL 713.0')
ΔP = 10' @ 11 GPM

PEN. RM CLR
(EL 737.0')
ΔP = 10' @ 12 GPM

PIPE CHASE COOLER
(EL 692.0')
ΔP = 15' @ 15 GPM

ELECTRIC BD RM A/C CONDENSER
(EL 692.0')
ΔP = 10' @ 440 GPM
DESIGN FLOW = 370 GPM

CENT CHG PUMP RM CLR
(EL 692.0')
ΔP = 10' @ 35 GPM

RECIPROCATING CHG PUMP RM CLR
(EL 692.0')
ΔP = 10' @ 12 GPM

CCS PUMPS & AUX FW PUMP SPACE COOLER
(EL 713.0')
ΔP = 15' @ 115 GPM
DESIGN FLOW = 102 GPM

AUXILIARY CONTROL AIR COMPRESSOR A
DETAIL A4
(EL 737.0')

NOTE:
1. FOR GENERAL NOTES AND REFERENCE DRAWINGS, SEE SHEET 1.
2. (TP) & (TP) DENOTE UNIT 1 & UNIT 2 INTERFACE POINTS. THE STRUCTURAL BOUNDARY IS THE FIRST ANCHORED EQUIPMENT OR PIPE ANCHOR ON THE UNIT 2 SIDE OF THE INTERFACE POINT. BECAUSE OF TIES, SOME INTERFACE POINTS WILL HAVE MORE THAN ONE STRUCTURAL TERMINATION.
3. THROTTLE VALVES ADDED TO VALVE ACTUATOR TO PREVENT OVER-PRESSURIZATION OF DIAPHRAGM AND TO ASSIST VALVES SHUTOFF CAPABILITY.

DCA W39476-01-0

DCA W39476-01-0

DCA W39476-03-0

@ SEE NOTE 13 SH 1 AND NOTE 19 ON SH 5.

THIS CONFIGURATION CONTROL DRAWING SUPERSEDES UNIT 1 AS-CONSTRUCTED DRAWING 47B845-4 REVISION X.

REV NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	APPD	APPD	APPD	ISSD
16	W-39476-A	MAR 97	MAF	JEW	JEW	NR	NR	NR	NR	MAR 97
	REVISED PER DCA'S W39476-01-0 (STG 1) & -03-0 (STG 3).									

SCALE: NTS — EXCEPT AS NOTED

PROJECT FACILITY
POWERHOUSE
AUX & CONTROL BLDG UNIT 1

TITLE
MECHANICAL
FLOW DIAGRAM - ESSENTIAL
RAW COOLING WATER

1 — WATTS BAR NUCLEAR PLANT — TENNESSEE VALLEY AUTHORITY — Q

DESIGN		INITIAL ISSUE	ENGINEERING APPROVAL
DRAFTER: S.B. HANCOCK	CHECKER: K.E. THOMPSON	RO ISSUE PER WREP 5.17, RIMS B26 '89 1019 375 & DCN K-06753-A	1 B.W. HUNDATE
DESIGNER: M.L. CHAPMAN	REVIEWER: J.P. LUND		2 B.W. HUNDATE
DATE: 1-26-90	BS M	1-47W845-4 R16	3 F.A. MOONTZ

COMPANION DRAWINGS: 1-47W845-1, 2, 3, 5, & 7

FSAR FIG. 9.2-4

ISSUED BY: J. EDWARD GIBBS

PROCADAM MAINTAINED DRAWING
THIS CONFIGURATION CONTROL DRAWING IS MAINTAINED BY THE WBN CAD UNIT AND IS NOW PART OF THE TVA PROCADAM DATABASE

CONFIGURATION CONTROL DRAWING

1-47W845-7 | M | 65

DCA S38636-14-0

DCA S38636-14-0

DCA S38636-14-0

DCA S38636-14-0

AUXILIARY CONTROL AIR COMPRESSOR B
DETAIL A7
(EL 757.0')

FSAR FIG. 9.2-4B

NOTE: INTERFACE HOLD ORDER H.O. 29011, 29013 PLACED ON INDICATED VALVES TO MAINTAIN CLOSED CONFIGURATION.

THIS CONFIGURATION CONTROL DRAWING SUPERSEDES UNIT 1 AS-CONSTRUCTED DRAWING 47W845-4 REVISION 11.

REV NO.	CHANGE REF	DATE	DFTR	CHKR	DSGN	RVWR	1APPD	2APPD	3APPD	ISSD
13	S-38636-B	4-26-90	MDR	PDH	ESJ	NR	NR	NR		
	REVISED PER DCA S38636-14-0. DELETED SYSTEM BOUNDARY.									

SCALE: NTS — EXCEPT AS NOTED

PROJECT FACILITY
POWERHOUSE
AUX BLDG UNIT 2

TITLE
MECHANICAL
FLOW DIAGRAM - ESSENTIAL
RAW COOLING WATER SYSTEM

1 | WATTS BAR NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY | Q

DESIGN		INITIAL ISSUE	ENGINEERING APPROVAL
DRAFTER B.R. HANCOCK	CHECKER C.E. THOMPSON	RO ISSUE PER WBEP 5.17 & RIMS B26 '89 1019 375	1 S.V. HUNGATE
DESIGNER W.L. CHAPMAN	REVIEWER J.C. LEBO		2 S.V. HUNGATE
			3 F.A. ROONTZ

DATE 1-26-90 | 65 | M | 1-47W845-7 | R13

ISSUED BY: J. EDWARD GIBBS

PROCADAM MAINTAINED DRAWING
THIS CONFIGURATION CONTROL DRAWING IS MAINTAINED BY THE WBN CAD UNIT AND IS NOW PART OF THE TVA PROCADAM DATABASE

CONFIGURATION CONTROL DRAWING