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SCHWENCER,A. Licensing Branch 2

SEE RPI

SUBJECT: Forwards final response to NRC Questions 031.135,031.137 & 031.138 re control sys failures,per SER Outstanding Issue 13.Responses will be incorportated into FSAR Amend 31.

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	NRR/DSI/AEB 26	1	1	NRR/DSI/ASB	1	1
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June 24, 1983
G02-83-574

Docket No. 50-397

Director of Nuclear Reactor Regulation
Attention: Mr. A Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Schwencer:

Subject: NUCLEAR PROJECT NO. 2
CONTROL SYSTEM FAILURES QUESTIONS,
WNP-2 SER #3, OUTSTANDING ISSUE #13,
FINAL SUBMITTAL

Reference:
a) G02-83-541, G. D. Bouchey (SS) to A. Schwencer (NRC), Same Subject, dated June 21, 1983

b) G02-83-509, G. D. Bouchey (SS) to A. Schwencer (NRC), Same Subject, dated June 10, 1983

Enclosed is our final and formal response to NRC Questions 031.135, "Loss of Non-Class IE Instrumentation and Control Power System Bus During Power Operation (IE Bulletin 79-27)"; 031.137, "Qualification of Control Systems (IE Information Notice 79-22)"; and 031.138, "Control System Failures", as committed to in References (a) and (b) above. These responses will be incorporated into WNP-2 FSAR Amendment No. 31 to be issued at the end of the month.

Please note:

Question 031.135 (IEB 79-27) requires a review of procedures to implement changes as a result of the report conclusions. The report's recent completion has not allowed sufficient time for this review and rather than delay submittal, the report is forwarded without the subject review. The review will be completed and the necessary procedure changes approved and implemented prior to fuel load.

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1/80

For Question 031.137 (IEN 79-22) the worst case event combination quantitative analysis described in this submittal did not consider the normal response of the recirculation flow control system and its mitigating action. The Supply System is pursuing this analysis with General Electric to confirm our engineering judgment that the minor excedance of the Delta Critical Power Ratio would not occur if the WNP-2 flux/flow controls are realistically modeled. The Supply System does not intend to respond further on this issue unless the completed analysis materially changes the conclusions drawn in this submittal. Based upon the assessment that the high energy line break (HELB) and its postulated damaged-induced failures is an extremely low frequency event, this approach is justified commensurate with the potential safety implications.

Should you have any further questions, contact Mr. R. M. Nelson, Manager, WNP-2 Licensing.

Very truly yours,

G. D. Bouchey, Manager
Nuclear Safety and Regulatory Programs

JCA/tmh
Enclosure

cc: R Auluck - NRC
WS Chin - BPA
A Toth - NRC Site

Q.031.135

8307050004

Loss of Non-Class IE Instrumentation and Control Power System Bus During Power Operation (IE Bulletin 79-27)

If reactor controls and vital instruments derive power from common electrical distribution systems, the failure of such electrical distribution systems may result in an event requiring operator action concurrent with failure of important instrumentation upon which these operator actions should be based. This concern was addressed in IE Bulletin 79-27. On November 30, 1979, IE Bulletin 79-27 was sent to operating license (OL) holders, the near term OL applicants (North Anna 2, Diablo Canyon, McGuire, Salem 2, Sequoyah, and Zimmer), and other holders of construction permits (CP), including WNP-2. Of these recipients, the CP holders were not given explicit direction for making a submittal as part of the licensing review. However, they were informed that the issue would be addressed later.

You are requested to address these issues by taking IE Bulletin 79-27 Actions 1 thru 3 under "Actions to be Taken by Licensees". Within the response time called for in the attached transmittal letter, complete the review and evaluation required by Actions 1 thru 3 and provide a written response describing your reviews and actions. This report should be in the form of an amendment to your FSAR and submitted to the NRC Office of Nuclear Reactor Regulations as a licensing submittal.

CONTENTS

APPENDICES AND ILLUSTRATIONS

Response:

1.0 ANALYSIS OBJECTIVE

The overall analysis objective was to determine whether the loss of power to any bus would jeopardize being able to bring the plant to cold shutdown.

This review was conducted in response to IE Bulletin 79-27 which identified specific actions to be taken in accomplishing the review. These actions are as detailed below:

1) Review the Class 1E and Non-Class 1E buses supplying power to safety and non-safety related instrumentation and control systems which could affect the ability to achieve a cold shutdown condition using existing plant operating procedures or procedures developed for each bus in the event of its failure.

2) Identify the instrument and control system loads connected to the bus and evaluate the effects of loss of power to these loads including the ability to achieve a cold shutdown condition.

3) Identify and review the alarm and/or indication provided in the control room to alert the operator to the loss of power to the bus.

4) Identify alternate indication and/or control circuits which may be powered from other Non-Class 1E or Class 1E instrumentation and control buses.

5) Identify methods for restoring power to the buses.

6) Prepare emergency procedures or review existing ones that will be used by control room operators, including procedures required to achieve a cold shutdown condition, upon loss of power to each Class 1E and Non-Class 1E bus supplying power to safety and non-safety related instrument and control systems.

7) Describe any proposed design modifications or administrative controls to be implemented resulting from these procedures, and the proposed schedule for implementing the changes.

A comprehensive approach was developed to analyze the consequences of a bus failure during cold shutdown. Details of this approach are identified in the anlaysis methodology section. Alternate cold shutdown paths, conclusions, and followup recommendations are also discussed in their respective sections.

This report with its appendices and illustrations was prepared by the General Electric Company (GE) for Washington Public Power Supply System (WPPSS). Significant technical contribution was also provided by Burns and Roe, Inc. (BRI).

2.0 ANALYSIS METHODOLOGY

The information required to analyze the effect of a bus failure on cold shutdown was obtained from both GE and BRI.

The division of responsibility for the information and analysis gathering was as follows:

ACTIVITY	ASSIGNED TO
2.1 Identify Required Systems	GE & BRI
2.2 Identify Required Devices	GE & BRI
2.3 Identify Required Buses	GE & BRI
2.4 Determine & Summarize Normal & Alternate Shutdown Paths	GE
2.5 Determine 1E and Non-1E Loads	GE & BRI
2.6 Analyze Bus Loss During Shutdown	GE
2.7 Analyze Cascade Effect of Combined Bus Losses	GE
2.8 Determine Bus Loss Annunciation	GE & BRI
2.9 Review Plant Procedures to Verify Appropriate Steps During Bus Loss	WPPSS
2.10 Modify/Augment Plant Procedures if Necessary	WPPSS

2.1 IDENTIFY REQUIRED SYSTEMS

This step established the systems required for plant shutdown to a cold shutdown state. A list of WNP-2 plant systems and subsystems was compiled and reviewed to determine only those systems necessary to achieve a cold shutdown. These systems were grouped together (see Figure 1) in their required normal and alternate shutdown paths. A detailed discussion of the methods used to develop Figure 1 is discussed in Section 2.4 of this report.

2.2 IDENTIFY REQUIRED DEVICES

Since not all devices in a system are required for shutdown only those devices the operator would manipulate in going to cold shutdown were evaluated. System operating procedures (PPM's) were reviewed in conjunction with the plant shutdown procedure (PPM 23.2.6) to properly evaluate devices required. The devices required for cold shutdown, the associated annunciators, and power busses were analyzed system by system.

2.3 IDENTIFY REQUIRED BUSES

The devices discussed in Section 2.2 were reviewed to determine their power supply bus(es). All power supply buses which have cold shutdown devices were then arranged to show how they are interconnected. Annunciators and loss of power alarms for the buses were reviewed to determine if the operator would be alerted on loss of a bus. Figure 2 shows all required buses, breakers and annunciators for these buses.

2.4 DETERMINE AND SUMMARIZE NORMAL AND ALTERNATE SHUTDOWN PATHS

The shutdown paths are as identified in Figure 1. The information required to determine the three basic shutdown paths was obtained from plant procedures, P&ID's and WNP-2 FSAR system descriptions.

With reference to Figure 1, the alphabetical indicator, located in parenthesis in each system block, (e.g., (E); (F); etc.) represents the cross

reference code to the system device table Appendix "A". Although each system description block is located in its own respective shutdown path, the Figure does not necessarily show the sequential use of a particular system during the cold shutdown operation. For example; in the normal cool down path ⟨N⟩, feedwater (Group (J)) is shown as the fifth (5th) system in line. Control of feedwater occurs to some degree, prior and during condensate and condensor vacuum (Group (F)) operations.

In addition, the use of normal RHR cooling occurs as a last event irrespective of the shutdown path selection (and use). Because of this, the RHR Shutdown Cooling Mode (L), is shown as the last event in the Normal Cooldown Path, and is essentially duplicated by control of RHR "A" or RHR "B" in the alternate shutdown cooling modes.

2.5 DETERMINE 1E AND NON-1E LOADS

A review of the plant single line diagrams identified the 1E or Non-1E class status. These designators have been included in the "Power Bus Analysis Tables", Appendix "A", under the heading of "Essentiality Code".

2.6 ANALYZE BUS LOSS DURING SHUTDOWN

This step consisted of determining the affect of a bus loss on the ability to continue in the particular shutdown path that was being used at the time the bus loss occurred. Information presented in Figures 1 and 2 provided the facts necessary to analyze the consequences of a bus loss.

The conclusion effect of continuing in the existing shutdown mode is elaborated on in the affects column of the Appendix A document.

2.7 ANALYZE CASCADE EFFECT OF COMBINED BUS LOSSES

This step in the analysis is a continuation of Paragraph 2.6, where the consequences of an upstream bus loss will affect the cold shutdown path. In all cases, transfer to alternate power or transfer to other shutdown modes were possible.

2.8 DETERMINE BUS LOSS ANNUNCIATION

It is necessary when a bus loss occurs that the control room operating personnel are alerted to the fact. This step in the analysis determined what type of warning was relayed to the control room, i.e., annunciation or undervoltage relay triggering "control voltage lamps."

The identity of the alarm, indicator, or annunciator are shown in the appropriate column in Appendix A. Major bus annunciators are also identified on the "Bus system cascade chart" Figure 2.

2.9 REVIEW PLANT PROCEDURES TO VERIFY APPROPRIATE STEPS DURING BUS LOSS

This step must be accomplished as a result of this analysis report. WPPSS or their designated engineers should provide this review. The primary response is to restore power to the affected power bus(es). If this is not possible, then shifting to an alternate cooldown path is required.

2.10 MODIFY/AUGMENT PLANT PROCEDURES

If plant procedures require modification after the Paragraph 2.9 review, then WPPSS should make the necessary changes. When the "affects" column in Appendix A indicates that an alternate shutdown path is required, existing procedures or new supplemental procedures should be identified or prepared.

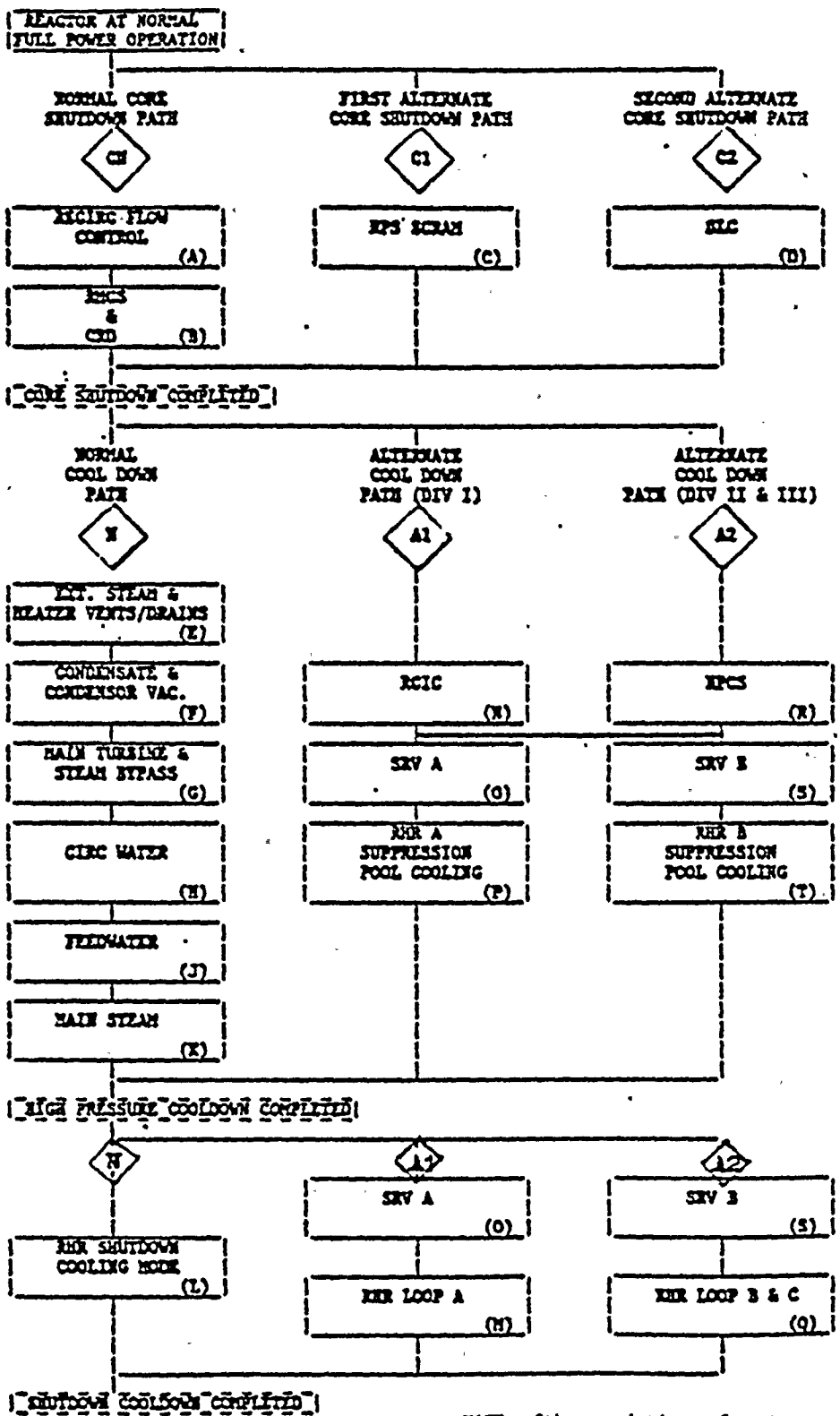
3.0 CONCLUSIONS

3.1 ALTERNATE SHUTDOWN PATHS

Analysis of the report information shows no situation where a single Bus Power Failure would prevent plant personnel from achieving a Reactor Cold Shutdown condition. This conclusion is based primarily on the analysis results as shown in Appendix "A", which delineates that no single bus supplies power to all three shutdown paths. In most cases, single buses provide power to systems that are active in only one shutdown path.

3.2 BUS FAILURE ANNUNCIATION

Bus failure of a major bus (i.e., 6.9 kV thru 480 Volt) is annunciated in the control room, thus giving the operator the knowledge that bus power is lost. The review and analysis of Appendix "A" and Figure 2 shows conclusively that control room personnel will have knowledge of individual bus or circuit failures.



NOTE: Other variations of systems are possible using RHRC (LPCI) ADS AND LPCS.

FIGURE 1 - COLD SHUTDOWN PATHS - WNPP-2

13-0175 (1)

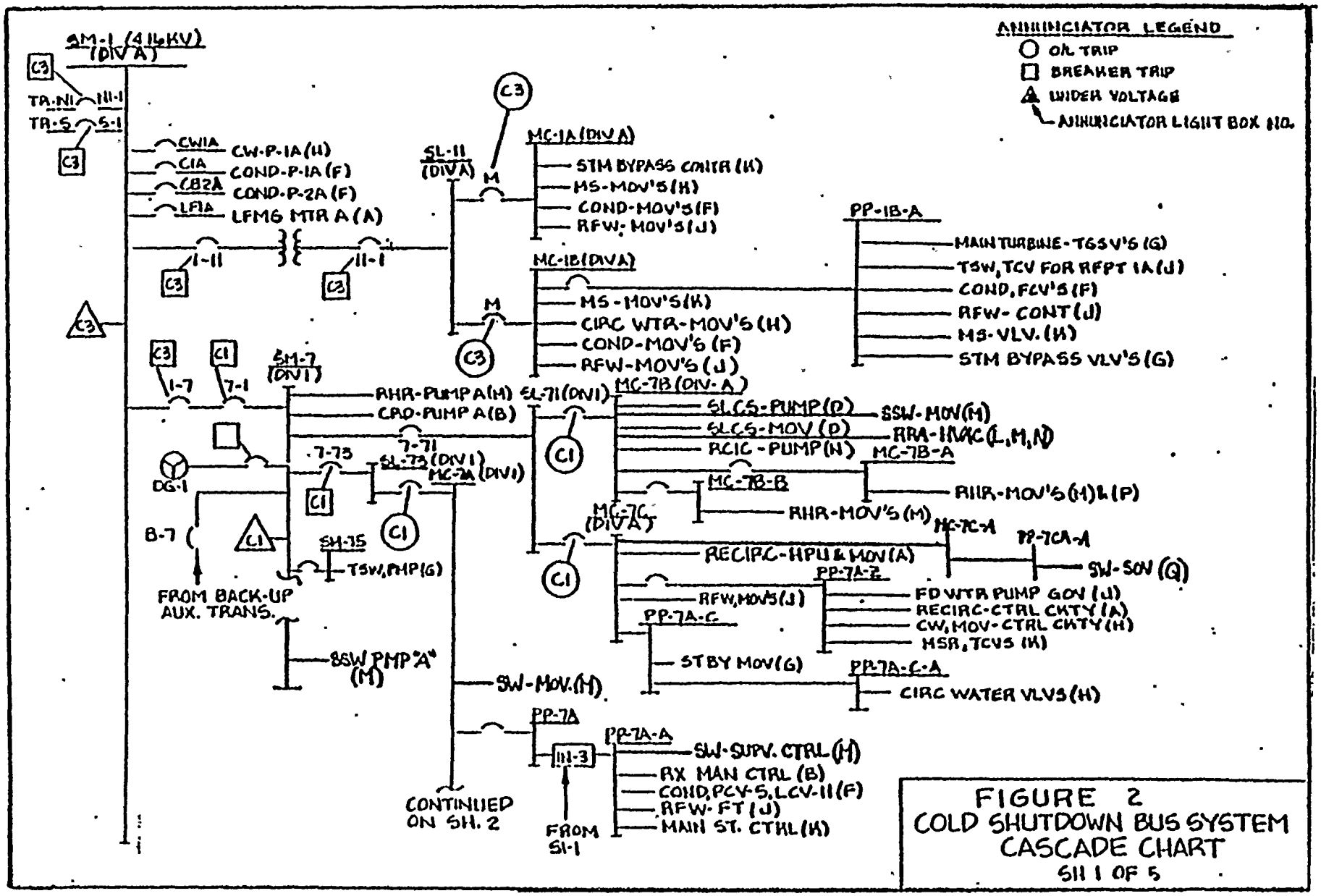


FIGURE 2
COLD SHUTDOWN BUS SYSTEM
CASCADE CHART
SH 1 OF 5

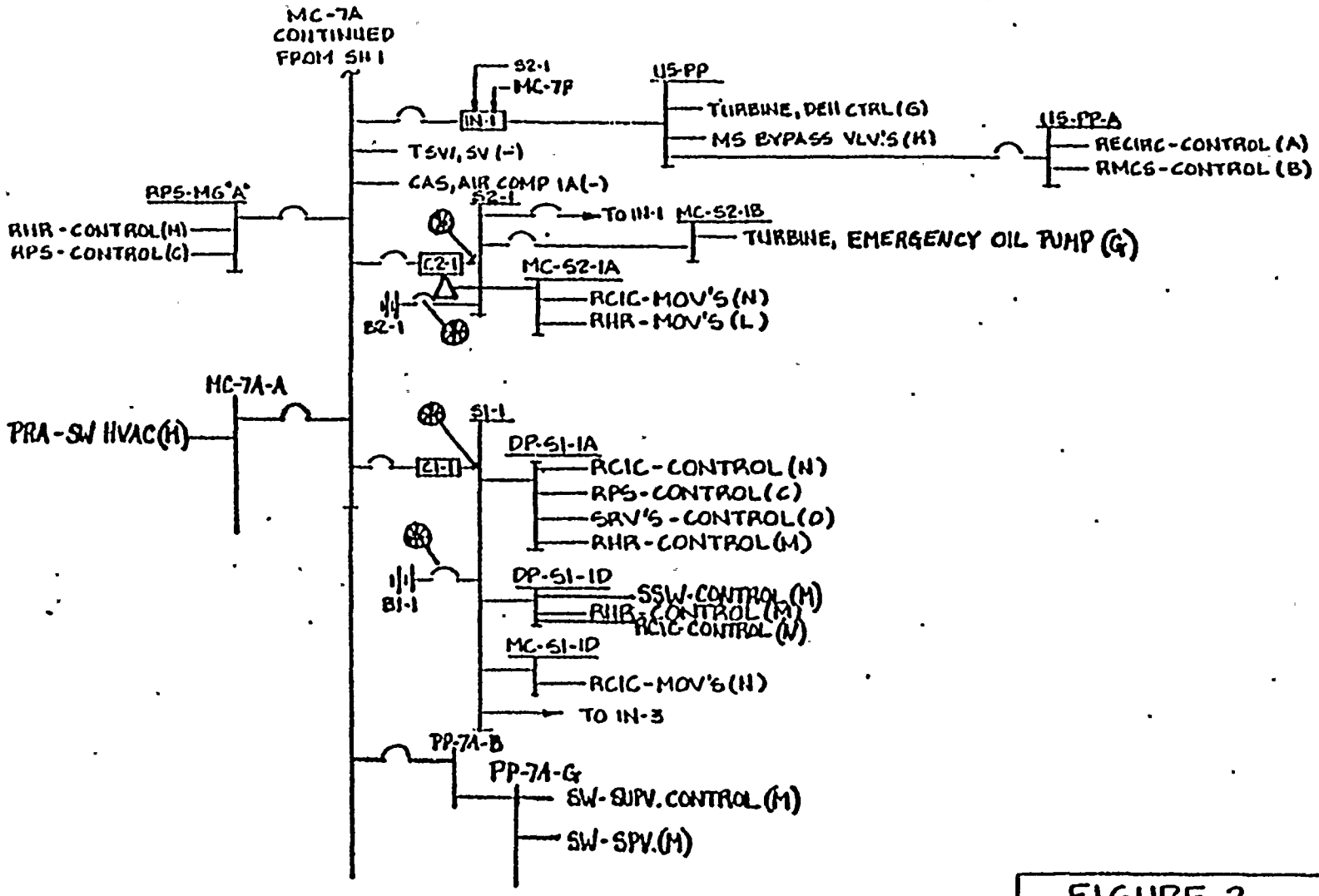


FIGURE 2
COLD SHUTDOWN SYS
SH. 2 OF 5

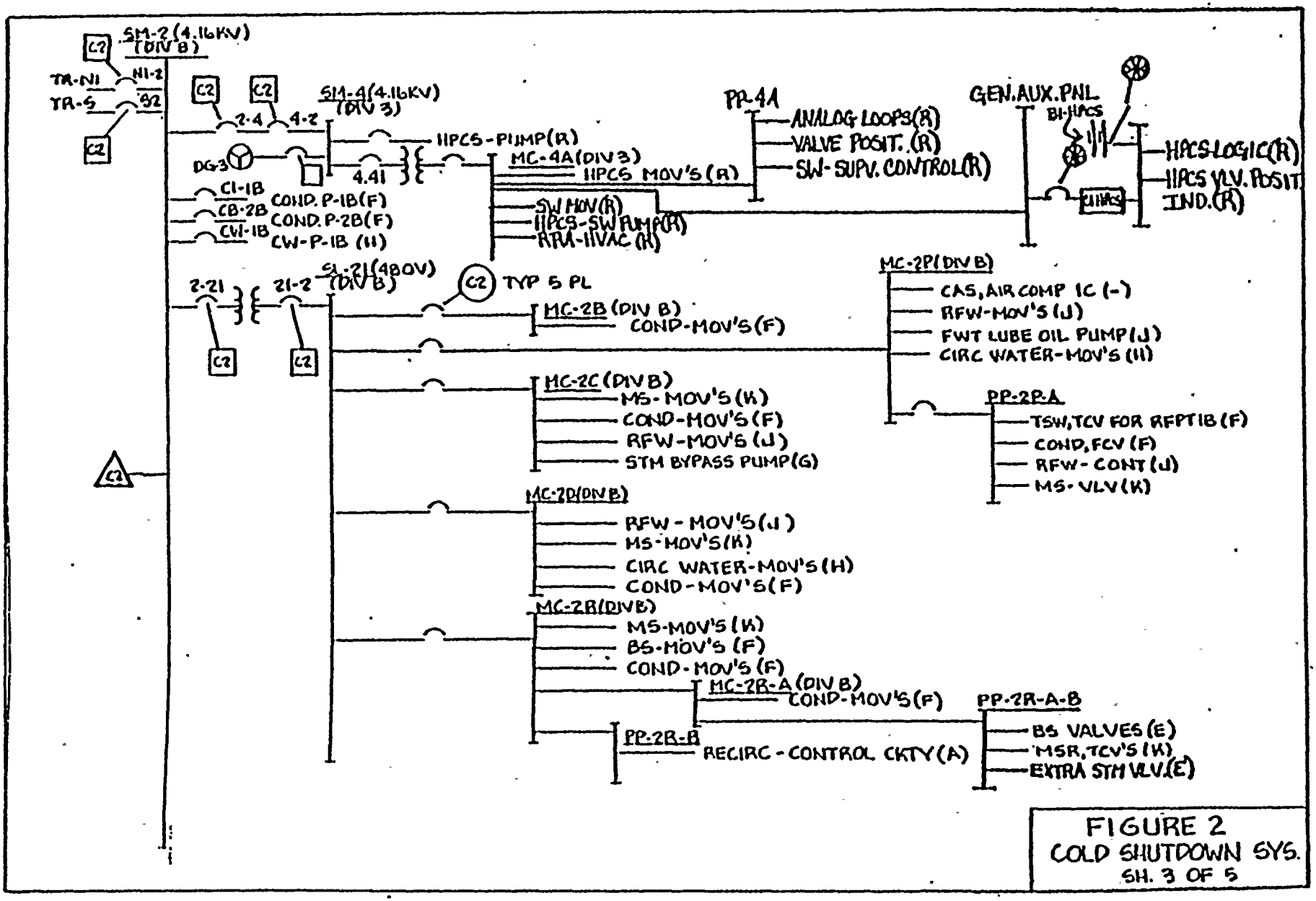


FIGURE 2
COLD SHUTDOWN SYS.
SH. 3 OF 5

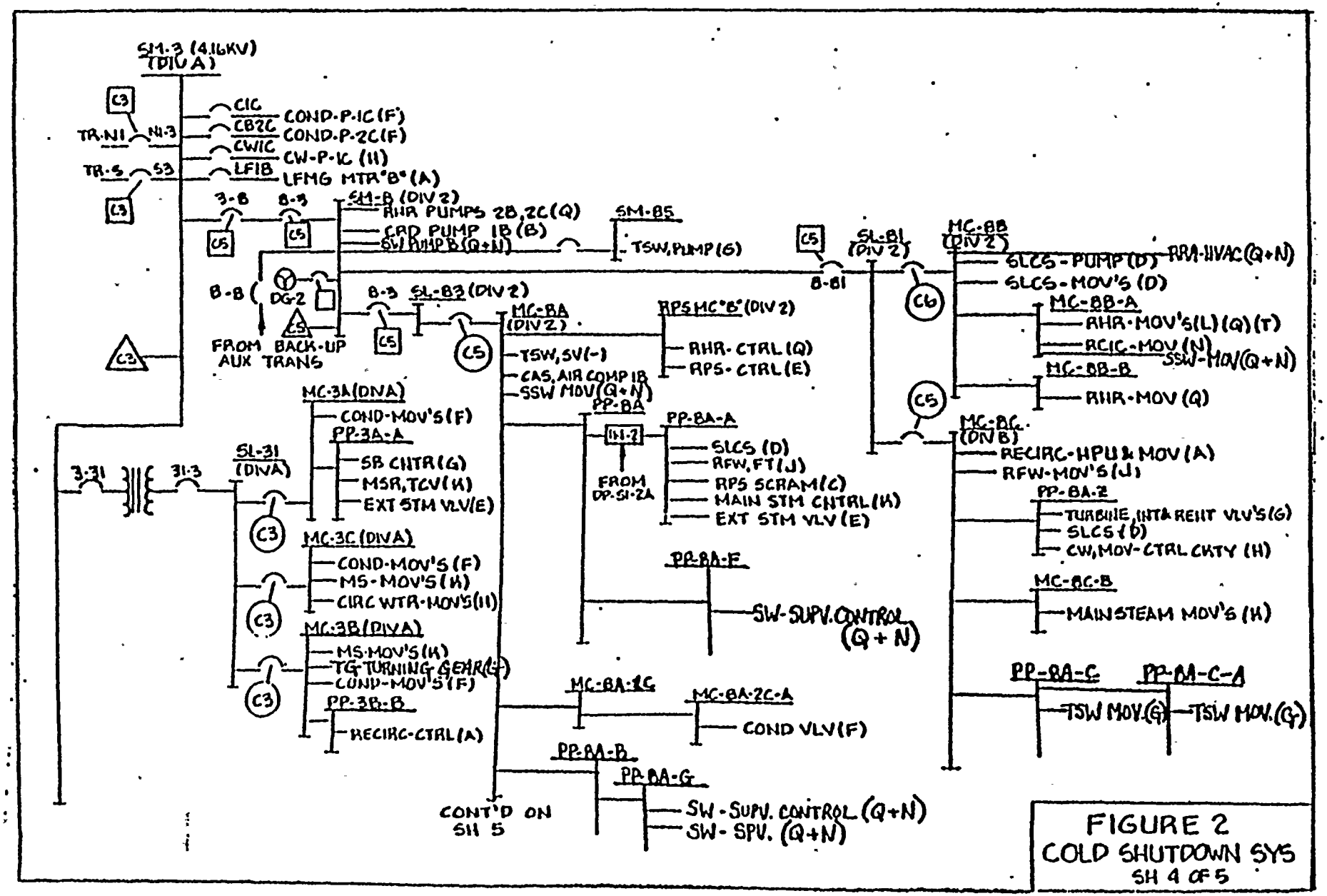


FIGURE 2
COLD SHUTDOWN SYS
SH 4 OF 5

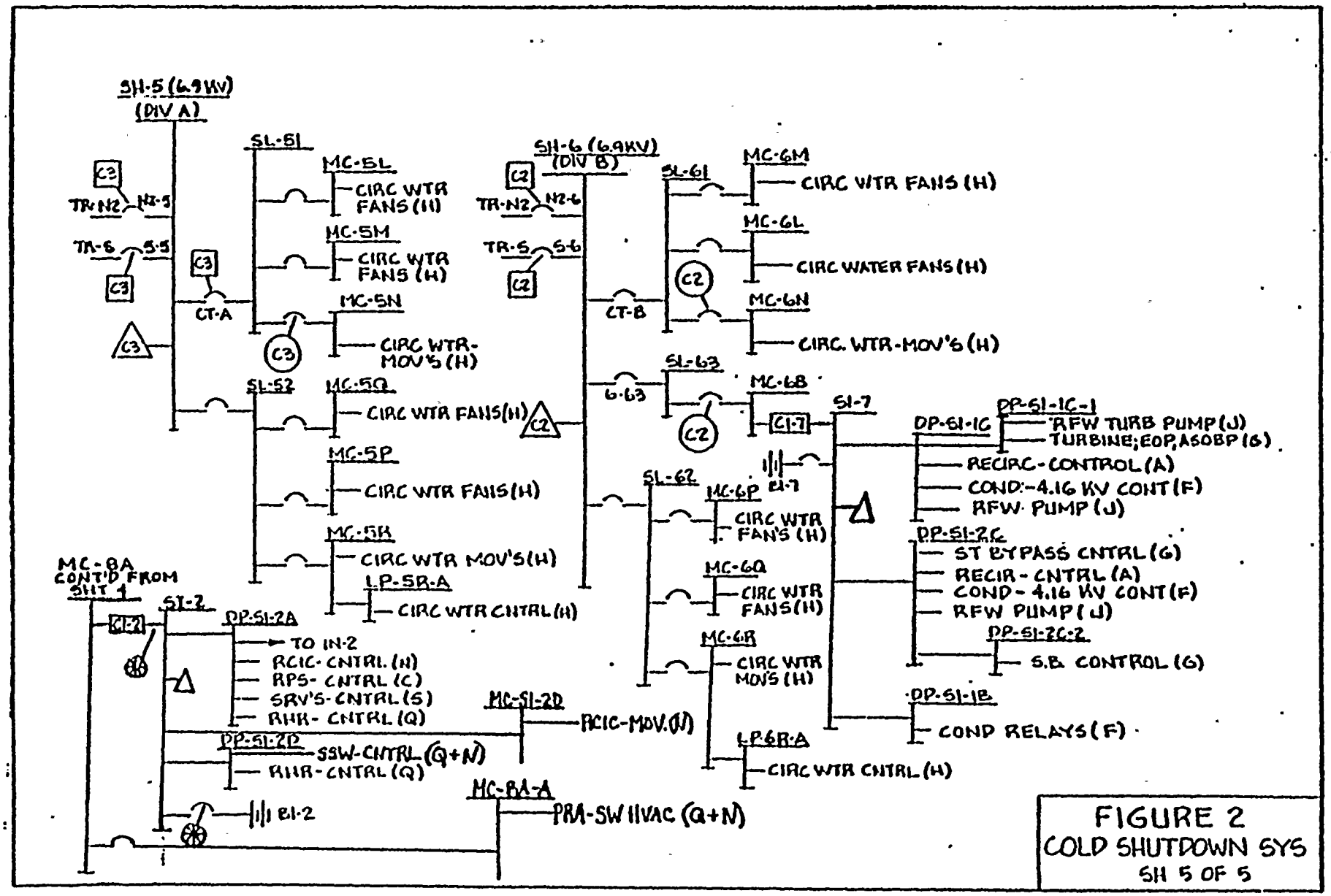


FIGURE 2
COLD SHUTDOWN SYS
SH 5 OF 5

APPENDIX A
WPPSS NUCLEAR PLANT NUMBER 2 (WNPP-2)
COLD SHUTDOWN POWER BUS ANALYSIS

NOTES:

1) THE LOSS OF BUS POWER IN THE A1 PATH OF AFFECTING COLD SHUTDOWN REQUIRED THE CONSIDERATION OF TRANSFERRING TO THE SECOND ALTERNATE PATH A2 . THIS CONSIDERATION IS OBVIOUSLY DEPENDENT UPON THE TIME SEQUENCE OF BUS POWER LOSS (I.E., IF THE A1 SYSTEM HAS BEEN USED AND DROPPED, THEN TRANSFER TO THE A2 PATH IS NOT NECESSARY).

2) THE COMBINATION OF A SINGLE BUS POWER LOSS THAT AFFECTS DEVICES IN TWO SHUTDOWN PATHS (I.E. N AND A1 OR CN AND C1) REQUIRES TRANSFERRING OF CONTROLS TO THE SECOND ALTERNATE SHUTDOWN PATH. (THIS IS NOT REQUIRED FOR FAILURE OF C1 AS THIS ROUTE IS FAIL SAFE ON LOSS OF POWER.)

3) THIS FEEDER BUS POWERS OTHER BUSSES THAT POWER DEVICES IN ALTERNATE SHUTDOWN PATHS. TRANSFER OF THE SHUTDOWN MODE TO THE NEXT ALTERNATE PATH MUST BE ACCOMPLISHED IF BUS POWER CANNOT BE RE-ESTABLISHED.

4) LOSS OF A COMMON POWER BUS THAT AFFECTS A CORE SHUTDOWN PATH AND HEAT REMOVAL PATH REQUIRES A TRANSFER TO THE FIRST AVAILABLE ALTERNATE. SINCE BOTH PATHS ARE NOT REQUIRED SIMULTANEOUSLY, FURTHER ANALYSIS NOT NECESSARY.

5) THIS FEEDER BUS POWER OTHER BUSSES THAT POWER DEVICES IN THE SAME COLD SHUTDOWN PATHS. TRANSFER TO THE FIRST ALTERNATE SHUTDOWN PATH IS NECESSARY.

6) THE LOSS OF POSITION INDICATION LAMPS FOR SEVERAL MOVS OR DEVICES IS INDICATIVE OF A POWER BUS FAILURE. UPON FAILURE OF ONE SET OF INDICATION LAMPS A REVIEW OF ADJACENT LAMPS WILL INDICATE POWER FAILURE OF THE RESPECTIVE BUS.

7) TRANSFER MUST BE INITIATED TO A2 .

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-1B-A	NON-ESS	A	AR - SPV'S (F) TURBINE - TURN GEAR (G) FEEDWATER - CONTROL (J) COND-FCV'S (F) M.S. - VALVE (K) TSW, TCV FOR RFPT 1A (J)	H	NOTE 6	MUST TRANSFER TO ALTERNATE COOLDOWN PATH A1 OR A2 .
MC-1B	NON-ESS	A	CIRC. WATER - MOVS (H) COND - MOVS (F) M.S. - MOVS (K) FEED TO PP-1B-A	H	O/L TRIP ANN. NOTE 6	NOTE 5.
MC-1A	NON-ESS	A	TG-OIL PUMPS, EHP, EX (G) MS-MOVS (K) COND-MOVS (F) RFW -MOVS (J)	H	O/L TRIP ANN. NOTE 6	MUST TRANSFER TO ALTERNATE COOLDOWN PATH A1 OR A2
SL-11	NON-ESS	A	FEED TO MCC'S MC-1A & MC-1B AND PANEL PP-1B-A	-	BKR TRIP ANN.	NOTE 5
MC-7B-A	ESS-1E	1	RHR MOVS (H) & (P) & (L) LOSS OF PWR TO HIGH-LOW PRESS PERMISSIVE	A1 H	MOV NETWORK PWR LOSS/OL LIGHT. RHR/LPCS OUT OF SERV. ANN.	NOTE 7.
MC-7B-B	ESS-1E	1	RHR MOVS (H) LOSS OF PWR TO HIGH-LOW PRESS PERMISSIVE	A1 H	RHR/LPCS OUT OF SERV. ANN.	NOTE 7

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
MC-7B	ESS-1E	1	SSW-MOV'S (H) SLCS PUMPS & MOVS (D) RRA-HVAC-RCIC, RHR (L,M,N) RCIC-PUMP (N) FEED TO BUSSES MC-7B-A & MC-7B-B	N C2 A1	O/L TRIP ANN. MOV NETWORK PWR LOSS/OL LIGHT. RHR/LPCS OUT OF SERV. ANN. "RHR PUMP 2A ROOM HVAC OUT-OF SERVICE" "RRA-FN-12 PWR LOSS" "RHR PUMP RM-2 RRA-FC-2 TRIP" "RCIC DIV. 1 OUT-OF-SERVICE" "DC MCC-RM ADA-AD-12 INLET DAMPER CLOSE"	NOTE 4
PP-7A-C-A		A	TSW-MOV (G) CIRC WTR VALVES (H)	N	NOTE 6.	NOT REQUIRED
PP-7A-C		A	TSW-MOV (G) FEED TO PP-7A-C-A	N	NOTE 6	NOTE 5.
PP-7A-Z	NON-ESS	A	RECIRC CONTROL (A) FWCS, PUMP GOV. (J) CIRC WTR FAN CONTROL (H) MAIN STEAM CONTROL (K)	CN N	P603 ANN. RFP B AT CONSTANT SPEED RPV HIGH WATER LEVEL TRIP RECIRC FCV'S LOCKUP FCV'S MOTION INHIBIT ALARM RFW TURBINE A STOPPED MASTER CNTLR OUTPUT SIGNAL ABNORMAL. FLUX CNTLR OUTPUT SIGNAL ABNORMAL NOTE 6	MUST TRANSFER TO ALTERNATE PATH C1 AND SEE NOTE 4.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-7CA-A	NON-ESS	A	SW-SV (N) FROM RRA-FC-6	A1	NOTE 6	NONE, OPERATION IS AVAILABLE FROM REMOTE SHUTDOWN PANEL IF REQUIRED.
MC-7C	NON-ESS	A	RECIRC HYD. PWR. UNITS (A) REACTOR FW MOVS (J) FEED TO PANEL PP-7A-Z AND PP-7A-C	CN N	P603 ANN. RFP B AT CONSTANT SPEED RPV HIGH WATER LEVEL TRIP RECIRC FCV'S LOCKUP FCV'S MOTION INHIBIT ALARM RFW TURBINE A STOPPED MASTER CNTLR OUTPUT SIGNAL ABNORMAL. FLUX CNTLR OUTPUT SIGNAL ABNORMAL NOTE 6	NOTE 4
SL-71	ESS-1E	1	FEED TO THE MC-7C & MC-7B	-	BKR TRIP ANN.	NOTES 2 AND 3
C72-P001 (MG 'A') BUS A	RPS A	A	RPS CONTROL (C) RHR CONTROL	C1 N	REACTOR ½ SCRAM & ANNUNCIATION	LOSS OF RPS (C1 PATH) CREATES FAIL SAFE CONDITION. TRANSFER TO A1 OR A2.
PP-7A-A	ESS-1E	1	RX MANUAL CONTROL (B) CONDENSATE VALVES (F) RX FEEDWATER (J) AR CONTROL (K) SW - SUPR CONTROL (H) SSW - SPURP CONTROL (H)	CN N N A1 A1	LOSS OF VOLTAGE IND FOR PP-7A-A ON BOARD - C "SSW "A"-SVPV SYST TROUBLE" "SSW "A"-OUT-OF-SERVICE" "SSW PP HOUSE A, PRA-FN-A LOW FLOW"	AFFECTS ROD BLOCK; C1 SHUTDOWN PATH SHOULD BE INITIATED. TRANSFER TO A2 . NOTE 6.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-7A	ESS-1E	1	FEED TO INVERTER THAT FEEDS PP-7A-A (ALSO FED FROM S1-1)	-		NOTE 3.
US-PP-A	NON-ESS	A	RECIRC FLOW CONTROL (A)	CN	NONE, HOWEVER ROD BLOCK INITIATED	LOSS OF BUS REQUIRES TRANSFERRING TO C1 ALTERNATE PATH
			RMCS CONTROL (B)	CN		
US-PP	NON-ESS	A	TURBINE, DEH CONTROL CKT (G)	N	LOSS OF VOLTAGE IND ON BOARD-C.	UNABLE TO COOLDOWN BY BLEEDING STEAM, MUST TRANSFER TO A1 OR A2 .
			MS, BYPASS VALVE CONT (K)			
			FEED TO US-PP-A	N	LOSS OF DIGITAL CONTROL	
DP-S1-1A	ESS-1E	1	RPS BACKUP SCRAM VALVE (C)	C1	P601 RCIC PWR FAILURE	NOTE 1.
			RECIRC PUMP TRIP CKT (C)	A1	LIGHT. RHR LOGIC A PWR FAILURE ANN.	
			RCIC CONTROL (N)	A1		
			SRV CONTROL (O)	A1	LPCS/RHR A PWR FAILURE LIGHT	
			RHR CONTROL (H)		RHR/LPCS OUT OF SERV. ANN.	
					RCIC DIV 1 OUT OF SERV. ANN.	

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE.
DP-S1-1D	ESS-1E	1	SSW-CONTROL (H) RHR CONTROL (H) RCIC CONTROL (H)	A1	CB-SSW-1A OUT OF SERV. SSW A OUT OF SERVICE CB-RHR 2A OUT OF SERV. LIGHT RHR A/LPCS OUT OF SERV. ANN. P601 MOV NETWORK PWR LOSS LIGHT RCIC DIV 1 OUT OF SERV. ANN. LOSS OF P601 RCIC VALVE AND PUMP IND LIGHTS ADS A/C PWR FAILURE LIGHT ADS A/C OUT OF SERV. ANN. P601 LOSS OF ADS VALVE IND LIGHTS	NOTE 1
MC-S1-1D	ESS-1E	1	RCIC MOVS (H)	A1	NOTE 6. P601 MOV NETWORK PWR LOSS LIGHT. RCIC DIV. 1 OUT OF SERV. ANN. LOSS OF P601 RCIC VALVE AND PUMP IND. LIGHTS	NOTE 1.
S1-1	ESS-1E	1	FEED TO THE PRIOR 3 PANELS DP-S1-1A, DP-S1-1D, MC-S1-1D	-	UNDERVOLTAGE ANN.	NOTE 3.
MC-S2-1A	ESS-1E	1	RCIC-MOVS (H)	A1	NOTE 6.	NOTE 2.
			RHR-MOVS (L)	N		
MC-S2-1B	NON-ESS	A	TG EMERG. OIL PUMPS (G)	N	NOTE 6.	NONE.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
S2-1	ESS-1E	1	FEED TO PRIOR 2 MCCS MC-S2-1A, MC-S2-1B & IN-1	-	UNDERVOLTAGE ANN.	NOTE 3.
MC-7A-A	ESS-1E	1	PRA-FN-1A, (H)	A1	PRA-FN-1A PWR LOSS SSW A OUT OF SERVICE "STDBY-SW-A SUPV SYST TROUBLE" NOTE 6	NOTE 1.
PP-7A-G	ESS-1E	1	SW-SUPV CONTROL (H) SW-SPV (H)	A1	SUPV SYS TROUBLE SSW A OUT-OF-SERVICE "STDBY SW "A" SUPV SYST TROUBLE"	NOTE 1.
MC-7A	ESS-1E	1	SSW-MOV (H) CAS, AIR COMP (-) TSW, SV (-) FEED TO MC-7A-A, PP-7A-G PP-7A, S2-1, S1-1, IN-1	A1	"SSW A OUT-OF-SERVICE "MOV NETWORK PWR LOSS/OL" NOTE 6 O/L TRIP ANN.	NOTE 1.
SL-73	ESS-1E	1	FEED TO PRIOR MCC-MC-7A	-	BKR TRIP ANN.	NOTE 1.
SM-75	NON-ESS	A	TSW, PUMP (G)	M	BKR TRIP ANN.	NONE.
SM-7	ESS-1E	1	RHR PUMP 'A' (H) SSW PUMP 'A' (H) CRD PUMP 'A' (B) FEED TO LOAD CENTERS SL-71/ SL-73 AND SM-75	A1 CM	SM7 BUS TRIP AND UNDERVOLTAGE ANN. SM-8 UNDERVOLTAGE ANN.	NOTE 4. TRANSFER TO C1 AND A2
SM-1	ESS-1E	A	CW PUMP (H) COND PUMP (F) COND. BOOSTER PUMP (F) LFHG MTR 'A' (A) FEED TO SWITCH GEAR SM-7/SL-11	M CM —	UNDERVOLTAGE BKR TRIP ANN. BKR TRIP ANN.	NOTE 4. TRANSFER TO A1 OR A2 NOTE 3.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-4A	ESS-1E	3	SSW-SUPV CONTROL (R) HPCS CONTROL (R)	A2	P601 LOSS OF VALVE POSITION LIGHTS	NOTE 1.
GEN & ENG AUX PANEL	ESS-1E	3	HPCS CONTROL (R)	A2	LOSS OF GEN. INDICATORS.	NONE.
MC-4A	ESS-1E	3	HPCS-SW PUMP (R) HPCS MOVS (R) RRA-HVAC (R) FEED TO PP4A AND GEN. AUX. PNL.	A2	NOTE 6 P601 LOSS OF VALVE POSITION LIGHTS "HPCS SW OUT-OF-SERVICE" "HPCS OUT-OF-SERVICE" "HPCS PUMP ROOM HVAC OUT-OF-SERVICE" "HPCS PUMP RM-6 RRA-FC-4 TRIP"	NOTE 1.
SM-4	ESS-1E	3	HPCS PUMP (R) FEED TO MC-4A	A2 -	TWO BKR TRIP ANN.	NOTE 1.
PP-2RA-B	NON-ESS	B	BS, NRV'S (E) MS, TCVS (K) EXTR STM VALVE (E)	N	NOTE 6	NONE.
MC-2R-A	NON-ESS	B	COND. MOVS (F) FEED TO PP-2RA-B	N -	NOTE 6	NON, ALL MOVS FAIL AS IS.
PP-2R-B	NON-ESS	B	RECIRC CONTROL (A)	CN	SYS B DRYWELL HIGH PRESS INTLK. FLOW CONTROL VALVE B HYD PWR UNIT STARTUP INHIBITED	MUST TRANSFER TO C1 ALTERNATE PATH
MC-2R	NON-ESS	B	AR MOV (F) COND MOVS (F) M.S. MOVS (K) FEED TO PP-2R-B AND MC-2R-A	N -	O/L TRIP NOTE 6 NOTE 6	TRANSFER TO C1

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-2P-A	NON-ESS	B	AR-SPV'S (F) H.S. VLV (K) RFW-TURBINE CONTROL (J) COND-FCV (F) TSW-TCV FOR RFPT-1B (J)	N N	NOTE 6	LOSS OF RFP-B MAY RESULT IN NEED TO SHIFT TO ALTERNATE PATH A1 OR A2 .
MC-2P	NON-ESS	B	CAS, AIR COMPRESSORS & VLV (-) FEEDWATER PUMP TURNING GEAR & HOVS (J) CIRC WATER HOVS (H) FEED TO PP-2P-A	N	O/L TRIP ANN.	OTHER COMP. OPERABLE. LOSS OF 1 PUMP HAS NO EFFECT. HOVS FAIL AS IS. NO TRANSFER REQUIRED
MC-2D	NON-ESS	B	AR-EX (F) CIRC WATER HOVS (H) COND. HOVS (F) RFW HOVS (J) H.S. HOVS (K) & (F)	N	O/L TRIP ANN. AND NOTE 6.	NONE.
MC-2C	NON-ESS	B	H.S. HOVS (K) COND. HOVS (F) RFW HOVS (J) TG-EHP (G)	N	O/L TRIP ANN. NOTE 6	NONE.
MC-2B	NON-ESS	B	COND. HOVS (F)	N	NOTE 6 O/L TRIP ANN.	NONE.
SL-21	NON-ESS	B	FEED TO MC-2R, MC-2P, MC-2D, MC-2C AND MC-2B.	-	TWO BKR TRIP	LOSS OF RFP B MAY RESULT IN NEED TO SHIFT TO ALTERNATE PATH A1 OR A2 .
SH-2	NON-ESS	B	COND. PUMP 'B' (F) COND. BOOSTER PUMP (F) C.W. PUMP (H) FEED TO SH-4 AND SL-21	N -	TWO BKR TRIP UNDER-VOLTAGE	TRANSFER TO A1 OR A2 .
MC-8C-B	NON-ESS	B	MAINSTEAM-HOVS (K)	N	NOTE 6	NONE.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
PP-8A-Z	NON-ESS	B	SLCS ALARMS AND INDICATORS (D) RFW TURBINE B TRIP (J) TURBINE VALVES (G) CW, FANS MOV-CONTROL (H)	C2 N	RFT B TRIP ANN. BOARD H LOSS OF FANS STATUS LIGHTS BOARD B LOSS OF VALVE POSITION IND.	DIV. A ALTERNATE RFW PUMP AND VALVE CONTROLS IS USED.
PP-8A-C-A	NON-ESS	B	TSW MOV (G)	N	NOTE 6.	NONE.
PP-8A-C	NON-ESS	B	TSW-MOV (G)	N	NOTE 6.	NONE.
MC-8C	NON-ESS	B	RECIRC MPU & MOV (A)	CN	O/L TRIP ANN.	TRANSFER TO ALTERNATE PATH C1 MAY NOT BE NEEDED.
			RFW, MOV (J)	N		
			FEED TO MC-8C-B, PP-8A-C, PP-8A-Z AND PP-8A-C-A	-	NOTE 6	
MC-8B-B	ESS-1E	2	RHR MOVS (Q)	A2	P601 LOSS OF VALVES POSITION IND.	SYSTEM PREPARATION FOR N PATH. NO TRANSFER REQUIRED. A2 ARE 'B' VALVE. ALTERNATE SHUTDOWN PATH IS VIA 'A' VALVES.
MC-8B-A	ESS-1E	2	RHR MOVS (L), (Q) AND (T) SSW-MOV (Q) (N) RCIC MOVS (N)	A2 A1	RCIC DIV. 2 OUT OF SERV. ANN. NOTE 6 MOV NETWORK PWR LOSS/OL. RHR B/C OUT OF SERV. ANN. "RHR 2B/C PUMP ROOM OUT-OF-SERVICE"	USE HPCS THEN TRANSFER TO A1 .

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
HC-8B	ESS-1E	2	SLCS PUMP AND MOVS (D) RRA-HVAC (Q) (N) FEED TO HC-8B-B & HC-8B-A	C2 A1 A2	O/L TRIP ANN. "RCIC PUMP RM-3 RRA-FC-6 TRIP" RCIC PUMP RM HVAC OUT-OF-SERVICE "RCIC DIV 2 OUT-OF-SERVICE" "RHR PUMP RM-1/4 RRA-FC-3/1 TRIP" "RHR B/C PUMP RM HVAC OUT-OF-SERVICE"	USE HPCS, THEN TRANSFER TO A1 . NOTE 3.
SL-81	ESS-1E	2	FEED TO MCC'S HC-8C/HC-8B	-	BKR TRIP ANN.	
DP-S1-2D	ESS-1E	2	RHR CONTROL (Q) SSW-CONTROL (Q) (N)	A2 A1 A2	CB-RHR 2B OUT OF SERV. LIGHT CB-RHR 2C OUT OF SERV. LIGHT RHR B/C OUT OF SERV. ANN. CB-SW1B OUT OF SERV. CB-SSW-B OUT OF SERV.	USE HPCS THEN TRANSFER BACK TO A1 .
DP-S1-2A	ESS-1E	2	RCIC CONTROL (N) RPS CONTROL (C) SRV CONTROL (S) RHR CONTROL (Q)	A1 C1 A2 A2	LOSS OF RHR LOGIC ALARM B/C LOGIC PWR FAILURE LIGHT. RCIC DIV. 2 OUT OF SERV. ANN. RHR B/C OUT OF SERV. ANN.	NOTE 1 AND 2.
HC-S1-2D	ESS-1E	2	RCIC-MOV (N)	A1	P601 MOV NETWORK PWR LOSS LIGHT. RCIC DIV. 1 OUT OF SERV. ANN.	NONE.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
S1-2	ESS-1E	2	FEED TO MC-S1-2D, DP-S1-2D AND DP-S1-2A	-	UNDERVOLTAGE ANN.	NOTE 3.
PP-8A-A	ESS-1E	2	SLCS INDICATION (D)	C2		POTENTIAL TRANSFER TO ALTERNATE HEAT REMOVAL PATH.
			RPS INDICATION (C)	C1		
			AIR REMOVAL CONTROL (K)	N		
			EXTRACT. STEAM PT (E) RFW, FT (J)			
PP-8A-F	ESS-1E	2	SW-SUPV CONTROL (Q) (N)	A1	SSW B SUPV SYSTEM TROUBLE IND.	USE HPCS THEN TRANSFER BACK TO A1 .
				A2	SSW B OUT-OF-SERV. IND. "SSWPP HOUSE B PRA-FN-1B LOW FLOW"	
PP-8A	ESS-1E	2	FEED TO PP-8A-F AND INVERTER TO PP-8A-A	-		NOTE 2.
C72-P001 BUS B	ESS-1E	B	RHR CONTROL (Q) (L)	N	REACTOR 1/2 SCRAM AND ANNUNCIATION	LOSS OF RPS C1 PATH CREATES FAIL SAFE CONDITION. TRANSFER TO A1 OR A2
			RPS CONTROL (C)	C1		
PP-8A-2C-A	NON-ESS	B	CONDENSATE VALVE (F)	N		NONE.
MC-8A-2C	NON-ESS	B	FEED TO PANEL PP-8A-2C-A	-		NONE.
PP-8A-G	ESS-1E	2	SW-SUPV CONTROL (Q) (N)	A1 A2	"STDBY SW-"B"-SUPV SYST TROUBLE"	USE HPCS OR RCIC THEN TRANSFER TO A1 OR N .
			SW-SPV (Q) (N)	A1 A2	SSW B OUT-OF-SERV.	

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
HC-8A-A	ESS-1E	2	PRA-SW HVAC (Q) (H)	A1 A2 A2	PRA-FN-1B PWR LOSS. SSW B OUT OF SERVICE.	USE HPCS OR RCIC THEN TRANSFER TO A1 OR N .
HC-8A	ESS-1E	2	TSW, SV (-) CAS, AIR COMP. 1B (-) SSW MOV (Q) (H) FEED TO PP-8A, HC-8A-2C, PP-8A-G, AND HC-8A-A	A1 A2	MOV NETWORK PWR LOSS/OL. SSW B OUT-OF-SERV. IND. O/L TRIP ANN.	USE HPCS THEN TRANSFER TO A1 . NOTE 3
SL-83	ESS-1E	2	FEED TO PRIOR PANEL .	-	BKR TRIP ANN.	NOTE 3.
SH-85	NON-ESS	B	TSW, PUMP (G)	N	BKR TRIP ANN.	NONE, BACK-UP BY OTHER PUMP.
SH-8	ESS-1E	2	RHR PUMPS 2B, 2C (Q) CRD PUMP 1B (B) FEED TO SL-81, SL-83 & SH-85 SSW PUMP 1B	A2 CN	TWO BKR TRIP AND UNDERVOLTAGE ANN.	NOTE 4. NOTE 3.
PP-3B-B	NON-ESS	A	RECIRC CONTROL (A)	CN	SYS A HIGH DRYWELL PRESS INTLK IND. FLOW CONTROL VALVE A HYD PWR UNIT STARTUP INHIBIT VALVE A SERVO AMP INPUT CNTL SIGNAL ABNORMAL	POTENTIAL REACTOR SCRAM.
HC-3B	NON-ESS	A	M.S. MOVS (K) T.G. TURNING GEAR (G) AR MOVS (F) FEED TO PP-3B-B	N -	O/L TRIP ANN. NOTE 6	NOT ABLE TO USE N PATH MUST GO TO ALTERNATE SHUTDOWN
HC-3C	NON-ESS	A	CIRC. WATER MOVS (H) MS MOVS (K) CONDENSATE MOVS (F)	N	O/L TRIP ANN NOTE 6	NONE.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE.
PP-3A-A	NON-ESS	A	TSW, HD CONTROL (G) EXTRACTION STM. VALVES (E) MSR-TCV (K)	N	O/L TRIP ANN. NOTE 6	TRANSFER TO A1 OR A2 .
MC-3A	NON-ESS	A	COND. MOVS (F) FEED TO PP-3A-A	N	O/L TRIP ANN.	TRANSFER TO A1 OR A2 .
SL-31	NON-ESS	A	FEED TO MC-3A, MC-3B, MC-3C	-	TWO BKR TRIP	NOTE 5.
SM-3	NON-ESS	A	COND. PUMPS 1C AND 2C (F) CIRC WATER PUMP 1C (H) LFMG MOTOR 'B' (A) FEED TO SM-8 AND SL-31	N N CN -	TWO BKR TRIP UNDER-VOLTAGE ANNUNCIATION	TRANSFER TO ALTERNATE SHUTDOWN IS NECESSARY. LFMG 'A' IS BACKUP. NOTE 5.
MC-6L	NON-ESS	B	CIRC WATER FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	NONE.
MC-6N	NON-ESS	B	CIRC. WTR MOVS (H)	N		FAIL AS IS. NO TRANSFER REQUIRED.
MC-6M	NON-ESS	B	CIRC. WTR FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	NONE.
SL-61	NON-ESS	B	FEED TO MC-6N/6L & 6M	-	BKR TRIP ANN.	NOTE 5
DP-S1-1C-1	NON-ESS	A	TURBINE CONTROL, EOP, ASOBP (G) RFW TURB. PUMP (J)	N N	NOTE 6 OIL PUMPS O/L IND.	NONE.
DP-S1-1C	NON-ESS	A	RECIRC CONTROL (A) RFW PUMP (J) COND. CONTROL (F) FEED TO DP-S1-1C-1	CN N	RECIRC LFMG B TRANSFER DISABLED NOTE 6	TRANSFER TO A1 OR A2 .
DP-S1-2C-2	NON-ESS	B	STEAM BYPASS CONTROL (G)	N	NONE	ALTERNATE PATH A1 OR A2 .

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
DP-S1-2C	NON-ESS	B	RECIRC CONTROL (A)	CN	RECIRC LFMG A TRANSFER DISABLED	ALTERNATE PATH A1 OR A2 .
			COND. CONTROL (F)	N	NOTE 6.	
			VOLTAGE REGULATOR CONTROL (G)	N	DEH CONTROL REG.	
			RFW PUMP (J)	N	REG. SUPPLY BKR OPEN	
			FEED TO DP-S1-2C-2	N		
DP-S1-1B	NON-ESS	A	COND. RELAYS (F)	N		TRANSFER TO A1 OR A2 . LOSS OF CONDENSER VACUUM
S1-7	NON-ESS	-	FEED TO PRIOR 5 BUSSES	-	UNDERVOLTAGE ANN.	NOTE 4.
MC-6B	NON-ESS	B	FEED TO INVERTER C1-7 FEEDING S1-7 (PRIOR 5 BUSSES)	-	O/L TRIP ANN.	NONE.
SL-63	NON-ESS	B	FEED TO MC-6B	-	BKR TRIP ANN.	NOTE 3.
MC-6P	NON-ESS	B	CIRC. WTR FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW.
MC-6Q	NON-ESS	B	CIRC. WTR - FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW
LP-6R-A	NON-ESS	B	CIRC. WTR CONTROL (H)	N	NOTE 6	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW
MC-6R	NON-ESS	B	CIRC. WTR MOVS (H) FEEDS LP-6R-A	N	BKR TRIP ANN.	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW
SL-62	NON-ESS	B	FEED TO MC-6R/6P & /Q	-	BKR TRIP ANN.	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW
SH-6	NON-ESS	B	FEED TO SL-61/SL-63 & SL-62	-	TWO BKR TRIP	OTHER HALF WILL CONTROL FROM 'A' BUSSES BELOW

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
HC-5N	NON-ESS	A	CIRC. WATER MOVS (H)	N	O/L TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
HC-5L	NON-ESS	A	CIRC. WATER FANS (H)	N	HIGH VIBRATION O/L TRIP ANN. NOTE 6	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
HC-5H	NON-ESS	A	CIRC. WATER FANS (H)	N	HIGH VIBRATION O/L TRIP ANN. NOTE 6	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
SL-51	NON-ESS	A	FEED TO HC-5N/5L & 5H	-	BKR TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
LP-5R-A	NON-ESS	A	CIRC. WATER CONTROL (H)	N	NOTE 6	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
HC-5R	NON-ESS	A	CIRC. WATER MOVS (H)	N	BKR TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
HC-5Q	NON-ESS	A	CIRC. WATER FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.

POWER BUS NUMBER	ESSENTIALITY CODE	DIV	AFFECTED DEVICES	PATH CODE	ANN. TRIP OR LOSS OF CNTL. SIGNAL	AFFECT ON CONTINUING IN EXISTING SHUTDOWN MODE
MC-5P	NON-ESS	A	CIRC. WATER FANS (H)	N	HIGH VIBRATION O/L TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
SL-52	NON-ESS	A	FEED TO MC-5Q/R & P	-	BKR TRIP ANN.	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.
SH-5	NON-ESS	A	FEED TO SL-51, SL-52	-	TWO BKR TRIP	FAILS AS IS. NO TRANSFER REQUIRED. OTHER BUS DIVISION IS SUFFICIENT TO CONTROL CIRC. WATER.

APPENDIX B

WPPSS NUCLEAR PLANT NUMBER 2 (WNPP-2)

COLD SHUTDOWN SYSTEM DEVICE TABLE

NOTES:

*1) NOTES, AS DESCRIBED UNDER THE HEADING "ALARM POINT", COULD CONSIST OF ANNUNCIATOR ALARMS OR ANY OTHER INDICATIONS OF POWER FAILURE SUCH AS LOSS OF MULTIPLE POSITION INDICATOR LAMPS, ETC.

2) THE LOSS OF POSITION INDICATION LAMPS FOR SEVERAL MOVS OR DEVICES IS INDICATIVE OF A POWER BUS FAILURE. UPON FAILURE OF ONE SET OF INDICATION LAMPS, A REVIEW OF ADJACENT (IDENTIFIED) LAMPS WILL INDICATE POWER FAILURE OF THE RESPECTIVE BUS.

3) OTHER DEVICES WITH INDICATION LAMPS ARE POWERED FROM THE SAME BUS AS THIS ONE. VERIFY THE MATCHING GROUP OF DEVICES FROM THIS POWER BUS TO DETERMINE THE POWER LOSS.

(NOTE 3 WILL ALWAYS HAVE A MATCHING GROUP REFERENCE, E.G. GROUP M, P, A, ETC.)

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-1C	A	LFMG "A" MOTOR BKR CONTROL 125 VDC	CONTROL VOLTAGE TO MOTOR BKR & RELAY	INABILITY TO OPERATE LFMG	TOTAL LOSS OF "A" OR "B" RECIRC CONTROL	1) RECIRC PUMP A LOW SPEED AUTO TRANSFER CIRCUIT NOT AVAILABLE
DP-S1-2C	B	LFMG "B"	CONTROL VOLTAGE TO MOTOR BKR & RELAY	INABILITY TO OPERATE LFMG	TOTAL LOSS OF "A" OR "B" RECIRC CONTROL	1) RECIRC PUMP B LOW SPEED AUTO TRANSFER CIRCUIT NOT AVAILABLE
SM-1	A	B35-S001A	LFMG SET MOTOR DRIVE	INABILITY TO OPERATE LFMG	TOTAL LOSS OF "A" OR "B" RECIRC CONTROL	UNDER VOLTAGE ANNUNCIATION
SM-3	A	B35-S001B	LFMG SET MOTOR DRIVE	INABILITY TO OPERATE LFMG	TOTAL LOSS OF "A" OR "B" RECIRC CONTROL	UNDER VOLTAGE ANNUNCIATION
PP-7A-2	A	H13-P634 H13-P612	LOOP A AND B FLOW CNTL & HYDRAULIC POWER UNIT. MASTER FLUX CNTL	INABILITY TO CONTROL RECIRC FLOW	LOSS OF RECIRCULATION FLOW CONTROL	1) "MASTER CONTROLLER OUTPUT SIGNAL ABNORMAL" 2) FLUX CONTROLLER OUTPUT SIGNAL ABNORMAL
US-PP-A	A	H13-P602	FLUX ESTIMATOR INDICATORS	LOSS OF INDICATION	LOSS OF RECIRCULATION FLOW CONTROL	LOSS OF SEVERAL NSSS SYSTEMS INCLUDING POWER RANGE FLUX MONITORING
PP-3B-B	A	LFMG "A" VOLT. REG.	LOSS OF VOLTAGE REGULATOR	LOSS OF VOLTAGE CONTROL	CANNOT OPERATE LFMG "A"	SAME 3 POINTS AS PP-2R-B ONLY FOR VALVE A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-2R-B	B	LFMG "B" VOLT. REG.	LOSS OF VOLTAGE REGULATOR	LOSS OF VOLTAGE	CANNOT OPERATE LFMG "B"	1) "SYST B DRYWELL HIGH PRESS INTLK 2) "FLOW CONTROL VALVE B HYD PWR UNIT START-UP INHIBITED" 3) "VALVE B SERVO AMP INPUT CONTROL SIGNAL ABNORMAL"
PP-2R-B	B		HYDRAULIC POWER UNIT FOR RECIRC FLOW	LOSS OF CONTROL PWR		1) "SYS B DRYWELL HIGH PRESS. INTLK" 2) "FLOW CONTROL VALVE FB HYD PWR UNIT STARTUP INHIBITED" 3) "VALVE B SEKVO AMP INPUT CONTROL SIGNAL ABNORMAL"
SH-13 (SH-1)	A	LF2A	LFMG "A" OUTPUT BREAKER	LOSS OF LFMG SET "A"	LOSS OF 15 HZ RECIRC PUMP "A" OPERATION	UNDER VOLTAGE AND BREAKER TRIP ANNUNCI-ATION
SH-14 (SH-3)	B	LF2B	LFMG "B" OUTPUT BREAKER	LOSS OF LFMG SET "B"	LOSS OF 15 HZ RECIRC PUMP "B" OPERATION	UNDER VOLTAGE AND BREAKER TRIP ANNUNCI-ATION
MC-7C	A	FLOW CONT. HYD PWR UNIT	HYDRAULIC POWER UNIT FOR RECIRC FLOW CONTROL VALVE	MUST LOSE BOTH MC-7C AND MC-8C TO LOSE HYD POWER UNITS	NONE, UNLESS ONE LOOP ALREADY DOWN (SEE MC-8C BELOW)	FLOW CONTROL VALVE A HYD POWER UNIT START-UP INHIBIT
		RRC-V-67A	RECIRC PUMP P DISH VALVE	MOV VALVE FAILS AS IS	REQUIRED TO BE SHUT FOR RHR/SD COOLING	LOSS OF VALVE POSITION IND. ON P602
MC-8C	B	FLOW CONT. HYD POWER UNIT	HYDRAULIC POWER UNIT FOR RECIRC FLOW CONTROL VALVE	MUST LOSE BOTH MC-7C AND MC-8C TO LOSE HYD POWER UNITS	NONE, UNLESS ONE LOOP ALREADY DOWN	FLOW CONTROL VALVE B HYD POWER START-UP INHIBIT

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SM-7	1	CRD-P-1A	CRD PUMP "A"	STOPS PUMPING	LOSS OF RMCRD CONTROL IF OTHER PUMP IS INOPERABLE	1) BUS SM-7 UV ANNUN. 2) CB CRD-1A TRIP ANNUNC.
SM-8	2	CRD-P-1B	CRD PUMP "B"	STOPS PUMPING	LOSS OF RMCRD CONTROL IF OTHER PUMP IS INOPERABLE	1) BUS SM-8 UV ANNUN. 2) CB CRD-1B TRIP ANNUNC.
US-PP-A	A	120 VAC	ROD SELECT LOGIC DISPLAY LOGIC	LOSS OF INDIVIDUAL ROD CONTROL	ROD BLOCK	SEE US-PP-A UNDER GROUP A
PP-7A-A	1	120 VAC	ROD POSITION INDICATION CONTROL	LOSS OF INDIVIDUAL ROD CONTROL	ROD BLOCK	LOSS OF VOLTAGE IND. FOR PP-7A-A ON BD-C

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
C72-P001 BACKUP TO TO MG SETS		C72-1070	SAFETY SYSTEMS SCRAM CHANNELS & SCRAM SOLENOIDS	SCRAM SOLENOIDS FAIL OPEN (N.C.)	CONTROL RODS FULL INSERT (SCRAM)	ALL SCRAM ANNUNCIATION
PP-8A-A	2	C72-1070	FEEDER TO SCRAM DISCHARGE VOLUME POS. INDICATOR LIGHTS	NO VALVE POSITION INDICATION VALVES C12-F010 & C12-F011	NONE	LOSS OF VALVE POSIT. IND. ON P603 FOR THESE VALVES
DP-S1-1A	1	C72-1070	TRIP SYSTEM "A" BACKUP SCRAM VALVE C12-F110A	DISABLES BACKUP SCRAM VALVE, F110A	NO SCRAM BACKUP	NONE
			RECIRC PUMP TRIP "A"	DISABLES RECIRC PUMP TRIP CIRCUIT	NO RPT RECIRC PUMP "A" TRIP	
DP-S1-2A	2	C72-1070	TRIP SYSTEM "B" BACKUP SCRAM VALVE C12-F110B	DISABLES BACKUP SCRAM VALVE F110B	NO SCRAM BACKUP	
			RECIRC PUMP TRIP "B"	DISABLES RECIRC PUMP TRIP CIRCUIT	NO RPT RECIRC PUMP "B" TRIP	
MG SET A		C72-1070	ALL OTHER RPS CIRCUITRY	FAIL SAFE DE-ENERGI-ZATION OF CIRCUITS	REACTOR SCRAM	ALL SCRAM ANNUN.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-7B	1	C41-C001A	SLC PUMP A	SLC PUMP INOPERABLE	NO LOOP A FLOW	1) "SLC-P-1A PWR LOSS" LIGHT 2) "SLC DIV 1 OUT OF SERVICE ANNUN.
		C41-F004A	SLC SQUIB VALVE	SQUIB VALVE DISABLED (NC)	NO LOOP A FLOW	1) "SLC-V-4A PWR LOSS" LIGHT 2) "SLC DIV 1 OUT OF SERVICE" ANNUN 3) LOSS OF STATUS LIGHT ON P603
		C41-F001A	SL MOV STORAGE TANK OUTLET LOOP A	MOV FAILS AS IS (NC)	NO LOOP A FLOW	1) "SLC-V-1A PWR LOSS/ OL LIGHT 2) "SLC DIV 1 OUT OF SERVICE" ANNUN. 3) LOSS OF POS. IND. ON P603
MC-8B	2	C41-C001B	SLC PUMP B	SLC PUMP INOPERABLE	NO LOOP B FLOW	1) "SLC-P-1B PWR LOSS" LIGHT 2) "SLC DIV 2 OUT OF SERVICE ANNUN.
		C41-F004B	SLC SQUIB VALVE	SQUIB VALVE DISABLED (NC)		1) "SLC-V-4B PWR LOSS" LIGHT 2) "SLC DIV 2 OUT OF SERVICE 3) LOSS OF STATUS LIGHT ON P603
		C41-F001B	SLC MOV STORAGE TANK OUTLET LOOP B	MOV FAILS AS IS (NC)		1) "SLC-V-1B PWR LOSS/OL" LIGHT 2) "SLC DIV 2 OUT OF SERVICE" ANNUN. 3) LOSS OF POS. IND. ON P603

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-8A-A	2	H13-P601	SQUIB VALVE READY LIGHTS POS. SWITCHES FOR SLC-V-8 AND SLC-V-31	LOSS OF SQUIB VALVE READY LIGHT ON P603 LOSS OF POS. IND. FOR SLC-V-8 AND SLC-V-31	NONE.	NOTE 2
PP-8A-Z	B	H13-P613	TANK LVL ALARM, TANK LVL & PUMP PRESSURE INDICATION	LOSS OF INDICATIONS ON P603	NONE.	1) "TANK LEVEL HI/LO" ANNUN. NOTE 2.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-3A-A	A	BS-DV-6A	RFW HTR DUMP VALVE	LOSS OF POWER, VALVE FAILS OPEN	NO EFFECT ON SHUTDOWN MODE. AFFECTS FW TEMPERATURE.	1) SEVERAL HEATER HI LEVEL TRIPS 2) STEAM DUMP VALVES NOT FULLY CLOSED 3) LOSS OF POS. IND.
		BS-DV-3A1	RFW HTR DUMP VALVE	LOSS OF POWER, VALVE FAILS OPEN	NO EFFECT ON SHUTDOWN MODE. AFFECTS FW TEMPERATURE.	1) SEVERAL HEATER HI LEVEL TRIPS 2) STEAM DUMP VALVES NOT FULLY CLOSED 3) LOSS OF POS. IND.
		BS-DV-4A	RFW HTR DUMP VALVE	LOSS OF POWER, VALVE FAILS OPEN	NO EFFECT ON SHUTDOWN MODE. AFFECTS FW TEMPERATURE.	1) SEVERAL HEATER HI LEVEL TRIPS 2) STEAM DUMP VALVES NOT FULLY CLOSED 3) LOSS OF POS. IND.
PP-3A-A	A	BS-V-8B BS-V-10A BS-V-10B BS-V-13A BS-DV-5A BS-DV-2A1 BS-DV-2A2 BS-V-27 BS-V-48 BS-V-52A BS-V-52B	NONE RETURN VALVES	LOSS OF POWER, VALVES CLOSE	EFFECT FW TEMP AND CONDENSATE VACUUM	1) SEVERAL HEATER HI LEVEL TRIPS 2) STEAM DUMP VALVES NOT FULLY CLOSED 3) LOSS OF POS. IND. NOTE 2.
PP-2RA-B	B	BS-DV-6B	RFW HTR DUMP VALVE	LOSS OF POWER, VALVES FAILS OPEN	NO EFFECT	1) "STEAM DUMP VALVES NOT FULLY CLOSED" 2) LOSS OF VALVE POSIT. IND. ON BD-T

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-2RA-B	B	BS-NRV'S	NON RETURN VALVES	LOSS OF POWER, VALVES CLOSED	NRV SUPPLYING EITHER STEAM OR CONDENSATE	NOTE 2. 1) "STEAM DUMP VALVES NOT FULLY CLOSED" ANN. 2) "LP HEATER-1B HIGH LEVEL TRIP 3) DITTO FOR HTRS 2B, 3B, 4B, 1C, 2C, 3C AND 4C
PP-1B-A		BS-SPVS	SOLENOID PILOT VALVES - TANK LEVEL IND.	BS-V-35A, 39A AND 64 OPEN	NONE.	LOSS OF VALVE POS IND. LIGHTS AND TANK LEVEL ON BD-T
PP-2P-A		BS-SPV'S	SOLENOID PILOT VALVES TANK LEVEL IND.	BS-V-39B AND 68 OPEN	NONE.	LOSS OF POSITION IND. LIGHTS AND TANK LEVEL ON BD-T
PP-8A-A	2	ES-PI-1B	STEAM EXHAUST PRESS. IND. FOR RFT-1B	LOSS OF INDICATION	NONE	LOSS OF VOLTAGE INDICATION ON 80-C FOR PP-8A-A
PP-7A-A	1	ES-PI-1A	STEAM EXHAUST PRESS. IND. FOR RFT-1A	LOSS OF INDICATION	NONE	LOSS OF VOLTAGE INDICATION ON BD-C FOR PP-7A-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SM-1	A	P-1A	CONDENSATE PUMP 1A	LOSS OF PUMP	AT 40% RX POWER ONE (1) CONDENSATE PUMP AND ONE (1) BOOSTER PUMP ARE SHUTDOWN. IF THE POWER FAILURE ON ONE BUS IS PRIOR TO 40% RX POWER THEN COND SYSTEM IS LOST. IF A SECOND BUS POWER LOSS IS EXPERIENCED PRIOR TO RX PRESSURE AT 300 PSIG THEN COND SYSTEM IS LOST. NO CONDENSATE PUMPS ARE REQUIRED WHEN RX PRESSURE IS AT 100 PSIG.	1) BUS SM1 UV ANNUNC. 2) CB C1A TRIP ANNUNC.
		P-2A	CONDESNATE BOOSTER PUMP 2A	LOSS OF PUMP		1) ABOVE 2) CB C2A TRIP ANNUNC.
SM-2	B	P-1B	CONDENSATE PUMP 1B	LOSS OF PUMP		1) BUS SM2 UV ANNUNC. 2) CB C1B TRIP ANNUNC. 3) CB C2B TRIP ANNUNC.
		P-2B	CONDENSATE BOOSTER PUMP 2B	LOSS OF PUMP		
SM-3	A	P-1C	CONDENSATE PUMP 1C	LOSS OF PUMP		1) BUS SM3 UV ANNUNC. 2) CB C1C TRIP ANN. 3) CB C2C TRIP ANN.
		P-2C	CONDENSATE BOOSTER PUMP 2C	LOSS OF PUMP		
MC-1A	A	COND-V-146A	COND OUTLET FROM LP HTR 5A	MOV FAILS AS IS N.O. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. ON BD-T
		COND-V-142A	COND INLET TO LP HTR 5A	MOV FAILS AS IS N.O. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. ON BD-T
		COND-V-134A	COND OUTLET FROM LP HTR 2A	MOV FAILS AS IS N.O. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. ON BD-T
		COND-V-615A	SEALING STEAM EVAP BLOWDOWN TO CONDENSER	MOV FAILS AS IS N.O. LOSS VALVE POSITION INDICATION	NONE.	NONE - NO POSITION INDICATION IN THE CONTROL ROOM
MC-1B	A	COND-V-123A	COND INLET TO LP HTR 1A	MOV FAILS AS IS N.O. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF VALVE POSITION ON BD-T

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-1B	A	COND-V-149	RFP BYPASS VALVE	MOV FAILS AS IS VALVE COULD BE OPEN OR CLOSED DEPENDENT ON OPERATIONS	REQUIRED TO BE OPEN FOR SYSTEM S/D	LOSS OF POSITION INDICATION ON BD-A
MC-2B	B	COND-V-140C	COND OUTLET FROM LP HTR 4C	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION ON BD-T	NONE.	O/L TRIP ANNUNCIATION OF FEED TO MCC'S AND NOTE 2
		COND-V-135C	COND INLET TO LP HTR 3C	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION ON BD-T	NONE.	O/L TRIP ANNUNCIATION OF FEED TO MCC'S AND NOTE 2
MC-2C	B	COND-V-146B	COND OUTLET FROM LP HTR 5B	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. ON BD-T
		COND-V-157	COND PRESSURE CONTROL VALVE INLET	VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. IND. ON BD-A
		COND-V-158	COND PRESS. CONTROL VALVE INLET	VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. IND. ON BD-A
		COND-V-159	COND PRESS. CONTROL VALVE INLET	VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. IND. ON BD-A
MC-2D	B	HS-V-110A	STEAM JET AIR EJECTOR STEAM	MOV FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE.	
		AR-EX-1B	GLAND CONDENSER EXHAUSTER	LOSS OF EXHAUSTER	NONE.	
		COND-V-114B COND-V-111B	COND-HX-8B COOLING WATER SUPPLY	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF VALUE POSIT. IND. ON BD-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		COND-V-123B	COND INLET TO LP HTR 1B	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF VALUE POSIT. IND. ON BD-T
MC-2D	B	COND-V-123C	COND INLET TO LP HTR 1C	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. ON BD-T
		CBP-AOP-1B	BOOSTER PUMP 1B AUX LUBE OIL PUMP	PUMP DISABLED. REQUIRED ONLY WHEN THE MAIN OIL PUMP IS DISABLED.	NONE.	
	B	OG-V-125B OG-V-149B	OG DISCHARGE FROM EJECTOR CONDENSER 8B	VALVES FAIL AS IS, LOSS OF POSITION INDICATION	NONE.	SEE PAGE 2 - MC-2D
MC-2R	B	COND-V-142B	COND INLET TO LP HTR 5B	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSIT. IND. ON BD-T
		COND-V-134B	COND OUTLET FROM HTR 2B	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSIT. IND. ON BD-T
		COND-V-134C	COND OUTLET FROM HTR 2C	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSIT. IND. ON BD-T
		AR-V-3B	MAIN CONDENSER VACUUM BKR VALVE	MOV FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	
MC-2R-A	B	COND-V-140B	COND OUTLET FROM LP HTR 4B	MOVS FAIL AS IS LOSS OF POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. LIGHTS ON BD-T
		COND-V-135B	COND INLET TO LP LP HTR 3B	MOVS FAIL AS IS LOSS OF POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. LIGHTS ON BD-T

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
HC-3A	A	COND-V-140A	COND OUTLET FROM LP HTR 4A	MOV FAIL AS IS LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSIT. IND. ON BD-T
HC-3A	A	COND-V-135A	COND INLET TO LP HTR 3A	MOV FAIL AS IS LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSIT. IND. ON BD-T
HC-3B	A	AR-V-3A	MAIN CONDENSER VACUUM BKR VALVE	MOV FAILS AS IS (N.C.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. IND.
		AR-V-3C	MAIN CONDENSER VACUUM BKR VALVE	MOV FAILS AS IS (N.C) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. IND.
		COND-V-141A	COND HTR 3A,B,C 4A,B,C BYPASS	MOV FAIL AS IS (N.C.) POSITION IND. LOST ON BD-T		LOSS OF VALVE POSIT. ON BD-T
		COND-V-141B COND-V-144	COND HTR 2A,B,C 5A,B BYPASS	MOV FAIL AS IS (N.C.) POSITION IND. LOST ON BD-T		LOSS OF VALVE POSIT. ON BD-T
		COND-V-609A COND-V-609C	COND HTR 1A, 1B BYPASS	MOV FAIL AS IS (N.C.) POSITION IND. LOST ON BD-T		LOSS OF VALVE POSIT. ON BD-T
		COND-V-184 COND-V-187	STEAM EXAPORATOR ISO VALVES	NO EFFECT.	NONE.	LOSS OF VALVE POSIT. ON BD-A
HC-3C	A	OG-V-125A OG-V-149A	OG DISCHARGE FROM EJECTOR CONDENSER 8A	VALVES FAIL AS IS, LOSS OF POSITION INDICATION	NONE.	NOTE 2 AND O/L TRIP ANNUNCIATION
		CBP-AOP-1A	BOOSTER PUMP 1A AUX LUBE OIL PUMP	PUMP DISABLED.	REQUIRED ONLY WHEN THE MAIN OIL PUMP IS DISABLED, OR WHEN STARTING, STOPPING THE BOOSTER PUMPS	NOTE 2 AND O/L TRIP ANNUNCIATION

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		AR-EX-1A	GLAND CONDENSER EXHAUSTER	LOSS OF EXHAUSTER	NONE.	NOTE 2 AND O/L TRIP ANNUNCIATION
MC-3C	A	COND-V-114A COND-V-111A	COND-HX-8A COOLING WATER SUPPLY	MOVS FAILS AS IS (N.O.) LOSS OF VALVE POSITION INDICATION	NONE.	NOTE 2 AND O/L TRIP ANNUNCIATION
DP-S1-1C	A	125 VDC BUS BKR NO. 4	4160 CONTROL VOLTAGE	LOSS OF CLOSURE AND TRIP VOLTAGE AT THE SWITCHGEAR FOR COND-P-1A AND 1C COND-P-2A AND 2C	UNABLE TO TRIP AND CLOSE PUMP BREAKERS	LOSS OF BREAKER STATUS LIGHTS ON BD-A.
		125 VDC BUS BKR NO. 5	4160 CONTROL VOLTAGE	LOSS OF CLOSURE AND TRIP VOLTAGE AT THE SWITCHGEAR FOR COND-P-1A AND 1C COND-P-2A AND 2C	UNABLE TO TRIP AND CLOSE PUMP BREAKERS	LOSS OF BREAKER STATUS LIGHTS ON BD-A.
DP-S1-2C	B	125 VDC BUS BKR NO. 3	4160 CONTROL VOLTAGE	LOSS OF CLOSURE AND TRIP VOLTAGE FOR CONP-P-1B AND COND-P-2B	UNABLE TO TRIP AND CLOSE PUMP BREAKERS	LOSS OF BREAKER STATUS LIGHTS ON BD-A.
PP-7A-A	1	COND-DPT-5 SRV-21	COND PCV-5 CONTROL LOOP GLAND SEAL STM COND BYPASS VALVE	COND-PCV-5 CLOSES LOSS OF DP INDICATION	100% FLOW THROUGH THE GLAND SEAL STEAM CONDENSER LOSS COND BOOSTER PUMPS/RFW	LOSS OF MOST BOP ANALOG LOOPS. IN DIV 1 AND DIV A. WITH ASSOCIATED ALARMS AND LOSS OF CONTROL AND INDICAT. LOSS OF VOLTAGE IND. FOR PP-7A-A ON BD-C.
PP-7A-A	1	COND-FT-11 SRV 17	FILTER DEMIN BYPASS VALVE COND-LCV-11 CONTROL LOOP	COND-LCV-11 CLOSES LOSS OF FLOW INDICATION	NONE.	LOSS OF MOST BOP ANALOG LOOPS. IN DIV 1 AND DIV A. WITH ASSOCIATED ALARMS AND LOSS OF CONTROL AND INDICAT. LOSS OF VOLTAGE IND. FOR PP-7A-A ON BD-C.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-1B	A	RELAYS PRM-1 PRM-3	INTERLOCKS TO AR-SPV-1-1 AR-SPV-1-2	SPVS DEENERGIZE AR-V-1 CLOSE	AIR REMOVAL SYSTEM IS ISOLATED. CONDENSER LOSES VACUUM SLOWLY.	
PP-1B-A	A	OG-V-129A	DRAIN DISCHARGE VALVE FOR EJECTOR CONDENSER 8A DRIP POT	OG-V-129A OPENS. LOSS LOSS OF POSITION INDICATION	NONE.	NOTE 2, LOSS OF POSITION INDICATION FOR ALL LISTED DEVICES
		AR-SPV-2A AR-SPV-2B	SPVS FOR AR-V-2A, 2B FOR AIR EJECTOR A	SPVS DEENERGIZE AR-V-2A AND 2B CLOSE. LOSS OF POSITION INDICATION	AIR EJECTOR A LOST. IF IN USE, CONDENSER VACUUM LOST	NOTE 2, LOSS OF POSITION INDICATION FOR ALL LISTED DEVICES
		AR-SPV-1-1 AR-SPV-1-2	SPVS FOR AR-V-1, VACUUM LINE FROM CONDENSER	SPVS DEENERGIZE AR-V-1 CLOSES. LOSS OF POSITION INDICATION	ENTIRE AIR REMOVAL SYSTEM IS ISOLATED. CONDENSER SLOWLY LOSES VACUUM.	NOTE 2, LOSS OF POSITION INDICATION FOR ALL LISTED DEVICES
		COND-FSVP 15A COND-FSVP 15C	COND. BOOSTER MINIMUM FLOW VALVES	COND-FCV-15A AND C THROTTLES. LOSS OF POSITION INDICATION	NONE.	LOSS OF POSITION IND. ON BD-A.
		COND-SPV-40	CONTROL AIR TO COND-PCV-40 CONDENSE HOOD SPRAY VALVE	LOSS OF ABILITY TO OPEN COND-PCV-40 WHICH IS NORMALLY CLOSED	NONE.	NOTE 2, LOSS OF POSITION INDICATION FOR ALL LISTED DEVICES
		COND-SPV-17	CONTROL AIR TO COND-V-17 CONDENSER/ CST CROSS TIE VALVE	COND-V-17 CLOSES WHEN COND-SPV-17 DEENERGIZES	LOSS OF INDICATION COND-V-17	NOTE 2, LOSS OF POSITION INDICATION FOR ALL LISTED DEVICES

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-2P-A	B	COND-FSPV 15B	COND. BOOSTER PUMP MINIMUM FLOW VALVE	COND-FCV-15B THROTTLES LOSS OF POSITION INDICATION	NONE	LOSS OF POSITION IND. ON BD-A.
		AR-SPV-2C AR-SPV-2D	SPVS FOR AR-V-2C AND 2D FOR AIR EJECTOR B	SPVS DEENERGIZE AR-V-2C AND 2D CLOSE. LOSS OF POSITION INDICATION.	AIR EJECTOR B LOST. IF IN USE. CONDENSER VACUUM LOST.	
PP-8A-2C-A	B	COND-SPV-76	CONTROL AIR FOR COND-V-76, FILTER DEMIN. BYPASS VALVE	COND-V-76 OPENS WHEN COND-SPV-76 DEENERGIZES	PARTIAL BYPASS OF FILTER DEMINERALIZERS, REDUCES SYSTEM FRICTION DROP ~~--SOME INCREASED FLOW IN SYSTEM.~~	
PP-2P-A	B	OG-V-129B	DRAIN DISCHARGE VALVE FOR EJECTOR COND. 8B DRIP POT.	OG-V-129B OPENS. LOSS OF POS. IND.	NONE.	NOTE 2.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-1A	A	TG-BLP-1	BEARING LIFT PUMP	LOSS OF INDICATION LOSS OF BEARING LIFT PUMP	REQUIRED FOR MAIN TURBINE S/D	O/L TRIP ANNUNCIATION AND NOTE 2.
		TG-BOP-1	BEARING OIL PUMP	LOSS OF INDICATION LOSS OF BEARING OIL PUMP	REQUIRED FOR MAIN TURBINE S/D	O/L TRIP ANNUNCIATION AND NOTE 2.
		TG-SOBP	SEAL OIL BACKUP PUMP	LOSS OF INDICATION LOSS OF SEAL OIL BACKUP PUMP	REQUIRED FOR MAIN TURBINE S/D	O/L TRIP ANNUNCIATION AND NOTE 2.
		TO-EX-1	TURBINE OIL VAPOR EXTRACTOR	LOSS OF POWER AND INDICATION	OPERATOR WILL TRIP TURBINE PER PPM 2.5.7	O/L TRIP ANNUNCIATION AND NOTE 2.
		TG-EHP-1A	ELECTRO-HYDRAULIC PUMP 1A	LOSS OF POWER, CONTROL AND IND. LOSE PUMP 1A	AUTO START OF EHP-1B	O/L TRIP ANNUNCIATION AND NOTE 2.
MC-2C	B	TG-EHP-1B	ELECTROC-HYDRAULIC PUMP 1B	LOSS OF POWER, CONTROL AND INDICATION	AUTO START OF EHP-1A	EH FLUID LOW PRESS ANN. (IF THIS IS THE RUNNING PUMP)
MC-3B	A	TG-TNG-1	LOSS OF INDICATION LOSS OF MAIN TURBINE TURNING GEAR	DAMAGE ~~TO TURBINE~~ IF SECURED HOT	REQUIRED FOR MAIN TURBINE S/D	1) T.G. FAILURE ANNUNC. 2) ZERO TURBINE SPEED ANNUNC.
SH-75	A	TSW-P-1A	PLANT SERVICE WATER PUMP	LOSS OF POWER TO TSW-P-1A	TSW-P-1B WILL AUTO START	1) BREAKER TRIPPED ANNUNC. 2) BUS UV ANNUNC.
SH-85	B	TSW-P-1B	PLANT SERVICE WATER PUMP	LOSS OF POWER TO TSW-P-1B	TSW-P-1~~B~~A WILL AUTO START	1) BREAKER TRIPPED ANNUNC. 2) BUS UV ANNUNC.
MC-S2-1B	A	TG-EOP-1	EMERG. OIL PUMP	LOSE AUTO START ON LOSS OF TG-BOP-1	NONE, AS LONG AS MAIN OIL PUMP AVAILABLE (TG-BOP-1)	LOSS OF PUMP STATUS LIGHTS ON BD-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-S2-1B	A	TG-ASOBP-1B	AIR SIDE BACKUP SEAL OIL PUMP	LOSE AUTO START (OF TG-ASOBP-1B) ON LOSS OF MAIN SEAL OIL PUMP	NONE, AS LONG AS MAIN OIL PUMP (TG-ASOP-1) IS AVAILABLE	LOSS OF PUMP STATUS LIGHTS ON BD-A
US-PP	A	AC PANEL AC-2 IN DEH CAB.00	VITAL AC POWER TO DEH CONTROLLER	LOSS OF DEH CONTROLLER AFTER TURBINE TRIP	UNABLE TO CONTROL PRESSURE DURING SHUTDOWN	LOSS OF VOLTAGE INDICATION ON BD-C FOR US-PP
PP-1B-A	A	TURNING GEAR SOLENOID VALVES	TURNING GEAR ENGAGE/DISENGAGE SOLENOID VALVES	LOSS OF MAIN TURBINE TURNING GEAR	REQUIRED FOR MAIN TURBINE S/D	LOSS OF INDICATION ON BD-B
PP-3A-A	A	MD-SPV-75 THRU 87	DRAIN VALVES	VALVES FAIL OPEN	REQUIRED TO OPEN ON NORMAL S/D	DRAIN VALVES OPEN TO DEH CONTROLLER ANNUNCIATOR
		TSW-TE-8 TSW-MV/1-8B TSW-1/P-8B TSW-TCV-8	PLANT SERVICE WATER TCV TO MAIN TURBINE OIL COOLERS	TSW-TCV-8 WILL CLOSE	TURBINE TRIP AND LOSS OF MAIN OIL COOLERS	"HIGH BEARING TEMP" ANNUNC.
PP-7A-C	A	TSW-V-53A	TSW-P-1A DISCHARGE VALVE (MOV)	MO VALVE WILL FAIL AS IS	NONE.	
PP-8A-C	B	TSW-V-53B	TSW-P-1B DISCHARGE VALVE (MOV)	MO VALVE WILL FAIL AS	NONE	
PP-8A-Z	B	INTERCEPT AND REHEAT STOP VALVES	CONTROL & INDICATION FOR INTERCEPTOR AND REHEAT STOP VALVES	LOSS OF QUICK ISOLATION AFTER LOAD REJECTION	TURBINE STILL TRIPS ON LOAD REJECTION - NO EFFECT	LOSS OF VALVE POSIT. INDICATION ON BD-B
DP-S1-1C-1	A	TG-EOP-1	CONTROL & INDICATION EMERG. OIL PUMP	STARTS ONLY ON LOSS OF TG-BOP-1	NONE.	1) EMERGENCY OIL PUMP OVERLOAD NOTE 2
DP-S1-1C-1	A	TG-ASOBP-1A	CONTROL & INDICATION SEAL OIL BACKUP PUMP	LOSS OF AIR SIDE BACKUP SEAL OIL PUMP	NONE IF TG-ASOP-1 IS AVAILABLE	1) AIR SIDE SEAL OIL BACKUP PUMP OVERLOAD NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-2C	B	CONT. CKT	VOLT REG.	LOSS OF LOAD FOLLOWING CAPABILITY	UNABLE TO PROPERLY UNLOAD TURBINE	1) DEH CONTROL "REGULATOR SUPPLY BKR OPEN" 2) POWER FAILURE ALARM TO DEH
DP-S1-2C-2	B	20/BV1 BV2, BV3 BV4	LOSS OF BYPASS VALVE RESET CAPABILITY	UNABLE TO RESET BYPASS VALVES AFTER TURBINE TRIP	UNABLE TO CONTROL PRESSURE DURING NORMAL SHUTDOWN	
PP-7A-C-A	A	RPWA-010,011 SPWA-010,011 TPWA-035,036, 037	TSW-V-53A CONTROL TSW-P-1A DISCHARGE VALVE	MOV FAILS AS IS OPEN IF ASSOC. PUMP IS RUNNING	NONE.	LOSS OF POSITION IND. FOR TSW-V-53A ON BD-A
PP-8A-C-A	B	RPWA-010,011 SPWA-010,011 TPWA-035,036, 037	TSW-V-53B CONTROL TSW-P-1B DISCHARGE VALVE	MOV FAILS AS IS OPEN IF ASSOC. PUMP IS RUNNING	NONE.	LOSS OF POS. IND. ON BD-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SH-1	A	CWP-1A	CIRC WATER PUMP	LOSS OF PUMP	UNTIL RX PRESSURE IS BELOW 100 PSIG WHEN 2 PUMPS CAN BE SHUT-DOWN NEED ONLY 2 PUMPS	SEE SH-1 GROUP F SHEET 1
SH-2	B	CWP-1B	CIRC WATER PUMP	LOSS OF PUMP	UNTIL RX PRESSURE IS BELOW 100 PSIG WHEN 2 PUMPS CAN BE SHUT-DOWN NEED ONLY 2 PUMPS	SEE SH-2 SHEET 1
SH-3	A	CWP-1C	CIRC WATER PUMP	LOSS OF PUMP	UNTIL RX PRESSURE IS BELOW 100 PSIG WHEN 2 PUMPS CAN BE SHUT-DOWN NEED ONLY 2 PUMPS	SEE SH-3 SHEET 1
MC-1B	A	CW-V-2A CW-V-2C	CONDENSER INLET VALVE	MOV FAILS IN POSITION N.O.	NONE.	LOSS OF VALVES POSITION INDICATION ON BD-A
MC-2D	B	CW-V-3B	CONDENSER OUTLET VALVE	MOV FAILS IN POSITION N.O.	NONE.	LOSS OF VALVES POSITION INDICATION ON BD-A
MC-2P	B	CW-V-2B	CONDENSER INLET VALVE	MOV FAILS IN POSITION N.O.	NONE.	LOSS OF VALVES POSITION INDICATION ON BD-A
MC-3C	A	CW-V-3A CW-V-3C	CONDENSER OUTLET VALVE	MOV FAILS IN POSITION N.O.	NONE.	LOSS OF VALVES POSITION INDICATION ON BD-A
MC-5L	A	CW-FN-19 CW-FN-20 CW-FN-21 CW-FN-22	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ¼ OF 36 TOTAL FANS	1) "HI VIBRATION/OLVD" ANNUNC. ON BD-H 2) INDICATION OF FANS STOPPED

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-5M	A	CW-FN-23 CW-FN-24 CW-FN-31 CW-FN-32 CW-FN-33	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) "HI VIBRATION/OLVD" ANNUNC. ON BD-M 2) INDICATION OF FANS STOPPED
MC-5N	A	CW-V-1A CW-V-1C	CIRC WATER PUMP DISCHARGE MOV	MOV FAILS IN POSITION (N.O.)	NONE.	NO ALARM IN CONTROL ROOM
		CW-V-10	COOLING TOWER BYPASS VALVE	MOV FAILS AS IS (N.C.)	NONE.	NO ALARM IN CONTROL ROOM
MC-5P	A	CW-FN-25 CW-FN-26 CW-FN-27 CW-FN-28	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) HI VIBRATION/OLVD" ANNUNC. ON BD-M 2) INDICATION OF FANS STOPPED
MC-5Q	A	CW-FN-29 CW-FN-30 CW-FN-34 CW-FN-35 CW-FN-36	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) HI VIBRATION/OLVD" ANNUNC. ON BD-M 2) INDICATION OF FANS STOPPED
MC-5R	A	CW-V-7,8,11	COOLING TOWER 2A, 2B, 2C SUPPLY VALVES	MOV'S FAIL AS IS - MAY BE OPEN OR CLOSED	NONE.	NO ALARM.
MC-6L	B	CW-FN-1 CW-FN-2 CW-FN-3 CW-FN-4	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) COOLING TOWER 1A FANS 1-6 HI VIB/OL 2) INDICATION OF FANS STOPPED
MC-6M	B	CW-FN-5 CW-FN-6 CW-FN-13 CW-FN-14 CW-FN-15	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) COOLING TOWER 1A FANS 1-6 HI VIB/OL 2) COOLING TOWER 1C FANS 13-18 HI VIB/OL

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-6P	B	CW-FN-7 CW-FN-8 CW-FN-9 CW-FN-10	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) COOLING TOWER 1B FANS 7-12 HI VIB/OL
MC-6Q	B	CW-FN-11 CW-FN-12 CW-FN-16 CW-FN-17 CW-FN-18	CIRC WATER FANS	FAN MOTORS STOP	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	1) COOLING TOWER 1B FANS 7-12 HI VIB/OL 2) COOLING TOWER 1C FANS 13-18 HI VIB/OL
MC-6R	B	CW-V-4,5,6	COOLING TOWER 1A, 1B, 1C SUPPLY	MOV'S FAIL AS IS - MAY BE OPEN OR CLOSED	NONE.	NO ALARM.
MC-6N	B	CW-V-1B	CIRC. WATER PUMP B DISCHARGE MOV	MOV FAILS AS IS (N.O.)	NONE.	NO ALARM.
PP-7A-C-A	A	TPWA 91,92 RPWA 92,92 SPWA 91,92	SUPERVISORY CIRCUIT FOR CW-V-10 COOLING TOWER BYPASS VALVE	MOV FAILS AS IS - (N.C.) LOSS VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. FOR CW-V-10 ON BD-H
PP-7A-Z	A	RCWA 91,92 SCWA 91,92 TCWA 91,92	SUPERVISORY CIRCUIT FOR CW-V-10 COOLING TOWER BYPASS VALVE	MOV FAILS AS IS - (N.C.) LOSS VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. FOR CW-V-10 ON BD-H
		RCFA 055 TO 060 SCEA 055 TO 060 TCEA 055 TO 060	SUPERVISORY CIRCUIT FOR CW-V-7,8,11 COOLING TOWER SUPPLY VALVES	MOV'S FAILS AS IS - WHICH MAY BE OPEN OR CLOSED. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF POSITION IND. FOR THESE VALVES ON BD-H IN THE CONTROL ROOM.
		TCEA 001 TO 019 RCEA 001 TO 019 SCEA 001 TO 019	SUPERVISORY CIRCUIT CW-FN-19 TO 34	LOSS OF FAN CONTROL. FAN MOTORS STOP. LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ½ OF 36 TOTAL FANS	LOSS OF FAN STATUS LIGHTS ON BD-H FOR FANS CW-FN-19 THRU CW-FN-36

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT.
		TCEA 049 TO 054 RCEA 049 TO 054 SCEA 049 TO 054	SUPERVISORY CIRCUIT CW-FN-35 AND 36	LOSS OF FAN CONTROL. FAN MOTORS STOP. LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ¼ OF 36 TOTAL FANS	LOSS OF FAN STATUS LIGHTS ON BD-M FOR FANS CW-FN-19 THRU CW-FN-36
PP-8A-Z	B	TCEB 001 TO 048 RCEB 001 TO 048 SCEB 001 TO 048	SUPERVISORY CIRCUIT CW-FN-1 TO 16	LOSS OF FAN CONTROL. FAN MOTORS STOP. LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ¼ OF 36 TOTAL FANS	LOSS OF FAN STATUS LIGHTS ON BD-M FOR FANS CW-FN-1 THRU CW-FN-18
PP-8A-Z	B	TCEB 049 TO 054 RCEB 049 TO 054 SCEB 049 TO 054	SUPERVISORY CIRCUIT CW-FN-17 AND 18	LOSS OF FAN CONTROL. FAN MOTORS STOP. LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ¼ OF 36 TOTAL FANS	LOSS OF FAN STATUS LIGHTS ON BD-M FOR FANS CW-FN-1 THRU CW-FN-18
PP-8A-Z	B	RCEB 055 TO 060 SCEB 055 TO 060 TCEB 055 TO 060	SUPERVISORY CIRCUIT FOR CW-V-4,5,6 COOLING TOWER SUPPLY VALVES	MOV'S FAIL AS IS - WHICH MAY BE OPEN OR CLOSED. LOSS OF VALVE POSITION INDICATION	NONE.	LOSS OF FAN STATUS LIGHTS ON BD-M FOR FANS CW-FN-1 THRU CW-FN-18

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
LP-5R-A	A	TEA 001 TO 054 REA 001 TO 054 SEA 001 TO 054	SUPERVISORY CIRCUIT CW-FN-19 TO 36	LOSS OF FAN CONTROL. FANS CONTINUE TO OPERATE IN THE STATE PRIOR TO POWER LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ½ OF THE TOTAL 36 FANS	NOTE 2
		TEA-055 TO 060 REA-055 TO 060 SEA-055 TO 060	SUPERVISORY CIRCUIT FOR CW-V-7,8,11 COOLING TOWER SUPPLY VALVES	MOV'S FAIL AS IS - WHICH MAY BE OPEN OR CLOSED. LOSS OF POSITION INDICATION	NONE.	NOTE 2
LP-6R-A	A	TEB 001 TO 054 REB 001 TO 054 SEB 001 TO 054	SUPERVISORY CIRCUIT CW-FN-1 TO 18	LOSS OF FAN CONTROL. FANS CONTINUE TO OPERATE IN THE STATE PRIOR TO POWER LOSS OF FAN OPERATION INDICATION	NO EFFECT, NEVER LOSE MORE THAN ½ OF THE TOTAL 36 FANS	NOTE 2
		TEB-055 TO 060 REB-055 TO 060 SEB-055 TO 060	SUPERVISORY CIRCUIT FOR CW-V-4,5,6 COOLING TOWER SUPPLY VALVES	MOV'S FAIL AS IS - WHICH MAY BE OPEN OR CLOSED. LOSS OF POSITION INDICATION	NONE.	NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-Z	A	H13-P612 120V INSTR. BUS POWER	INSTRUMENT POWER FOR FEEDWATER CONTROL SYSTEM	LOSS OF FEEDWATER CONTROLLER SIGNALS. ALARM UNITS DEENERGIZE, LOSS OF SIGNALS FORM INSTRUMENTS.	LOSS OF FEEDWATER CONTROL FOR RFW TURBINES. REACTOR RECIRC GOES TO LOW FLOW MODE.	1) ANNUNC. ON P603 "TURBINE RFP CONTROL SIGNAL FAILURE." 2) REACTOR HI WATER LEVEL TRIP. 3) REACTOR LEVEL HI OR LO. 4) REACTOR PRESS HI. 5) VALVE CONTROL SIGNAL FAILURE.
PP-8A-F	2	SCS2-021 RCS2-021	RECEIVER AND RELAY FROM SW-LS-1B3	LOSS OF LOW WATER TRIP OF SW-P-1B	NONE.	BISI "SUPV SYS" TROUBLE "SSW B 005"
MC-1A	A	SS-V-41	BYPASS VALVE AROUND SS-V-39 (MOV)	MOV VALVE FAILS CLOSED. LOSS OF POSITION INDICATION.	NONE.	NOTE 2.
		RFW-V-109-T	HP HTRS BYPASS MOV	FAIL AS IS (N.C.) LOSS OF POSITION INDICATION	NONE.	LOSS OF POSITION IND. ON BD-T
		RFW-V-112A-A&T	FW OUTLET FROM HP HTR 6A-MOV	MOV FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE ALL VALVES ALIGNED IN OPERATION	LOSS OF POSITION IND. ON BD-A AND BD-T
		RFW-V-108A-T	FW INLET TO HP HTR 6A	MOV FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE ALL VALVES ALIGNED IN OPERATION POSITION	LOSS OF POSITION IND. ON BD-T.
		RFW-V-117A-A&T	CONDENSATE AND FEEDWATER CLEANUP RECIRCULATION BLOCK VALVE	MOV VALVE FAILS AS IS (N.C.) POSITION INDICATION LOST	NONE.	LOSS OF POSITION IND. ON BD-A AND BD-T.
MC-1B	A	SS-V-6A SS-V-7A	SEAL STEAM TO RFW-DT-1A	MOV VALVES FAIL AS IS (N.O.) LOSS OF POSITION INDICATION	NONE.	NOTE 2.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		SS-V-8A	SEAL STEAM BYPASS TO RFW-DT-1A	MOV VALVE FAILS AS IS (N.C.) LOSS OF POSITION INDICATION	NONE.	NOTE 2.
		MD-P-1A	MISC DRAIN PUMP	LOSS OF POWER, CONTROL AND INDICATION	NONE, MD-P-1B WILL START ON HIGH TANK LEVEL IF MD-P-1A LOSES POWER	NOTE 2.
		MD-V-1A	MD-P-1A DISCHARGE VALVE	MOV FAILS OPEN AND LOSS OF POSITION INDICATION	NONE	NOTE 2.
		RFW-V-102A-A	RFP A DISCHARGE MOV	MOV FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE	VALVE POSITION LOST ON BD-A
		RFP-TNG-1A	RFP-A-TURNING GEAR	INOPERABLE, LOSS OF IND.	REQUIRED AFTER FEED PUMP TURBINE TRIPS	NOTE 2.
		RFW-AOP-1A	AUXILIARY OIL PUMP FOR RFP TURBINE "A"	PUMP INOPERABLE, LOSS OF IND.	REQUIRED AFTER SECURING MAIN LUBE OIL PUMP	NOTE 2.
		RFP-MOP-1A	MAIN LINE OIL PUMP	PUMP 1A INOPERABLE, LOSS OF INDICATION	TRIPS RFW TURBINE A	NOTE 2.
MC-2C	B	RFW-V-117B	CONDENSATE AND FEEDWATER CLEANUP RECIRCULATION BLOCK VALVE	VALVE FAILS AS IS (N.C.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. INDICATION ON BD-T AND BD-A
		RFW-V-118	REACTOR STARTUP BYPASS VALVE BLOCK VALVE	MOV VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSIT. INDICATION ON BD-T AND BD-A
MC-2C	B	RFW-V-112B	FW OUTLET FROM HP HTR 6B-MOV	MOV VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE	LOSS OF VALVE POSIT. INDICATION ON BD-T AND BD-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		RFW-V-108B	FW INLET TO HP HTR HTR 6B-MOV	MOV VALVE FAILS AS IS (N.O.) POSITION INDICATION LOST	NONE	LOSS OF VALVE POSIT. INDICATION ON BD-T AND BD-A
		SS-V-1A	SS EVAPORATOR SS-EV-1A DISCHARGE VALVE	MOV VALVE FAIL AS IS (N.O.) LOSS OF POSITION INDICATION	NONE.	NOTE 2
		SS-V-3B	EXCESS GLAND SEAL LEAKOFF VALVE	MOV VALVE FAILS AS IS (N.O.) LOSS OF POSITION INDICATION	NONE	NOTE 2
MC-2D	B	RFW-V-102B	RFP-B, DISCHARGE MOV	MOV FAILS AS IS, (N.O.) POSITION INDICATION LOST	NONE	LOSS OF POSIT. IND. ON BD-A
MC-2P	B	RFP-TNG-1B	RFP-B TURNING GEAR	INOPERABLE, LOSS OF IND.	REQUIRED AFTER TRIPPING RFP TURBINE	NOTE 2
		RFW-AOP-1B	AUXILIARY OIL PUMP FOR RFP TURBINE "B"	PUMP INOPERABLE LOSS OF IND.	REQUIRED AFTER SECURING MAIN LUBE OIL PUMP	NOTE 2
		SS-V-6B SS-V-7B	SEAL STEAM TO RFW-DT-1B	MOV VALVES FAIL AS IS (N.O.) LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSIT. IND. ON BD-A
		SS-V-8B	SEAL STEAM BYPASS TO RFW-DT-1B	MOV VALVES FAILS AS IS (N.C.) LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSIT. IND. ON BD-A
		MD-P-1B	MISC DRAIN PUMP	LOSS OF POWER, CONTROL AND INDICATION	NONE, MD-P-1A WILL START ON HIGH TANK LEVEL IF MD-P-1B LOSES POWER	LOSS OF POS. IND. ON BD-T
MC-2P	B	MD-V-1B	MD-P-1B DISCHARGE VALVE	MOV FAILS OPEN AND LOSS OF POSITION INDICATION	NONE	LOSS OF POS. IND. ON BD-T

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		RFP-MOP-1B	MAIN LUBE OIL PUMP	PUMP INOPERABLE LOSS OF INDICATION	TRIPS RFW TURBINE "B"	SEE RFW-AOP-1B ON SHEET 3
MC-7C	A	RFW-V-65A	RFW ISOLATION VALVE	MOV FAILS AS IS (N.O.) LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSITION IND. ON P602
MC-8C	B	RFW-V-65B	RFW ISOLATION VALVE	MOV FAILS AS IS (N.O.) LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSITION IND. ON P602
PP-8A-A	2	TT-Y-1B TT-Z-1B1	RFW TURBINE STOP VALVES RELAYS TO RFW-FSPV-2B	RELAYS DEENERGIZE AND DEENERGIZE RFW-FSPV-2B	RFW-FCV-2B DOES NOT CLOSE ON TRIP OF RFW-DT-1B BUT STILL HAS THROTTLING CAPABILITY	1) SEE PP-8A-A ON GROUP K SHEET 4 2) "RFP-1B TURBINE TRIP" 3) "RFP-1B TURBINE ALARMS
		RFW-FT-2B RFW-FIC-2B	RFW FLOW INDICATION AND MIN FLOW CONTROL	RFW-FCV-2B WILL GO FULL OPEN AND LOSS OF PUMP "B" FLOW INDICATION	FEED PUMPS WILL INCREASE FLOW TO 115% FLOW TO TRY TO MAINTAIN FEEDWATER FLOW TO VESSEL. REACTOR VESSEL LEVEL WILL DROP SLOWLY.	1) SEE PP-8A-A ON GROUP K SHEET 4 2) "RFP-1B TURBINE TRIP" 3) "RFP-1B TURBINE ALARMS
PP-7A-Z	A	RFT-GOV-1A	RFW FEED PUMP GOVERNOR	LOSS OF POWER TO GOVERNOR CAUSES AUTOMATIC TURBINE TRIP.		RFT-1A TURBINE TRIP ANNUNCIATOR
PP-8A-Z	B	RFT-GOV-1B	RFW FEED PUMP GOVERNOR	LOSS OF POWER TO GOVERNOR CAUSES AUTOMATIC TURBINE TRIP.		RFT-1B TURBINE TRIP ANNUNCIATOR
DP-S1-1C	A	RFW-DT-1A	RFW FEED PUMP	LOSS OF POWER RFW TURBINE TRIP CIRCUIT	FEEDWATER TURBINE 1A TRIPS	"TRIP CIRCUIT FAILURE" ANNUNCIATION
DP-S1-2C	B	RFW-DT-1B	RFW FEED PUMP	LOSS OF POWER RFW TURBINE TRIP CIRCUIT	FEEDWATER TURBINE 1B TRIPS	"TRIP CIRCUIT FAILURE" ANNUNCIATION

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-1C-1	A	RFW	RFW TURBINE EMERGENCY L.O. PUMPS	LOSS OF EMERGENCY CONTROLS FOR L.O. BOTH TURBINES	NONE	LOSS OF PUMP STATUS LIGHTS ON BD-A
PP-1B-A	A	TSW-TE-14A TSW-MV/1-142A TSW-1/P-142A TSW-TCV-14A	PLANT SERVICE WATER TCV TO RFW TURBINE OIL COOLERS	TSW-TCV-14A WILL CLOSE	Manual ~~OPERATOR SHOULD~~ TRIP RFW TURBINE 1A ON HIGH OIL TEMP ALARM. ~~TURBINE WILL EVENTUALLY TRIP ITSELF ON HIGH VIBRATION.~~	INCREASING TEMPERATURE AS INDICATED ON TSW-TI-14A ON BD-A.
		RFW-FSPV-2A	RFW SPV FOR RFW-FCV-2A MIN FLOW RECIRC VALVE	RFW-FCV-2A WILL OPEN AS FW FLOW DROPS OFF	RFW-FCV-2A DOES NOT CLOSE ON TRIP OF RFW-DT-1A BUT STILL HAS THROTTLING CAPABILITY	LOSS OF VALVE POSIT. ON BD-A
		99 TIX-1A	TURBINE SPEED SWITCH	TURBINE TRIP OF RFW-DT-1A LOSS OF SPEED INDICATION	LOSE FW PUMP 1A	NOTE 2
PP-2P-A	B	RFW-FSPV-2B	RFW SPV FOR RFW-FCV-2B MIN FLOW RECIRC VALVE	RFW-FCV-2B WILL OPEN AS FW FLOW DROPS OFF	RFW-FCV-2B DOES NOT CLOSE ON TRIP OF RFW-DT-1B BUT STILL HAS THROTTLING CAPABILITY	NOTE 2
		99 TIX-1B	TURBINE SPEED SWITCH	TURBINE TRIP OF RFW-DT-1B LOSS OF SPEED INDICATION	LOSE FW PUMP 1B	RFT TRIP WITH ALL ASSOC. ALARMS.
PP-2P-A	B	TSW-TE-14B TSW-MV/1-14B2 TSW-1/P-14B2 TSW-TCV-14B	PLANT SERVICE WATER TCV TO RFW TURBINE OIL COOLERS	TSW-TCV-14B WILL CLOSE	Manual ~~OPERATOR SHOULD~~ TRIP RFW TURBINE 1B ON HIGH OIL TEMP ALARM. ~~TURBINE WILL EVENTUALLY TRIP ITSELF ON HIGH VIBRATION~~	INCREASING TRIP AS INDICATED ON TSW-TI-14B ON BD-A

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-A	1	RFW-FT-2A RFW-FIC-2A	RFW-FLOW INDICATION AND MIN FLOW CONTROL	RFW-FCV-2A WILL GO FULL OPEN AND LOSS OF PUMP "A" FLOW INDICATION	FEED PUMPS WILL INCREASE FLOW TO 115% FLOW TO TRY TO MAINTAIN FEEDWATER FLOW TO VESSEL. REACTOR VESSEL LEVEL WILL DROP SLOWLY	1) SEE PP-7A-A ON GROUP F SHEETS 5&6 2) "RFT-1A TURBINE TRIP" 3) RFT-1A TURBINE ALARMS
		TT-Y-1A TT-Z-1A1	RFW-TURBINE STOP VALVES RELAYS TO RFW-FSPV-2A	RELAYS DEENERGIZE AND DEENERGIZE RFW-FSPV-2A	RFW-FCV-2A DOES NOT CLOSE ON TRIP OF RFW-DT-1A BUT STILL HAS THROTTLING CAPABILITY	1) SEE PP-7A-A ON GROUP F SHEETS 5&6 2) "RFT-1A TURBINE TRIP" 3) RFT-1A TURBINE ALARMS

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
HC-1A	A	MS-V-108A	MAIN STEAM SUPPLY TO SEAL STM EVAP.	MOV VALVE FAILS AS IS, (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSITION INDICATION ON BD-B
		MS-V-110A	STEAM TO SJAE COND-HC-8A	MOV VALVE FAILS AS IS, (N.O.) POSITION INDICATION LOST	NONE.	LOSS OF VALVE POSITION INDICATION ON BD-B
		MS-V-70A	MSR TEMP CONTROL	MOV FAILS AS IS, N.O.	NONE.	LOSS OF VALVE POSITION INDICATION ON BD-B
		MS-V-146	MSR ISOL. VALVE	MOV FAILS AS IS, N.O.	NONE.	LOSS OF VALVE POSITION INDICATION ON BD-B
		HD-V-19A	STM EVAP TO LP HTR 5A	MOV FAILS AS IS, N.O. LOSS OF POSITION INDICATION	NONE.	NOTE 2
HC-1B	A	MS-V-105A	STEAM TO RFW-DT-1A	MOV FAILS AS IS, N.O. LOSS OF POSITION INDICATION	NONE.	LOSS OF VALVE POSITION INDICATION ON BD-A
HC-2C	B	MS-V-101B	MSR SECOND STAGE SHUTOFF VALVE	VALVE FAILS AS IS, N.O. POSITION INDICATION LOST	NONE.	LOSS OF POST IND. ON BD-B
		MS-V-70C	MSR TEMP CONTROL	MOV FAILS AS IS, N.O.	NONE.	LOSS OF POST IND. ON BD-B
HC-2D	B	MS-V-110B	STEAM TO SJAE COND-HC-8B	MOV FAILS AS IS, N.O.	NONE.	LOSS OF VALVE POSIT. IND. ON BD-B
		MS-V-105B	STEAM TO RFW-DT-1B	MOV FAILS AS IS, N.O.	NONE.	LOSS OF VALVE POSIT. IND. ON BD-A
HC-2R	B	HD-V-23A	STM EVAP TO LP HTR 5B	MOV FAILS AS IS, N.O. LOSS OF POSITION INDICATION	NONE.	NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-2R	B	MS-V-103B	MSR SECOND STAGE SHUTOFF VALVE	MOV FAILS AS IS, (N.O.) LOSS OF POSITION INDICATION	NONE	LOSS OF VALVE POSIT. IND. ON BD-B
		MS-V-70D	MSR TEMP CONTROL	MOV FAILS AS IS, (N.O.) LOSS OF POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. ON BD-B
MC-3B	A	MS-V-103A	MSR SECOND STAGE SHUTOFF VALVE	MOV FAILS AS IS, (N.O.) LOSS OF POSITION INDICATION	NONE.	LOSS OF VALVE POSIT. IND. ON BD-B
		MS-V-70B	MSR TEMP CONTROL	MOV FAILS AS IS, (N.O.)	NONE.	LOSS OF VALVE POSIT. IND. ON BD-B
MC-3C	A	MS-V-110A	STEAM TO SJAE COND-HX-8A	MOV FAILS AS IS, (N.O.) LOSS OF POSITION INDICATION	NONE.	LOSS OF POSIT. IND. ON BD-B
PP-1B-A	A	MS-SPV-12A	CONTROL AIR TO MS-V-12A	MS-V-12A FAILS CLOSED- (N.C.) MS-V-13A FAILS CLOSED- (N.C.)	NONE.	LOSS OF POSIT. INDICATION FOR MS-V-12A; MS-PCV-11A; MS-PCV-12A; MS-PCV-13A ON BD-B
		MS-SPV-16A MS-SPV-17A	STEAM TO SJAE	MS-PCV-16A, 17A THROTTLE, THIS IS THEIR NORMAL POSITION	NONE.	LOSS OF POSITION IND. FOR BOTH VALVES ON BD-B
PP-2P-A	B	MS-SPV-12B	CONTROL AIR TO MS-V-12B	MS-V-12B FAILS CLOSED- (N.C.) MS-V-13B FAILS CLOSED- (N.C.)	NONE.	LOSS OF VALVE POSITION IND. FOR MS-PCV-11A, 12A, 13A AND MS-V-12B ON BD-B
		MS-SPV-16B MS-SPV-17B	STEAM TO SJAE	MS-PCV-16B, 17B THROTTLE; THIS IS THEIR NORMAL POSITION	NONE.	LOSS OF POSIT. IND. FOR BOTH VALVES ON BD-B

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-3A-A	A	HS-SPV-115A HS-SPV-115B	CONTROL AIR TO HS-TCV-115A	HS-TCV-115A CLOSES	LOSE MAJOR PORTION OF 2ND STAGE HEATING ON MOISTURE SEPARATOR REHEATERS 1A & 1B	1) MAIN STEAM BYPASS STRAINER HI ΔP 2) LOSS OF VALVE POSITION INDICATION
			CONTROL AIR TO HS-TCV-115B	HS-TCV-115B CLOSES	LOSE MAJOR PORTION OF 2ND STAGE HEATING ON MOISTURE SEPARATOR REHEATERS 1A & 1B	1) MAIN STEAM BYPASS STRAINER HI ΔP 2) LOSS OF VALVE POSITION INDICATION
PP-2RA-B	B	HS-SPV-115C HS-SPV-115D	CONTROL AIR TO HS-TCV-115C	HS-TCV-115C CLOSES	LOSE MAJOR PORTION OF 2ND STAGE HEATING ON MOISTURE SEPARATOR REHEATERS 1A & 1B	1) MAIN STEAM BYPASS STRAINER HI ΔP 2) LOSS OF STEAM TRAP BYPASS VALVE IND. ON BD-T
PP-7A-Z	A	HS-TC-115	CONTROLLER FOR HS-TCV-116A CONTROLLER FOR HS-TCV-116B CONTROLLER FOR HS-TCV-116C CONTROLLER FOR HS-TCV-116D	VALVES GO CLOSED	LOSE 2ND STAGE HEATING ON MOISTURE SEPARATOR REHEATERS 1A AND 1B	
MC-8C-B	B	HS-V-1	REACTOR HEAD VENT	LOSS OF POSITION INDICATION ON P601 MOV FAILS AS IS, (N.C.)	NONE	NOTE 2.
	B	HS-V-2	REACTOR HEAD VENT	LOSS OF POSITION INDICATION MOV FAILS AS IS, (N.C.)	NONE	NOTE 2.
MC-8C-B	B	HS-V-5	REACTOR HEAD VENT	LOSS OF POSITION INDICATION OF P601 MOV FAILS AS IS (N.C.)	NONE	NOTE 2.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
RPS 120 VAC	A	B22-F022 A,B,C,& D	MAIN STEAMLINE IN BOARD AOV	FAILS CLOSED IF BOTH SOL POWER IS LOST	SCRAMS REACTOR	
RPS 120 VAC	B	B22-F022 A,B,C,& D	MAIN STEAMLINE IN BOARD AOV	FAILS CLOSED IF BOTH SOL POWER IS LOST	SCRAMS REACTOR	
RPS 120 VAC	A	B22-F028 A,B,C,& D	MAIN STEAMLINE OUTBOARD AOV	FAILS CLOSED IF BOTH RPS BUSSES ARE LOST	SCRAMS REACTOR	
RPS 120 VAC	B	B22-F028 A,B,C,& D	MAIN STEAMLINE OUTBOARD AOV	FAILS CLOSED IF BOTH RPS BUSSES ARE LOST	SCRAMS REACTOR	
PP-7A-A	1	MS-FT-25A	FLOW DETECTION AND AIR REMOVAL ISOLATION LOGIC	AR-V-2A AND 2B OPEN. LOSS OF CONTROL FOR THESE VALVES	NORMALLY OPEN, IF THIS TRAIN IS OPERATING. NO EFFECT OTHERWISE	LOSS OF MOST BOP ANALOG LOOPS IN DIV 1 AND DIV A WITH ASSOCIATED ALARMS AND LOSS OF CONTROL AND INDICATION LOSS OF VOLTAGE IND. FOR PP-7A-A ON BD-C.
PP-8A-A	2	MS-FT-25B	FLOW DETECTION AND AIR REMOVAL ISOLATION LOGIC	AR-V-2C AND 2D OPEN. LOSS OF CONTROL FOR THESE VALVES	NORMALLY OPEN, IF THIS TRAIN IS OPERATING. NO EFFECT	1) LOSS OF MOST BOP ANALOG LOOPS IN DIV 2 AND DIV B WITH ASSOCIATED LOSS OF CONTROL AND INDICATION 2) LOSS OF VOLTAGE INDICATION FOR PP-8A-A ON BD-C.
USS-PP VIA DEH PWR DIST PANEL AL-2	A	MS-V-160A MS-V-160B MS-V-160C MS-V-160D	MS BYPASS VALVE SERVO ACTUATORS	LOSS OF PRESSURE CONTROL FUNCTION AFTER TURBINE TRIP. (BYPASS VALVES STILL OPEN ON TURBINE TRIP)	OPERATOR UNABLE TO CONTROL PRESS/TEMP RAMP DOWN RATE	LOSS OF VOLTAGE IND. ON US-PP VOLTMETER ON BD-C LOSS OF DIGITAL CONTROL SYSTEM
MC-7B	1	RRA-FN-12	DC MCC RM HVAC FAN UNIT	LOSS OF POWER & CONT. FOR FAN. LOSS OF CONT. RM & LOCAL INDICATION	LOSS OF VAC-S2-1A RCIC & RHR SHUTDOWN COOLING	RG 1.47 BISI "RRA-FN-12 PWR LOSS" "RCIC OUT-OF-SERVICE"DIV 1 "MOV NETWORK PWR LOSS/OL"
		ROA-SFV-12	DC MCC RM DAMPER OPERATOR SOL. VLV.	LOSS OF POWER TO SOL. VLV. WHICH CLOSES AIR DAMPER	LOSS OF NORMAL HVAC FOR MCC RM	"DC MCC RM AOA-AO-12 INLET DAMPER CLOSE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-7B	1	E51-C003	WATER LEG PUMP	LOSS OF PUMP	NONE.	1) "RCIC-P-3 PWR LOSS" LIGHT 2) "RCIC DIV 1 OUT OF SERVICE" ANNUNC.
MC-7B-A	1	E12-F006A	RHR PUMP "A" SHUTDOWN COOLING SUCTION VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	SUCTION TO "A" LOOP LOST	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "RHR A/LPCS OUT OF SERVICE" ANNUN.
		E12-F053B	RHR PUMP "B" S/D COOLING DISCH. VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	LOSS OF LOOP "B"	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "NS4 DIV 1 OUT OF SERVICE" ANNUN.
		E12-F053A	RHR PUMP "A" S/D COOLING DISCH VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	LOSS OF LOOP "A"	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "NS4 DIV 1 OUT OF SERVICE" ANNUN.
MC-8B-A	2	E12-F009	RHR S/D COOLING SUCTION VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	LOOP A AND B LOST FROM VESSEL	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "NS4 DIV 2 OUT OF SERVICE" ANNUN.
		E12-F006B	RHR PUMP "B" S/D COOLING SUCTION VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	SUCTION TO "B" LOOP LOST	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "RHR B AND C OUT OF SERVICE" ANNUN.
MC-S2-1A	1	E12-F008	RHR S/D COOLING SUCTION VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	LOOP A AND B LOST FROM VESSEL	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "NS4 DIV 1 OUT OF SERVICE" ANNUN.
DP-S1-1D	1	E12-F008	RHR S/D COOLING SUCTION VALVE	MOV FAILS AS IS (NC) LOSS OF POS. IND.	LOOP A AND B LOST FROM VESSEL	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "NS4 DIV 1 OUT OF SERVICE" ANNUN.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SM-7	D1	E12-C002A	RHR PUMP "A"	PUMP INOPERABLE	LOOP "A" OF RHR LOOP LOST	1) BUS SM-7 UV ANNUNC. 2) CB RHR-2A TRIPPED ANNUNC. 3) CB RHR-2A OUT OF SERVICE LIGHT ON P601 4) RHR LOOP "A" OUT OF SERVICE ANNUNC.
SM-7	1	SW-P-1A	STANDBY SERVICE WATER PUMP	LOSS OF PUMP POWER	LOSS OF RHR "A" HEAT EXCHANGER AND CRITICAL DIV 1 HVAC	BKR TRIP AND UNDER-VOLTAGE ANNUNC.
DP-S1-1A	1	H13-P629 125 VDC	CONTROL CKT FEED TO RELAY LOGIC FOR RHR "A" VALVE AND PUMP CONTROL	VALVE AUTO CKTS WILL FAIL. VALVES WILL NOT OPEN OR CLOSE. PUMP WILL NOT AUTO START.	LOSS OF RHR LOOP "A"	1) "RELAY LOGIC "A" PWR FAILURE" ANNUN. 2) "LPCS/RHR A LOGIC PWR FAIL" LIGHT 3) "RHR A/LPCS OUT OF SERVICE" ANNUN.
DP-S1-1D	1	125 VDC TO SM-7 SWGR	C002A SWGR BREAKER CONTROL VOLTAGE	PUMP MOTOR WILL NOT HAVE TRIPPING OR CLOSING CONTROL VOLTAGE	PUMP INOPERABLE, LOSS OF RHR LOOP "A"	1) "CB-RHR" 2A OUT OF SERVICE" LIGHT 2) "RHR A/LPCS OUT OF SERVICE" ANNUN.
DP-S1-1D	1	125 VDC CONTROL PWR TO SM-7	SW-P-1A BREAKER CONTROL VOLTAGE	PUMP MOTOR WILL NOT HAVE TRIPPING OR CLOSING CONTROL VOLTAGE.LOSS OF INDICATOR LIGHTS	NO BREAKER CLOSURE LOSS OF RHR "A" AND CRITICAL DIV 1 HVAC	RG 1.47 BISI "BKR CB-SWIA OUT OF SERVICE (SSW "A" OUT OF SERVICE" NOTE 2
RPS BUS A C72-P001		H13-P623 120V REACTOR PROTECTION, BUS "A"	RHR OUTBOARD VALVE CONTROL RELAY FEED	LOSS OF F008 OPENING MODE. FAILS VALVE AUTO CONTROL CIRCUITRY AND CLOSES VALVE	RHR S/D COOLING SUCTION FROM RECIRC LINE LOST	REACTOR SCRAM
PP-7A-G	1	TS1-21	TRANSMITTER FOR SW-LS-1A3	LOSS OF INTERLOCK TO SW-P-1A AND SW-V-2A FOR LOW WATER LEVEL	NONE.	BISI "SUPV SYS TROUBLE" "SSW "A" OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-G	1	TS1-003 TS1-004 TS1-001 TS1-002 TS1-022 TS1-031	TRANSMITTERS FOR SW-V-2A POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATION AND INTERLOCK TO SW-P-1A & SW-PCV-38A WILL NOT CHANGE	LOSS OF INTERLOCK TO SW-PCV-38A, KEEPING THIS VALVE CLOSED LOSS OF SSW "A" LOOP	"STANDBY SW "A" SUPV SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-G	1	TS1-013 TS1-014 TS1-015 TS1-016 TS1-017 TS1-024	TRANSMITTER FOR SW-V-12A POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE, POS. INDICATION WILL NOT CHANGE	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-G	1	SW-SPV-38A	SOLENOID VALVE FOR SW-PCV-38A, BACK PRESSURE CONTROL VALVE	SOLENOID VALVE WILL DEENERGIZE AND SW-PCV-38A WILL THROTTLE OPEN	NONE.	NONE.
		TS1-037 TS1-038 RS1-006 RS1-007 SS1-006 SS1-007	TRANSMITTERS FOR SW-PCV-38A POS. IND. RECEIVES AND SUPV. RELAYS FOR CONTROL OF SW-SPV-38A	SOLENOID VALVE WILL DEENERGIZE AND SW-PCV-38A WILL THROTTLE OPEN. POS. IND. WILL NOT CHANGE	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-G	1	TS1-005 TS1-006 TS1-007 TS1-008 TS1-020 TS1-032	TRANSMITTERS FOR SW-V-69A POS. SWITCH	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATOR WILL NOT CHANGE	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-G	1	TS1-009 TS1-010 TS1-011 TS1-012 TS1-023 TS1-033	TRANSMITTER FOR SW-V-70B POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATOR WILL NOT CHANGE	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-G	1	TS1-026 TS1-061 TS1-062 SS1-004 SS1-005 RS1-004 RS1-005	TRANSMITTERS FOR CONTROL OF PRA-FN-1A SUPV. RELAYS AND RECEIVERS FOR LOCAL OPERATING INDICATION	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE (FAN WOULD AUTOMATICALLY OPERATE) SUPV. RELAYS WOULD DEENERGIZE AND LOSS OF LOCAL POS. IND.	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-A	1	SCS1-021 RCS1-21	RECEIVER AND RELAYS FROM SW-LS-1A3	LOSS OF INTERLOCK TO SW-P-1A AND SW-V-2A FOR LOW WATER LEVEL	NONE.	BISI "SUPV SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE"
PP-7A-A	1	RSC1-003 RCS1-004 RCS1-001 RCS1-002 RCS1-022 RCS1-031 SCS1-003 SCS1-004 SCS1-001 SCS1-002 SCS1-022 SCS1-031	SUPV. RELAYS AND RECEIVERS FOR SW-V-2A POS. SWITCHES	SUPV. RELAYS DEENERGIZE. LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.C.)	LOSS OF SSW LOOP A	"STANDBY SW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" NOTE 2
PP-7A-A	1	RCS1-013 RCS1-014 RCS1-015 RCS1-016 RCS1-017 RCS1-024 SCS1-013 SCS1-014 SCS1-015 SCS1-016 SCS1-017 SCS1-024	SUPV. RELAYS AND RECEIVERS FOR SW-V-12A POS. SWITCHES	SUPV. RELAYS DEENERGIZE LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.C.)	LOSS OF SSW "A" RETURN TO SPRAY POND "B", BUT RETURN TO COOLING TOWERS REMAINS OPERABLE	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-A	1	TCS1-006 TCS1-007 RCS1-037 RCS1-038 SCS1-037 SCS1-038	TRANSMITTER FOR SW-SPV-38A CONTROL RECEIVERS AND SUPV. RELAYS FOR SW-PCV-38A POS. IND.	SOLENOID VALVE WILL REMAIN ENERGIZED KEEP SW-PCV-38A CLOSED. LOSS OF POS. IND.	LOSS OF RHR "A" AND DIV 1 HVAC FROM LOSS OF SSW LOOP A	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" NOTE 2
PP-7A-A	1	RCS1-005 RCS1-006 RCS1-007 RCS1-008 RCS1-020 RCS1-032 SCS1-005 SCS1-006 SCS1-007 SCS1-008 SCS1-020 SCS1-032	SUPV. RELAYS AND RECEIVERS FOR SW-V-69A POS. SWITCHES	SUPV. RELAYS DEENER-GIZE.LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.O.)	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" NOTE 2
PP-7A-A	1	RCS1-009 RCS1-010 RCS1-011 RCS1-012 RCS1-023 RCS1-033 SCS1-009 SCS1-010 SCS1-011 SCS1-012 SCS1-023 SCS1-033	RECEIVERS AND SUPV. RELAYS FOR SW-V-70B POS. SWITCHES	SUPV. RELAYS DEENER-GIZE LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.O.)	NONE.	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-7A-A	1	TCS1-004 TCS1-005 SCS1-026 SCS1-061 SCS1-062 RCS1-026 RCS1-061 RCS1-062	TRANSMITTER FOR LOCAL OPERATING INDICATION SUPV. RELAYS AND RECEIVERS FOR CONTROL OF PRA-FN-1A	RECEIVERS AT PUMP HOUSE WILL NOT CHANGE STATE AND LOCAL OPER. IND. WOULD NOT CHANGE. SUPV. RELAYS WOULD DEENERGIZE CAUSING THE FAN TO FAIL TO OPERATE	LOSS OF SSW LOOP "A" PUMP LOSS OF RHR "A"	"SSW A SUPV. SYSTEM TROUBLE" "SSW A OUT-OF-SERVICE" "SSW PP HOUSE A PRA-FN-A LOW FLOW"
MC-7A	1	SW-V-2A	SW-P-1A DISCHARGE VALVE	MOV FAILS-AS-IS (N.C.)	LOSS OF RHR "A" AND DIV 1 HVAC	RG 1.47 BISI "MOV NETWORK POWER LOSS/OL" "SSW A OUT-OF-SERVICE"
MC-7A	1	SW-V-12A	LOOP A WATER RETURN TO SPRAY POND "B" ISOL. VALVE	MOV FAILS-AS-IS (N.C.)	LOSS OF SSW "A" RETURN TO SPRAY POND "B", BUT RETURN TO COOLING TOWERS REMAINS OPERABLE	"MOV NETWORK POWER LOSS/OL" "SSW A OUT-OF-SERVICE"
MC-7A	1	SW-V-69A	SSW LOOP "A" RETURN TO COOLING TOWER ISOL. VALVE	MOV FAILS-AS-IS (N.O.)	NONE	"MOV NETWORK POWER LOSS/OL" "SSW A OUT-OF-SERVICE"
MC-7A	1	SW-V-70B	SSW LOOP "B" RETURN TO COOLING TOWERS ISOLATION VALVE	MOV FAILS-AS-IS (N.O.) LOSS OF POS. INDICATION	NONE	"MOV NETWORK POWER LOSS/OL" "SSW A OUT-OF-SERVICE" NOTE 2
MC-7A-A	1	PRA-FN-1A	SSW PUMP HOUSE "A" FAN COIL UNIT MOTOR	FAN FAILS TO OPERATE AND LOSS OF POS. INDICATION OF MCC	LOSS OF SSW LOOP "A" PUMP LOSS OF RHR "A"	"PRA-FN-1A POWER LOSS" "SSW A OUT-OF-SERVICE" RG 1.47 BISI ALARMS ON ANY SYSTEM SUPPLIED BY SSWA

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-7B-A	1	E12-F042A	RHR INJECTION VALVE	MOV FAILS AS IS (N.C.)	LOSS OF LPCI A INJECTION VALVE	1) "MOV NETWORK PWR LOSS/OL" LIGHT 2) "LPCS/RHR A OUT OF SERVICE" ANNUN.
MC-7B	1	SW-V-24A	SSW SHUTOFF VALVE FROM RHR-P-2A AND RRA-FC-2	MOV FAILS-AS-IS (N.C.) LOSS OF POS. IND.	LOSS OF RHR-P-2A AND RRA-FC-2	RG 1.47 BISI "RHR PUMP 2A ROOM HVAC OUT-OF-SERVICE" "RHR A OUT-OF-SERVICE" NOTE 2
MC-7B	1	RRA-FN-2	HVAC FOR UNIT FOR RHR-P-2A ROOM	LOSS OF POWER AND CONTROL TO FAN. LOSS OF LOCAL INDICATION	LOSS OF RHR-P-2A	"RHR PUMP RM-2 RRA-FC-2 TRIP" RG 1.47 BISI "RHR PUMP 2A RM HVAC OUT-OF-SERVICE" "RHR A OUT-OF-SERVICE"
MC-7B-A	D1	E12-F004A	MOV PUMP SUCTION FROM SUPPRES. POOL	MOV FAILS AS IS, (N.O.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F024A	RHR LOOP "A" TEST VALVE	MOV FAILS AS IS, (N.C.)	USED FOR SUPPRESSION POOL COOLING	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F064A	RHR PUMP "A" MIN. FLOW VALVE	MOV FAILS AS IS, (N.C.)	VALVE USED FOR START-UP OF SYSTEM. NO EFFECT.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-7B-B	D1	E12-F073A	RHR HX "A" OUTLET VENT	MOV FAILS AS IS, (N.C.)	HEAT X. VENT CAPABILITY LOST. NO EFFECT.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F074A	RHR HX "A" INBOARD VENT	MOV FAILS AS IS, (N.C.)	HEAT X. VENT CAPABILITY LOST. NO EFFECT.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F048A	RHR HX "A" BYPASS	FAILS AS IS, (N.O.)	Impact. ~~LOSE~~ COOLDOWN RATE ~~CONTROL~~	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
MC-7B-B	D1	E12-F068A	RHR HX "A" SW OUTLET	MOV FAILS AS IS, (N.C.)	HEAT EXCHANGER COOLING LOST	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F047A	MOV HT EXCH INLET	FAILS AS IS, (N.O.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F003A	MOV HT EXCH OUTLET	FAILS AS IS, (N.O.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F016A	MOV CONTAINMENT SPRAY (OUTBOARD)	FAILS AS IS, (N.C.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.
		E12-F017A	MOV CONTAINMENT SPRAY (INBOARD)	FAILS AS IS, (N.C.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) RHR A/LPCS OUT OF SERVICE ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-S2-1A	1	RCIC-V-19	RCIC MINIMUM FLOW VALVE	MOV VALVE FAILS AS IS, (N.C.)	NONE.	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		RCIC-V-22	RCIC TEST BYPASS VALVE	MOV VALVE FAILS AS IS, (N.C.)	NONE.	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		RCIC-V-59	RCIC TEST BYPASS	MOV VALVE FAILS AS IS, (N.C.)	NONE.	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		RCIC-P-2	RCIC VACUUM PUMP	LOSS OF Vacuum PUMP	~~LOSS OF VACUUM~~ None	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		E51-F045	STEAM TO TURBINE	MOV VALVE FAILS AS IS, (N.C.)	LOSS OF STEAM TO RCIC TURBINE	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-S2-1A	1	RCIC-V-1	TRIP THROTTLE VALVE STEAM INLET	VALVE FAILS AS IS, (N.O.)	NONE.	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		E51-F013	PUMP DISCHARGE	MOV VALVE FAILS AS IS, (N.C.)	RCIC INOPERABLE	1) BISI LIGHT ON P601, (BATT B2-1) OUT OF SERVICE). 2) ANNUNC "RCIC DIV 1 OUT OF SERVICE" 3) "MOV NETWORK PWR LOSS/OL" LIGHT
		RCIC-V-64	STEAMLINE ISOLATION VALVE	FAILS AS IS, (N.~~O~~C.)	none	
		RCIC-V-69	VACUUM PUMP DISH VALVE	FAILS AS IS, (N.O.)		
		RCIC-P-4	RCIC COND. PUMP	INOPERATIVE	~~LOSS OF RCIC CONDENSER OPERATION~~ none	
MC-7B	1	RRA-FN-12	DC MCC RM HVAC FAN UNIT	LOSS OF POWER AND CONTROL FOR FAN. LOSS OF CONTROL ROOM AND LOCAL INDICATION.	LOSS OF VAC-S2-1A (RCIC AND RHR SHUT-DOWN COOLING)	RG 1.47 BISI "RRA-FN-12 POWER LOSS" "RCIC DIV 1 OUT-OF-SERVICE" "MOV NETWORK POWER LOSS/OL"
		ROA-SPV-12	AC MCC RUN DAMPER OPERATOR SOLENOID VALVE	LOSS OF POWER TO SOLENOID VALVE WHICH CLOSES AIR DAMPER	LOSS OF NORMAL HVAC FOR MCC ROOM	"DC MCC-RM AOA-AO-12 INLET DAMPER CLOSE"
MC-7B	1	E51-C003	WATER LEG PUMP	LOSS OF PUMP	NONE	1) "RCIC-P-3 PWR LOSS" LIGHT 2) "RCIC DIV 1 OUT-OF-SERVICE" ANN.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-8B	2	RRA-FN-6	HVAC FAN UNIT FOR RCIC ROOM	LOSS OF POWER AND CONTROL FOR FAN. LOSS OF LOCAL INDICATION	LOSS OF RCIC SYSTEM OPERATION	"RCIC PUMP RM 3 RRA-FC-6 TRIP" RG 1.47 BISI "RCIC PUMP RM HVAC OUT-OF-SERVICE" "RCIC DIV 2 OUT-OF-SERVICE"
MC-8B-A	2	E51-F076 E51-F063	STEAM SUPPLY LINE ISOLATION	MOV VALVE FAILS AS IS, (N.O.)	NONE.	1) "MOV NETWORK PWR LOSS/OL" 2) RCIC DIV 2 OUT OF SERVICE" ANNUNC.
DP-S1-1A	1	H13-P601 125 VDC BUS "A"	CONTROL CIRCUIT FEED FOR TURBINE SUPER-VISORY LIGHTS & AOV's	LOSS OF TURBINE SUPER-VISORY LIGHTS & DRAIN & DISCHARGE AOV'S	LOSS OF RCIC TURBINE STATUS	1) RCIC INVERTER PWR FAILURE LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF POSITION IND. LIGHTS FOR E51-F025, E51-F004, E51-F054, E51-C003
		H13-P621 125 VDC BUS "A"	CONTROL CIRCUIT FEED FOR RELAY LOGIC	AUTO FOR VALVES E51-F008, F010, F013 AND F045. LOSS OF REMOTE TURBINE TRIP.	LOSS OF RCIC AUTO INITIATION AND MANUAL INITIATION FROM CON-TROL ROOM.	1) LOGIC BUS A POWER FAILURE LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-S1-1D	1	E51-F008	STEAM SUPPLY LINE ISOLATION	MOV VALVE FAILS AS IS, (N.O.)	NONE.	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601
		E51-F068	TURBINE EXHAUST TO SUPPRESSION CHAMBER	MOV VALVE FAILS AS IS, (N.O.)	NONE.	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601
MC-S1-1D	I	E51-F031	PUMP SUCTION FROM SUPPRESSION POOL	MOV VALVE FAILS AS IS, (N.C.)	ISOLATES SUPPRESSION POOL SUCTION PATH	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601
		E51-F010	PUMP SUCTION FROM CONDENSATE STORAGE TANK	MOV VALVE FAILS AS IS, (N.O.)	NONE.	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601
		RCIC-V-46	TURBINE COOLING WATER SUPPLY VALVE	MOV VALVE FAILS AS IS, (N.C.)	LOSS OF RCIC TURBINE	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		RCIC-V-110	TURB. EXH ~~TO SUP-PRESSION ISOLATION~~ Vacuum Breaker	MOV FAILS AS IS N.O. (N.~~O~~.) C		1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION IND. ON P601
DP-S1-2A	2	H13-P601 125 VDC BUS "B"	CONTROL CIRCUIT FEED FOR TURBINE SUPV LIGHT AND AOV'S	LOSS OF TURBINE SUPV LIGHTS AND DRAIN AND DISCHARGE AOV'S	LOSS OF RCIC TURBINE STATUS	1) LOSS OF POSITION IND. FOR E41-F026, E51-F005
		H13-P618 125 VDC BUS "B"	CONTROL CIRCUIT FEED FOR RELAY LOGIC	AUTO ISOLATION FOR VALVE E51-F063	~~NONE.~~ LOSS OF RCIC Steam Supply	1) LOGIC BUS B POWER FAILURE LIGHT ON P601 2) RCIC DIV 2 OUT OF SERVICE ANNUNC.
DP-S1-1D	1	MC-S2-1A	CONTROL POWER FOR BREAKERS RCIC-V-19; 22; 59; 45; 1; 2; 13; 64; 69; 8; 68; 31; 10; 46; RCIC-P-2; 4	MOV'S FAIL AS IS. (SEE MC-S2-1A ON SHEET 28) AND MC-S1-1D PUMPS ARE LOST	RCIC DIV 1 OUT OF SERVICE	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 1 OUT OF SERVICE ANNUNC. 3) LOSS OF VALVE POSITION INDICATING LIGHTS AND PUMP STATUS LIGHTS ON P601
MC-S1-2D	2	RCIC-V-86	VACUUM BREAKER ISOLATION VALVE	MOV'S FAIL AS IS (N.O.)	NONE	1) MOV NETWORK POWER LOSS LIGHT ON P601 2) RCIC DIV 2 OUT OF SERVICE ANNUNC.
SM-8	2	SW-P-1B	STANDBY SERVICE WATER PUMP	LOSS OF PUMP POWER	LOSS OF RHR "B" HEAT EXCHANGER AND CRITICAL DIV 2 HVAC (RCIC)	BKR TRIP AND UNDER-VOLTAGE ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-2D	2	125 VDC CONTROL POWER TO SH-7	SW-P-1B BREAKER CONTROL VOLTAGE	PUMP MOTOR WILL NOT HAVE TRIPPERS, OR CLOSING CONTROL VOLTAGE. LOSS OF IND. LIGHTS. CAN BE CONTROLLED AT REMOTE SHUTDOWN PANEL	NO BREAKER CLOSURE. LOSS OF RHR "B" HEAT EXCHANGER AND DIV 2 HVAC (RCIC)	RG 1.47 BISI "BKR CB-SW1B OUT-OF-SERVICE" "SSW "B" OUT-OF-SERVICE" NOTE 2
PP-2A-G	2	TS2-21	TRANSMITTER FOR SW-LS-1B3	LOSS OF LOW WATER TRIP OF SW-P-1B	NONE	RG 1.47 BISI "SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-003 TS2-004 TS2-001 TS2-002 TS2-031 TS2-022	TRANSMITTER FOR SW-V-2B POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATOR AND INTERLOCKS TO SW-P-1B AND SW-PCV-38B	LOSS OF INTERLOCK TO SW-PCV-38B, KEEPING THIS VALVE CLOSED. LOSS OF SSW "B" LOOP	"STANDBY SW "B" SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	SW-SPV-38B	SOLENOID VALVE FOR SW-PCV-38B BACK PRESSURE CONTROL VALVE	SOLENOID VALVE WILL DEENERGIZE AND SW-PCV-38B WILL THROTTLE OPEN	NONE	NONE
		TS2-037 TS2-038 RS2-013 RS2-014 SS2-013 SS2-014	TRANSMITTERS FOR SW-PCV-38B POS. IND. RECEIVERS AND SUPV. RELAYS FOR CONTROL OF SW-SPV-38B	SUPV. RELAYS DEENERGIZE, THEREFORE DEENERGIZING SW-SPV-38B TO THROTTLE OPEN. POS. IND. WILL NOT CHANGE	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-026 TS2-061 TS2-062 SS2-004 SS2-005 RS2-004 RS2-005	TRANSMITTERS FOR CONTROL OF PRA-FN-1B SUPV. RELAYS AND RECEIVERS FOR LOCAL OPEN INDICATION	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE (FAN WOULD AUTO OPERATE) SUPV. RELAYS WOULD DEENERGIZE, THUS LOSS OF LOCAL OPER. INDICATION	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-8A-F	2	SCS2-021 RCS2-021	RECEIVER AND RELAY FROM SW-LS-1B3	LOSS OF LOW WATER TRIP OF SW-P-1B	NONE	RG 1.47 BISI "SUPV SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-F	2	RCS2-003 RCS2-004 RCS2-001 RCS2-002 RCS2-022 RCS2-031 SCS2-003 SCS2-004 SCS2-001 SCS2-002 SCS2-022 SCS2-031	SUPV. RELAYS AND RECEIVER FOR SW-V-2B POS SWITCHES	SUPV. RELAYS DEENERGIZE.LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.C.)	LOSS OF SSW LOOP "B"	"STANDBY SW "B" SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2
PP-8A-F	2	TCS2-013 TCS2-014 RCS2-037 RCS2-038 SCS2-037 SCS2-038	TRANSMITTERS FOR SW-SPV-38B CONTROL RECEIVERS AND SUPV. RELAYS FOR SW-PCV-38B POS. IND.	RECEIVER IN PUMP HOUSE WILL NOT CHANGE STATE AND KEEPING SOLENOID VALVE NORMALLY ENERGIZED KEEPING SW-PCV-38B CLOSED.LOSS OF POS. IND.	LOSS OF RHR "B" AND DIV 2 HVAC FROM LOSS OF SSW LOOP B	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2
PP-8A-F	2	TCS2-004 TCS2-005 RCS2-026 RCS2-061 RCS2-062 SCS2-026 SCS2-061 SCS2-062	TRANSMITTERS FOR LOCAL OPERATING INDICATION. SUPV. RELAYS AND RECEIVERS FOR CONTROL OF PRA-FN-1B	RECEIVER AT PUMP HOUSE WILL NOT CHANGE STATE, THUS LOCAL OPER. IND. WOULD NOT CHANGE. SUPV. RELAYS WOULD DEENERGIZE CAUSING THE FAN TO FAIL TO OPERATE	LOSS OF SSW LOOP "B" PUMP. LOSS OF RHR "B" AND RCIC HVAC	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" "SSW PP HOUSE B PRA-FN-1B LOW FLOW"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-8A	2	SW-V-2B	SW-P-1B DISCHARGE VALVE	MOV FAILS-AS-IS (N.C.)	LOSS OF SSW B THUS LOSS OF RHR "B" AND DIV 2 HVAC (RCIC)	RG 1.47 BISI "MOV NETWORK POWER LOSS/OL" "SSW B OUT-OF-SERVICE" NOTE 2
MC-8A-A	2	PRA-FN-1B	SSW PUMP HOUSE "B" FAN COIL UNIT MOTOR	FAN FAILS TO OPERATE AND LOSS OF POS. INDICATION AT MCC	LOSS OF SSW LOOP "B" PUMP LOSS OF RHR "B" AND RCIC HVAC	"PRA-FN-1B POWER LOSS" "SSW B OUT-OF-SERVICE"
PP-7CA-A	A	SW-SV-34	SSW SHUTOFF VALVE FROM RRA-FC-6 FOR RCIC ROOM	SOLENOID VALVE FAILS OPEN. LOSS OF POS. IND.	NONE - OPERATION IS AVAILABLE FROM THE REMOTE SHUTDOWN PANEL, IF REQUIRED	NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-1A BKR NO	D1	B22-F013 A,B,C,D,E F,G,H,J,K,L	SAFETY RELIEF VALVES	NORMALLY CLOSED, (N.C.) CANNOT BE OPENED ELECTRICALLY TO PERFORM ADS	NONE VALVES WILL STILL OPEN MECHANICALLY	1) "ADS A/C LOGIC POWER FAIL" LIGHT 2) "ADS A/C OUT OF SERVICE" ANNUNC 3) LOSS OF POS. IND. ON P601
		B22-F013 A,B,C,D,E F,G,H,J,K,L	ADS VALVES	NORMALLY CLOSED, (N.C.) CANNOT BE OPENED WITH "B" POWER TO PERFORM ADS	NONE "B" POWER IS USED	1) "ADS A/C LOGIC POWER FAIL" LIGHT 2) "ADS A/C OUT OF SERVICE" ANNUNC 3) LOSS OF POS. IND. ON P601

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
REFER TO GROUP 'H' FOR PUMPS, VALVES AND CONTROLS THAT ARE ALSO NEEDED FOR SUPPRESSION POOL COOLING 'A'.						
MC-7B-A	D1	E12-F027A	RHR LOOP "A" DISCHARGE TO SUPPRESSION POOL SPRAY	MOV FAILS AS IS, (N.C.) LOSS OF INDICATION	VALVE USED FOR RETURN TO SUPPRESSION POOL	1) NOTE 3. GROUP L LOSS OF POSITION IND. ON P601 2) "MOV NETWORK PWR LOSS/OL" LIGHT 3) "LPCS/RHR A OUT OF SERVICE" ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SH-8	D2	E12-C002B	RHR PUMP "B"	PUMP INOPERABLE	LOOP "B" OF RHR INOPERABLE	TWO BREAKER TRIP AND BUS UNDERVOLTAGE ANNUNCIATION
		E12-C002C	RHR PUMP "C"	PUMP INOPERABLE	LOOP "C" OF RHR INOPERABLE	TWO BREAKER TRIP AND BUS UNDERVOLTAGE ANNUNCIATION
SH-8	2	SW-P-1B	STANDBY SERVICE WATER PUMP	LOSS OF PUMP POWER	LOSS OF RHR "B" HEAT EXCHANGER AND CRITICAL DIV 2 HVAC (RCIC)	BKR TRIP AND UNDER-VOLTAGE ANNUNC.
MC-8B	2	RRA-FN-1	HVAC FAN UNIT FOR RHR-P-2C ROOM	LOSS OF POWER AND CONTROL TO FAN. LOSS OF LOCAL INDICATION	LOSS OF RHR-P-2C	"RHR PUMP RM-4 RRA-FC-1 TRIP" RG 1.47 BISI "RHR C PUMP RM HVAC OUT-OF-SERVICE" "RHR C OUT-OF-SERVICE"
		RRA-FN-3	HVAC FAN UNIT FOR RHR-P-2B ROOM	HVAC FAN UNIT FOR RHR-P-2B ROOM	LOSS OF POWER & CONT. TO FAN. LOSS OF LOCAL IND.	"RHR PUMP RM-1 FC-3 TRIP" RG 1.47 BISI "RHR B PUMP RM HVAC OOS" "RHR B OUT-OF-SERVICE
MC-8B-A		E12-F004B	MOV PUMP SUCTION FROM SUPPRESSION POOL	MOV FAILS AS IS, (N.O.)	NONE - REQUIRED TO BE CLOSED DURING SHUT-DOWN COOLING	LOSS OF VALVE POSITION INDICATION ON P601
		E12-F016B	MOV CONTAINMENT SPRAY (OUTBOARD)	MOV FAILS AS IS, (N.C.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.
		E12-F017B	MOV CONTAINMENT SPRAY (INBOARD)	MOV FAILS AS IS, (N.C.)	NONE.	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		E12-F024B	PUMP "B" TEST VALVE	MOV FAILS AS IS, (N.C.)	USED FOR SUPPRESSION POOL COOLING	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.
MC-8B-A	2	SW-V-24B	SSW SHUTOFF VALVE FROM RHR-P-2B AND RRA-FC-3	MOV FAILS-AS-IS (N.C.) LOSS OF POS. IND.	LOSS OF RHR-P-2B AND RRA-FC-3	RG 1.47 BISI "RHR PUMP 2B ROOM HVAC OUT-OF-SERVICE" "RHR B OUT-OF-SERVICE" NOTE 2
		SW-V-24C	SSW SHUTOFF VALVE FROM RHR-P-2C AND RRA-FC-1	MOV FAILS-AS-IS (N.C.) LOSS OF POS. IND.	LOSS OF RHR-P-2C AND RRA-FC-1	"RHR C PMP RM HVAC OOS" RG 1.47 BISI "RHR C OUT-OF-SERVICE" NOTE 2
MC-8B-B	D2	E12-F073B	RHR HX "B" OUTBOARD VENT	MOV FAILS AS IS, (N.C.)	HEAT X VENT CAPABILITY LOST. NO EFFECT.	LOSS OF VALVE POSITION INDICATION ON P601.
		E12-F074B	RHR HX "B" INBOARD VENT	MOV FAILS AS IS, (N.C.)	HEAT X VENT CAPABILITY LOST. NO EFFECT.	LOSS OF VALVE POSITION INDICATION ON P601.
MC-8B-B	D2	E12-F048B	RHR HX "B" BYPASS	MOV FAILS AS IS, (N.O.)	LOSS OF COOLDOWN RATE CONTROL AND EFFICIENCY	LOSS OF VALVE POSITION INDICATION ON P601.
		E12-F068B	RHR HX "B" SW OUTLET	MOV FAILS AS IS, (N.C.)	HEAT EXCHANGER "B" COOLING LOST	LOSS OF VALVE POSITION INDICATION ON P601.
		E12-F047B	MOV HEAT EXCH INLET	MOV FAILS AS IS, (N.O.)	NONE.	LOSS OF VALVE POSITION INDICATION ON P601.
		E12-F003B	MOV HEAT EXCH OUTLET	MOV FAILS-AS-IS (N.O.)	NONE	NONE
DP-S1-2D	2	125 VDC CNTL FEED TO SWGR	C002BAC SWITCHGEAR BREAKER CONTROL VOLTAGE	PUMP MOTOR BKR WILL NOT CLOSE AND TRIPPING CONTRL VOLTAGE LOST	NO PUMP BKR CLOSURE THEREFORE LOOP "B" AND "C" OF RHR IS INOPERABLE	1) "CB-RHR 2B OUT-OF-SERVICE" LIGHT 2) "CB-RHR 2C OUT-OF-SERVICE" LIGHT 3) "RHR B/C OUT-OF-SERVICE" ANN.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-2D	2	125 VDC CONTROL POWER TO SM-7	SW-P-1B BREAKER CONTROL VOLTAGE	PUMP MOTOR WILL NOT HAVE TRIPPING OR CLOSING CONTROL VOLTAGE. LOSS OF IND. LIGHTS. CAN BE CONTROLLED AT REMOTE SHUTDOWN PANEL	NO BREAKER CLOSURE LOSS OF RHR "B" HEAT EXCHANGER AND DIV 2 HVAC (RCIC)	RG 1.47 BISI "BKR CB-SWIB OUT-OF-SERVICE" "SSW B OUT-OF-SERVICE" NOTE 2
RPS BUS "B" C72-P001	-	HB-P622 120V REACTOR PROTECTION BUS "B"	RHR SYSTEM INBOARD CONTROL RELAY FEED	LOSS OF F009 OPENING MODE. WILL FAIL THE VALVE CONTROL CIRCUITRY AND CLOSE THE VALVES	S/D COOLING SUCTION FROM RECIRC LINE FOR RHR LOOP A & B LOST.	1) LOSS OF VALVE POSIT. IND. FOR E12-F060A AND B ON P601 2) REACTOR SCRAM WITH ASSOC. ALARMS
MC-8B-A	D2	E12-F042B	RHR INJECTION VALVE	MOV FAILS IN POSITION, (N.C.)	LOSS OF "B" LPCI INJECTION VALVE	NOTE 2. 1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.
		E12-F042C	RHR INJECTION VALVE	MOV FAILS IN POSITION, (N.C.)	LOSS OF "C" LPCI INJECTION VALVE	NOTE 2. 1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.
DP-S1-2A	2	H13-P601 125 VDC	RHR ANALOG POSITION IND. FOR RHR-V-73B AND 74B	LOSS OF VALVE POSIT. INDICATION ON P601 - FAIL DOWN SCALE	NONE.	NONE.
DP-S1-2A	2	H13-P618 125 VDC BUS B	CONTROL CKT FEED FOR RELAY LOGIC RHR LOOPS B&C VALVE AND PUMP CONTROL	VALVE AUTO CKTS WILL FAIL. VALVES WILL NOT OPEN IN AUTO (SEE ANALYSIS FOR VALVES) PUMP WILL NOT AUTO START	LOOP "B" BLOCKED LOSS OF RHR LOOPS B&C	1) "RHR B/C LOGIC PWR FAIL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-8A-F	2	SCS2-021 RCS2-021	RECEIVER AND RELAY FROM SW-LS-1B3	LOSS OF LOW WATER TRIP OF SW-P-1B	NONE	RG 1.47 BISI "SUPV. SYS TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-F	2	RCS2-013 RCS2-014 RCS2-015 RCS2-016 RCS2-017 RCS2-024 SCS2-013 SCS2-014 SCS2-015 SCS2-016 SCS2-017 SCS2-024	SUPV. RELAYS AND RECEIVERS FOR SW-V-12B POS. SWITCHES	SUPV. RELAYS DEENERGIZE. LOSS OF POS. INDICATION AND VALVE WILL FAILS-AS-IS (N.C.)	LOSS OF SSW "B" RETURN TO SPRAY POND "A", BUT RETURN TO COOLING TOWER REMAINS OPERABLE	"STANDBY SW "B" SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2
PP-8A-F	2	TCS2-013 TCS2-014 RCS2-037 RCS2-038 SCS2-037 SCS2-038	TRANSMITTERS FOR SW-SPV-38B CONTROL RECEIVERS AND SUPV. RELAYS FOR SW-PCV-38B POS. IND.	RECEIVERS IN PUMP HOUSE WILL NOT CHANGE STATE AND KEEPING SW-PCV-38B CLOSED LOSS OF POS. IND.	LOSS OF RHR "B" AND DIV 2 HVAC FROM LOSS OF SSW LOOP B	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2
PP-8A-F	2	RCS2-005 RCS2-006 RCS2-007 RCS2-008 RCS2-020 RCS2-032 SCS2-005 SCS2-006 SCS2-007 SCS2-008 SCS2-020 SCS2-032	SUPV. RELAYS AND RECEIVERS FOR SW-V-69B POS. SWITCHES	SUPV. RELAYS DEENERGIZE. LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.O.)	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-8A-F	2	RCS2-009 RCS2-010 RCS2-011 RCS2-012 RCS2-023 RCS2-033 SCS2-009 SCS2-010 SCS2-011 SCS2-012 SCS2-023 SCS2-033	SUPV. RELAYS AND RECEIVERS FOR SW-V-70A POS. SWITCHES	SUPV. RELAYS DEENERGIZE LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.O.)	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" NOTE 2
PP-8A-F	2	TCS2-004 TCS2-005 RCS2-026 RCS2-061 RCS2-062 SCS2-026 SCS2-061 SCS2-062	TRANSMITTERS FOR LOCAL OPERATING INDICATION SUPV. RELAYS AND RECEIVERS FOR CONTROL OF PRA-FN-1B	RECIEVER OF PUMP HOUSE WILL NOT CHANGE STATE, THUS LOCAL OPER. IND. WOULD NOT CHANGE. SUPV. RELAYS WOULD DEENERGIZE CAUSING THE FAN TO FAIL TO OPERATE	LOSS OF SSW LOOP B PUMP LOSS OF RHR "B" AND RCIC HVAC	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE" "SSW PP HOUSE B PRA-FN-1B LOW FLOW"
PP-8A-G	2	TS2-21	TRANSMITTER FOR SW-LS-1B3	LOSS OF LOW WATER TRIP OF SW-P-1B	NONE.	RG 1.47 BISI "SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-013 TS2-014 TS2-015 TS2-016 TS2-017 TS2-024	TRANSMITTER FOR SW-V-12B POS. SWITCHES	RECIEVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATION WILL NOT CHANGE	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-8A-G	2	SW-SPV-38B	SOLENOID VALVE FOR SW-PCV-38B BACK PRESSURE CONTROL VALVE	SOLENOID VALVE WILL DEENERGIZE AND SW-PCV-38B WILL THROTTLE OPEN	NONE	NONE
		TS2-037 TS2-038 RS2-013 RS2-014 SS2-013 SS2-014	TRANSMITTERS FOR SW-PCV-38B POS. IND. RECEIVERS AND SUPV. RELAYS FOR CONTROL OF SW-SPV-38B	SUPV. RELAYS DEENERGIZE, THEREFORE DEENERGIZING SW-SPV-38B TO THROTTLE OPEN. POS. IND. WILL NOT CHANGE.	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-005 TS2-006 TS2-007 TS2-008 TS2-020 TS2-030	TRANSMITTERS FOR SW-V-69B POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATION WILL NOT CHANGE	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-009 TS2-010 TS2-011 TS2-012 TS2-023 TS2-033	TRANSMITTERS FOR SW-V-70A POS. SWITCHES	RECEIVERS IN CONTROL ROOM WILL NOT CHANGE STATE. POS. INDICATION WILL NOT CHANGE	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
PP-8A-G	2	TS2-026 TS2-061 TS2-062 SS2-004 SS2-005 RS2-004 RS2-005	TRANSMITTERS FOR CONTROL OF PRA-FN-1B SUPV. RELAYS AND RECEIVERS FOR LOCAL OPER. INDICATION	RECEIVERS FOR CONTROL ROOM WILL NOT CHANGE STATE (FAN WOULD AUTO OPERATE) SUPV. RELAYS WOULD DEENERGIZE, THUS LOSS OF LOCAL OPER. INDICATION	NONE	"SSW B SUPV. SYSTEM TROUBLE" "SSW B OUT-OF-SERVICE"
MC-8A	2	SW-V-12B	LOOP B WATER RETURN TO SPRAY POND "B" ISOL. VALVE	MOV FAILS-AS-IS, (N.C.) LOSS OF POS. IND.	LOSS OF SSW "B" RETURN TO SPRAY POND A; BUT RETURN TO COOLING TOWER REMAINS OPERABLE	"MOV NETWORK POWER LOSS/OL" "SSW B OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-8A	2	SW-V-69B	SSW LOOP B RETURN TO COOLING TOWER ISOL. VALVE	MOV FAILS-AS-IS (N.O.) LOSS OF POS. IND.	NONE	"MOV NETWORK POWER LOSS/OL" "SSW B OUT-OF-SERVICE" NOTE 2
MC-8A	2	SW-V-70A	SSW LOOP A RETURN TO COOLING TOWERS ISOLATION VALVE	MOV FAILS-AS-IS (N.O.)	NONE	"MOV NETWORK POWER LOSS/OL" "SSW B OUT-OF-SERVICE"
MC-8A-A	2	PRA-FN-1B	SSW PUMP HOUSE "B" FAN COIL UNIT MOTOR	FAN FAILS TO OPERATE AND LOSS OF POS. IND. AT MCC	LOSS OF SSW LOOP "B" PUMP LOSS OF RHR "B" AND RCIC HVAC	"PRA-FN-1B POWER LOSS" "SSW B OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
SH-4	2	E22-C001	HPCS PUMP	LOSS OF HPCS PUMP	HPCS INOPERATIVE	TWO BREAKER TRIP ANNUNCIATION
MC-4A	3	E22-C003	STANDBY WATER LEG PUMP	LOSS OF PUMP	NONE.	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.
MC-4A	3	SW-V-29	HPCS-P-2 DISCHARGE VALVE	MOV FAILS-AS-IS (N.C.)	LOSS OF HPCS	"HPCS SW OUT-OF-SERVICE" "HPCS OUT-OF-SERVICE"
MC-4A	3	SW-V-54	SSW SHUTOFF VALVE FOR HPCS ROOM RRA-FC-4	MOV FAILS-AS-IS (N.C.) LOSS OF POS. IND.	LOSS OF HPCS PUMP ROOM HVAC, THEREBY DEFEATING HPCS	RG 1.47 BISI "HPCS PUMP RM HVAC OUT-OF-SERVICE" "HPCS OUT-OF-SERVICE" NOTE 2
		HPCS-P-2	HPCS SERVICE WATER PUMP	PUMP INOPERATIVE LOSS OF LOCAL PLUS CONTROL ROOM POS. IND.	LOSS OF HPCS SSW, THEREBY DEFEATING HPCS	RG 1.47 BISI "HPCS SW OUT-OF-SERVICE" "HPCS OUT-OF-SERVICE"
MC-4A	3	RRA-FN-4	HVAC FAN UNIT FOR HPCS PUMP ROOM	LOSS OF POWER AND CONTROL TO FAN. LOSS OF LOCAL INDICATION	LOSS OF HPCS PUMP	"HPCS PUMP RM 6 RRA-FC-4 TRIP" RG 1.47 BISI "HPCS PUMP RM HVAC OUT-OF-SERVICE" "HPCS OUT-OF-SERVICE"

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
(AC)		E22-F001	PUMP SUCTION FROM CONDENSATE STORAGE TANK	VALVE FAILS AS IS, (N.O.)	NONE.	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.
		E22-F004	HPCS PUMP DISCHARGE	VALVE FAILS AS IS, (N.C.)	HPCS INOPERATIVE	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.
MC-4A	3	E22-F015	PUMP SUCTION FROM SUPPRESSION POOL	VALVE FAILS AS IS, (N.C.)	USE SUCTION FROM CONDENSATE TANK	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
		E22-F011 E22-F012 E22-F010 E22-F023		MOV FAILS AS IS, (N.C)	NONE.	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.
		ENGINE & GENERATOR LOAD PANEL BATT CHGR CIRCUIT	S1-HPCS BATTERY	LOSS OF BATTERY CHARGER	NONE.	1) HPCS-P-3 POWER LOSS LIGHT ON P601 2) MOV NETWORK POWER LOSS LIGHT ON P601 3) HPCS OUT OF SERVICE ANNUNCIATOR 4) LOSS OF VALVE POSIT. IND. ON P601 FOR E22-F001; F004; F015; F012; F023.
S1-HPCS	3	H13-P625	RELAY LOGIC FOR MANUAL AND AUTO INITIATION	LOSS OF VALVE AND PUMP CONTROL	HPCS INOPERATIVE	1) HPCS LOGIC POWER FAILURE LIGHT ON P601 2) HPCS OUT OF SERVICE ANNUNCIATOR
S1-HPCS		H13-P601	E22-F010, E22-F011 VALVE POSIT. INDICATORS	VALVE POSITION IND. INDICATE DOWNSCALE	NONE - DOES NOT AFFECT VALVE POSITION	

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
PP-4A	3	H13-P625	HPCS ANALOG LOOP POWER SUPPLY	LOSS OF HPCS FLOW AND PRESSURE INDICATION	CANNOT VERIFY PROPER SYSTEM OPERATION	
		H13-P601	E22-F005	TESTABLE CHECK VALVE CANNOT BE TESTED	NONE.	LOSS OF VALVE POSITION LIGHTS ON P601
			E22-F009A E22-F009B E22-F003B	MANUAL VALVE POSIT. INDICATION	NONE.	LOSS OF VALVE POSITION LIGHTS ON P601
PP-4A	3	TS3-001 TS3-002 TS3-003 TS3-004 TS3-005 TS3-006 RCS3-001 RCS3-002 RCS3-003 RCS3-004 RCS3-005 RCS3-006 SCS3-001 SCS3-002 SCS3-003 SCS3-004 SCS3-005 SCS3-006	TRANSMITTERS, SUPV. RELAYS AND RECEIVERS FOR SW-V-29 POS. SWITCHES AND SW-PS-40B	SUPV. RELAYS DEENERGIZE LOSS OF POS. INDICATION AND VALVE WILL FAIL-AS-IS (N.C.)	LOSS OF HPCS	NOTE 2

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
DP-S1-2A	D2		ADS VALVES	(N.C.) LOSS OF DIV 2 POWER CAN BE OPENED WITH "A" POWER TO PERFORM ADS	NONE. 'A' POWER IS USED.	1) "ADS B/D LOGIC POWER FAIL" LIGHT 2) "ADS B/D OUT OF SERVICE" ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
REFER TO GROUP 'Q' FOR PUMPS, VALVES AND CONTROLS THAT ARE ALSO REQUIRED FOR SUPPRESSION POOL COOLING 'B'.						
MC-8B-A	D2	E12-F027B	RHR LOOP "B" DISCHARGE TO SUPPRESSION POOL MOV	MOV FAILS AS IS,(N.C.)	VALVE USED FOR RETURN TO SUPPRESSION POOL FLOW	1) "MOV NETWORK POWER LOSS/OL" LIGHT 2) "RHR B/C OUT OF SERVICE" ANNUNC.

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-2P**	11	CAS-C-1C	CAS COMPRESSOR 1C	LOSS OF CAS-C-1C AND INDICATION	REMAINING COMPRESSORS HAVE ADEQUATE CAPACITY	LOSS OF COMPRESSOR STATUS LIGHTS ON BD-A
		TSW-SV-1C	PLANT SERVICE WATER TO CAS-C-1C	TSW-SV-1C DISABLED (CLOSES IF OPEN)	LOSS OF 1 COMPRESSOR CAS-C-1C	
MC-7A**	1	CAS-C-1A	CAS COMPRESSOR 1A	LOSS OF CAS-C-1A AND INDICATION	REMAINING COMPRESSORS HAVE ADEQUATE CAPACITY	LOSS OF COMPRESSOR STATUS LIGHTS ON BD-A
		TSW-SV-1A	PLANT SERVICE WATER TO CAS-C-1A	TSW-SV-1A DISABLED (CLOSES IF OPEN)	LOSS OF 1 COMPRESSOR CAS-C-1A	LOSS OF COMPRESSOR STATUS LIGHTS ON BD-A
MC-8A**	1	CAS-C-1B	CAS COMPRESSOR 1B	LOSS OF CAS-C-1B AND INDICATION	REMAINING COMPRESSORS HAVE ADEQUATE CAPACITY	LOSS OF COMPRESSOR STATUS LIGHTS ON BD-A
		TSW-SV-1B	PLANT SERVICE WATER TO CAS-C-1B	TSW-SV-1B DISABLED (CLOSES IF OPEN)	LOSS OF 1 COMPRESSOR CAS-C-1B	LOSS OF COMPRESSOR STATUS LIGHTS ON BD-A
						**STANDBY COMPRESSION WILL START WHEN PRESSURE DROPS TO 90 PSIG. THIS WILL ANNUNCIATE IN THE CONTROL ROOM.
						IF BKRS TRIPS DUE TO A GROUND OR OVERLOAD THIS WILL BE ANNUNCIATED.
MC-7A-A	1	PRA-FN-1A	SW-HVAC	FAN DISABLED SSW A LOOP LOSS	PRA-FN-1A PWR LOSS. SSW A OUT OF SERVICE.	NOTE 1.
PP-7A-G	1	TS1-21	SW-SUPV CONTROL SW-SPV	LOSS OF SSW LOOP	STANDBY SW A SUPV SYSTEM TROUBLE SSW A-005	

BUS NUMBER	BUS DIV	DEVICE NUMBER	DEVICE DESCRIPTION	PRIMARY EFFECT ON DEVICE	PRIMARY EFFECT ON SYSTEM	ALARM POINT
MC-8A-A	2	PRA-FN-1B	SW-HVAC	FAN DISABLED SSW B LOOP LOSS	PRA-FN-1TS PWR LOSS SSW B OUT OF SERVICE.	NOTE 1.

Q. 031.137

Qualification of Control Systems (IE Information Notice 79-22)

Operating reactor licensees were informed by IE Information Notice 79-22, issued September 19, 1979, that certain non-safety grade or control equipment, if subjected to the adverse environment of a high energy line break, could impact the safety analyses and the adequacy of the protection functions performed by the safety grade equipment. Enclosed is a copy of IE Information Notice 79-22, and reprinted copies of an August 30, 1979 Westinghouse letter and a September 10, 1979 Public Service Electric and Gas Company letter which address this matter. Operating Reactor licensees conducted reviews to determine whether such problems could exist at operating facilities.

We are concerned that a similar potential may exist at light water facilities now under construction. You are, therefore, requested to perform a review to determine what, if any, design changes or operator actions would be necessary to assure that high energy line breaks will not cause control system failures to complicate the event beyond your FSAR analysis. Provide the results of your review including all identified problems and the manner in which you have resolved them to NRR.

The specific "scenarios" discussed in the above referenced Westinghouse letter are to be considered as examples of the kinds of interactions which might occur. Your review should include those scenarios, where applicable, but should not necessarily be limited to them. Applicants with other LWR designs should consider analogous interactions as relevant to their designs.

Response:

1.0 INTRODUCTION

1.1 OBJECTIVE

The objective of this analysis was to determine if any non-safety grade control equipment, if subjected to the adverse environment of a high energy line break (HELB), could impact the WNP-2 safety analysis and/or the adequacy of the protective functions performed by the plants safety grade equipment. Investigations conducted were consistent with concerns identified by IE Information Notice 79-22 and in answer to the above question.

1.2 APPROACH

The approach described below outlines the actions completed during this review. The sequence of this approach is shown graphically in Figure 1.

1.2.1 Identify non-safety grade control systems which may impact reactor pressure, water level, critical power ratio (CPR), feedwater (FW) temperature and/or the performance of safety-grade equipment.

1.2.2 Establish criteria for high energy line determination, break postulation, and consequence evaluation.

1.2.3 Identify and locate all high energy lines. For the reactor building, pipe break studies previously completed were referenced for line and break locations as well as targets.

1.2.4 For each applicable control system, identify and locate instrumentation, equipment, process tubing, and control cables from all systems in high energy line areas that could affect the control system's operation.

1.2.5 Postulate breaks in identified high energy lines. Identify control system damage incurred due to jet impingement and/or pipe whip for each break.

1.2.6 Evaluate the consequences resulting from each postulated break. If a single control system is affected, verify that the event incurred is bounded by WNP-2 FSAR Chapter 15. If more than one control system is affected, determine if the combined event is bounded by Chapter 15 analysis. If the single or combined event is not bounded, analyze an event which is bounding and determine the consequences.

1.2.7 For any single or combined event analyzed as unacceptable, define required operator actions or hardware modifications.

1.3 CONCLUSIONS

A detailed and comprehensive study was completed to determine if any non-safety grade control equipment, if subjected to the adverse environment of a HELB, could impact the WNP-2 safety analysis and/or the adequacy of protective functions performed by the plants safety grade equipment. The entire plant has been evaluated for the effects of high energy line breaks on applicable control systems. Worst case failure of all equipment, instrumentation, process tubing, control cables, and power cables was considered.

It was determined, that there are events which fall outside the limits of Chapter 15 transient analysis. In evaluating these new events, a single bounding event, incorporating the worse case combination of each of the new events, has been postulated and analyzed using a General Electric computer code. The results of this analysis indicated that the reactor Delta Critical Power Ratio (ΔCPR) exceeded the FSAR required operating limit of 0.18 for a very short duration. However, 4.4 indicates that even if boiling transition should occur for a short duration, no fuel damage would be expected to occur. These results are well within the bounds of the design basis accidents analyzed in Chapter 6.

The protection functions performed by safety grade equipment are not significantly imparied by the effect of any plant HELB. Therefore, safe plant shutdown is assured at all times. No potential event results in any increase in risk to the health and safety of the public.

2.0 ANALYSIS CRITERIA

2.1 APPLICABLE EVENTS

The Chapter 15 transient analysis was used as a guide in establishing the applicable analysis events. Determination of the final list of applicable events was accomplished by evaluating the Chapter 15 transient events against the criteria in 2.1.1. These applicable events were then used in the analysis as the bounding events which could affect either a plant safety system or a critical reactor parameter (level, press, CPR, etc.). All plant control systems are then analyzed to determine their ability to result in one of these bounding applicable events.

2.1.1 Criteria for Event Applicability

1. Events must be capable of occurring at 100% reactor power.

2. Events must result from a HELB.

If an event did meet these criteria but tended to reduce the severity of the overall consequence when combined with other events, the single event was analyzed alone.

2.1.2 Applicable Events

1. Loss of Feedwater Heating (15.1.1). Applicable Event

2. Feedwater Controller Failure - Maximum Demand (15.1.2). Applicable Event

3. Pressure Regulator Fail - Open (15.1.3). Applicable Event

4. Inadvertent Opening of a Safety or Relief Valve (15.1.4). Applicable Event

5. RHR Shutdown Cooling Malfunction Decreasing Temperature (15.1.6). This event is not applicable as it cannot occur at 100% reactor power.

6. Pressure Regulator Fail - Closed (15.2.1). Applicable Event

7. Generator Load Rejection, Bypass On (15.2.2). Applicable Event

8. Generator Load Rejection, Bypass Off (15.2.2). Applicable Event

9. Turbine Trip, Bypass On (15.2.3). Applicable Event

10. Turbine Trip, Bypass Off (15.2.3). Applicable Event

11. Inadvertent MSIV Closure (15.2.4). Applicable Event

12. Loss of Condenser Vacuum (15.2.5). Applicable Event

13. Loss of Auxiliary Power Transformers (15.2.6). This event results in an immediate reactor scram decreasing the severity of any other event combined with it. This event is not applicable.

14. Loss of All Grid Connections (15.2.6). This event is not the result of a high energy line break and is therefore not applicable. In addition, this event is bounded by generator load rejection, bypass on.

15. Loss of Feedwater Flow (15.2.7). Applicable Event

16. Feedwater Piping Break (15.2.8). This event is bounded by loss of feedwater flow and is not considered separately.

17. Failure of RHR Shutdown Cooling (15.2.9). The RHR shutdown cooling system is not in operation at 100% power. Therefore, this is not an applicable transient event.

18. Trip of One Recirculation Pump Motor (15.3.1.). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by the analysis presented in 15.3.1.

19. Trip of Both Recirculation Pump Motors (15.3.1). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by the analysis presented in 15.3.1.

20. Fast Closure of One Main Recirculation Valve (15.3.2). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by analysis presented in 15.3.2.

21. Fast Closure of Two Main Recirculation Valves (15.3.2). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by the analysis presented in 15.3.2.

22. Seizure of One Recirculation Pump (15.3.3). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by the analysis presented in 15.3.3.

23. Recirculation Pump Shaft Break (15.3.4). A reduction of recirculation flow reduces the severity of any other event or event combination. This event is bounded by the analysis presented in 15.3.4.

24. Rod Withdrawal Error - Refueling (15.4.1.1). This event is not applicable as it does not occur at 100% power operation.

25. Rod Withdrawal Error - Startup (15.4.1.2). This event is not applicable as it does not occur at 100% power operation.

26. Rod Withdrawal Error - At Power (15.4.2). This event is not applicable as it is not the result of a HELB.

27. Control Rod Misoperation (15.4.3). This event is not applicable as it is not the result of a HELB.

28. Abnormal Startup of Idle Recirculation Loop (15.4.4). This event is not applicable as it does not occur at 100% power operation.

29. Fast Opening of One Main Recirculation Valve (15.4.5). This event is not applicable as it does not occur at 100% power operation.

30. Fast Opening of Both Main Recirculation Valves (15.4.5). This event is not applicable as it does not occur at 100% power operation.

31. Misplaced Bundle Accident (15.4.7). This event is not applicable as it does not occur at 100% power operation.

32. Rod Drop Accident (15.4.9). This event is not applicable as it is not the result of a HELB.

33. Inadvertent HPCS Pump Start (15.5.1). As described, this event is the result of operator error. However, the event will be analyzed as a possible result of a HELB and is applicable.

2.1.3 Control System Components Identification

All plant system components were considered in this analysis. For each event found applicable in 2.1.2, all components of any plant system which could result in that event were addressed in the analysis. This included all instrumentation, equipment, process tubing, power cables, and control cables. Failure modes were considered as follows:

1. Instrumentation - When the instrumentation was mechanically damaged by a HELB, it was assumed to command controlled equipment to the worst failure mode.

2. Equipment - When the equipment was mechanically damaged by a HELB, it was assumed to fail in the worst failure mode.

3. Process Tubing - Process tubing was evaluated for the worst case of two failure mechanisms, crimping, and rupture. In the event of crimping, controlled equipment was considered to freeze in place. For rupture, controlled equipment was considered to operate normally for a loss of signal.

4. Power Cables - Failure of power cables was assumed to act as a simple power loss, not necessarily a worst case failure mode. Resultant control actions due to the power loss were considered.

5. Control Cables - Control cables were assumed to command controlled equipment to the worst failure mode.

2.2 HIGH ENERGY LINES

The definition of high energy lines used in this analysis is based on the criteria established in 3.6.1 of the Standard Review Plan and 3.6.2 of the WNP-2 FSAR. A summary of that criteria is presented below.

2.2.1 Criteria for High Energy Lines

High energy lines were defined to include those lines whose process fluid exceeds a temperature of 200°F or a pressure of 275 psig during normal 100% power operation. All piping systems larger than 1-inch NPS which meet this criteria for more than 2% normal 100% power operating time were included.

2.2.2 Criteria for Break Locations

High energy lines not previously analyzed during other pipe break studies (Reference 3.6) were assumed to break at terminal ends and intermediate pipe fittings. Those lines evaluated during previous studies for HELB were considered to break as identified in those studies.

2.2.3 Break Effects

HELB effects were evaluated in detail for damage due to pipe whip and jet impingement. The general criteria used in evaluating the effects of pipe whip and jet impingement is presented in 3.6.2. A summary of that criteria is provided below.

2.2.3.1 Pipe Whip

Pipe whip was analyzed in the plane defined by the piping geometry. Movement was analyzed in the direction of the jet reaction while hinging at the nearest rigid support, anchor, or penetration. The pipe was allowed to move in a radius about the hinge point until hitting a line of equal to or larger size, a reinforced concrete wall or column.

2.2.3.2 Jet Impingement

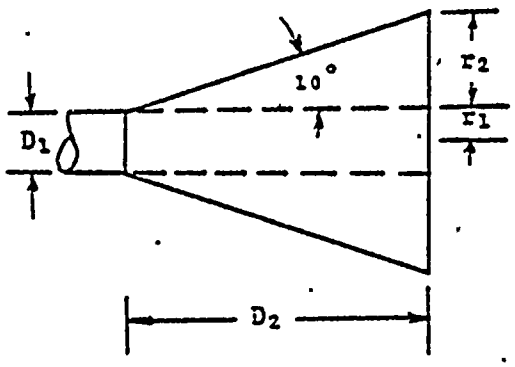
Jet impingement was considered for all circumferential and longitudinal breaks. Longitudinal breaks were postulated to occur in high energy lines 4-inch NPS and larger with a flow area equal to the flow area of the piping system. Circumferential breaks were postulated to occur in high energy lines larger than 1-inch NPS with the two halves being displaced laterally by a distance of one pipe diameter relative to each other. To simplify the evaluation of the effects of jet impingement on targets, the jets were considered to have an effective cone angle of 10°, with a jet length equal to 2 times the distance required for the pressure of the fluid jet to diminish to 10 psig. A sample calculation is provided below. Table 1 provides a summary of jet lengths considered in the evaluation. Concrete walls were considered to be an effective barrier against further cone propagation.

Sample Calculation:

Line Size = D_1 = 2"

Pressure at D_2 = P_2 = 10 psi

Pressure at Break = P_1 = 1,000 psi



$$P_1A_1 = P_1 \pi D_1^2 /4$$

$$P_2A_2 = P_2 \pi 4 (r_1 + r_2)^2 /4$$

$$P_1A_1 = P_2A_2$$

$$P_1 \pi D_1^2 /4 = P_2 \pi 4(r_1 + r_2)^2 /4$$

$$P_1D_1 = 4P_2(D_1 /2 + D_2 \text{ Tan } 10°)^2$$

$$D_2 = (\sqrt{P_1/P_2} - 1) D_1 /2 \text{ Tan } 10°$$

$$D_2 = [(\sqrt{1000/10} - 1) 2/12] / 2(.176)$$

$$D_2 = 4.25 \text{ ft.}$$

$$2D_2 = 8.5 \text{ ft.}$$

2.3 ZONE DETERMINATION

For purposes of this analysis, buildings were divided into zones for reference only (see Figure 2). However, the effects of a given break were not confined to these reference zones. They were instead based on the criteria established in 2.2, in the discussions of pipe whip and jet impingement.

3.0 HELB POSTULATION/CONTROL SYSTEM DAMAGE

HELBs were analyzed for each zone (2.3). Targets were identified due to the resulting pipe whips and jet impingements. The targets were then evaluated with the applicable control system components identified and located in 2.1.3; potential transient events resulted from this evaluation. See Example 1 for a typical zone evaluation.

3.1 SINGLE EVENT ANALYSIS FOR POTENTIAL EVENTS

All applicable transient events, as determined by 2.1.2, found to be a potential event due to a HELB were analyzed to determine the effect on critical reactor parameters. Each identified event not discussed below was evaluated as a part of the multiple event analysis performed in 3.2. Single events bounded by the Chapter 15 transient analysis are discussed below.

Bldg: Turbine
Elev: 471'
Zone: 2E10

ZONE SUMMARY
BREAK/TARGET SUMMARY

Line No.	Temp (°F)	Press (psig)	No. Breaks	Jet (Feet)	Whip Damage	Targets
12" MS(2)-4	541	955	None	-	-	-
2" SS(6)-1	358	52	None	-	-	-
24" BS(8)-1	216	1	8	0.	No	None
16" HD(9)-2	365	148	3	21	Yes	Cable Trays: PB, CB, SB
12" BS(1)-2	448	399	None	-	-	-
18" BS(6)-1	358	52	4	10.5	Yes	Cable Trays: PB, CB, SB, PA, CA, SA
4" HV(9)-1	358	52	None	-	-	-
6" SS(10)-1	216	1	5	0	No	None
20" BS(7)-1	282	27	5	6	No	Cable Trays: PA, CA, SA
2" BS(7)-1	282	27	None	-	-	-
20" COND(4)-3	170	428	1	53	No	None (FW Trip)
2" BS(7)-1	282	27	None	-	-	-
3" HV(12)-2	453	399	4	7.5	Yes	Cable Trays CA, PA, CB, PB

TARGET EVALUATION

Target	Event Evaluation
Cable Tray PB	None
Cable Tray CB	FW Temperature Reduced, Turbine Trip
Cable Tray SB	None
Cable Tray PA	None
Cable Tray CA	FW Temperature Reduced
Cable Tray SA	None

ZONE POTENTIAL EVENT SUMMARY:

(1) Breaks in 16" HD(9)-2, 18" BS(6)-1, or 3" HV(12)-2 could result in a partial loss of FW heating and a turbine trip with bypass.

(2) Breaks in 20" BS(7)-1 could result in a partial loss of FW heating.

(3) Breaks in 20" COND(4)-3 could result in a total loss of FW.

Example 1

3.1.1 Loss of Feedwater Heating

Feedwater (FW) heating controls are located in the vicinity of high energy lines on the three main levels of the turbine building. The overall FW temperature control system is diversely segregated with each component failure capable of contributing only a small amount to the loss of feedwater temperature. A strategically located high energy line break is potentially capable of damaging several controls resulting in a ramping feedwater temperature decrease. As the temperature decreased, reactor power would increase until the APRMs initiated a reactor scram on high thermal power. Any temperature decrease of approximately 65°F or greater would result in a scram and is therefore bounded by Chapter 15 transient analysis event 15.1.1, which assumes 100°F temperature decrease.

For multiple event analysis including loss of feedwater heating, a 65°F reduction in temperature will be considered. This decrease will bring the reactor to a thermal power level just beneath the APRM scram point which is considered worst case for multiple event analysis.

3.1.1.1 Mechanism For Failure

Feedwater heating can be reduced by various mechanisms; all requiring reduced feedwater (tube side) or steam (shell side) flow through the heaters.

Reduced feedwater flow through the heaters requires conductor shorts simulating a valve movement demand signal in the cables controlling heater isolation and bypass valves, or damage to the valves themselves.

Reduced steam flow to the heaters also requires conductor shorts in valve control cables or level controllers, or damage to the valves or controllers themselves. In addition, steam can be bypassed directly to the main condenser if controlling process tubing is ruptured, resulting in FW heater extraction steam bypass valves failing open.

Approximately 165 valves control flow to the 16 feedwater heaters. A single cable short, tubing rupture or component damaged, can in most cases alter the position of only 1 or 2 valves. Valve control cables are normally 9 conductor cables. A short resulting in valve movement requires the proper 2 conductors in these 9 conductor cables to selectively short without blowing circuit protective fuses. Tube rupture cannot isolate heating steam but can dump steam to the main condenser and bypass the heaters.

All heaters are instrumented with high and low level alarms located in the control room. All the major FW heater related motor operated valves have position indication in the control room. Any HELB resulting in significant reduction of feedwater heating would not go unnoticed by plant operators.

3.1.2 Feedwater Controller Failure - Maximum Demand

Feedwater flow controls were reviewed for control system failures which could potentially drive the turbine controls to maximum demand. The feedwater flow controller sums signals from reactor water level, steam line flow, and feedwater flow and sends the resultant signal to the reactor feedpump turbines. Reactor water level and steamline flow signals were found to be unaffected by any high energy line breaks. Potential for generating a high feedwater flow demand signal as the result of HELB exists on the 441' and 471' levels of the turbine building. Damage to these signals was considered to result in a feedwater controller failure - maximum demand event. Single event occurrence is bounded by Chapter 15 transient analysis.

3.1.2.1 Mechanism For Failure

Feedwater controller failure - maximum demand can occur in two ways, loss of feedwater flow signal or loss of feedpump turbine speed feedback to the controller.

Loss of the feedwater flow signal requires open circuit of 2 separate cables or rupture of at least 2 process instrument lines. These controls are located on the 471' level of the turbine building. Due to the nature of the 3-element feedwater flow controls, failure of this signal will not result in the 146% upper limit demand as analyzed in Chapter 15. The flow demand will be of a lesser degree, decreasing as vessel level increases.

Loss of the feedpump turbine speed feedback to the controller requires open circuit of 2 separate cables. These controls are located on the 441' level of the turbine building. Loss of both of these signals would drive the turbine valves wide open, similar to the event analyzed in Chapter 15. This failure mechanism can only occur as a single event from a HELB and is bounded by Chapter 15 transient analysis.

3.1.3 Pressure Regulator Fail - Open

The DEH pressure regulator is designed to switch to manual control on a pressure regulator signal failure. Control system analysis found no credible failures resulting in a pressure regulator fail - open event due to a HELB.

3.1.4 Inadvertent Opening of a Safety/Relief Valve

This event cannot occur due to a high energy line break outside of containment.

3.1.5 Pressure Regulator Fail - Closed

Loss of signals positioning the governor and bypass valves could result in this event. These signal cables are located on the 471' elevation of the turbine building and could be damaged by an HELB. Single event occurrence is bounded by Chapter 15 transient analysis.

3.1.5.1 Mechanism For Failure

A pressure regulator fail-closed event as the result of a HELB would be a slow developing event. Complete failure requires open circuit of the 8 signals (in 8 different cables) used in the positioning of the governor and bypass valves. Open circuit of these cables would allow controlled valves to slowly drift closed due to servo valve leakage.

Should a turbine trip occur during this event, the bypass valves would still remain operable during the trip transient.

3.1.6 Generator Load Rejection, Bypass On

A true generator load rejection cannot result from a high energy line break. However, cable damage or hydraulic line damage could simulate this event and fast close the governor valves. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.6.1 Mechanism For Failure

A generator load rejection, bypass-on event due to a HELB can result from control cable damage or damage to the turbine electro-hydraulic (EH) fluid lines. These controls are located on the 471' and 501' elevation of the turbine building.

A single short requesting governor valve fast closure for overspeed protection control would appear as a load rejection to the reactor. For all HELBs resulting in governor valve fast closure, reactor protection system (RPS) signal functions remained unaffected.

A rupture of the EH fluid lines controlling trip of the governor valves would also fast close these valves. Again, for all HELBs resulting in governor valve fast closure, RPS signal functions remained unaffected.

3.1.7 Generator Load Rejection, Bypass Off

A true generator load rejection cannot result from a high energy line break. However, hydraulic line damage could simulate this event and fast close the governor valves while disabling the bypass valves. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.7.1 Mechanism For Failure

A generator load rejection, bypass off event due to the HELB can result from EH fluid line damage only. These lines are located on the 471' level of the turbine building. The exact location for failure is uncertain as the HELB would have to rupture the governor valve EH fluid trip line and the bypass valve positioning EH fluid lines. The large volume of EH fluid contained near the bypass valves in accumulators and the positioning of the hydraulic lines makes this event very unlikely. HELBs hitting the bypass valves were assumed to cause this event, however, no break results in a loss of the turbine RPS signals function.

3.1.8 Turbine Trip, Bypass On

Several high energy line breaks in the turbine building could result in this event by damaging cables and/or hydraulic lines. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.8.1 Mechanism For Failure

A turbine trip, bypass on event due to a HELB can result from cable damage, damage to the turbine EH fluid lines, vacuum sensing line damage, or condenser damage. These controls and equipment are located on the 471' and 501' elevation of the turbine building.

Several trip signals run from the turbine to the control room in control cables. Shorting of the cable conductors or damage to the controlling equipment could signal a turbine trip. For all HELBs resulting in a turbine trip from control cable damage, RPS signal function was unaffected.

A rupture of the EH fluid lines controlling trip of the turbine valves would also result in a turbine trip. For all HELBs resulting in a turbine trip due to EH fluid line rupture, RPS single function was unaffected.

Vacuum sensing line damage or condenser damage could result in a turbine trip on low vacuum. The extent of damage would determine the time to trip ranging from immediately to several minutes. For all HELBs resulting in vacuum sensing line damage or condenser damage, RPS signal function was unaffected.

3.1.9 Turbine Trip, Bypass Off

Hydraulic line damage due to a high energy line break in the turbine building could cause this event. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.9.1 Mechanism For Failure

A turbine trip, bypass on event due to a HELB can result from damage to the turbine EH fluid lines only. These controls are located on the 471' elevation of the turbine building. The exact location for failure is uncertain as the HELB would have to rupture the turbine trip EH fluid line and the bypass valve positioning EH fluid lines. The large volume of EH fluid contained near the bypass valves in accumulators and the positioning of the hydraulic lines makes this event very unlikely. HELBs hitting the bypass valves were assumed to cause this event, however, no break resulted in a loss of the turbine RPS signal function.

3.1.10 Inadvertent MSIV Closure

The potential for a high energy line break which would inadvertently close the MSIVs exists on the 471' elevation of the turbine building. Damage to the control loops sensing low condenser vacuum, low steamline pressure, high radiation or high room temperature could result in this event. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.10.1 Mechanism For Failure

Inadvertent MSIV closure can result from both normal and abnormal initiation. Controls causing this event due to a HELB are located on the 471' and 501' level of the turbine building.

Normal closure will occur for any HELB heating leak detection thermocouples to their trip point. These thermocouples are located over the main steam lines in the turbine building.

Abnormal closure would occur from equipment, control cable, or process tubing damage from main steam pressure sensors, vacuum switches, or radiation detectors. All components would have to be damaged such that an open circuit is simulated.

All other instrumentation designed to close the MSIVs is protected from the effects of a HELB. RPS signals function normally for all HELBs inadvertently closing the MSIVs.

3.1.11 Loss of Condenser Vacuum

Loss of condenser vacuum is a potential event due to a high energy break in the turbine building. This event has no direct effects on reactor parameters. In all cases, a loss of condenser vacuum results in a turbine trip. Therefore, the loss of condenser vacuum event is included with the turbine trip event analyses. As a single event it is bounded by Chapter 15 transient analysis.

3.1.12 Loss of Feedwater Flow

Several high energy line breaks on the 441' and 471' elevation of the turbine building could result in a loss of feedwater (FW) flow. This event is considered and as a single event is bounded by Chapter 15 transient analysis.

3.1.12.1 Mechanism For Failure

Loss of feedwater flow will occur for any HELB resulting in reactor feedpump turbine (RFPT) trip or feedwater isolation. Any main feedwater line break will cause this event. In addition, any main condensate line break will cause a RFPT trip on low suction pressure.

On the 441' elevation of the turbine building, several spurious signals resulting in a RFPT trip could result from a HELB. In each of these cases, the signals are the result of either shorts or open circuits in the damaged cables.

Damage to level switches, process tubing, or control cables on turbine building elevation 471' could simulate FW heater high level and isolate portions of the FW flow. Also, shorts in control cables located on elevations 471' and 501' in the turbine building could result in closing combinations of the FW heating system valves. These valve closures would require selective control cable damage resulting from the proper 2 conductors in a 9 conductor cable shorting together without blowing circuit protective fuses.

3.1.13 Loss of Partial or Total Recirculation Flow

The six (6) Chapter 15 transient events which discuss loss of partial or total recirculation flow were analyzed for single event occurrence only. Note, the vessel water level (L-8) trip and the turbine throttle valve reactor protection switch scram signals, which terminate these events, cannot be lost due a HELB. Any decrease in recirculation flow is bounded by Chapter 15 transient analysis.

3.1.14 Inadvertent HPCS Pump Start

A review of the HPCS pump control system showed that an inadvertent start cannot occur due to a high energy line break.

3.2 MULTIPLE EVENT ANALYSIS

Multiple events were considered to be the result of pipe whip and jet impingement from a high energy line break with reactor scram culminating the events. Each event was considered to have occurred as described in section 3.1 of this report. Multiple events were not necessarily considered to occur simultaneously but were instead considered to occur at worst case timing until reactor scram. The single active failure assumed per MEB 3-1 in Chapter 3.6 was not considered.

Breaks in main steam lines were considered to activate RPS signals prior to the development of multiple events. Reviews indicated that in no case can the RPS system be incapacitated due to any high energy line breaks. Breaks in main condensate or feedwater lines which would trip the feedwater pumps or terminate feedwater to the reactor were not considered capable of resulting in the loss of feedwater temperature event. Leak detection system temperature detectors designed to close MSIVs in case of high temperature were considered to activate for breaks in their immediate vicinity.

3.2.1 Worst Case Event Combinations

On the 471' level of the turbine building, one set of Division A trays (power, control, and signal) and one set of Division B trays (power, control, and signal) run the length of the floor gathering cables in route to the control room. A strategically located HELB could hit both sets of trays. Assuming worst case cable failures in all trays, either open circuit or short, the following events, or any combination thereof, are possible:

1) Loss of Feedwater Heating
2) Feedwater Controller Failure-Maximum Demand
3) Pressure Regulator Fail-Closed
4) Loss of Feedwater Flow
5) MSIV Closure
6) Turbine Trip, Bypass On

Using the above events, an analysis using a General Electric computer code was run to establish a bounding event combination which resulted in the worst impact on critical reactor parameters. The initial conditions and input parameters used in this analysis are consistent with those used in Chapter 15. In establishing this bounding combination, events 1 through 4 above are taken in a worst combination to bring the reactor to a power level just beneath thermal power monitor analytical scram limit (122% NBR). At this power level, events 5 and 6 above were assumed to occur. For this event, the Delta Critical Power Ration (Δ CPR) exceeded 0.18 for less than 5 seconds (0.18 Δ

CPR sets the present FSAR required operating limit). The peak vessel pressure was less than 1,207 psig and the peak cladding temperature was less than 900°F, which is considerably less than the allowable peak vessel pressure (1,375 psig) and the allowable peak cladding temperature (2,200°F). (At these levels, 4.4 has indicated that no fuel damage is expected.) The reactor can be brought to cold shutdown with no increase in the risk to the health and safety of the public.

This transient also assumes worst case operational modes of other, potentially mitigating, control systems; specifically the recirculation flow control system. For this event sequence the recirculation flow control system is assumed to be in manual such that it does not act to maintain thermal power near rated, thus the turbine trip and MSIV closure are initiated when thermal power is approximately 122% NBR. Under more realistic assumptions concerning the control systems unaffected by the HELB, the actual plant response is much less severe. The recirculation flow control system in its normal operational mode would be in flux-auto, master-manual mode which would establish a manually adjusted flux demand (power level) and modulate the recirculation flow demand to the recirculation flow control valve positioners according to the flux error (demand minus flux feedback) experienced. During this postulated sequence of failures the flow control system would sense the flux deviation from initial conditions as the effects of the feedwater temperature reduction perturb reactor power and automatically reduce core flow to maintain flux at the original flux setpoint. The effect of this control system action alters the power level at which the turbine trip and MSIV closure occur. The pressurization portion of this event would then be initiated from approximately the initial conditions. This change is expected to significantly reduce the calculated ΔCPR valves comparable to the present Chapter 15 analysis. In the most probable plant response to this HELB, fuel barrier integrity is not challenged.

Considering the low probability that such a break could occur: i.e., the selective combination of cable shorts and open circuits required, the assumption of worst possible event combination and the extremely conservative initial reactor parameters used, the occurrence of this combination can be classified as low frequency. As such, this event should be evaluated as an accident and is bounded by the design basis accidents analyzed in the FSAR.

3.2.2 Other Event Combinations

Various other breaks could result in combinations of the events considered in section 3.2.1 of this report. Individual computer analyses were not run for each of these combinations but many are within the bounds of Chapter 15; all are bounded by the analysis in 3.2.1.

3.2.2.1 Loss of Feedwater Heating and Loss of Feedwater Flow

This combined event is bounded by the loss of feedwater heating transient event as described in Chapter 15. The loss of feedwater flow can only reduce the severity of the loss of feedwater heating event. The sequence of events after the loss of feedwater flow will be as described in Table 15.2-11 resulting in a safe reactor shutdown.

3.2.2.2 Loss of Feedwater Heating and Turbine Trip, Bypass On

The worst case combination of these two events would be a loss of feedwater heating raising reactor power to a level just beneath the thermal power monitor analytical scram point followed by the turbine trip, bypass on. Occurrence of this event requires cable shorting on the 471' elevation of the turbine building.

Such an event is bounded by the analysis in 3.2.1.

3.2.2.3 Loss of Feedwater Heating and Inadvertent MSIV Closure

The worst case combination of these two events would be a loss of feedwater heating raising reactor power to a level just beneath the thermal power monitor analytical scram point followed by MSIV closure. Occurrence of this event requires cable shorting or process tubing damage on the 471' elevation of the turbine building.

This combination of events is bounded by the analysis in 3.2.1.

3.2.2.4 Loss of Feedwater Heating, Turbine Trip, Bypass On, and Inadvertent MSIV Closure

This combination of events is bounded by sections 3.2.2.2 or 3.2.2.3 above, depending on event sequence.

3.2.2.5 Loss of Feedwater Heating and Pressure Regulator Fail - Closed

The pressure regulator fail - closed event described in section 3.1.5 of this report results in a very mild transient. Reactor scram would occur on high pressure or APRM RPS signals. This combined event is bounded by section 3.2.2.2 of this report.

3.2.2.6 Loss of Feedwater Heating and Feedwater Controller Failure, Maximum Demand

This combination of events worst case could result in a turbine trip with bypass valves and reactor power just below thermal power monitor analytical scram levels. This combined event is bounded by section 3.2.2.2 above.

3.2.2.7 Loss of Feedwater Heating, Inadvertent MSIV Closure, Pressure Regulator Fail - Closed and Loss of Feedwater Flow

The worst case sequence of these potential combined events would be a loss of feedwater heating, then a pressure regulator fail - closed culminated by an inadvertent MSIV closure. Loss of feedwater flow could only reduce the severity of the transient. The worst case combination would require the loss of feedwater heating and pressure regulator fail - closed events to raise reactor power and pressure to levels just beneath RPS scram followed by MSIV closure. Occurrence of this event requires cable shorts and open circuits on the 471' elevation of the turbine building.

Such an event is bounded by the analysis of 3.2.1.

TABLE 1 - CONE LENGTH

PROCESS PRESSURE

Pipe Diameter	1000 psi	900 psi	800 psi	700 psi	600 psi	500 psi	400 psi	300 psi	200 psi	100 psi	50 psi	25 psi
2"	8.5	8	7.5	7	6.4	5.7	5	4.2	3.3	2	1.1	.5
2 1/2"	10.6	10	9.4	8.7	8	7.1	6.3	5.3	4.1	2.5	1.5	.7
3"	12.7	12	11.2	10.4	9.5	8.6	7.5	6.3	5	3	1.7	.8
4"	17	16	15	13.9	12.7	11.5	10	8.5	6.5	4	2.3	1.1
6"	25.5	24	22.5	20.8	19	17.1	15	12.7	9.8	6.1	3.5	1.6
8"	34	32	30	27.8	25.5	23	20	16.9	13.1	8.1	4.7	2.2
10"	42.5	40	37.5	35	31.8	28.6	25	21	16.4	10.2	5.8	2.7
12"	51	48	45	42	38	34.4	30	25.3	19.6	12.2	7	3.3
14"	59.5	56	52.5	48.5	44.5	40	35	30	23	14.3	8.1	3.8
16"	68	64	60	55.5	51	45.8	40	34	26.2	16.3	9.3	4.4
18"	76	72	67.5	62.5	57	51.5	45	38	29.5	18.3	10.5	4.9
20"	85	80	75	69.5	63.5	57.5	50.2	42	33	20.4	11.6	5.4
24"	102	96	90	83.4	76	68.7	60.3	50.5	39	24.5	14	6.6
30"	127	120	112.5	104	95.5	85.9	75.5	63.5	49	30.5	17.5	8.2
42"	178	168	157	146	134	120	105	89	69	43	25	11.5

CONE LENGTH IN FEET

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D.C. 20555

September 14, 1979

IE Information Notice No. 79-22

QUALIFICATION OF CONTROL SYSTEMS

Public Service Electric and Gas Company notified the NRC of a potential unreviewed safety question at their Salem Unit 1 facility. This notification was based on a continuing review by Westinghouse of the environmental qualifications of equipment that they supply for nuclear steam supply systems. Based on the present status of this effort, Westinghouse has informed their customers that the performance of non-safety grade equipment subjected to an adverse environment could impact the protective functions performed by safety grade equipment. These non-safety grade systems include:

Steam generator power operated relief valve control system

Pressurizer power operated relief valve control system

Main feedwater control system

Automatic rod control system

These systems could potentially malfunction due to a high energy line break inside or outside of containment. NRC is also concerned that the adverse environment could also give erroneous information to the plant operators. Westinghouse states that the consequences of such an event could possibly be more limiting than results presented in Safety Analysis Reports, however, Westinghouse also states that the severity of the results can be limited by operator actions together with operating characteristics of the safety systems. Further, Westinghouse has recommended to their customers that they review their systems to determine whether any unreviewed safety questions exist.

This Information Notice is provided as an early notification of a possible significant matter. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If NRC evaluations so indicate, further licensee actions may be requested or required. If you have questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

No written response to this Information Notice is required.

REPRINT

Westinghouse Electric Corporation
Water Reactor Division
Nuclear Service Division
Box 2728
Pittsburgh, Pennsylvania 15230

August 30, 1979
PSE-79-21

Mr. F. P. Librizzi, General Manager
Electric Production
Public Service Electric and Gas Company
80 Park Place
Newark, New Jersey 07101

Dear Mr. Librizzi:

Public Service Electric and Gas Co.
Salem Unit No. 1
QUALIFICATION OF CONTROL SYSTEMS

As part of a continuing review of the environmental qualifications of Westinghouse supplied NSSS equipment, Westinghouse has also found it necessary to consider the interaction with non-safety grade systems. This investigation has been conducted to determine if the performance of non-safety grade systems which may not be protected from an adverse environment could impact the protective functions performed by NSSS safety grade equipment. The NSSS control and protection systems were included in this review to assess the adequacy of the present environmental qualification requirements.

As a result of this review, several systems were identified which, if subjected to an adverse environment, could potentially lead to control system operation which may impact protective functions. These systems are:

- Steam generator power operated relief valve control system
- Pressurizer power operated relief valve control system
- Main feedwater control system
- Automatic rod control system

Page 2
PSE-79-21

Each of the above mentioned systems could potentially malfunction if impacted by adverse environments due to a high energy line break inside or outside containment. In each case, a limited set of breaks, coupled with possible consequential control malfunction in an adverse direction, of the above events could yield results which are more limiting than those presented in the plant Safety Analysis Reports. In all cases, however, the severity of the results can be limited by operator actions together with operating characteristics of the safety systems.

We believe these systems identified do not constitute a substantial safety hazard. However, Westinghouse recommends you review them to determine if any unreviewed safety questions or significant deficiencies exist in your plant(s).

To assist you in understanding these concerns, Westinghouse will hold a seminar in Pittsburgh on Thursday, September 6 at Westinghouse R&O Center, Building 701, with all our operating plant customers. The seminar will address the potential impact of these concerns for various plant designs and various licensing bases.

Please contact your WNSD Regional Service office to confirm your attendance at the seminar. We will provide additional details concerning the agenda and other meeting arrangements as they become available.

Very truly yours,

ORIGINAL SIGNED BY

F. Noon, Manager
Eastern Regional & WNI Support

SR4/CC13&14

cc: H. J. Midura
H. J. Heller
R. D. Rippe
T. N. Taylor
R. A. Uderitz
C. F. Barclay W

REPRINT

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
Salem Nuclear Generating Station
P. O. Box 56
Hancocks Bridge, New Jersey 08038

September 10, 1979

Mr. Boyce M. Grier
Director of USNRC
Office of Inspection and Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Sir:

REPORTABLE OCCURRENCE 79-58/01P
SALEM NO. 1 UNIT LER

This letter will serve to confirm our telephone report to Mr. Gary Schneider of the Regional NRC office on Friday, September 6, 1979, advising of a potential reportable occurrence in accordance with Technical Specification 6.9.1.8.

We have been notified by our Engineering Department that a Westinghouse conducted review of the environmental qualifications of Westinghouse supplied NSSS equipment has identified that conditions associated with high energy line breaks inside or outside containment and their impact on non-safety control systems may constitute an unreviewed safety question. The control systems concerned are steam generator power operated relief valve control, pressurizer power operated relief valve control, main feedwater control and automatic rod control systems.

A detailed report will be submitted in the time period specified by the Technical Specifications.

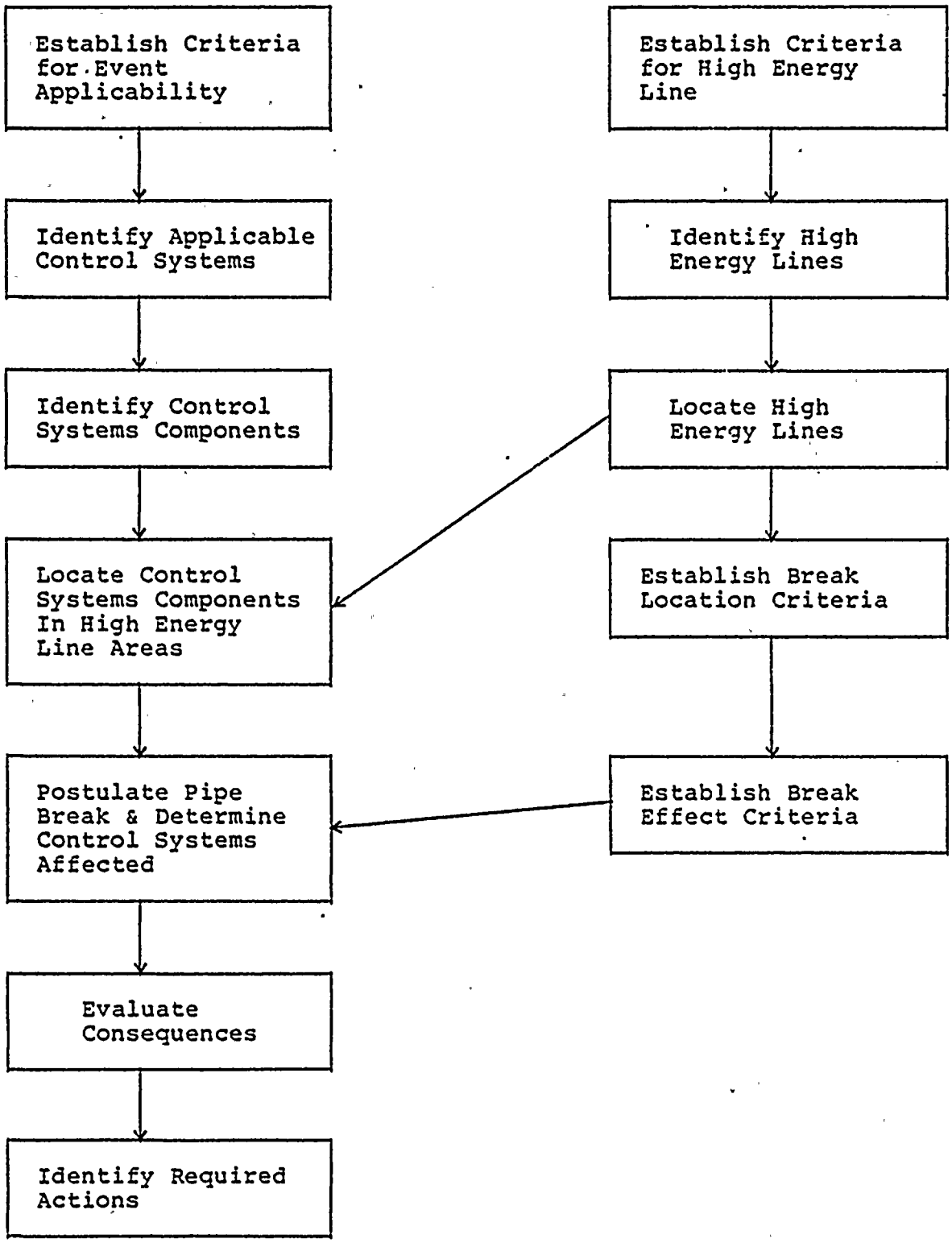
Very truly yours,

Original Signed By

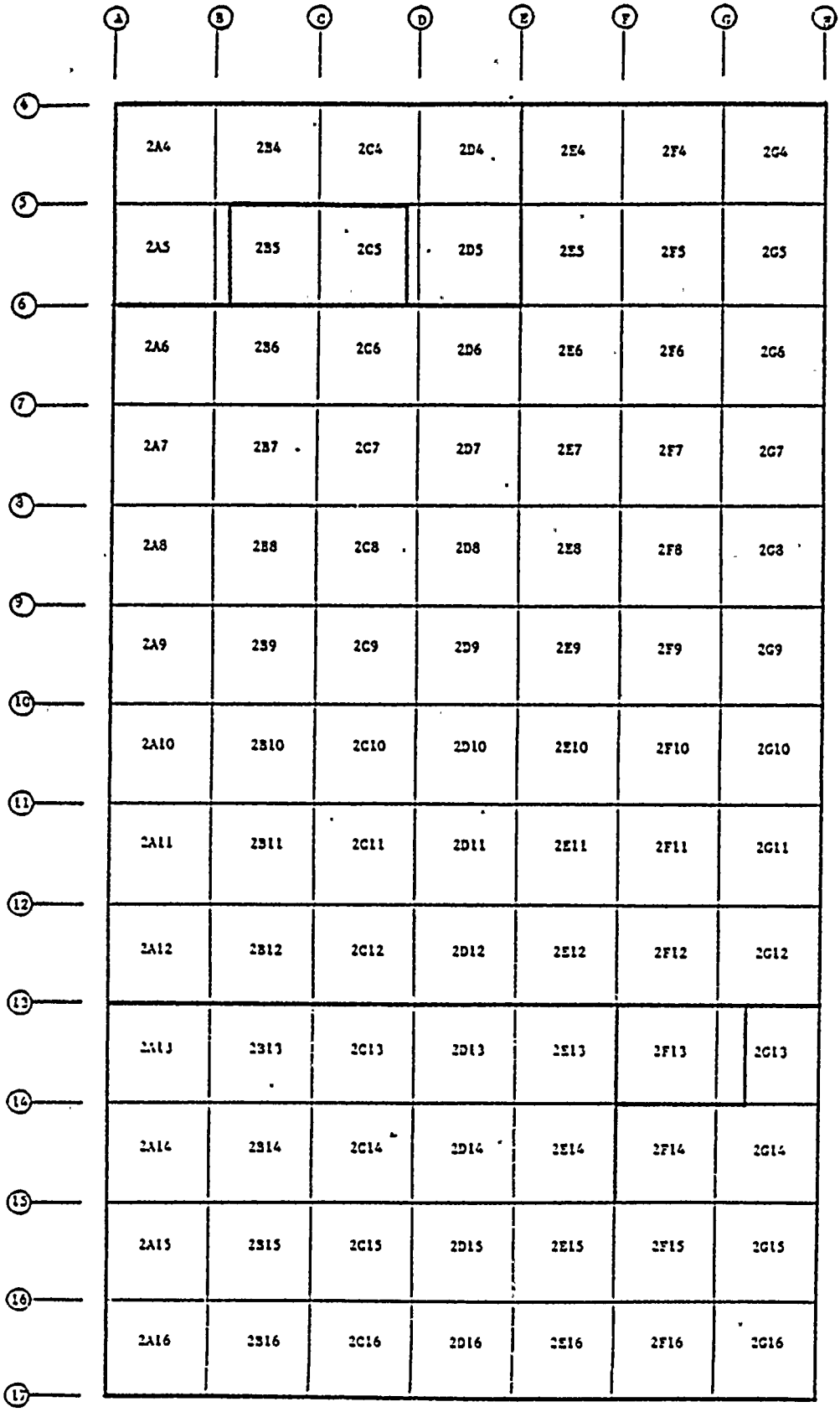
H. J. Midura
Manager - Salem Generating Station

AWK:jds

CC: General Manager - Electric Production
Manager - Quality Assurance



WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 2	APPROACH SEQUENCE	FIGURE 031.137-1



TURBINE BUILDING 471' ELEVATION

WASHINGTON PUBLIC POWER **SUPPLY SYSTEM** NUCLEAR PROJECT NO. 2	TURBINE BUILDING (ELEV. 471') - ZONE MAP	FIGURE 031.137-2

Q.031.138

Control System Failures

The analyses reported in Chapter 15 of the FSAR are intended to demonstrate the adequacy of safety systems in mitigating anticipated operational occurrences and accidents.

Based on the conservative assumptions made in defining these design-basis events and the detailed review of the analyses by the staff, it is likely that they adequately bound the consequences of single control system failures.

To provide assurance that the design basis event analyses adequately bound other more fundamental credible failures you are requested to provide the following information:

(1) Identify those control systems whose failure or malfunction could seriously impact plant safety.

(2) Indicate which, if any, of the control systems identified in (1) receive power from common power sources. The power sources considered should include all power sources whose failure or malfunction could lead to failure or malfuction of more than one control system and should extend to the effects of cascading power losses due to the failure of higher level distribution panels and load centers.

(3) Indicate which, if any, of the control systems identified in (1) receive input sugnals from common sensors. The sensors considered should include, but should not necessarily be limited to, common hydraulic headers or impulse lines feeding pressure, temperature, level or other signals to two or more control systems.

(4) Provide justification that any simultaneous malfunctions of the control systems indentified in (2) and (3) resulting from failures or malfunctions of the applicable common power source or sensor are bounded by the analyses in Chapter 15 and would not require action or response beyond the capability of operators or safety systems.

Response:

COMMON SENSORS FAILURES EVALUATION REPORT
FOR WASHINGTON PUBLIC POWER SUPPLY SYSTEM
NUCLEAR PROJECT NO. 2

1.0 OBJECT

This document constitutes:

- An analysis in response to the NRC concern that the failure of an instrument line which contains sensors to multiple control systems could result in consequences outside the bounds of the Washington Public Power Supply System Nuclear Project No. 2 (WNP-2) Final Safety Analysis Report (FSAR) Chapter 15 analysis and beyond the capabilities of operators or safety systems.

- A positive demonstration that adequate common sensor review and analysis has been performed to ensure that despite such failure the WNP-2 FSAR Chapter 15 analyses are bounding, and no consequences beyond the capability of operators or safety systems would result.

A comprehensive approach was developed to analyze the control systems capable of affecting reactor water level, pressure, or power in the Nuclear Plant No. 2 Evaluation Report for Control Systems Failures. This Common Sensor Report uses the knowledge of which systems affect reactor water level, pressure or power, gained in Evaluation Report for Control Systems Failures, for valid restriction of this analysis to only those systems.

This report was prepared by General Electric Company for Washington Public Power Supply System Nuclear Project No. 2 with a significant technical contribution from Burns & Roe, Incorporated (B&R Inc.), the Principal Architect Engineer.

2.0 CONCLUSIONS

This report, supplemented by existing FSAR Chapter 15 transient analysis, documents an evaluation of WNP-2 Nuclear Power Station for common sensor failures. No new transient category events have been postulated as a result of this study. All the uncovered consequences (Reactor Scram, Turbine trip, Feedwater increased/decreased flow) are bounded by FSAR Chapter 15 analysis.

3.0 ANALYSIS METHODOLOGY

The common sensor failure analysis was conducted in the following manner by GE and B&R Inc:

Activity	Assigned To
• Identify Common Sensors	B&R Inc & GE
• Determine Failure Mode	B&R Inc & GE
• Summarize Common Sensor Failures	GE
• Analyze Combined Effects	GE
• Compare Results to Chapter 15	GE
• Analyze Exceptions	GE
• Modify/Augment Chapter 15 if Necessary	GE

3.1 IDENTIFY COMMON SENSORS

The systems that effect reactor water level, pressure or power were analyzed for instrument lines with sensors for more than one system.

The Evaluation Report for Control Systems Failure identified those systems that effect reactor water level, pressure or power as follows:

MPL	Systems	MPL	Systems
NB	Nuclear Boiler	MS	Main Turbine Generator
RRC	Reactor Recirculation	CW	Circulating Water
CRD	CRD Hydraulic	SW	Service Water
RFT	Feedwater Turbine	CAS	Control and Service Air
NMS	Neutron Monitoring	AR	Air Removal
PRM	Process Radiation Monitoring	COND	Condensate
ARM	Area Rad Monitoring	DEH	Main Turbine Control
RWCU	Reactor Water Cleanup	TO	Main Turbine and Feedwater Turbines Lube Oil
MS	Main Steam		
ES	Exhaust Steam	SS	Seal Steam
BS	Bleed Steam-Extraction Steam	TG	Main Generator Cooling
HV	Heater Vents	GH	Main Generator Hydrogen and CO_2 Purge
HD	Heater Drains		
MD	Miscellaneous Drains	RCC	RB Cooling Water
MV	Miscellaneous Vents	TSW	TB Cooling Water

3.2 DETERMINE FAILURE MODE

The postulated probable failures are either that an instrument line is plugged (pinched) or broken.

The worst case would be any total combination of common sensor failures that can be postulated from a single failure.

3.3 SUMMARIZE COMMON SENSOR FAILURES

The common sensor failure table (attachment to this report) lists all the instrument lines with sensors and their failure modes. The combined failures are the consequences that the NRC is concerned with.

3.4 ANALYZE COMBINE EFFECTS

This step used two approaches.

The first approach totaled all effects as worst case failure of the instrument line. There were no single effects that mitigated the total failure consequences.

The second approach considered probable failures where the reactor scram had taken precedent over the other failure effects. In these instances the instrument line was analyzed as to whether a probable failure could be postulated without the reactor scramming. No such failure could be postulated.

3.5 COMPARE RESULTS TO CHAPTER 15

The combined effects as identified in common sensor table were reviewed and evaluated. Section 4 includes these evaluations, considering worst case effects.

3.6 ANALYZE EXCEPTIONS

There were no exceptions to FSAR Chapter 15 analysis.

3.7 MODIFY/AUGMENT CHAPTER 15 IF NECESSARY

This step was not necessary in the WNP-2 analysis.

4.0 COMMON SENSOR SUMMARY RESULTS AND CHAPTER 15 COMPARISONS

Instrument Line	Line Failure Consequences
No. 1	Line break initiates a decrease in feedwater flow and trip of Recirc Pump A. Reactor scram is a direct consequence. Reactor scram will not cause adverse consequences. Plugged line has no effect.
No. 2	Line break initiates increased feedwater flow, resulting in reactor scram. Reactor scram will not cause adverse consequences. Plugged line has no effect.
No. 3	No effect
No. 4	No effect
No. 5	No effect

Instrument Line	Line Failure Consequences
No. 6	Breaking of this instrument line initiates a Main Turbine Trip. A Main Turbine Trip event is analyzed in Chapter 15. Plugged line has no effect.
No. 7	No effect
No. 8	No effect
No. 9	No effect
No. 10	No effect
No. 11	No effect
No. 12	No effect
No. 13	Line break initiates a decrease in feedwater flow resulting in reactor scram. Reactor scram will not cause adverse consequences. Plugged line has no effect.
No. 14	Line break prevents automatic SRV initiation; this event is analyzed in Chapter 15. Plugged line has no effect.
No. 15	Line break initiates closure of all main steam line valves causing a reactor scram. Reactor scram takes precedence over other sensor failure consequences. Reactor scram will not cause adverse consequences. Plugged line has no effect.
No. 16	No effect
No. 17	Breaking this instrument line decreases feedwater flow resulting in Reactor Scram. Reactor scram will not cause adverse consequences. Plugged line has no effect.
No. 18	Same as No. 15
No. 19	Same as No. 17
No. 20	Same as No. 15
No. 21	Same as No. 17
No. 22	Same as No. 15
No. 23	Same as No. 17
No. 24	Same as No. 15

Instrument Line	Line Failure Consequences
No. 25	Same as No. 2
No. 26	No effect
No. 27	No effect
No. 28	Line break transfers Recirc Pumps A and B to low speed. A decrease in reactor flow is analyzed in Chapter 15. Plugged line has no effect.
No. 29	Same as No. 28
No. 30	No effect

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N051A	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	RECORDER R623A RED PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	RECORDER R623A RED PEN AT CONSTANT READING	NONE
	B22-N023A	BROKEN	MINIMUM PRESSURE SIGNAL	RPS CHANNEL "A1" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RPS CHANNEL "A1" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
	B22-N020A	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	GIVES MSIV CLOSURE BYPASS SIGNAL TO SCRAM TRIP LOGIC "A1" ONLY IN SHUTDOWN, REFUEL, AND STARTUP	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	REACTOR HIGH PRESSURE TRIP OF MSIV CLOSURE SCRAM BYPASS IS INOPERATIVE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
	B22-N026A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "A" TRIP IS INOPERATIVE	MAIN STEAM LINE ISOLATION VALVES CLOSURE 1/2 TRIP REMAINS OPERATIVE FROM CHANNEL "C" CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "A" TRIP INOPERATIVE	NONE
	B22-N100A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	DIV I HALF OF HPCS HIGH LEVEL SEAL-IN TRIPPED	NONE

INSTRUMENT LINE 1 340° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004A)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIV I HALF OF HPCS HIGH LEVEL SEAL-IN INOPERATIVE	NONE
	B22-N031A AND B22-N031C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 1 LOW LEVEL TRIP INOPERATIVE	ALLOWS IMPROPER OPERATION OF HPCS PUMP DISCHARGE VALVE LOGIC RESET CIRCUIT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 1 LOW LEVEL TRIP INOPERATIVE	NONE
REACTOR RECIRC	B35-N038A	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP A TRIPS AND IS BLOCKED FROM TRANSFER TO LOW SPEED	RECIRC PUMP A IS INOPERATIVE
		PLUGGED	CONSTANT PRESSURE SIGNAL	IF PUMP B IS AT HIGH SPEED AND STOPS, NPSH INTERLOCK INOPERATIVE	NONE
REACTOR FEEDWATER	C34-N005	BROKEN	MINIMUM PRESSURE SIGNAL	C34-R605 HIGH LEVEL RECORDER INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	C34-R605 HIGH LEVEL RECORDER INOPERATIVE	NONE
	C34-N008A	BROKEN	MINIMUM PRESSURE SIGNAL	RECORDER C34-R609 RED PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RECORDER C34-R609 RED PEN AT CONSTANT READING	NONE

INSTRUMENT LINE 1 340° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004A)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N004A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606A WATER LEVEL RECORDER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606A WATER LEVEL RECORDER AT CONSTANT READING; REACTOR FEED-WATER ERROR IN LEVEL FOLLOWING	NONE
	B22-N024A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A1 LOW LEVEL SCRAM INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A1 LOW LEVEL SCRAM INOPERATIVE	NONE

INSTRUMENT LINE 1 340° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004A)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N101A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E51-F045 CLOSURE ON HIGH REACTOR LEVEL INOPERATIVE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON MANUAL INITIATION ONLY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E51-F045 CLOSURE ON HIGH REACTOR LEVEL INOPERATIVE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON MANUAL INITIATION ONLY
	B22-N024A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A1 LOW LEVEL SCRAM TRIP	1/2 REACTOR SCRAM
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A1 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
	B22-N024B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B1 LOW LEVEL SCRAM TRIP	1/2 REACTOR SCRAM
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B1 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
	B22-N038A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	1/3 DIVISION 1 AUTO DEPRESSURIZATION LOGIC TRIP	TWO ADDITIONAL RPV LOW LEVEL TRIPS NEEDED TO ALLOW ADS INITIATION FROM DIVISION 1
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 1 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	ADS INITIATION AVAILABLE FROM DIVISION 2
	B22-N100A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	DIVISION 1 HALF OF HPCS HIGH LEVEL SEAL-IN INOPERATIVE	NONE

INSTRUMENT LINE 2 10° N13 VARIABLE SIGNAL SENSING LINE
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 1 HALF OF HPCS HIGH LEVEL SEAL-IN INOPERATIVE	NONE
REACTOR FEEDWATER	C34-N004A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606A WATER LEVEL RECORDER INOPERATIVE; REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606A WATER LEVEL RECORDER AT CONSTANT READING; REACTOR FEED-WATER ERROR IN LEVEL FOLLOWING	NONE

INSTRUMENT LINE 2 10° N13 VARIABLE SIGNAL SENSING LINE
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N023C	BROKEN	MINIMUM PRESSURE SIGNAL	RPS, CHANNEL "A2" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RPS, CHANNEL "A2" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
	B22-N026C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "C" TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP REMAINS INOPERATIVE FROM CHANNEL "A" CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "C" TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP REMAINS INOPERATIVE FROM CHANNEL "A" CIRCUITRY
	B22-N100B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 HALF OF HPCS HIGH LEVEL SEAL-IN TRIPPED	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 HALF OF HPCS HIGH LEVEL SEAL IN INOPERATIVE	NONE
	B22-N020C	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	GIVES MSIV CLOSURE BYPASS SIGNAL TO SCRAM TRIP LOGIC "A2" ONLY IN SHUTDOWN, REFUEL, AND STARTUP MODE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	REACTOR HIGH PRESSURE TRIP OF MSIV CLOSURE SCRAM BYPASS IS INOPERATIVE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
	B22-N024C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A2 LOW LEVEL SCRAM INOPERATIVE	NONE

INSTRUMENT LINE 3 160° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004C)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A2 LOW LEVEL SCRAM INOPERATIVE	NONE
	B22-N031B AND B22-N031D	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL TRIP INOPERATIVE	ALLOWS IMPROPER OPERATION OF HPCS PUMP DISCHARGE VALVE LOGIC RESET CIRCUIT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL INOPERATIVE	NONE
REACTOR FEEDWATER	C34-N004C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606C WATER LEVEL RECORDER INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606C WATER LEVEL RECORDER AT CONSTANT READING	NONE

INSTRUMENT LINE 3 160° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004C)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N047A AND B22-N047C	BROKEN	LOSE DIVISION 1 HIGH DRYWELL PRESSURE SIGNAL	NONE - BACKED UP BY DIVISION 2	NONE
		PLUGGED	LOSE DIVISION 1 HIGH DRYWELL PRESSURE SIGNAL	NONE	NONE
REACTOR PROTECTION	C72-N002A	BROKEN	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "A1"	NONE - BACKED UP BY B1, A2, AND B2 CIRCUITS	NONE
		PLUGGED	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "A1"	NONE	NONE
	C72-N004	BROKEN	LOSE PRIMARY CONTAINMENT HIGH PRESSURE ALARM	NONE	NONE
		PLUGGED	LOSE PRIMARY CONTAINMENT HIGH PRESSURE ALARM	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
MAIN STEAM	MS-PTD-20A	BROKEN	LOSE TURBINE DEH FEEDBACK CONTROL SIGNAL	LARGER ERROR IN TURBINE OUTPUT POWER CONTROL, BUT DOES NOT SIGNIFICANTLY AFFECT TURBINE OPERATION	NONE
		PLUGGED	LOSE TURBINE DEH FEEDBACK CONTROL SIGNAL	LARGER ERROR IN TURBINE OUTPUT POWER CONTROL, BUT DOES NOT SIGNIFICANTLY AFFECT TURBINE OPERATION	NONE
REACTOR PROTECTION	C72-N003A	BROKEN	FIRST STAGE TURBINE PRESSURE SWITCH WILL NOT OPEN, SENSES 30% POWER	TURBINE CONTROL VALVE FAST CLOSURE, STOP VALVE AND RPT TRIP "A1" BYPASS INOPERATIVE	NONE
		PLUGGED	FIRST STAGE TURBINE PRESSURE SWITCH WILL NOT OPEN, SENSES 30% POWER	NONE	NONE
CONTROL ROD DRIVE HYDRAULICS	C12-N054A	BROKEN	MINIMUM FIRST STAGE TURBINE PRESSURE SIGNAL	ROD SEQUENCE CONTROL INITIATES ROD BLOCK DIVISION 1	NONE
		PLUGGED	CONSTANT FIRST STAGE TURBINE PRESSURE SIGNAL	LOW POWER ROD SEQUENCE CONTROL LOGIC DIVISION 1 INOPERATIVE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
MAIN STEAM	MS-PTD-20B	BROKEN	MINIMUM FIRST STAGE TURBINE PRESSURE SIGNAL	METER MS-P1-20B INOPERATIVE	NONE
		PLUGGED	CONSTANT FIRST STAGE TURBINE PRESSURE SIGNAL	METER PS-P1-20B AT CONSTANT READING	NONE
	MS-PT-20BG	BROKEN	MINIMUM FIRST STAGE PRESSURE INDICATION	INDICATOR MS-P1-20BG INOPERATIVE	NONE
		PLUGGED	CONSTANT FIRST STAGE PRESSURE INDICATION	INDICATOR MS-P1-20BG AT CONSTANT READING	NONE
	MS-DPIS-63	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	MAIN TURBINE TRIPS AT LESS THAN 15 PSID	MAIN TURBINE TRIP
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	NO TRIP CAPABILITY ON LOW DIFFERENTIAL PRESSURE	NONE
REACTOR FEEDWATER	C34-N007	BROKEN	MINIMUM TURBINE STEAM FLOW SIGNAL	RECORDER C34-R609 BLACK PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT TURBINE STEAM FLOW SIGNAL	RECORDER C34-R609 BLACK PEN AT CONSTANT READING	NONE
REACTOR PROTECTION	C72-N003C	BROKEN	FIRST STAGE TURBINE PRESSURE SWITCH WILL NOT OPEN, SENSES 30% POWER	TURBINE CONTROL VALVE FAST CLOSURE, STOP VALVE AND RPT TRIP "A2" BYPASS INOPERATIVE	NONE
		PLUGGED	FIRST STAGE TURBINE PRESSURE SWITCH WILL NOT OPEN, SENSES 30% POWER	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	C72-N003D	BROKEN	FIRST STAGE TURBINE PRESSURE SWITCH WILL NOT OPEN, SENSES 30% POWER	TURBINE CONTROL VALVE FAST CLOSURE, STOP VALVE AND RPT TRIP "B2" BYPASS INOPERATIVE	NONE
CONTROL ROD DRIVE HYDRAULICS	C12-N054B	BROKEN	MINIMUM FIRST STAGE TURBINE PRESSURE SIGNAL	ROD SEQUENCE CONTROL INITIATES ROD BLOCK DIVISION 2	NONE
		PLUGGED	CONSTANT FIRST STAGE TURBINE PRESSURE SIGNAL	LOW POWER ROD SEQUENCE CONTROL LOGIC DIVISION 2 INOPERATIVE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N047B AND B22-N047D	BROKEN	LOSE DIVISION 2 HIGH DRYWELL PRESSURE SIGNAL	NONE - BACKED UP BY DIVISION 1	NONE
		PLUGGED	LOSE DIVISION 2 HIGH DRYWELL PRESSURE SIGNAL	NONE	NONE
REACTOR PROTECTION	C72-N002C	BROKEN	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE	NONE - BACKED UP BY A1, B1, AND A2 CIRCUITS	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
BLEED STREAM	BS-PT-3B3	BROKEN	MINIMUM GLAND SEAL STEAM PRESSURE SIGNAL	LOW GLAND SEAL STEAM PRESSURE ALARM IN CONTROL ROOM	NONE
		PLUGGED	CONSTANT GLAND SEAL STEAM PRESSURE SIGNAL	NONE	NONE
MAIN STEAM	MS-DPIS-63	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	LOSE CAPABILITY TO TRIP MAIN TURBINE ON LOW PRESSURE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	LOSE CAPABILITY TO TRIP MAIN TURBINE ON LOW PRESSURE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N032	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECORDER R613 CORE PLATE DIFF PRESSURE BLACK PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECORDER R613 CORE PLATE DIFF PRESSURE BLACK PEN CONSTANT INDICATION	NONE
	B22-N034 (A THRU W)	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECORDERS R608, R611A,B AND R613 RED PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECORDERS R608, R611A,B AND R613 RED PEN INOPERATIVE	NONE
REACTOR WATER CLEANUP	G33-N037	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECORDER R610 INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECORDER R610 CONSTANT INDICATION	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N027	BROKEN	MAXIMUM REACTOR VESSEL LEVEL SIGNAL	B22-R605 METER INOPERATIVE OFF SCALE, HIGH LEVEL	NONE
		PLUGGED	CONSTANT REACTOR VESSEL LEVEL SIGNAL	B22-R605 METER AT CONSTANT READING	NONE
REACTOR FEEDWATER	C34-N017	BROKEN	MAXIMUM WIDE RANGE REACTOR LEVEL SIGNAL	C34-R608 RECORDER REGISTERS MAXIMUM SIGNAL	NONE
		PLUGGED	CONSTANT WIDE RANGE REACTOR LEVEL SIGNAL	C34-R608 RECORDER REGISTERS CONSTANT SIGNAL	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N048A AND B22-N048C	BROKEN	DIVISION 1 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE - BACKED UP BY DIVISION 2	NONE
		PLUGGED	DIVISION 1 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE	NONE
REACTOR PROTECTION	C72-N002B	BROKEN	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "B1"	NONE - BACKED UP BY A1, A2, AND B2 CIRCUITS	NONE
		PLUGGED	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "B1"	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N048B AND B22-N048D	BROKEN	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE - BACKED UP BY DIVISION 1	NONE
		PLUGGED	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE	NONE
REACTOR PROTECTION	C72-N002D	BROKEN	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "A2"	NONE - BACKED UP BY A1, A2, AND B2 CIRCUITS	NONE
		PLUGGED	LOSE REACTOR SCRAM ON PRIMARY CONTAINMENT HIGH PRESSURE "A2"	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N026D	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC D TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "B" CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION D LOGIC TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "B" CIRCUITRY
	B22-N020D	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	GIVES MSIV CLOSURE BYPASS SIGNAL TO SCRAM TRIP LOGIC "B2" ONLY IN SHUTDOWN, REFUEL, AND STARTUP MODE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	REACTOR HIGH PRESSURE TRIP OF MSIV CLOSURE SCRAM BYPASS IS INOPERATIVE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
	B22-N023D	BROKEN	MINIMUM PRESSURE SIGNAL	RPS CHANNEL "B2" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RPS CHANNEL "B2" HIGH RPV PRESSURE TRIP INOPERATIVE	NONE
	B22-N045C	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS ½ HIGH PRESSURE TRIP; BACKED BY A AND B CIRCUITS	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS ½ HIGH PRESSURE TRIP; BACKED BY A AND B CIRCUITS	NONE

INSTRUMENT LINE 13 200° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004B)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	B22-N045D	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS ½ HIGH PRESSURE TRIP INOPERATIVE; BACKED BY A AND B CIRCUITS	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS ½ HIGH PRESSURE TRIP INOPERATIVE; BACKED BY A AND B CIRCUITS	NONE
	B22-N051B	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	RECORDER R623B RED PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	RECORDER R623B RED PEN CONSTANT READING	NONE
	B22-N036C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL A REMAINS OPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL A REMAINS OPERATIVE	NONE
	B22-N036D	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL B REMAINS OPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL B REMAINS OPERATIVE	NONE

INSTRUMENT LINE 13 200° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004B)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	B22-N037B AND B22-N037D	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	1/2 DIVISION 2 ADS - AND - RCIC LOGIC TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	1/2 DIVISION 2 ADS - AND - RCIC LOGIC INOPERATIVE	NONE
	B22-N044B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR WATER LVL INDICATOR R610 INOPERATIVE (SEE NOTE)	NOTE: THIS INSTRUMENT IS USED ONLY DURING POST ACCIDENT REACTOR SHUTDOWN AND WHEN RECIRC PUMPS ARE SECURED. DURING REACTOR OPERATION INSTRUMENT READS OFF SCALE, HIGH.
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR WATER LVL INDICATOR R610 CONSTANT READING (SEE NOTE)	
	B22-N038B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE
	B22-N024D	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B2 LOW LEVEL SCRAM INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B2 LOW LEVEL SCRAM INOPERATIVE	NONE
	B22-N101B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E51-F045 (HIGH LEVEL) 1/2 TRIP	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E51-F045 INOPERATIVE HIGH LEVEL TRIP	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N004B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606B WATER LEVEL RECORDER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606B WATER LEVEL RECORDER AT CONSTANT READING; REACTOR FEED-WATER ERROR IN LEVEL FOLLOWING	NONE
REACTOR RECIRC	B35-N038C	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP B TRIPS AND IS BLOCKED FROM TRANSFER TO LOW SPEED	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	(IF PUMP A IS AT HIGH SPEED) AND PUMP B STOPS, NPSH INTERLOCK INOPERATIVE	NONE

INSTRUMENT LINE 13 200° N14 REFERENCE LEG (CONDENSING CHAMBER B22-D004B)
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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR HPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N036A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A BKR "3A" ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL C REMAINS OPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A BKR "3A" ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL C REMAINS OPERATIVE	NONE
	B22-N036B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B BKR "3B" ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL D REMAINS OPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B BKR "3B" ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL D REMAINS OPERATIVE	NONE
	B22-N026B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "B" TRIP INOPERATIVE	MAIN STEAM LINE ISOLATION VALVES CLOSURE 1/2 TRIP REMAINS OPERATIVE FROM CHANNEL "D" CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL ISOLATION LOGIC "B" TRIP INOPERATIVE	MAIN STEAM LINE ISOLATION VALVES CLOSURE 1/2 TRIP REMAINS OPERATIVE FROM CHANNEL "D" CIRCUITRY
	B22-N037A AND B22-N037C	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	1/2 DIVISION 1 ADS, RCIC, LPCS LOGIC TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	1/2 DIVISION 1 ADS INOPERATIVE; LPCS LEVEL INOP; RCIC 1/2 LEVEL TRIP INOPERATIVE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	B22-N101A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E41-F045 (HIGH LEVEL) 1/2 TRIP	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RCIC ISOLATION VALVE E41-F045 (HIGH LEVEL) TRIP INOPERATIVE	NONE
	B22-N024B	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR CHANNEL B1 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR CHANNEL B1 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
	B22-N039 (A THRU V)	BROKEN	MINIMUM PRESSURE SIGNAL	SAFETY RELIEF VALVES INITIATION CIRCUIT INOPERATIVE	SAFETY RELIEF VALVES INITIATION INOPERATIVE
		PLUGGED	CONSTANT PRESSURE SIGNAL	SAFETY RELIEF VALVES INITIATION CIRCUIT INOPERATIVE	NONE
	B22-N045A	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP 1A BKR "3A" ATWS HIGH PRESSURE TRIP INOPERATIVE; BACKED BY C AND D CIRCUITS	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RECIRC PUMP 1A BKR "3A" ATWS HIGH PRESSURE TRIP INOPERATIVE; BACKED BY C AND D CIRCUITS	NONE
	B22-N045B	BROKEN	MINIMUM PRESSURE SIGNAL	RECIRC PUMP 1B, BKR "3B" ATWS HIGH PRESSURE TRIP INOPERATIVE; BACKED BY C AND D CIRCUITS	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
		PLUGGED	CONSTANT PRESSURE SIGNAL	RECIRC PUMP 1B, BKR "3B" ATWS HIGH PRESSURE TRIP INOPERATIVE; BACKED BY C AND D CIRCUITS	NONE
	B22-N023B	BROKEN	MINIMUM PRESSURE SIGNAL	RPS TRIP CHANNEL "B1" REACTOR TRIP ON HIGH RPV PRESSURE INOPERATIVE	NONE
		PLUGGED	CONSTANT PRESSURE SIGNAL	RPS TRIP CHANNEL "B1" REACTOR TRIP ON HIGH RPV PRESSURE INOPERATIVE	NONE
	B22-N020B	BROKEN	MINIMUM REACTOR PRESSURE SIGNAL	GIVES MSIV CLOSURE BYPASS SIGNAL TO SCRAM TRIP LOGIC "B1" ONLY IN SHUTDOWN, REFUEL, AND STARTUP MODE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
		PLUGGED	CONSTANT REACTOR PRESSURE SIGNAL	REACTOR HIGH PRESSURE TRIP OF MSIV CLOSURE SCRAM BYPASS IS INOPERATIVE	NONE: REACTOR MODE SWITCH IN "RUN" POSITION BLOCKS THE BYPASS SIGNAL
	B22-N038A	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE	NONE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003A	BROKEN	MAXIMUM STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER AT CONSTANT READING; REACTOR FEED-WATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N008C E31-N008D	BROKEN	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	DIVISION 1 TURBINE STEAM LINE HIGH FLOW DIVISION 2 ISOLATION INITIATED	MAIN STEAM LINE VALVES CLOSURE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
CONTROL ROD DRIVE HYDRAULICS	C12-N008	BROKEN	MAXIMUM DIFFERENTIAL PRESSURE SIGNAL	METER C12-R009 INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	METER C12-R009 AT CONSTANT READING	NONE
	C12-N011	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	METER C12-R005 INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	METER C12-R005 AT CONSTANT READING	NONE
NUCLEAR BOILER	B22-N032	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RECORDER R613 CORE PLATE DIFF PRESSURE BLACK PEN INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECORDER R613 CORE PLATE DIFF PRESSURE BLACK PEN CONSTANT INDICATION	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003A	BROKEN	MINIMUM STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N008A E31-N008B	BROKEN	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	DIVISION 1 TURBINE STEAM LINE HIGH FLOW DIVISION 1 ISOLATION DISABLED, BUT DIVISION 1 ISOLATION IS INTACT	NONE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003A	BROKEN	MAXIMUM STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "A" DIFF PRESSURE SIGNAL	C34-R603A STEAM FLOW METER AT CONSTANT READING; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N008A E31-N008B	BROKEN	INITIATE TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	DIVISION 1 TURBINE STEAM LINE HIGH FLOW DIVISION 1 ISOLATION INITIATED	MAIN STEAM LINE ISOLATION VALVES CLOSURE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003B	BROKEN	MINIMUM STEAM FLOW LINE "B" DIFF PRESSURE SIGNAL	C34-R603B STEAM FLOW METER INOPERATIVE: REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "B" DIFF PRESSURE SIGNAL	C34-R603B STEAM FLOW METER INOPERATIVE: REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N009A E31-N009B	BROKEN	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	DIVISION 1 TURBINE STEAM LINE HIGH FLOW DIVISION 1 ISOLATION DISABLED, BUT DIVISION 2 ISOLATION IS INTACT	NONE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003B	BROKEN	MAXIMUM STEAM FLOW LINE "B" DIFF PRESSURE SIGNAL	C34-R603B STEAM FLOW METER INOPERATIVE REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "B" DIFF PRESSURE SIGNAL	C34-R603B STEAM FLOW METER AT CONSTANT READING; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N009A E31-N009B	BROKEN	INITIATE TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	DIVISION 1 TURBINE STEAM LINE HIGH FLOW DIVISION 1 ISOLATION INITIATED	MAIN STEAM LINE ISOLATION VALVES CLOSURE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 1 ISOLATION SIGNALS	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003C	BROKEN	MINIMUM STEAM FLOW LINE "C" DIFF PRESSURE SIGNAL	C34-R603C STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "C" DIFF PRESSURE SIGNAL	C34-R603C STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N010C E31-N010D	BROKEN	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	DIVISION 2 TURBINE STEAM LINE HIGH FLOW DIVISION 2 ISOLATION DISABLED, BUT DIVISION 1 ISOLATION IS INTACT	NONE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR HPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003C	BROKEN	MAXIMUM STEAM FLOW LINE "C" DIFF PRESSURE SIGNAL	C34-R603C STEAM FLOW METER INOPERATIVE REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "C" DIFF PRESSURE SIGNAL	C34-R603C STEAM FLOW METER AT CONSTANT READING; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N010C E31-N010D	BROKEN	INITIATE TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	DIVISION 2 TURBINE STEAM LINE HIGH FLOW DIVISION 2 ISOLATION INITIATED	MAIN STEAM LINE ISOLATION VALVES CLOSURE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003D	BROKEN	MINIMUM STEAM FLOW LINE "D" DIFF PRESSURE SIGNAL	C34-R603D STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER DECREASED FLOW
		PLUGGED	CONSTANT STEAM LINE FLOW "D" DIFF PRESSURE SIGNAL	NONE	NONE
LEAK DETECTION	E31-N011C E31-N011D	BROKEN	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	DIVISION 2 TURBINE STEAM LINE FLOW DIVISION 2 ISOLATION DISABLED, BUT DIVISION 1 ISOLATION IS INTACT	NONE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	NONE	NONE

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
REACTOR FEEDWATER	C34-N003D	BROKEN	MAXIMUM STEAM FLOW LINE "D" DIFF PRESSURE SIGNAL	C34-R603D STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER DECREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT STEAM FLOW LINE "D" DIFF PRESSURE SIGNAL	C34-R603D STEAM FLOW METER INOPERATIVE; REACTOR FEEDWATER ERROR IN STEAM FLOW FOLLOWING	NONE
LEAK DETECTION	E31-N011C E31-N010D	BROKEN	INITIATE TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	DIVISION 2 TURBINE STEAM LINE HIGH FLOW DIVISION 2 ISOLATION INITIATED	MAIN STEAM LINE ISOLATION VALVES CLOSURE
		PLUGGED	LOSS OF TWO OF FOUR HIGH FLOW MSIV DIVISION 2 ISOLATION SIGNALS	NONE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR HPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N100B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 HALF OF HPCS HIGH LEVEL SEAL IN INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 HALF OF HPCS HIGH LEVEL SEAL IN INOPERATIVE	NONE
	B22-N024C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A2 LOW LEVEL SCRAM TRIP	1/2 REACTOR SCRAM
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL A2 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
	B22-N024D	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B2 LOW LEVEL SCRAM TRIP	1/2 REACTOR SCRAM
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RPS CHANNEL B2 LOW LEVEL SCRAM TRIP INOPERATIVE	NONE
	B22-N038B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	1/3 DIVISION 2 AUTO DEPRESSURIZATION LOGIC TRIP	TWO ADDITIONAL RPV LOW LEVEL TRIPS NEEDED TO ALLOW ADS INITIATION FROM DIVISION 2
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	ADS INITIATION AVAILABLE FROM DIVISION 1
	B22-N101B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON HIGH REACTOR LEVEL INOPERATIVE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON MANUAL INITIATION ONLY

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON HIGH REACTOR LEVEL INOPERATIVE	RCIC ISOLATION VALVE E51-F045 CLOSURE ON MANUAL INITIATION ONLY
NUCLEAR BOILER	B22-N027	BROKEN	MINIMUM REACTOR VESSEL LEVEL SIGNAL	B22-R605 METER INOPERATIVE OFF SCALE, LOW LEVEL	NONE
		PLUGGED	CONSTANT REACTOR VESSEL LEVEL SIGNAL	B22-R605 METER AT CONSTANT READING	NONE
REACTOR FEEDWATER	C34-N004B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606B WATER LEVEL RECORDER INOPERATIVE; REACTOR FEEDWATER INCREASED FLOW	FEEDWATER INCREASED FLOW
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606B WATER LEVEL RECORDER AT CONSTANT READING; REACTOR FEED-WATER ERROR IN LEVEL FOLLOWING	NONE
	C34-N004C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	C34-R606C WATER LEVEL RECORDER INOPERATIVE	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	C34-R606C WATER LEVEL RECORDER AT CONSTANT READING	NONE
	C34-N017	BROKEN	MINIMUM WIDE RANGE REACTOR LEVEL SIGNAL	C34-R608 RECORDER REGISTERS MINIMUM SIGNAL	NONE
		PLUGGED	CONSTANT WIDE RANGE REACTOR LEVEL SIGNAL	C34-R608 RECORDER REGISTERS CONSTANT SIGNAL	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	B22-N031A AND B22-N031C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL TRIP	PREVENTS HIGH WATER LEVEL SEAL-IN OF HPCS PUMP DISCHARGE VALVE CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL INOPERATIVE	NONE
	B22-N026A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC A TRIP	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC A TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "C" CIRCUITRY

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
	B22-N031B AND B22-N031D	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL TRIP	PREVENTS HIGH WATER LEVEL SEAL-IN OF HPCS PUMP DISCHARGE VALVE CIRCUITRY
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR HIGH PRESSURE CORE SPRAY DIVISION 2 LOW LEVEL INOPERATIVE	NONE
	B22-N026C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC C TRIP	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC C TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "A" CIRCUITRY

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N026B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC "B" TRIP	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC "B" TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "D" CIRCUITRY
	B22-N036A	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2 TRIPS	RECIRC PUMPS A AND B AT LOW SPEED OPERATION
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL C REMAINS OPERATIVE	NONE
	B22-N036B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2 TRIPS	RECIRC PUMPS A AND B AT LOW SPEED OPERATION
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2, 1/2 TRIP INOPERATIVE - CHANNEL D REMAINS OPERATIVE	NONE
	B22-N037A AND B22-N037C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC PARTIAL TRIP; LPCS INITIATED; RCIC INITIATED	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE; LPCS LEVEL TRIP INOPERATIVE	NONE

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HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N026D	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC "D" TRIP	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR LOW LOW WATER LEVEL MAIN STEAM ISOLATION LOGIC "D" TRIP INOPERATIVE	MAIN STEAM ISOLATION VALVES CLOSURE 1/2 TRIP STILL OPERATIVE FROM CHANNEL "B" CIRCUITRY
	B22-N036C	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2 TRIP	RECIRC PUMPS A AND B AT LOW SPEED OPERATION
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP A, BKR 3A ATWS LOW LEVEL 2 TRIP INOPERATIVE	NONE
	B22-N036D	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2 TRIP	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	RECIRC PUMP B, BKR 3B ATWS LOW LEVEL 2 TRIP INOPERATIVE	NONE
	B22-N037B AND B22-N037D	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	1/3 DIVISION 2 AUTO DEPRESSURIZATION LOGIC TRIP	NONE
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	DIVISION 2 AUTO DEPRESSURIZATION LOGIC INOPERATIVE	NONE

INSTRUMENT LINE 29 200° N12 VARIABLE SIGNAL SENSING LINE
PAGE 1 OF 1

HANFORD COMMON SENSOR FAILURE TABLE

SYSTEM ID	COMMON TAP SENSOR MPL	FAILURE TYPE (BROKEN OR PLUGGED)	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECT
NUCLEAR BOILER	B22-N044B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	REACTOR WATER LEVEL INDICATOR R610 SHOWS MINIMUM LEVEL	NOTE: THIS INSTRUMENT IS USED ONLY DURING REACTOR SHUTDOWN AND WHEN RECIRC PUMPS ARE SECURED. A BROKEN INSTRUMENT LINE WILL GIVE A ZERO OR MINIMUM VESSEL WATER LEVEL READING.
		PLUGGED	CONSTANT DIFFERENTIAL PRESSURE SIGNAL	REACTOR WATER LEVEL INDICATOR R610 CONSTANT	NONE
	B22-N033B	BROKEN	MINIMUM DIFFERENTIAL PRESSURE SIGNAL	JET PUMP FLOW CIRCUITRY INOPERATIVE	NONE
		PLUGGED	ERRATIC DIFFERENTIAL PRESSURE SIGNAL	JET PUMP FLOW CIRCUITRY INOPERATIVE	NONE

INSTRUMENT LINE 30 VARIABLE SIGNAL SENSING LINE (HIGH PRESSURE CONNECTION JET PUMP) (B22-N033B HIGH SIDE).
PAGE 1 OF 1

Response:

CONTROL SYSTEMS FAILURES EVALUATION REPORT FOR WNP-2 NUCLEAR POWER STATION

1.0 OBJECT

A

This document constitutes:

- An analysis in response to the NRC concern that the failures of power sources which provide power or electrical signals to multiple control systems could result in consequences outside the bounds of the WNP-2 Final Safety Analysis Report (FSAR) Chapter 15 analyses and beyond the capability of operators or safety systems.

- A positive demonstration that adequate review and analysis has been performed to ensure that despite such failures the WNP-2 FSAR Chapter 15 analyses are bounding, and no consequences beyond the capability of operators on safety systems would result.

A comprehensive approach was developed to analyze the control systems capable of affecting reactor water level, pressure or power in the WNP-2 plant.

This report with its attachments was prepared by the General Electric Company (GE) for the Washington Public Power Supply System (WPPSS). Significant technical contribution was provided from Burns & Roe, Inc (BRI).

2.0 CONCLUSIONS

This report, supplemented by the existing FSAR Chapter 15 analyses, documents an evaluation of the WNP-2 Nuclear Power Station for system interaction by electrical means. The conclusion of this evaluation is that previously reported limits of minimum critical power ratio (MCPR), peak vessel and main steamline pressures, and peak fuel cladding temperature for the expected operational occurrence category of events would not be exceeded as a result of common power source failures. Although new transient category events have been postulated as a result of this study, the net effects have been positively determined to be less severe than those of the original, conservative, Chapter 15 events. It should be noted that this study uses the event - consequence logic of the Chapter 15 analysis, but starts the logic chain from a specific source (e.g., a single bus failure) rather than a system condition (e.g., feedwater runout). By approaching the study in this manner, a great deal of confidence can be placed in the study conclusions. The approach validated itself by uncovering previously unanalyzed interactions. The soundness of the total plant design is demonstrated by its being tolerant of these interactions.

3.0 ANALYSIS METHODOLOGY

The division of responsibility in performing this analysis is as listed below:

TASKS	ASSIGNED TO
• DEFINE BUS STRUCTURE	BRI
• DEFINE CONTROL SYSTEMS	BRI & GE
• IDENTIFY LOADS & EFFECTS DUE TO BUS LOSS	BRI & GE
• DETERMINE CRITICAL LOADS	BRI & GE
• SUMMARIZE CRITICAL LOADS	GE
• ANALYZE COMBINED EFFECTS	BRI & GE
• COMPARE RESULTS TO CHAPTER 15	GE
• ANALYZE EXCEPTIONS	GE
• MODIFY/AUGMENT CHAPTER 15 IF NECESSARY	GE

3.1 DEFINE BUS STRUCTURE

This step established the potential sources for system interaction by electrical means. Bus trees (see Figure 1) were constructed using one-line diagram information to show power distribution from the highest level not previously analyzed (the highest level previously analyzed is the loss of offsite power) down to the lowest level of plant distribution (Motor Control Center's, instrument busses, etc.).

3.2 DEFINE CONTROL SYSTEMS

This step established the scope of control systems to be analyzed. A complete list of WNP-2 plant systems and subsystems was compiled. This list was then reviewed to confine the analysis to only those systems with the potential to affect reactor pressure, water level, or power.

To ensure that all necessary systems were considered, certain elimination criteria were established that documented the justification for not analysing that system further. If there was any uncertainty as to whether or not a system met the criteria, it was retained for further analysis. Those systems that met the criteria for elimination were removed from the complete system list to produce the final list of control systems for analysis. This final list, reviewed by GE and BRI, is as follows:

3.2 DEFINE CONTROL SYSTEMS (Continued)

SYSTEMS	SYSTEMS
Feedwater Control System	Hydrogen Seal System
Nuclear Boiler System	Generator Cooling
Reactor Recirculation	Air Removal
CRD Hydraulic Control System	Generator Hydrogen & CO2 Purge
Feedwater Turbine	Main Generator Excitation
Neutron Monitoring	Off Gas
Process Radiation Monitor System	Circulating Water
Area Radiation Monitor System	Service Water
Reactor Water Cleanup	RB Closed Cooling Water System
Main Steam	TB Closed Cooling Water System
Condensate	Compressed Air
Turbine Control	Low Conductivity Drains
Lube Oil P/O TG, RFW	Primary Containment
Moisture Extraction	Instrumentation
Exhaust Steam	Heater Drains
Bleed (Extraction) Steam	Miscellaneous Drains
Heater Vents	Sealing Steam
Feedwater	Plant Service Water
Service Air	

3.3 IDENTIFY LOADS

This step provided the data base necessary to determine which electrical loads were to be analyzed. A set of load tables comprised of all electrical loads of the control systems in Paragraph 3.2 was assembled by GE and BRI, each providing information on the loads within their respective scope of supply.

Each load was listed with its power bus source, its unique Master Parts List system number, circuit description, and failure mode on power loss with primary and secondary effects. A sample of a load table is included in Appendix C.

3.4 DETERMINE CRITICAL LOADS

This step constituted the first analytical step in sorting out the loads with the potential for initiating events affecting reactor pressure, water level and power. The elimination criteria established earlier for the system list was refined in Appendix B for use in the component review for determining which individual loads were worthy of further consideration or could be deleted from the analysis. If there was any uncertainty as to whether or not a load met the elimination criteria it was retained for further analysis. The code associated with an elimination criterion was assigned to each eliminated load in the load tables discussed in the previous step.

3.5 SUMMARIZE CRITICAL LOADS

The non-critical loads were deleted from the load tables, and the remaining loads are grouped together by their common power busses. These tables are shown in Appendix A.

3.6 ANALYZE COMBINED EFFECTS

This step provided the basis for determining the worst case combinations of load and system failures that are credible events considering the interconnection by power distribution. Using the combined effects at the lowest level bus as a starting point, the next higher bus was postulated to fail and the total effects at that level analyzed. This process was continued up to the highest bus level. The combined effects at the lowest bus level are included in the Appendix A tables. Worst case effects at the higher levels are summarized in Section 4. The combined effects at intermediate bus levels less severe than their associated higher bus combined effects were analyzed but not included in Section 4. Combined effects at intermediate bus levels which were more severe than their associated higher bus combined failures were analyzed and included in section 4.

3.7 COMPARE RESULTS TO CHAPTER 15

This step evaluated the consequences of all potential system interaction events initiated by electrical means. A review of the information in the Appendix A tables was conducted in the course of developing the bus summaries of Section 4. At each bus level of the combined effects analysis, the review evaluated the effects as being bounded by a specific Chapter 15 transient analysis or not. Section 4 includes these evaluations considering the worst case effects.

3.8 ANALYZE EXCEPTIONS

The purpose of this step was to determine if a failure scenario not directly covered by a Chapter 15 transient analysis would be bounded by one with more severe effects. The cases of this type are included in the Section 4 descriptions of worst case failures.

3.9 MODIFY/AUGMENT CHAPTER 15 IF NECESSARY

This step was not necessary in the WNP-2 analysis.

4.0 BUS LOSS SUMMARY RESULTS AND CHAPTER 15 COMPARISON

4.1 AC BUS

4.1.1 SM-1 (4.16KV)

The loss of this bus causes reactor feedwater pump 1A, condensate pump 1A, condensate booster pump 2A, and circulating water pump 1A to be inoperative, and the air removal system to be isolated.

There is a partial loss in feedwater heating since the extraction steam motor-operated valves to the feedwater heaters fail open (as-is) on loss of motive power, but steam is partially bypassed to the condenser via the dump valves which also fail open.

There is also a slow loss in the main condenser vacuum due to the isolation of the air removal system and loss of one circulating water pump.

Concurrent with the feedwater pump 1A trip and a reactor vessel low water level, the reactor recirculation flow runback reduces reactor power to about 68% NBR to stay within the remaining feedwater capacity and avoid scram.

If no operator action were taken, a main turbine trip due to low condenser vacuum would occur more than ninety minutes after the power bus loss and at a reduced reactor power level.

This event is bounded by the turbine trip already analyzed in FSAR Chapter 15 and bounded by the loss of lower bus, PP-1B-A.

4.1.1.1 PP-1B-A (120V)

The loss of this bus causes the reactor feedwater pump turbine 1A to be inoperative. There is also a partial loss of feedwater heating, and a slow loss of main condenser vacuum due to the isolation of the air removal system, leading to a main turbine trip.

The worst case reduction in feedwater temperature has been determined to be considerably less than 83°F.

Concurrent with the feedwater pump trip and a low reactor vessel water level, the reactor recirculation flow runback occurs which is intended to reduce reactor power to about 68% NBR. (Within the remaining feedwater capability). The partial reduction of feedwater heating will gradually raise power to about 75%. If the power exceeds feedwater capability, low level scram will occur and this event is bounded by the loss of all feedwater event already analysed in Chapter #15.

Due to the inaccessibility during power operation of the valve that isolates the air removal system the main condenser vacuum loss continues until the main turbine trips and the reactor shuts down.

If no operator action were taken, a main turbine trip due to low condenser vacuum would occur more than a hundred minutes after the power bus loss and at a reduced reactor power level.

This event is bounded by the turbine trip transient already analyzed in FSAR Chapter 15.

4.1.2 SM-2 (4.16KV)

The loss of this bus causes reactor feedwater pump 1B, condensate pump 1B, condensate booster pump 2B, and circulating water pump 1B to be inoperative.

There is also a partial loss of feedwater heating due to the extraction steam to the heaters partially bypassed to the main condenser, and a possible slow loss of main condenser vacuum due to the loss of ejector/condenser "B", leading to a main turbine trip. If ejector/condenser "A" is in use at the time, or if it is manually started, the loss of ejector/condenser "B" would not result in a main turbine trip.

The worst case reduction in feedwater temperature has been calculated to be less than 33°F.

Concurrent to reactor feedwater pump turbine 1A trip and low reactor vessel water level, the reactor recirculation flow runback is initiated which is intended to reduce reactor power to about 68% NBR. The effect of the slightly colder feedwater is to raise this final power slightly but probably still within the feedwater capability.

In the unlikely event of a main turbine trip (more than a hundred minutes after the power bus loss, and at reduced reactor power), the effects of this event are similar to those of the loss of SM-1.

4.1.2.1 PP-2P-A The loss of this bus causes a trip of feedwater pump 1B, a partial loss of feedwater heating, a possible slow loss of main condenser vacuum, due to the loss of ejector/condenser "B". A potential delayed (~100 min.) main turbine trip due to low condenser vacuum.

The worst case reduction in feedwater temperature has been calculated to be considerably less than 83°F. Concurrent with the feedwater pump trip and a low reactor vessel water level, the reactor recirculation flow run back will reduce reactor power to 68% NBR (which is within the remaining feedwater capability).

The partial reduction of feedwater heating will gradually raise power to about 75%. If the power exceeds feedwater capability. Low level scram will occur and this event is bounded by the loss of all feedwater event already analysed in Chapter 15.

Since the reactor is operating at reduced power, should a main turbine trip occur, the event is bounded by the turbine trip transient already analyzed in FSAR Chapter 15.

4.1.3 SM-3

The loss of this bus causes condensate pump 1C, condensate booster pump 2C, and circulating water pump 1C to be inoperative. There is also a partial loss of feedwater heating and a potential delayed (>90 min.) main turbine trip due to low condenser vacuum.

The worst case reduction in feedwater heating is less severe than that due to the loss of power at a lower bus because the motor-operated extraction steam valves fail-open on loss of motive power; this reduction in temperature has been calculated to be no more than 23°F.

The condensate pump 1C trip causes the remaining condensate booster pumps 2A and 2B to trip on low suction head, and causes both feedwater pumps to trip.

The reactor scrams on low water level. The scram occurs rapidly and precedes the main turbine trip and the effects of the loss of feedwater heating on the reactor.

This event is bounded by the loss of feedwater transient already analyzed in FSAR Chapter 15 and by the loss of the lower bus, PP-3A-A.

4.1.3.1 PP-3A-A

The loss of this bus causes a partial loss of feedwater heating, a loss of the main turbine oil temperature control valve, and a potential main turbine trip due to vibration.

The worst case reduction in feedwater temperature has been calculated to be no more than 51°F. This reduction in feedwater heating will increase reactor power by less than eleven percent nuclear boiler rated (NBR) power.

The worst case scenario is the unlikely event of a loss of feedwater heating and a delayed main turbine trip.

A computer analysis was performed to determine the reactor parameters as a consequence of a main turbine trip at approximately 111 percent of initial steady state power (turbine trip at ~116 NBR power). The results yielded a delta critical power ratio (ΔCPR) of less than 0.15, and a maximum vessel pressure of 1177 psia which are less severe than the consequences of the loss of feedwater heater, manual flow control, and the feedwater controller failure-max. demand at high power transients analyzed in FSAR Chapter 15. This event is then, although previously not analyzed for the WNP-2 plant, still bounded by existing analyses.

4.2 <u>DC BUS</u>

4.2.1 S1-7

The loss of this bus causes a trip of both reactor feedwater pump turbines and a potential delayed trip of the main turbine.

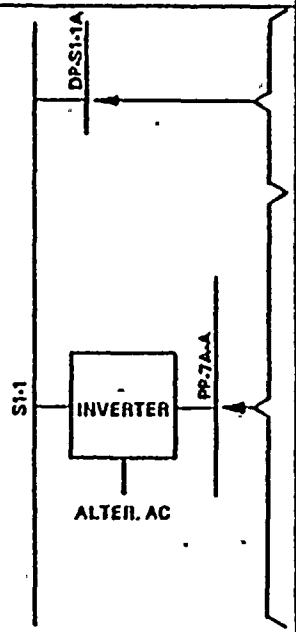
Following the trip of both feedwater turbines, the reactor vessel water level lowers and the reactor scrams on the low water level.

The scram occurs rapidly and precedes the would-be main turbine trip.

This event is bounded by the loss of feedwater transient already analyzed in FSAR Chapter 15.

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS



DC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
	REACTOR FEEDWATER	REACTOR VESSEL HIGH WATER LEVEL, RFP TRIP CHANNEL "C"	CHANNEL "C" TRIPS ON LOSS OF POWER	NONE, HIGH WATER LEVEL TRIP FUNCTION REQUIRES 2 OF 3 CHANNELS TO TRIP RFPT'S AND MAIN TURBINE.	NONE, CHANNEL "C" INDICATES TRIPPED.
	CONDENSER	COND-PCV-5 VALVE	COND-PCV-5 OPENS	RFW FLOW REDUCED 5000 GPM. DECREASE IN CONDENSER VACUUM	RPV WATER LEVEL 3 SCRAM
	REACTOR FEEDWATER	RELAY TT-X-1A RFPT TRIP INTERLOCK TO REACTOR RECIRC SYSTEM	RELAY TT-X-1A DEENERGIZES PROVIDING RFPT TRIP SIGNAL TO SYSTEM	NONE - BOTH RFPT TRIP AND RPV LOW WATER LEVEL SIGNALS REQUIRED FOR RECIRC RUNBACK	
	STEAM LEAK DETECTION	TEMPERATURE SWITCHES E31-N604AB, N615AB	DISABLE HIGH TEMPERATURE INPUT TO MSIV TRIP	NONE	
	REACTOR FEEDWATER	RFW-FCV-2A	RFW-FCV-2A FULL OPEN	RPV WATER LEVEL 3 SCRAM	

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

DC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
S1-2 DP-S1-2A	REACTOR FEEDWATER	REACTOR VESSEL HIGH WATER LEVEL, RFP TRIP CHANNEL "B"	CHANNEL "B" TRIPS ON LOSS OF POWER	NONE, HIGH WATER LEVEL TRIP FUNCTION REQUIRES 2 OF 3 CHANNELS TO TRIP RFPT'S AND MAIN TURBINE	NONE, CHANNEL "B" INDICATES TRIPPED
INVERTER PP-8A-A ALTER. AC	REACTOR FEEDWATER	RFW-FCV-2B CIRCUIT ~~RFW LOCKUP CIRCUIT~~ RELAY TT-X-1B, RFPT TRIP INTERLOCK TO REACTOR RECIRC. SYSTEM	FCV-2B OPENS ~~STOP RFP'S IF CONTROL SIGNAL LOST~~ RELAY TT-X-1B DEENERGIZES PROVIDING RFPT TRIP SIGNAL TO REACTOR RECIRC. SYSTEM	SCRAM AT RPV LOW LEVEL 3 ~~SCRAM AT RPV LOW LEVEL 3 IF RFP CONTROL SIGNAL LOST~~ NONE-BOTH RFPT TRIP & RPV LOW WATER LEVEL SIGNALS REQUIRED FOR RECIRC. RUN BACK	REACTOR SCRAM AT RPV LOW LEVEL 3
	STEAM LEAK DETECTION	TEMPERATURE SWITCHES E31-N815CD, N604CD	DISABLE HIGH TEMPERATURE INPUT TO MSIV TRIP	NONE	NONE

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

DC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
S1-7 DP-S1-1C	REACTOR FEEDWATER	RFP TURBINE "A" SOLENOID TRIP CIRCUIT	RFP TURBINE "A" TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC RUN-BACK TO 68% POWER
S1-7 DP-S1-1B	AIR REMOVAL	AR-V-1 VALVE AR-V-2 VALVE	LOSE CONDENSER VACUUM SLOWLY	MAIN TURBINE TRIP ≅ 100 MINUTES	MAIN TURBINE TRIP ON LOW CONDENSER VACUUM ≅ 100 MINUTES
S1-7 DP-S1-2C	REACTOR FEEDWATER	RFP TURBINE "B" SOLENOID TRIP CIRCUIT	RFP TURBINE "B" TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC RUN-BACK TO 68% POWER
	MAIN TURBINE CONTROL	VOLTAGE REGULATOR CONTROL CIRCUIT	MAIN TURBINE TRIP ON LARGE LOAD CHANGE	NO LOAD FOLLOWING	

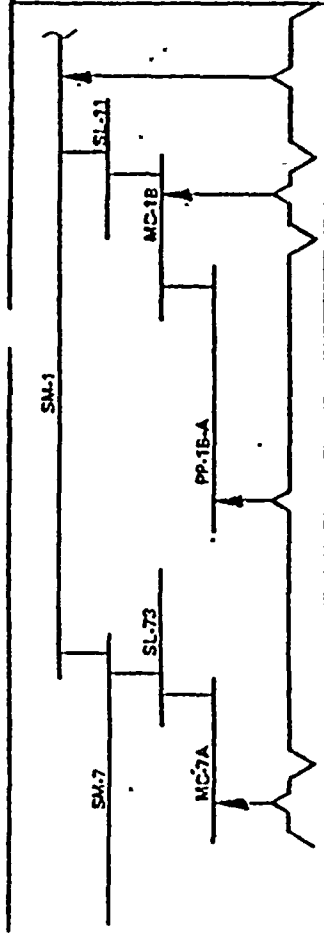
APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
6.9 KV SWGR BUS 6	REACTOR RECIRC	RECIRC PUMP C001B	PUMP C001B TRIP TO LOW SPEED	REACTOR LOW POWER LEVEL	LOW POWER LEVEL
6.9 KV SWGR BUS 6 6.9 KV SWGR BUS 5	REACTOR RECIRC	RECIRC PUMP C001A	PUMP C001A TRIP TO LOW SPEED	REACTOR LOW POWER LEVEL	LOW POWER LEVEL
6.9 KV SWGR BUS 5 SL-53 MC-5D	OFFGAS	F051A VALVE F051B VALVE	LOSE CONDENSER VACUUM SLOWLY.	MAIN TURBINE TRIP ≈ 100 MINUTES	MAIN TURBINE TRIP ON LOW CONDENSER VACUUM ≈ 100 MINUTES
6.9 KV SWGR BUS 5 MC-5D PP-5D-A	OFFGAS	REGEN. BLOWERS	LOSE CONDENSER VACUUM SLOWLY	MAIN TURBINE TRIP ≈ 100 MINUTES	MAIN TURBINE TRIP ON LOW CONDENSER VACUUM ≈ 100 MINUTES

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS



AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
	REACTOR FEEDWATER	COND. PUMP 1A COND. BOOSTER PUMP 2A	PUMPS INOPERATIVE	DECREASE IN FLOW TO SUCTION OF RFP'S	SEE SECTION 4.0.
	CIRC WATER	CIRC. WATER PUMP 1A	PUMP INOPERATIVE	DECREASE IN COOLING FLOW TO MAIN CONDENSER	
	REACTOR RECIRC	LFMG SET S001A	LFMG S001A INOPERATIVE	NONE AT FULL POWER	
	REACTOR FEEDWATER	RFP-TNG-1A (TURNING GEAR) RFP-MOP-1A (MAIN OIL PUMP) RFP-AOP-1A (AUX OIL PUMP)	HOT TNG - RFP 1A TRIP STOP MOP - RFP 1A TRIP STOP AOP - RFP 1A TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER
	REACTOR FEEDWATER	991X-A (TURBINE SPEED SW)	RFP - 1A TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER
	AIR REMOVAL	AR-SPV-2A AR-SPV-2B	LOW CONDENSER VACUUM DUE TO AIR EJECTOR "A" LOSS	MAIN TURBINE TRIP IN 103 MINUTES	DECREASE FEEDWATER TEMPERATURE DECREASE CONDENSER VACUUM MAIN TURBINE TRIP IN 103 MINUTES
		AR-SPV-1-1 AR-SPV-1-2	LOW CONDENSER VACUUM DUE TO AIR REMOVAL SYSTEM ISOLATED	MAIN TURBINE TRIP IN 103 MINUTES	
	BLEED STEAM	BS-V-39A VALVE BS-V-35A VALVE BS-V-64 VALVE	BS-V-39A OPEN BS-V-35A OPEN BS-V-64 OPEN	NONE	
	HEATER DRAINS	BS-V-4A VALVE BS-V-5A VALVE BS-V-6A VALVE	BS-V-4A CLOSES BS-V-5A CLOSES BS-V-6A CLOSES	DECREASE IN FEEDWATER TEMPERATURE AND CONDENSER VACUUM	
	HEATER VENTS	HV-V-29A VALVE	HV-V-29A OPENS	NONE	
	SEALING STEAM	SS-V-12A VALVE	SS-V-12A OPENS	NONE	
	OFFGAS	OG-V-129A VALVE	OG-V-129A OPENS	NONE	
	COMPRESSED AIR	~~INSTR.~~ AIR COMPRESSOR 1A COMP. 1B ON BUS SM-3, COMP. 1C ON BUS SM-2	COMPRESSOR 1A INOPERATIVE	NONE - COMPRESSORS 1B & 1C MEET REQUIREMENTS	NONE

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
SM-7, SL-71, MC-7C, PP-7A-Z	REACTOR RECIRC	SUBLOOP HYD. PWR UNIT D003A (SEE MC-3D-A)	IF OTHER LOOP NOT AVAILABLE FCV 60A LOCKS UP	NO LOAD FOLLOWING	NO LOAD FOLLOWING
	REACTOR FEEDWATER	RFPT-GOV-1A	RFW PUMP 1A INOPERATIVE	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER
		FEEDWATER SYSTEM CONTROL CIRCUITRY	FEEDWATER PUMPS AT ~~LAST~~ IDLE SPEED	NO LOAD FOLLOWING WITH REDUCED POWER	RPV HIGH WATER LEVEL TRIP
		REACTOR VESSEL HIGH WATER LEVEL, RFP TRIP CHANNEL "A"	CHANNEL "A" TRIPS ON LOSS OF POWER	NONE, HIGH LEVEL TRIP FUNCTION REQUIRES 2 OF 3 CHANNELS TO TRIP RFPT'S AND MAIN TURBINE	CHANNEL "A" INDICATES TRIPPED
	REACTOR RECIRC	LOOP A & B FLOW CONTROLLERS	LOCKUP OF FC VALVES 60A & 60B	NO LOAD FOLLOWING	
		FLUX CONTROLLER FLUX ESTIMATOR	SHIFT CONTROL TO MANUAL MODE	MANUAL LOAD FOLLOWING	

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
SM-2	REACTOR FEEDWATER	COND. PUMP 1B	PUMPS INOPERATIVE	DECREASE IN FLOW TO SUCTION OF RFP'S	SEE SECTION 4.0
		COND. BOOSTER PUMP 2B			
	CIRC. WATER	CIRC. WATER PUMP 1B		DECREASE IN CONDENSER COOLING FLOW	
MC-2P	COMPRESSED AIR	~~INSTR.~~ AIR COMPRESSOR 1C	COMPRESSOR 1C INOPERATIVE (COMP. 1A ON BUS SM-1, COMP. 1B ON BUS SM-3)	NONE, COMPRESSORS 1A & 1B MEET REQUIREMENTS	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68 % POWER
	REACTOR FEEDWATER	RFP-TNG-1B (TURNING GEAR) RFP-MOP-1B (MAIN OIL PUMP) RFP-AOP-1B (AUX OIL PUMP)	HOT TNG-RFP1B TRIP STOP MOP - RFP 1B TRIP STOP AOP - RFP 1B TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER	
SL-21	REACTOR FEEDWATER	(TURBINE SPEED SW) 99 T1X-1B	RFP-1B TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER
	MAIN STEAM	MS-V-142B VALVE	MS-V-142B OPENS	NONE	DECREASE IN FEEDWATER FLOW
	BLEED STEAM	BS-V-44B VALVE BS-V-45B VALVE BS-V-116B VALVE	BS-V-44B OPENS BS-V-45B OPENS BS-V-116B OPENS	NONE	DECREASE IN FEEDWATER TEMPERATURE DECREASE IN CONDENSER VACUUM
PP-2P-A	HEATER VENTS	HV-V-29B VALVE	HV-V-29B OPENS	NONE	MAIN TURBINE TRIP IN 103 MINUTES
	AIR REMOVAL	AR-SPV-2C,D	LOSE CONDENSER VACUUM SLOWLY	MAIN TURBINE TRIP IN 103 MINUTES	
	BLEED STEAM	BS-V-39B VALVE BS-V-68 VALVE	BS-V-39B OPENS BS-V-68 OPENS	NONE	
	MAIN STEAM	MS-V-133B VALVE MS-V-137B VALVE	MS-V-133B OPENS MS-V-137B OPENS		
	HEATER DRAINS	BS-V-4B, 5B, 6B VALVE	BS-V-4B, 5B, 6B CLOSES	DECREASE IN FEEDWATER TEMPERATURE AND CONDENSER VACUUM	

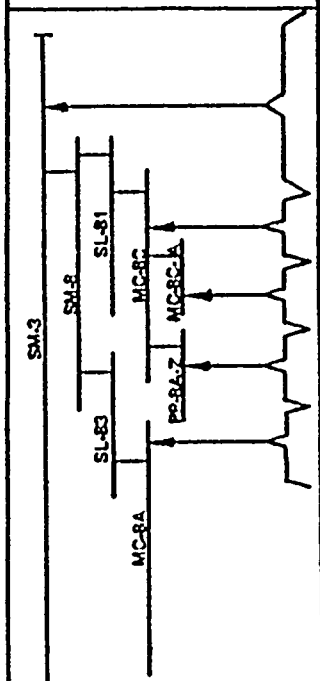
APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
SL-21, PP-2P-A	OFFGAS	OG-V-129B VALVE	OG-V-129B OPENS	NONE	NONE
	SEALING STEAM	SS-V-12B SS-V-16	SS-V-12B OPENS SS-V-16 OPENS	NONE.	
	MAIN STEAM	MS-V-125B	MS-V-125B OPEN	NONE	DECREASE IN FEEDWATER TEMPERATURE. DECREASE IN CONDENSER VACUUM
	BLEED STEAM	BS-V-56 VALVE BS-V-31 VALVE BS-V-52B VALVE	BS-V-56 OPENS BS-V-31 OPENS BS-V-52B OPENS	NONE	
	SEALING STEAM	SS-V-30 VALVE	SS-V-30 OPENS	NONE	
MC-2R, MC-2R-A, PP-2R-A-B	BLEED STEAM	BS-V-1B VALVE BS-V-8D BS-V-8E BS-V-1C BS-V-10D BS-V-12B BS-V-2C2 BS-V-8F BS-V-10E BS-V-2C1 BS-V-2C2 BS-V-3A2 BS-V-3C1 BS-V-10C BS-V-3C2 BS-V-4C BS-V-5B BS-V-2B1 BS-V-2B2 BS-V-3B1 BS-V-3B2 BS-V-4B BS-V-11F BS-V-12C BS-V-4C PLUS OTHER BS VALVES	BS VALVES FAIL CLOSED OR OPEN PER VALVE TYPE	DECREASE IN FEEDWATER TEMPERATURE AND CONDENSER VACUUM	

APPENDIX A

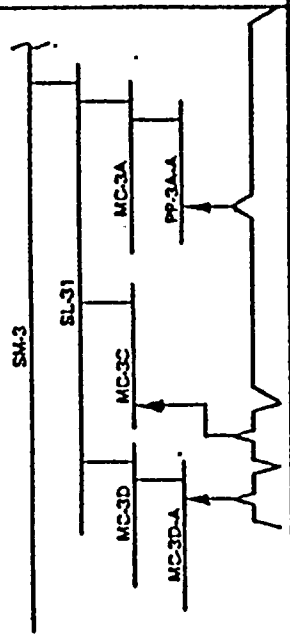
HANFORD CONTROL SYSTEM FAILURE ANALYSIS



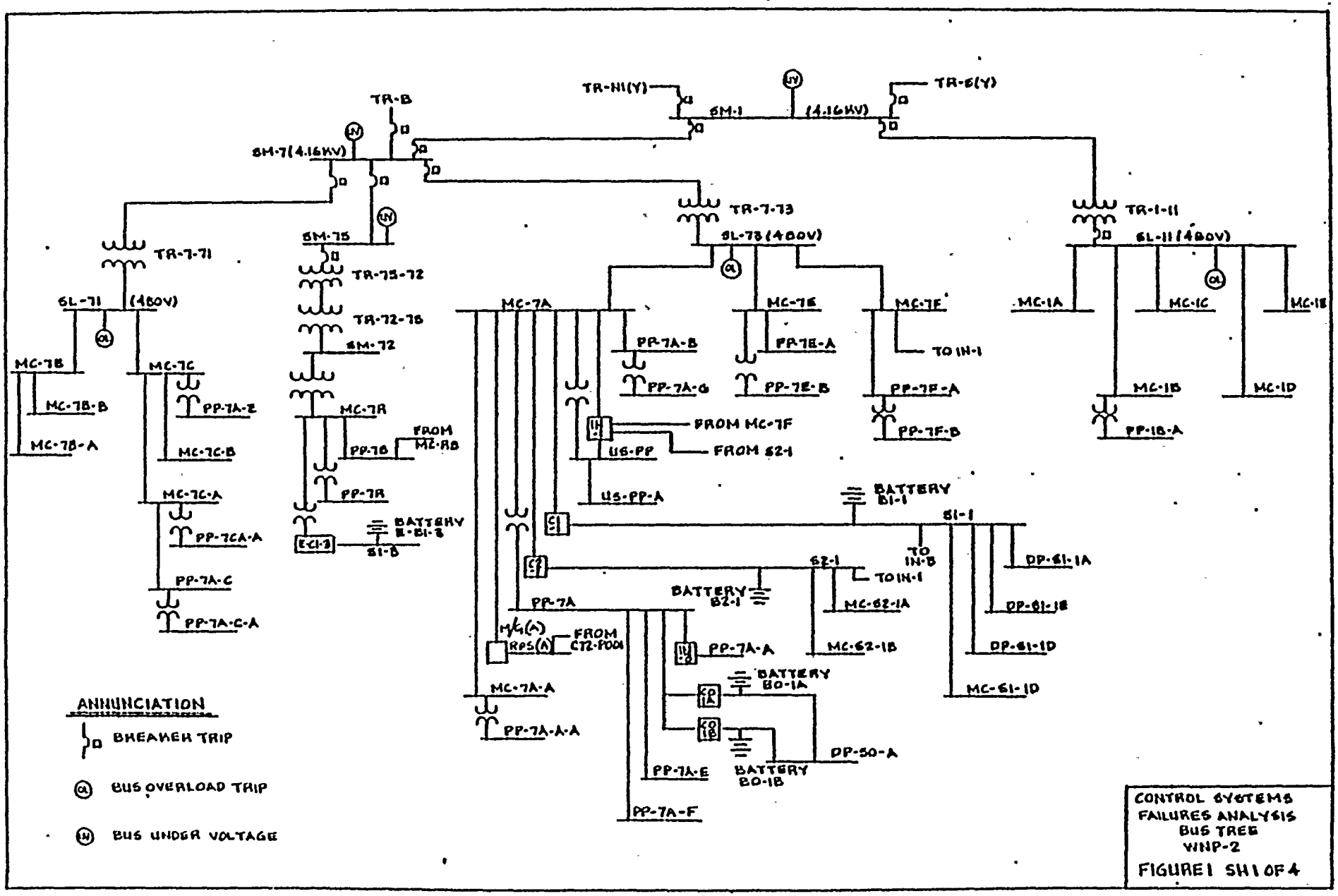
AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
	REACTOR FEEDWATER	COND. PUMP 1C	PUMPS INOPERATIVE	DECREASE IN FLOW TO SUCTION OF RFP'S	SEE SECTION 4.0
		COND. BOOSTER PUMP 2C			
	CIRC. WATER	CIRC. PUMP 1C		DECREASE IN CONDENSER COOLING FLOW	
	REACTOR RECIRC	LFMG SET S001B	LFMG SET S001B INOPERATIVE	NONE AT FULL POWER	
	REACTOR RECIRC	SUBLOOP HYD PWR UNIT D003B	IF OTHER LOOP NOT AVAILABLE FCV-60B LOCKS UP	NO LOAD FOLLOWING	NO LOAD FOLLOWING
	REACTOR RECIRC	SUBLOOP HYD PWR UNIT D003B	IF OTHER LOOP NOT AVAILABLE FCV-60B LOCKS UP	NO LOAD FOLLOWING	NO LOAD FOLLOWING
	REACTOR FEEDWATER	REACTOR FEEDWATER TURBINE GOVERNOR (RFPT-GOV-1B)	REACTOR FEEDWATER TURBINE "B" TRIP	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN BACK TO 68% POWER	RPV WATER LEVEL LOWER AND REACTOR RECIRC. RUN-BACK TO 68% POWER
	COMPRESSED AIR	~~INSTR.~~ AIR COMPRESSOR 1B (COMP. 1A BUS ON SM-1, COMP. 1C BUS ON SM-2)	COMPRESSOR 1B INOPERATIVE	NONE, COMPRESSORS 1A & 1C MEET REQUIREMENTS	NONE

APPENDIX A

HANFORD CONTROL SYSTEM FAILURE ANALYSIS

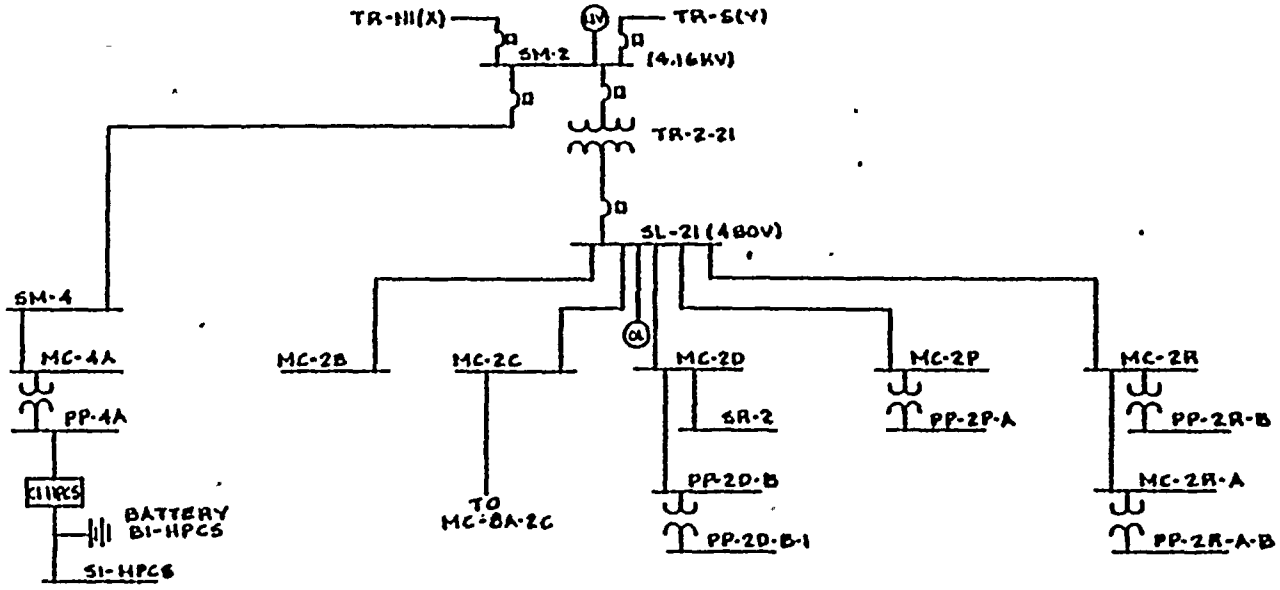


AC BUS	SYSTEM	COMPONENT DESCRIPTION	PRIMARY EFFECT	SECONDARY EFFECT	COMBINED EFFECTS
	BLEED STEAM	BS V-8A, -8B BS-V-10A BS-V-10B BS-V-13A BS DV-5A BS DV-6A BS DV-2A1 BS DV-2A2 BS DV-3A1 BS DV-4A BS V-27 BS-V-48 BS-V-52B BS-V-52A PLUS OTHER BS VALVES	BS-V-8A, B CLOSED IF FLOW LOST BS-V-10A CLOSED IF FLOW LOST BS-V-10B CLOSED BS-V-13A CLOSED BS DV-5A OPEN BS DV-6A OPEN BS DV-2A1 OPEN BS DV-2A2 OPEN BS DV-3A1 OPEN BS DV-4A OPEN BS-V-27 OPEN BS-V-48 OPEN BS-V-52B OPEN BS-V-52A OPEN	DECREASE FEEDWATER TEMPERATURE AND CONDENSER VACUUM	MAIN TURBINE TRIP ON HIGH OIL TEMPERATURE DECREASE IN FEEDWATER TEMPERATURE DECREASE IN CONDENSER VACUUM
	TURBINE SERVICE WATER	MAIN TURBINE OIL TEMPERATURE CONTROL VALVE	TSW-TCV-8 CLOSED	MAIN TURBINE TRIP ON HIGH OIL TEMPERATURE	
	OFFGAS	OG-V-125A OG-V-140A	DECREASE IN CONDENSER VACUUM	DECREASE IN CONDENSER VACUUM	DECREASE IN CONDENSER VACUUM
	REACTOR RECIRC.	SUBLOOP HYD PWR UNIT A D003A	IF OTHER SUBLOOP NOT AVAILABLE, FCV 60A LOCKS UP	NO LOAD FOLLOWING	NO LOAD FOLLOWING



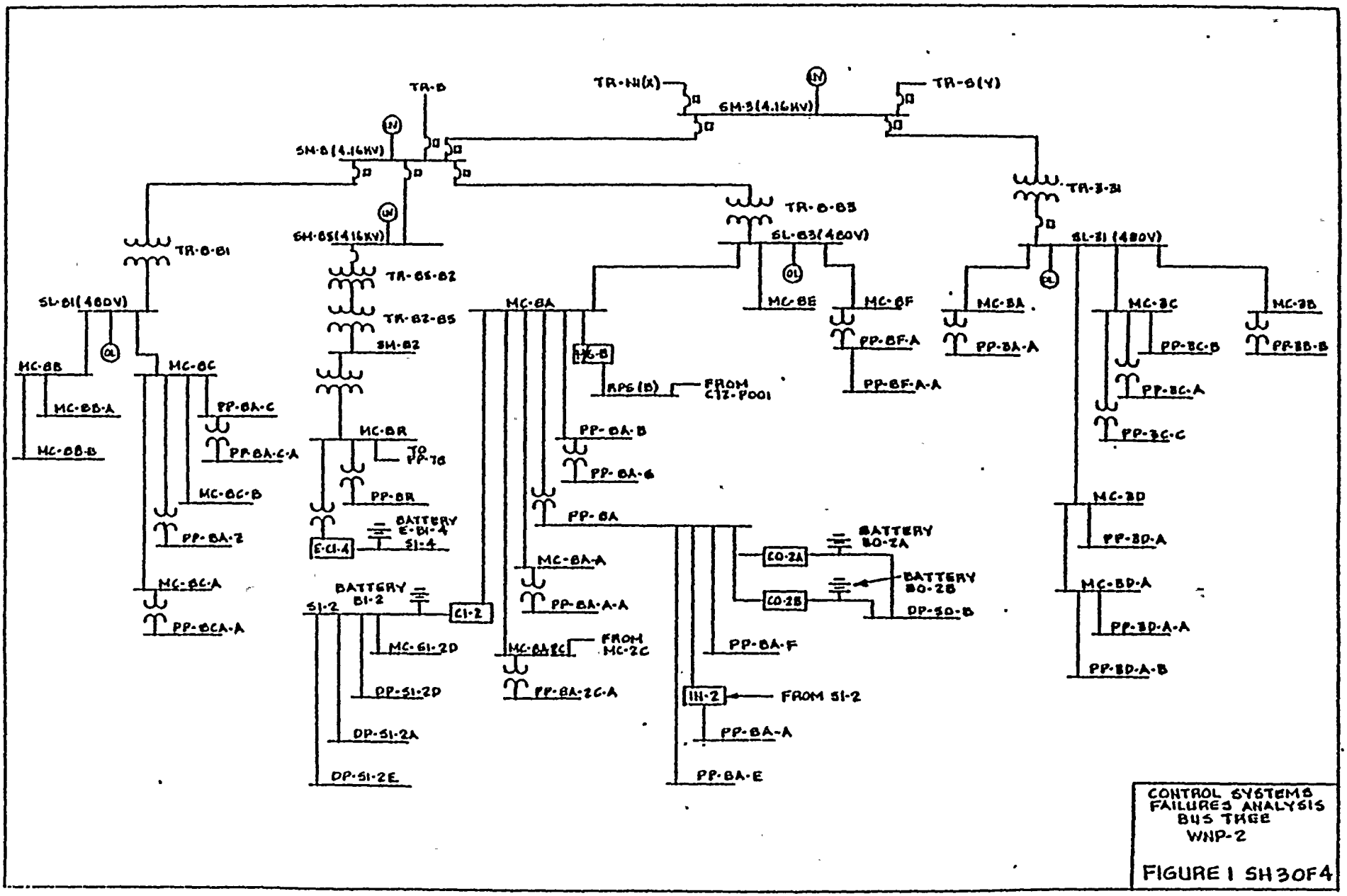
CONTROL SYSTEMS
FAILURES ANALYSIS
BUS TREE
WNP-2

FIGURE 1 SH 1 OF 4



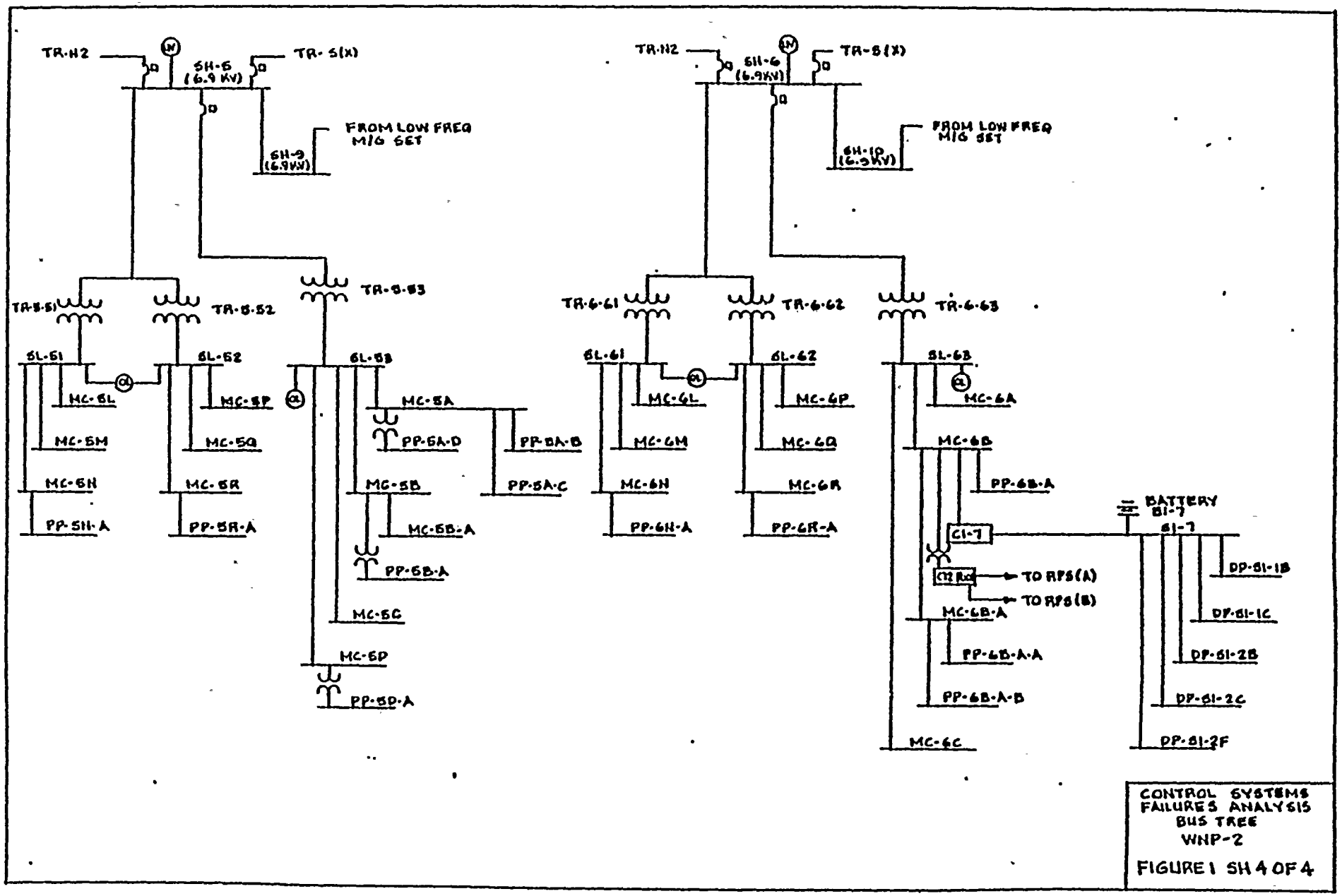
CONTROL SYSTEMS
FAILURES ANALYSIS
BUS TREE
WNP-2

FIGURE 1 SH2 OF 4



CONTROL SYSTEMS
FAILURES ANALYSIS
BUS TREE
WNP-2

FIGURE 1 SH 3 OF 4



CONTROL SYSTEMS FAILURES ANALYSIS
BUS TREE
WNP-2

FIGURE 1 SH 4 OF 4

APPENDIX B

ELIMINATION CRITERIA

Elimination Criterion	Basis
N1	Components whose failure effects are clearly bounded by a dominant failure effect on the same bus can be eliminated by inspection. An example would be the loss of several trips such as feedwater turbine overspeed trip on the same bus as the solenoid that controls all remote trips. The solenoid loss is clearly the dominant effect. Also in the case of identical components, only one of the components on that bus need be listed.
N2	Instrumentation with no direct or indirect controlling function or passive input (such as a permissive) into control logic. Instrumentation and other dedicated inputs to the process computer, as well as the computer itself, may be excluded. Operator actions as a result of indications are not considered control functions for the control systems failure analysis.
N3	Control systems and controlled components (pumps, valves) which have no direct or indirect interaction with reactor operation/parameters. Examples are communications, most unit heaters and controls, lighting controls, ventilation control systems for exterior buildings, machine shop equipment, refueling or maintenance equipment controls, etc.
N4	Control systems and controlled components (pumps, valves) that do interact or interface with reactor operating systems but which cannot affect the reactor parameters (water level, pressure or reactivity) either directly or indirectly. Examples are : some offgas components, area radiation monitors. Valves that fail as is and in a normal full open or close position are also in this category.
N5	Systems which are not used during normal power operation. For example, eliminate start-up, shutdown or refueling systems not used during normal operation.
N6	Some lube oil pumps are powered from AC busses but have a back-up pump powered from a DC source. Since a single electrical failure cannot disable the lube oil function these components can be eliminated from the analysis.
Y	Requires further analysis.

* In some cases more than one of these criteria may apply.

POWER BUS (AE DESIGNATION)	SYSTEM (INCL. MPL#)	SYSTEM CONTROL AND INSTRUMENTATION LOADS ON BUS	GENERAL EFFECTS: LIMITATIONS ON THE SYS.'S CAPABILITY TO PERFORM ITS PRINCIPAL FUNCTION DUE TO LOSS OF BUS	SPECIFIC EFFECTS OF BUS LOSS TO SYSTEM: EFFECT ON SYSTEM SUBFUNCTIONS	EFFECTS ON OTHER SYSTEMS	** CODE	EFFECTS (WITHIN 10 MIN ON REACTOR WATER LEVEL, PRESSURE OR CPR	INPUTS REQUIRED FROM OTHER SYSTEMS AND EFFECT ON LOSS OF INPUT
Power Supply 399 in BD-GII (PP-8A-A) (CKT-33)	RFW (Reactor Feedwater B22)	Loop 04-A51 RFW-PT-1B PI-1B SRU-2 A0102	None	Indicator on BD-A & process computer indicate min. pressure	None N2	D	None	RFW-P-1B discharge pressure indication lost in control room.
		Loop 04-A53 RFW-FT-2B SQRT-2B SRU-8 FIC-2B E/P-2B	RFW-FCV-2B will go full open, by passing feedwater to main condenser feedpumps will increase to 115% flow to try to maintain feedwater flow to vessel	Low flow indication and signal to RFW-FIC-2B on BD-A causing min flow air to RFW-FCU-2B: (fully opening valve) H620-504.2	Reactor Vessel level will drop slowly, operator must take action to lower reactor power to prevent scram at Level 3	A	RPV level will drop	High condenser level annunciated in control room (Cond-LS-2H).
		Loop 04-T52 RFW-DPT-3B DPI-3B SRU-56	None	Indicator on BD-T indicates min. diff. pressure	None N2	D	None	ΔP across HP heater B indication lost.

APPENDIX C

REFERENCES:

FSAR 10.4, Table 10.4-2
H504, Rev. 36
H620/504-2, Rev. 1
H634 04-A51/2
H634 04-A53/3
H634 04-T52/0

**Code Classification for Effects on Reactor Parameters:
"A" - Immediate (<1 minute) and Direct
"B" - Immediate but Indirect
"C" - Effect is Delayed
"D" - No Effect on Reactor Parameters (<10 minutes)

hjr/C06294-44*

8307050004

WNP-2
NUREG 0588 ENVIRONMENTAL EQUIPMENT QUALIFICATION REPORT

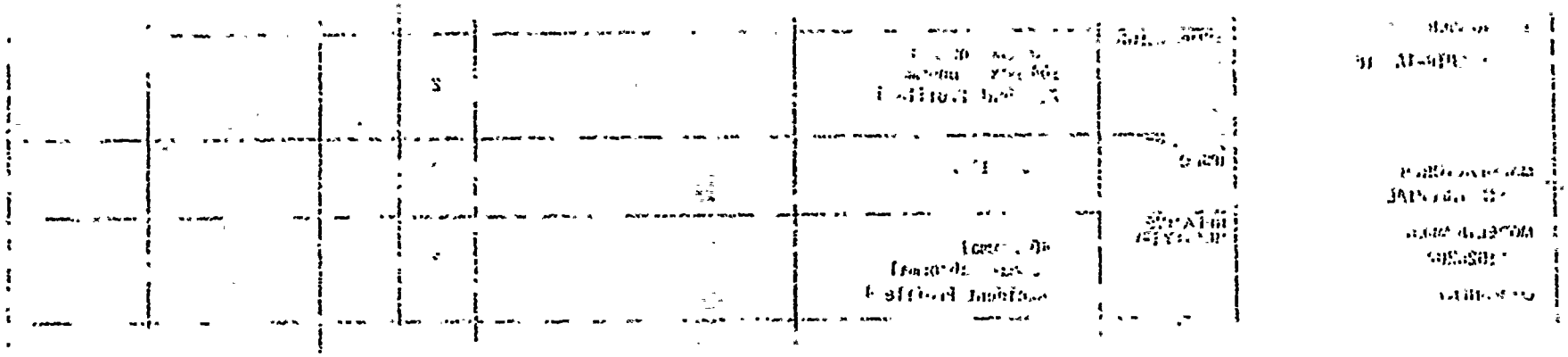
Volume 2

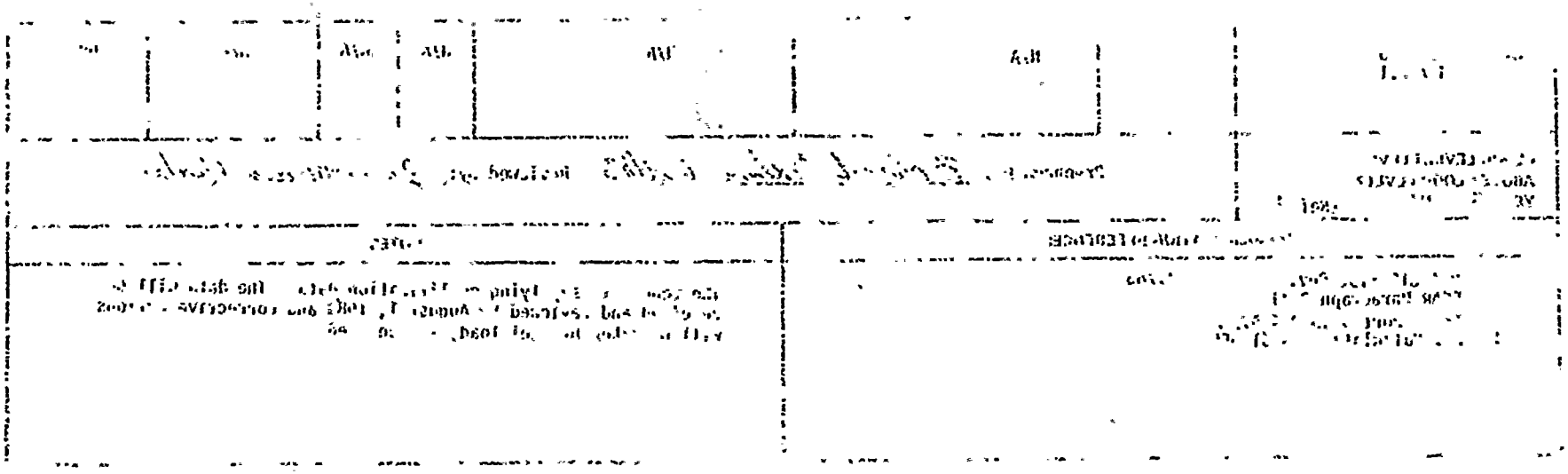
July 1983

Washington Public Power Supply System
Richland, Washington 99352

APPENDIX C

WNP-2 EQUIPMENT QUALIFICATION REPORTS





WPPSS

QID#045002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-CNTR-1A, 1B MANUFACTURER ITE IMPERIAL MODEL NUMBER A102D202 COMPONENT Contactor FUNCTION/SERVICE Contactor for CAC-EHC-1A, 1B LOCATION: BLDG R ELEVATION 577 COLUMN M.8/7.0 M.7/7.1	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4		2			
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-572 F 4. BRI Calculation #5.51.055	1. The vendor is supplying qualification data. The data will be received and reviewed by August 1, 1983 and corrective actions will be taken by fuel load, if required.

WP-1081

WPPSS QID #109007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

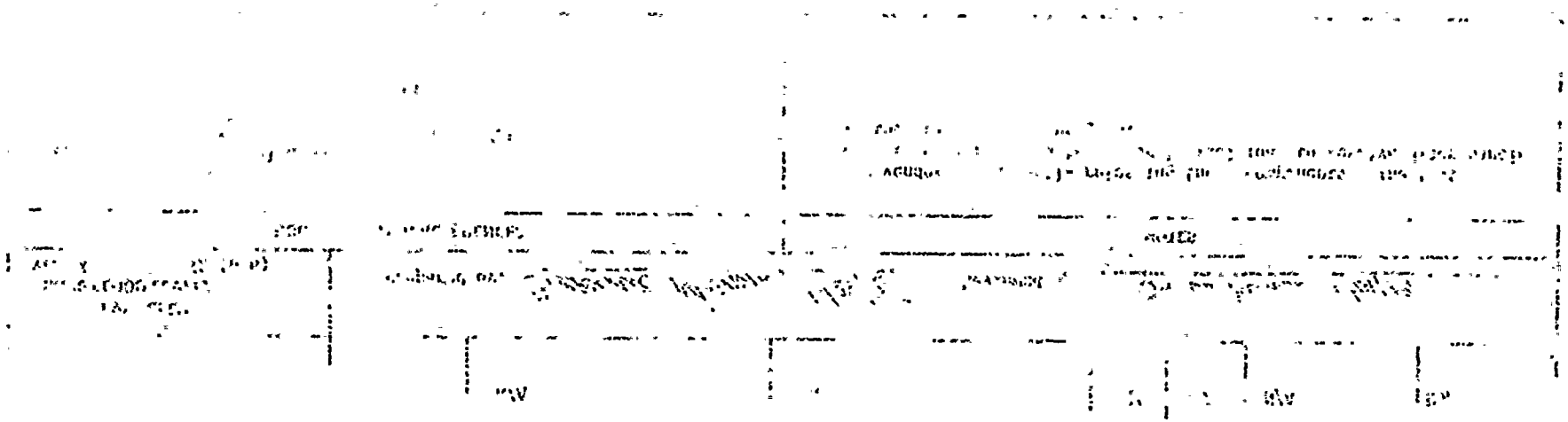
EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-EHC-1A, B MANUFACTURER Chromalox MODEL NUMBER DWG#B393-. 146225-000 COMPONENT Heater FUNCTION/SERVICE Preheater for HR-1A, 1B LOCATION: BLDG R ELEVATION 580 COLUMN M7/6.6, M7/7.4	OPERATING TIME	6 months	Equivalent To >6 months	1	4,5	Sequential Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	1700(Ambient temp. + energized coils)	2	4	Sequential Test	None
	PRESSURE (PSIA)	14.7	85	2	4	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	1.0×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Engineering Analysis, Sequential Test	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

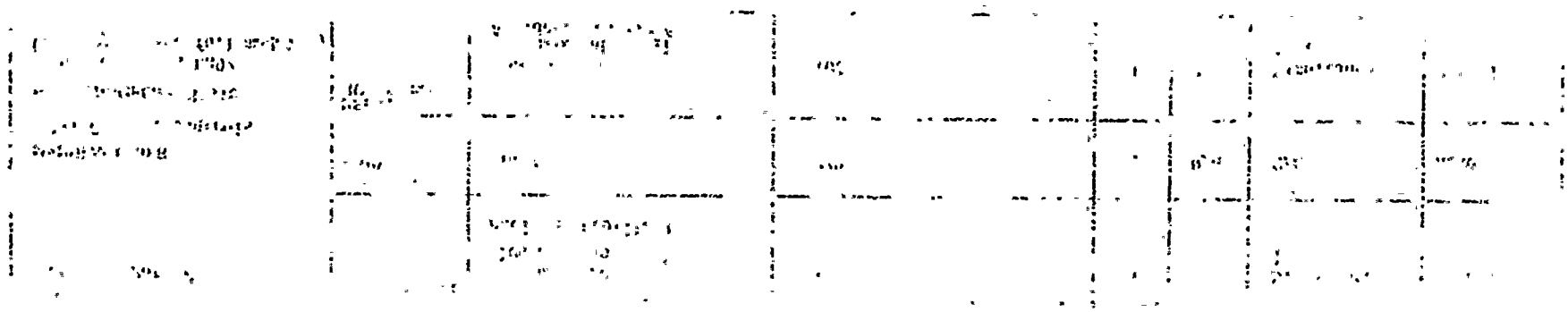
FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Nahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572F 4. Westinghouse Test Report WCAP 7709-L, Supplements 1-7 5. QID File #109007 6. BRI Calculation #5.51.055	Qualified.

WP-1081





WPPSS QID #110001, 2, 4

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71, 42A
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-EHO-Note 2	OPERATING TIME	6 months	Equivalent to > 6 months	5	3	Simultaneous Test	Note 1
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	150	1	3	Simultaneous Test	Note 1
MANUFACTURER ITT-General Controls	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
MODEL NUMBER - Basic NH91 & NH95 & NH92 (See Note 3 for full model #)	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident profile 4	100	1	3	Simultaneous Test	Note 1
COMPONENT Electro-Hydraulic Operator	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
FUNCTION/SERVICE Operate FCV (3 phase)	RADIATION (RAD)	1.7×10^6	3.9×10^7	2	3	Sequential Test	Note 1
	AGING	40 years	10.6 years	1	3, 4	Sequential Test, Engineering Analysis	Note 1
LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (See Note 2)	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Note 6)

Prepared By: Behzad Mahini 6/24/83 Reviewed By: James Means 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 311
2. EDS Study 0740-004-471E
3. MCC Powers #377-80.010 with Appendices A-D.
4. Calculation QID 110001
5. BRI CIE list, REV 8, 6/1/83
6. BRI Calc. #5.51.055

NOTES

1. The vendor is currently retesting these components. The test results will be evaluated prior to fuel load to resolve discrepancies in the original test program.

WP-1081

WPPSS QID #110001, 2, 4

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-71, 42 PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

EPN	Elevation	Column
CAC-EHO-FCV/1A	575	L.9/5.3
EHO-FCV/1B	565	J.6/6.7
EHO-FCV/2A	558	M.2/7.1
EHO-FCV/2B	563	M.4/6.6
EHO-FCV/3A	494	M.8/4.4
EHO-FCV/3B	480	J.0/7.4
EHO-FCV/4A	493	M.2/7.8
EHO-FCV/4B	494	N.0/6.0
EHO-FCV/5A	572	M.6/6.5
EHO-FCV/5B	573	M.5/7.5
EHO-FCV/6A	572	M.6/6.5
EHO-FCV/6B	573	M.5/7.5
EHO-TCV/4A	573	M.5/6.6
EHO-TCV/4B	573	M.5/7.4
EHO- V/1A	573	M.5/6.6
EHO- V/1B	573	M.5/7.4
EHO- V/2A	573	M.5/6.6
EHO- V/2B	573	M.5/7.4
EHO- V/3A	573	M.5/6.6
EHO- V/3B	573	M.5/7.4

3.

QID	EPN	Model
110001	CAC-EHO-FCV/6A	NH92
	TCV/4A	NH92H9970F3L29
	TCV/4B	NH92H9970F3L29
110002	CAC-EHO-V/1A	NH95H2670F3L2
	-V/1B	NH95H2670F3L2
110004	CAC-EHO-V/3A	NH95H1670F3L3
	-V/3B	NH95H1670F3L3
	-FCV/1A	NH91J4002F2L18
	-FCV/1B	NH91J4002F2L18
	-FCV/2A	NH91J4002F2L18
	-FCV/2B	NH91J4002F2L18
	-FCV/3A	NH91
	-FCV/3B	NH91
	-FCV/4A	NH91J4002F2L18
	-FCV/4B	NH91J4002F2L18
	-FCV/5A	NH91H4070F3L16
	-FCV/5B	NH91H4070F3L16
	-FCV/6B	NH91H4070F3L16
	-V/2A	NH91H2070F3L2
	-V/2B	NH91H2070F3L2

WP-1083

Prepared by: Bekard Mahini 6/24/83 Reviewed by: Arnie Morris 6/24/83

WPPSS QID #156004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-FT-5A, B -6A, B -7A, B MANUFACTURER Barton MODEL NUMBER 386 COMPONENT Differential Pressure Transmitter FUNCTION/SERVICE FT-5A, B: FT for Scrubber 1A, B Ser. Water Inlet FT-6A, B: FT to CAC-FC-67A, B FT-7A, B: FT to CAC-FIC-67A, B LOCATION: BLDG R ELEVATION 578(5),575,576(7B) COLUMN M.3/6.8, M.3/7.5 M.5/6.8, M.5/7.3 M.3/6.6, M.3/7.4	OPERATING TIME	6 months	Equivalent to >6 months	5	4	Eng. Analysis & Operating Experience	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	286	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	74.7	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100%	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	4.8×10^7	2	7	Separate Test	None
	AGING	40 years	8 years	1	4	Operating Experience & Engineering Analysis	None Note 1
	ACCURACY	0.5%	0.5%	1	3,4	Simultaneous Test And Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Behzad Mikani 6-24-83 Reviewed by: James Means

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Report No. 0740-004-572F
3. Westinghouse Test Report WCAP 7410-L, dated 12/70, Volume I of II
4. QID File 209002
5. BRI CIE list, REV 8, 6/1/83
6. BRI Calculation #5.51.055

NOTES

1. A preventive maintenance/surveillance program is being implemented to extend the qualified life.

Qualified.

WP-1081

WPPSS QID #209002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: #2808-71

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-LT-1A, B MANUFACTURER ITT Barton MODEL NUMBER 386 COMPONENT Differential Pressure Transmitter FUNCTION/SERVICE LTs for MS-1A,1B LOCATION: BLDG R ELEVATION 574' COLUMN M.3/6.8 M.3/7.5	OPERATING TIME	6 months	Equivalent to >6 months	5	4	Engineering Analysis and Operating Experience	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	286	1	3	Simultaneous Test Operating Experience	None
	PRESSURE (PSIA)	14.7	74.7	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100%	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	4.8×10^7	2	4	Separate Test	None
	AGING	40 years	8 years	1	4	Operating Experience, Engineering Analysis	None Note 1
	ACCURACY	0.5%	0.5%	1	3,4	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by Behzad Mahini 6/24/83 Reviewed by: James Moore 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Report No. 0740-004-572F 3. Westinghouse Test Report WCAP 7410-L, dated 12/70, Volume I of II 4. QID File #209002 5. BRI CIE list, REV 8, 6/1/83 6. BRI Calc. #5.51.055	1. A preventive maintenance/surveillance program is being implemented to extend the qualified life. Qualified

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WPPSS QID #213048

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

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PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmospheric Control TAG NUMBER CAC-M-FN/1A, 1B	OPERATING TIME	6 months	Equivalent to 6 months	1	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident profile 4	410	2	4	Simultaneous Test Engineering Analysis	None
MANUFACTURER Westinghouse	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
MODEL NUMBER Style No. 75D42473 COMPONENT Fan Motor	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident profile 4	100	2	4	Sequential Test	None
FUNCTION/SERVICE Fan motors for FN-1A, 1B	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	1.0×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION 572 COLUMN M5/6.6 M5/7.4	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by Behzad Mahini 6/24/83 Reviewed by: James Moreno 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Para. 3.11 3. EDS Report 0740-004-572F 4. QID# 213017 5. BRI Calc. #5.51.055	Qualified.

WP-1081

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmospheric Control TAG NUMBER CAC-MO-11, 2 13, 4 15, 6 17, 8 MANUFACTURER Limitorque MODEL NUMBER SMB-000-5/056A COMPONENT Porter Peerless Motor Operator DC Motor/Class H Ins. FUNCTION/SERVICE Operate CAC Valves LOCATION: BLDG R ELEVATION (See Note 1) COLUMN	OPERATING TIME	6 months	Equivalent to 6 months	5	3,4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident profile 4	100%	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	1×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years+	1	3,4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mehini 6/24/83 Reviewed by: James Ivans 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Study 0740-004-471E (worst case)
3. Limitorque Report B0009, 4/30/76
4. Applicability calculations in QID 221001
5. BRI CIE list, REV 8, 6/1/83
6. BRI Calculation #5.51.055

NOTES

Qualfied.	Tag Number	Elevation	Column
1.	CAC-MO-2	558	M.1/7.1
	-4	493	M.3/8.0
	-6	575	L.7/5.0
	-8	491	M.7/4.5
	-11	560	M.2/6.5
	-13	487	N.0/6.0
	-15	565	J.6/6.7
	-17	494	J /7.4

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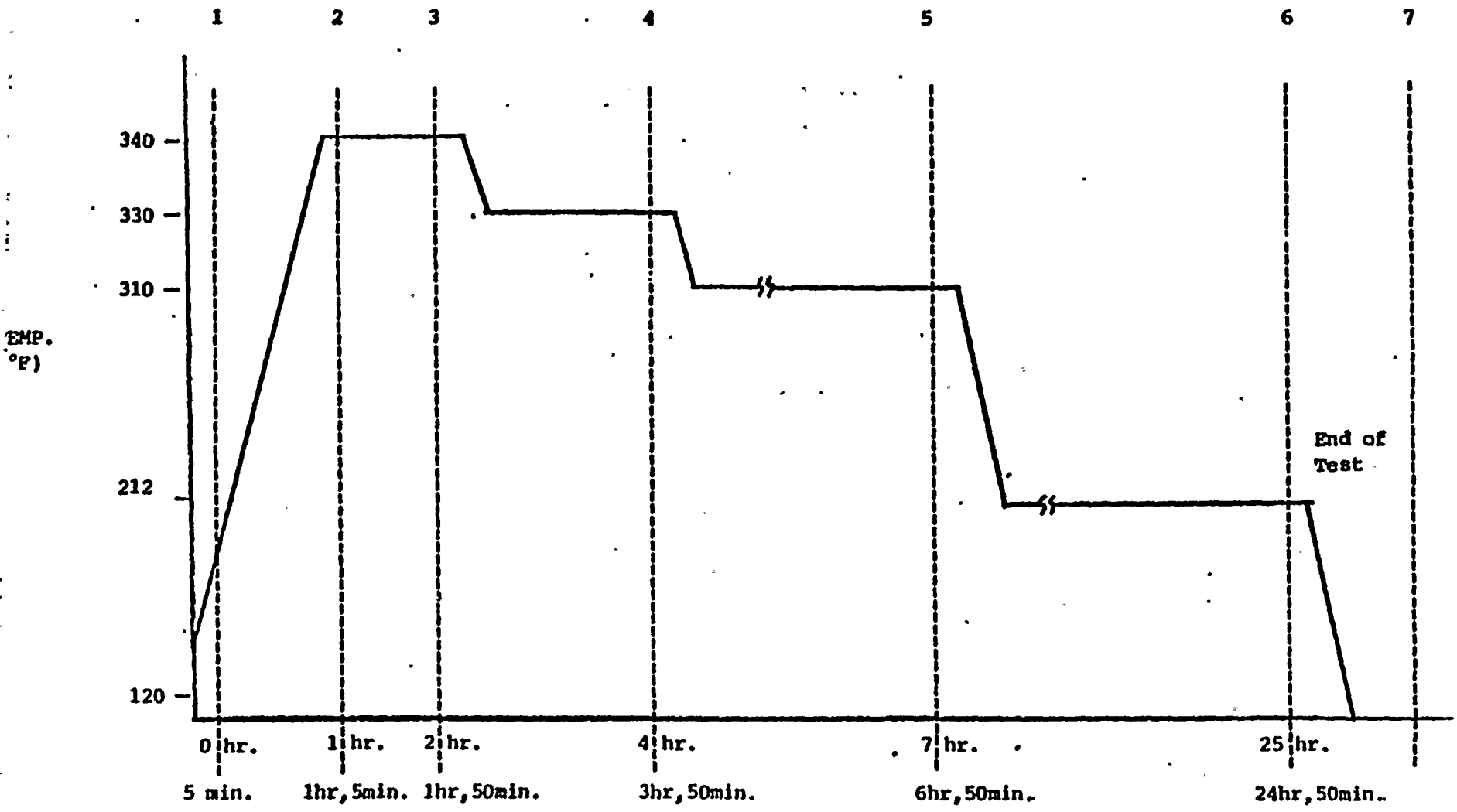
1
2
3
4
5
6
7
340
330
310
212
120
EMP.
°F)
End of
Test
0 hr.
1 hr.
2 hr.
4 hr.
7 hr.
25 hr.
5 min.
1hr,5min.
1hr,50min.
3hr,50min.
6hr,50min.
24hr,50min.

WPPSS QID #259006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-PT-68A, B -1A, B MANUFACTURER ITT Barton MODEL NUMBER 386 COMPONENT Differential Pressure Transmitter FUNCTION/SERVICE PT-68A, B: PT for CAC-MS-1A, B PT-1A, B: 0-30 psig for CAC-FN-1A, B LOCATION: BLDG R ELEVATION 576, 572, 575, 575 COLUMN M.3/6.8, M.3/7.5 M.3/6.5, M.3/7.3	OPERATING TIME	6 months	Equivalent to > 6 months	5	4	Eng. Analysis & Operating Experience	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	286	1	3	Simultaneous Test, Operating Experience	None
	PRESSURE (PSIA)	14.7	74.7	1		Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100%	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	4.8×10^7	2	4	Separate Test	None
	AGING	40 years	8 years	1	4	Operating Exper. & Eng. Analysis	None Note 1
	ACCURACY	0.5%	0.5%	7	3,4	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James McCarver 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Report No. 0740-004-572F
3. Westinghouse Test Report WCAP 7410-L, dated 12/70, Volume I of II
4. QID File 209002
5. BRI CIE list, REV 8, 6/1/83
6. BRI Calc. #5.51.055
7. Supplu System Calc#In-o2-83-Q1

NOTES

1. A preventive maintenance/surveillance program is being implemented to extend the qualified life.

Qualified.

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WPPSS QID # 283011E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-RLY-Note 1	OPERATING TIME	4320 hours	> 4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90° normal 104° abnormal Accident Profile 4	194	2	4	Engineering Analysis	None
MANUFACTURER ASEA	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
MODEL NUMBER RXMK1 COMPONENT Relay	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
FUNCTION/SERVICE Power Available Relay	CHEMICAL SPRAY	N/A	N/A			N/A	None
	RADIATION (RAD)	7.1×10^4	10^6	3	4	Engineering Analysis	None
	AGING	40 years	> 40 years	2	4	Engineering Analysis	None
LOCATION: BLDG R ELEVATION See COLUMN Note 1	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref 5)

Prepared by: Ali Sadri 6/24/83 Reviewed by: James Mizanse 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR 3.11 3. EDS report 0740-004-471D 4. QID 283015 E 5. BRI Calculation #5.51.055	Qualified

WP-1081

WPPSS QID # 283011 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

EPN	LOCATION	
CAC-RLY-4A/CR1	476	N.1/9.0
4A/CR2	476	"
FCV1A80	471	"
FCV2A80	471	"
FCV3A80	471	"
FCV4A80	471	"
4B/CR1	476	N.0/8.3
4B/CR2	476	"
FCV1B80	471	"
FCV2B80	471	"
FCV3B80	471	"
FCV4B80	471	"

WP-1083

Prepared by: Ali Naiber 6/24/83

Reviewed by: James Meyers 6/24/83

QID #339006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-TE-(NOTE 1) MANUFACTURER Thermo Electric, Inc. MODEL NUMBER 80500 COMPONENT Temperature Element FUNCTION/SERVICE LOCATION: BLDG R ELEVATION See COLUMN Note 1	OPERATING TIME	6 months	Equivalent to >6 months	2	4	Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	Profile 4	1	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/A	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	90 Max normal	1	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	1.0×10	3	4	Engineering Analysis	None
	AGING	40 years	40 years	1	4	Engineering Analysis	None
	ACCURACY	1.0%	0.5%	6	4	Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Richard Malkiewicz 6/24/83 Reviewed by: James Morris 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, REV 8, 6/1/83 3. EDS Report #0740-004-572F 4. QID #339006 5. BRI Calc. #5.51.055 6. Supply System Calc.In-02-83-01	Qualified 1. (See next page.)

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WPPSS QID #339006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

	ELEVATION	COLUMN
CAC-TE-1A	580	M.5/6.6
1B	580	M.5/7.4
2A	581	M.5/6.6
2B	581	M.5/7.4
3A	576	M.5/6.6
3B	576	M.5/7.4
4A	578	M.5/6.6
4B	578	M.5/7.4
5A	576	M.5/6.6
5B	576	M.5/7.4
6A	578	M.5/6.6
6B	578	M.5/7.4
7A	580	M.5/6.6
7B	580	M.5/7.4

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Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Williams 6/24/83

WPPSS QID 361009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Air System TAG NUMBER CAS-V-453	OPERATING TIME	4320 Hours	Equivalent to >4320 Hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	Max normal 90 Max abnormal 104 Accident Profile 4	221° F	2	4	Materials Test and Engineering Analysis	None
MANUFACTURER Marotta MODEL NUMBER MV250-4	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
COMPONENT Solenoid Valve	RELATIVE HUMITY (%)	Max normal 40 Max abnormal 90 68 Accident	90	2	4	Engineering Analysis	None
FUNCTION/SERVICE Control Wetwell Vacuum Breakers	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	5×10^6	3	4	Materials Test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Materials Test and Engineering Analysis	None
LOCATION: BLDG Reactor ELEVATION 479 COLUMN M.5/7.5	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 6)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meerna 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Study 0740-004-471h
4. QID 315023
5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83
6. BRI Calc. #5.51.055

NOTES

Qualified

1. These components are being tested to demonstrate their qualification to IEEE Stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

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WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge System TAG NUMBER CEP-POS-V/1A 2A	OPERATING TIME	6 months	Equivalent to >6 months	2	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed LOCA test	1	4	Simultaneous Test	None
MANUFACTURER NAMCO	PRESSURE (PSIA)	14.7	See enclosed LOCA test	1	4	Simultaneous Test	None
MODEL NUMBER EA74080100 COMPONENT Limit Switches	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	See enclosed LOCA test	1	4	Simultaneous Test	None
FUNCTION/SERVICE Limit Switches for CEP-V-1A, 1B, 2A	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	2.0×10^8	3	5	Engineering Analysis	None
	AGING	40 years	40 years	1	5	Engineering Analysis	None
LOCATION: BLDG R ELEVATION 563, 558 COLUMN J.1/5.4	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Bekzad Mahini 6/24/83 Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, Rev.8 dated 6/1/83 3. EDS Report 0740-004-548Q 4. ACME-Cleveland Report, "Qualification of Namco Control Limit Switch Model EA-740" dated 2/22/79 5. QID No. 200015 6. NAMCO Controls, Limit Switches General Catalog, copyright 1979 7. BRI Calc. #5.51.055	Qualified

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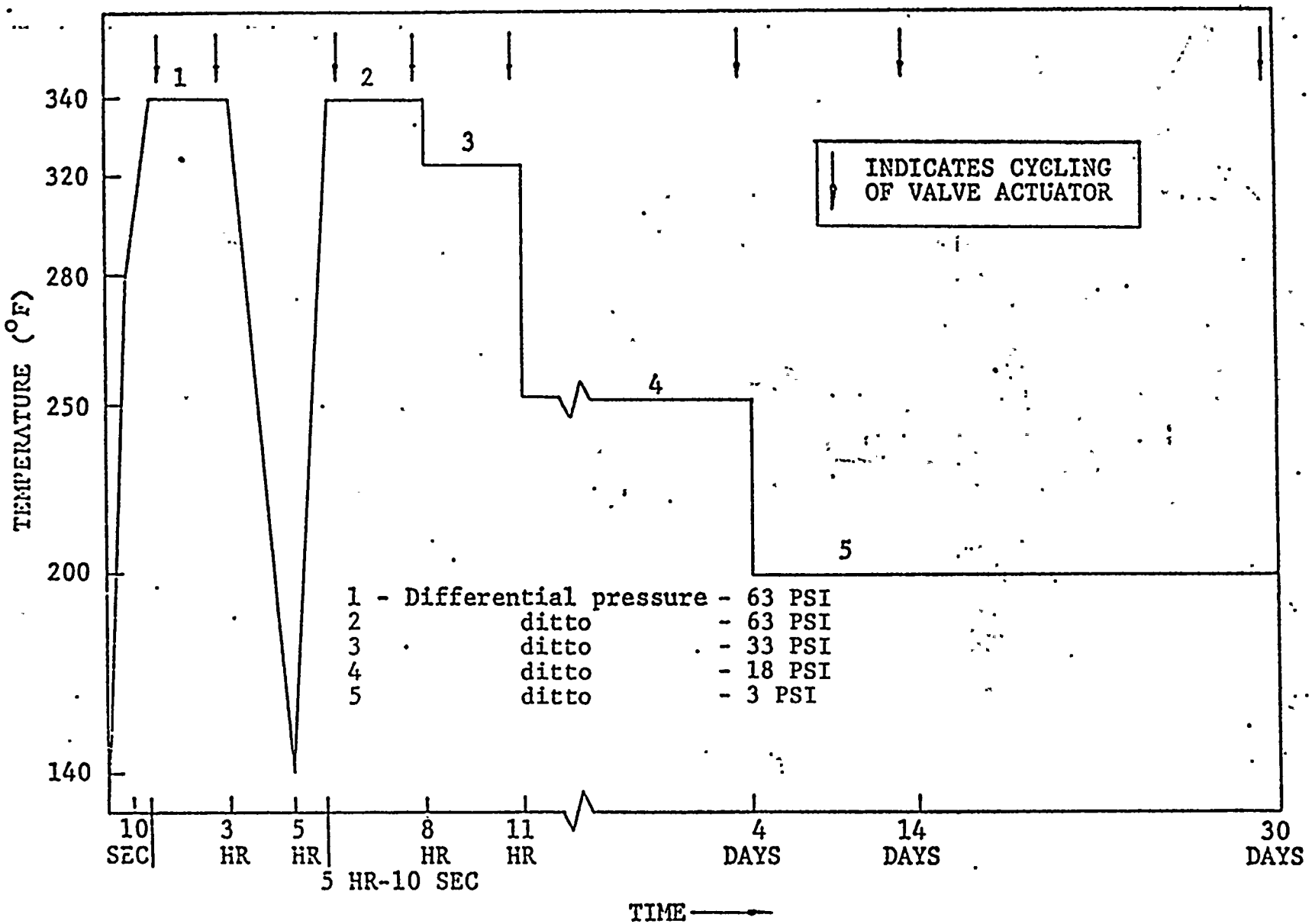

Fig 1
Test Chamber Temperature Profile for Accident Environment Simulation
(Taken from IEEE Standard 382-1972)

WPPSS QID #200009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge System TAG NUMBER CEP-POS-V/1B 2B	OPERATING TIME	6 months	Equivalent to 6 months	2	4,5	Sequential test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	200	1	4	Sequential Test and Engineering Analysis	None
MANUFACTURER NAMCO	PRESSURE (PSIA)	14.7	N/A	1	N/A	N/A	None
MODEL NUMBER 17031100 COMPONENT Limit Switches	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100%	1	4,5	Sequential Test and Engineering Analysis	None
FUNCTION/SERVICE Limit Switches for CEP-V-1B,2B	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	5.0×10^7	3	5	Engineering Analysis	None
	AGING	40 years	40 years	1	5	Engineering Analysis	None
LOCATION: BLDG R ELEVATION 563, 559 COLUMN J.4/5.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Matini 6/24/83 Reviewed by: James Moore 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list Rev. 8, dated 6/1/83 3. EDS Report 0740-004-548Q 4. ACME-Cleveland Report, "Qualification of Namco Control Limit Switch Model EA-170", dated 7/24/78 5. QID No. 200009 6. NAMCO Controls, Limit Switches General Catalog, copyright 1979 7. BRI Calc. #5.51.055	Qualified

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WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

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PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge System TAG NUMBER CEP-POS-V/3A 4A MANUFACTURER Namco MODEL NUMBER 74080100 COMPONENT Limit Switches FUNCTION/SERVICE Limit Switch for CEP-LMS-3A -4A,B LOCATION: BLDG R ELEVATION 491,491,495 COLUMN H.4/5.4,H.5/5.6, H.4/5.6	OPERATING TIME	6 months	Equivalent to or >6 months	1	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed LOCA tested profile #1	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed LOCA tested profile #1	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	See enclosed LOCA tested profile #1	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meeuns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-471J 4. Qualification of NAMCO Controls Limit Switch Model EA-740 to IEEE Stds. 344 (1975), 323 (1974) and 382 (1972), Rev. 1, dtd. 2/22/79, Rev. 0. dtd. 2/20/78 5. QID #200015 6. BRI Calc. #5.51.055	Qualified

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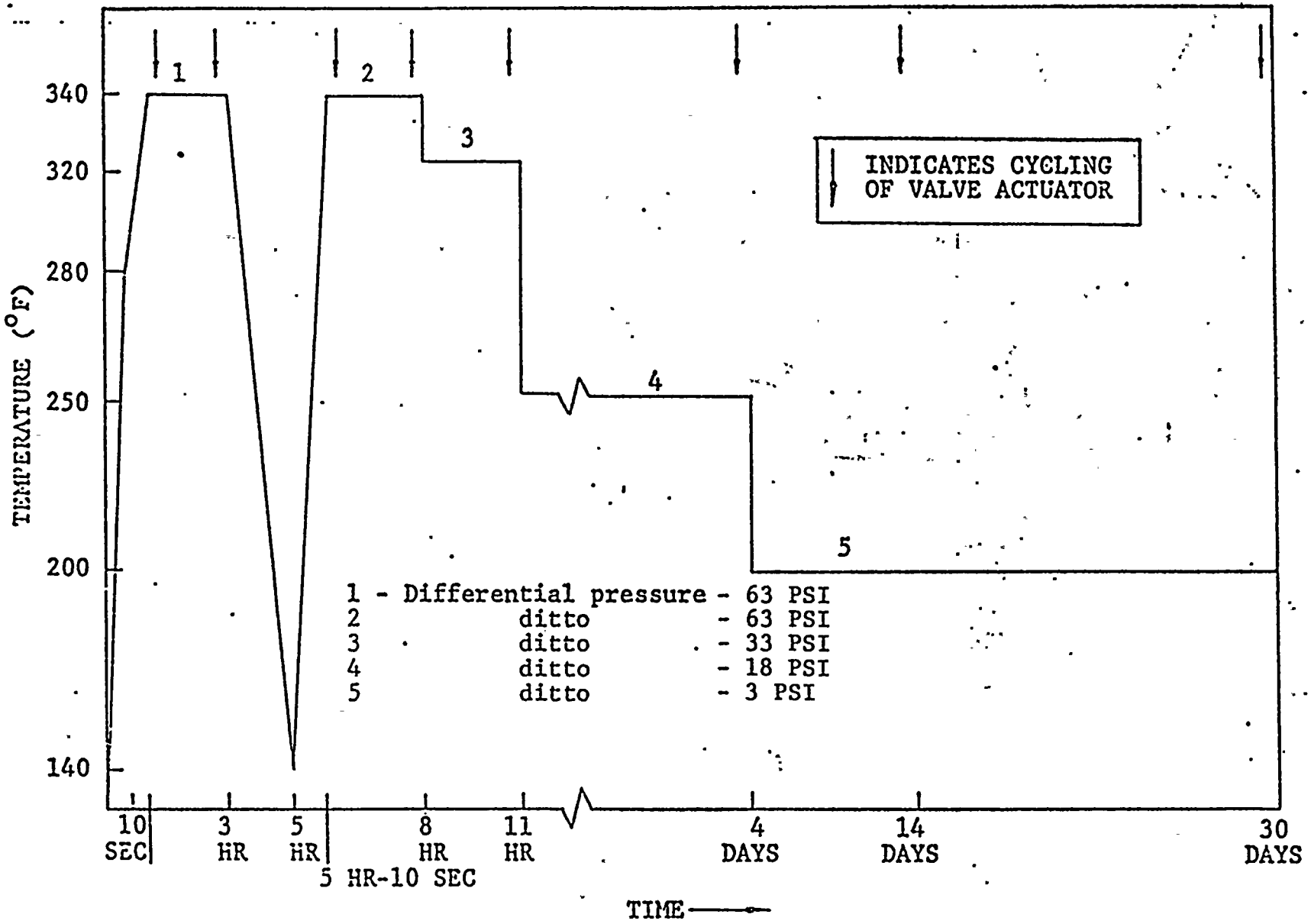

Fig 1
Test Chamber Temperature Profile for Accident Environment Simulation
(Taken from IEEE Standard 382-1972)

WPPSS QID #200009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge System TAG NUMBER CEP-POS-V/3B V/4B MANUFACTURER Namco MODEL NUMBER 17031100 COMPONENT Limit Switches for CEP-V-3B FUNCTION/SERVICE Limit Switch for CEP-V-3B LOCATION: BLDG R ELEVATION 495 COLUMN H.5/5.4	OPERATING TIME	6 months	Equivalent To or > 6 months	1	4,5	Sequential Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	200° F	2	4,5	Sequential Test Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100	2	4,5	Sequential Test and Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	4.4×10^7	5.0×10^7	3	5	Engineering Analysis	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meams 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-471J 4. Qualification of NAMCO Controls Limit Switch Model EA-170 Report Revision 1 dated 7/24/78 5. QID #200009 6. BRI Calc. #5.51.055	Qualified.

WA-1081

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge TAG NUMBER CEP-SPV-(See Note 2)	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Profile 4	Envelopes Profile 4 with >8C margin	2	4	Simultaneous Test Engineering Analysis	None
MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER See Note 2	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal Profile 4	N/R (<90%)	2	6	Engineering Analysis	None
COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Solenoid Pilot for CEP-V-3A	CHEMICAL SPRAY	N/A	N/A	2	6	Engineering Analysis	None
	RADIATION (RAD)	1.7×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	Note 1
LOCATION: BLDG R ELEVATION See Note 2 COLUMN	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Al. Nadler 6/24/83

Reviewed by: James Nizzarno 6/24/83

DOCUMENTATION REFERENCES	NOTES
1 BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-471J (Pinpoint Calculation) (Worst Case) 4. Calculation QID315004-1 5. Calculation QID315004-2 6. Calculation QID315004-3 7. BRI Calculation #5.51.055	1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. TAG NUMBERS

	Elev.	Loc.	Model No.
-1A	552	M.8/5.8	WJHT8316A74
-1B	553	M.8/5.8	WJHT831654
-2A	554	M.7/8.2	WJHT8316A76
-2B	554	H.7/8.1	WJHT831654
-3A	477	H.4/6.8	WJHT831654
-3B	478	H.4/6.8	WJHT831654
-4A	507	L.4/9.3	WJHT8316A74
-4B	507	L.4/9.3	WJHT8316A54

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-MO-20 -30A -30B MANUFACTURER Limitorque MODEL NUMBER SMB-000 COMPONENT Reliance Motor AC Motor/Class RH Ins. FUNCTION/SERVICE Operate CIA Valves LOCATION: BLDG R ELEVATION 522, 541, 543 COLUMN J3/7, J5/4.3, M7/6.9	OPERATING TIME	4320 hours	Equivalent to >6 months	7	3,4	Simultaneous Testing and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4,11	See enclosed profile	1	3	Simultaneous Testing	None
	PRESSURE (PSIA)	Normal 14.7 Accident profile 11	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 80 max. accident	Steam for 24 hours 100% for 15 days	1	3	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	2.04×10^8	2	3	Sequential Testing	None
	AGING	40 years	40 years+	1	3,4,5	Sequential Testing, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meaurno 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-522H (worst case) 3. Limitorque Report 600376A dated 5/13/76 4. Calculations in QID 221001 5. Limitorque Report B0058 dated 1/11/80 6. BRI Calculation #5.51.055 7. BRI C1E list, REV 8, 6/1/83	Qualified.

WP-1081

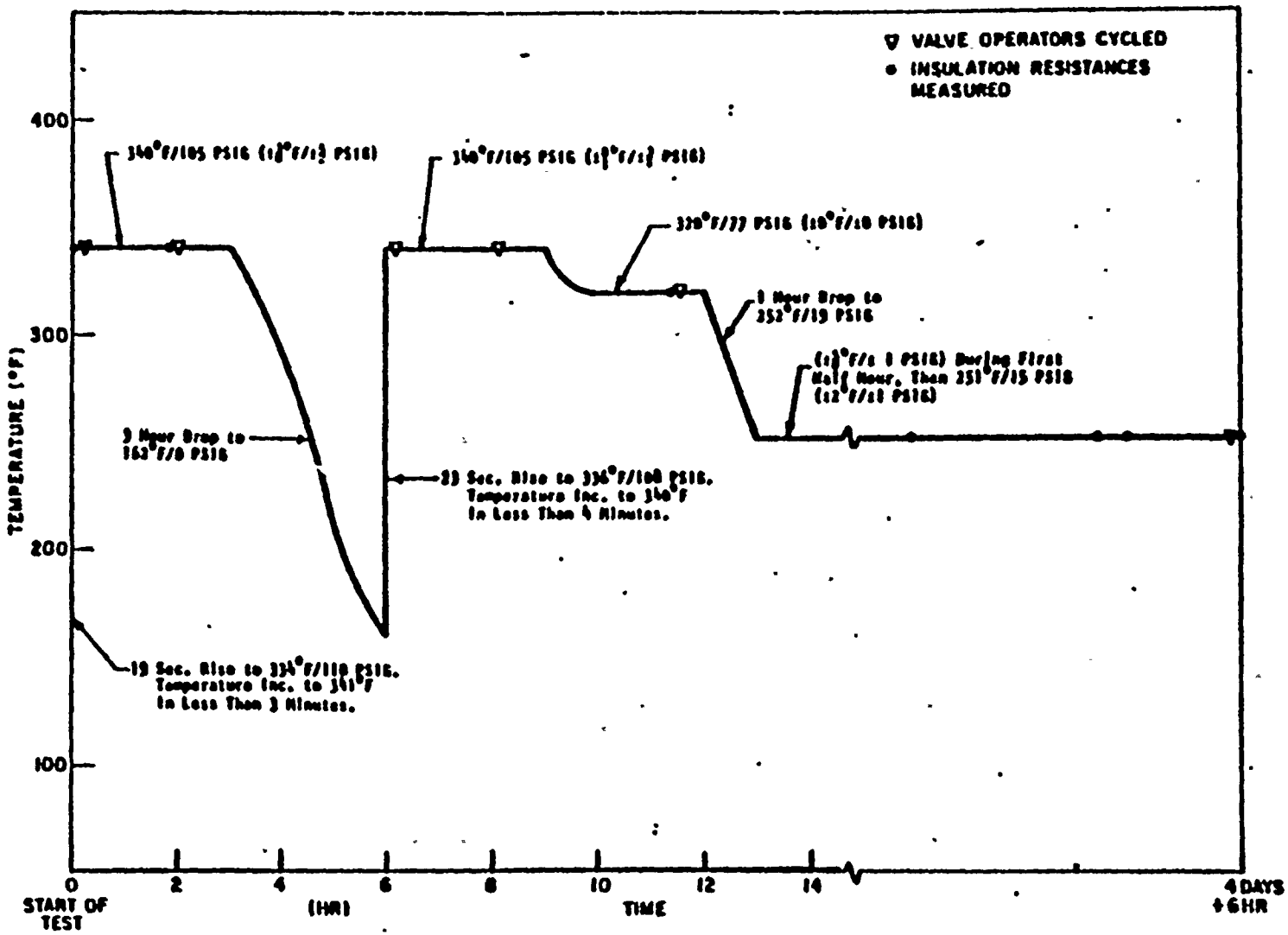

Figure 3. Actual Steam Exposure Profile

F-C3441

WPPSS QID#254001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-PROG-1A, B	OPERATING TIME	6 months	Note 1	1	4	Simultaneous Test, Engineering Analysis	
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4, 26, 27, 30, 32		2			
MANUFACTURER Automatic and Timing Control, Inc.	PRESSURE (PSIA)	14.7 normal accident profile 26, 27 30, 32		2			
MODEL NUMBER 1820B1Q20XX 1820B01020XX COMPONENT PROG.	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 100 accident		2			
FUNCTION/SERVICE PROGR's to N2 Bottle SPV's	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4		2			
	AGING	40 years		3			
LOCATION: BLDG R ELEVATION 554 COLUMN H.8/5.8, H.7/8.2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mimms 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-548G, P 4. Letter #GE-02-JLS-82-016 5. BRI Calc. #5.51.055	1. These components are scheduled to be tested. Equipment justification #1 in Appendix D is provided for CIA-PROG-1A. CIA - PROG-1B is on Table B of the JIO and does not require qualification prior to fuel load.

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EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58
MPL:
PPD:
PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-PS-21A CIA-PS-21B MANUFACTURER Barton MODEL NUMBER 288 COMPONENT Pressure Switch FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 554 COLUMN M8/5.8 , H.7/8.1	OPERATING TIME	6 months	Equivalent to >6 months	1	4, 5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident 4,26,27,30,32	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident 26,27,30,32	Accident Profile 30	2	4, 5	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4	3×10^6	3	4,5	Separate Effect Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	5%	1.5 FSPE	8	5,4	Engineering Analysis And Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Bobbed Mallini 6/24/83 Reviewed by James Dreano 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-548G, P
4. QID File #256007
5. Qualification Test Report for Barton 288 Switch Report No. R3-288A-1
6. Test report for Barton pressure switch 289A GE Report 05991, Rev.1, 12/7/73.
7. BRI Calc. #5.51.055
8. Supply System Calc. In-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

QID #256001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-PS-22A, B	OPERATING TIME	6 months	Note 1	1	1		None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,26,27, 30,32		2			None
MANUFACTURER ASCO	PRESSURE (PSIA)	Normal 14.7 Accident Profile 26,27, 30,32		2			None
MODEL NUMBER SB11AKR/TG10A32 COMPONENT	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident		2			None
Pressure Switch FUNCTION/SERVICE	CHEMICAL SPRAY	N/A		2			None
- Remote Local PS - CIA N_2 Header Pressure IR-68	RADIATION (RAD)	8.5×10^4		3			None
	AGING	40 years		2			None
LOCATION: BLDG R ELEVATION 548 COLUMN H.8/5.7 H.8/5.7	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Nakini 6/24/83 Reviewed by: James Nicarro 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-548P
4. QID #256001
5. BRI Calc. #5.51.055

NOTES

1. Equipment justification #2 in Appendix D is provided for CIA-PS-22A. CIA-PS-22B is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1681

WPPSS QID # 259003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-59

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-PT-21A CIA-PT-21B	OPERATING TIME	6 months	Equivalent to 6 months	1	4,5,8	Seperate Effects and Engineering Analysis	None Note 1
	TEMPERATURE (F)	90 normal 104 abnormal 27,30,32 Accident Profile 4, 26	212°F	2	5	Sequential Test and Engineering Analysis	None
MANUFACTURER Rosemount	PRESSURE (PSIA)	Normal 14.7 32 Accident Profile 26,27,30	24.7	2	8	Sequential Test	None
MODEL NUMBER 1151GP7A22T0003PB COMPONENT Pressure Transmitter	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	7	Sequential Test	None
FUNCTION/SERVICE CIA Header Pressure	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4	2×10^6	3	6	Seperate Effects	None
	AGING	40 years	14 years	2	8	Engineering Analysis	None See Note 2
LOCATION: BLDG R ELEVATION 548 COLUMN M7/5.8 H.7/8.2	ACCURACY	5%	1.88%	10	8,5	Engineering Analysis, Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 9)

Prepared by: Behzad Mahsiri 6/24/83 Reviewed by: James Meanor 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-548 G, P
4. Rosemount Product Data Sheet 2256
5. Rosemount Report 97 215 A1 dated 2/9/72
6. Rosemount Report 127227, Rev. 6
7. Rosemount Report 37327B dated 3/28/73
8. QID file #259003
9. BRI Calc. #5.51.055
10. Supply System Calc. #In-02-83-01

NOTES

Qualified

1. Test data and equipment production specifications indicate the component will operate 6 months at the required temperature.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #283041

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-RLY-21A, B MANUFACTURER Struthers-Dunn MODEL NUMBER 219XBXP COMPONENT Relay FUNCTION/SERVICE Control relay closes on low pressure LOCATION: BLDG R ELEVATION 548, 550 COLUMN H.8/5.7, H.7/8.2	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4, 26, 27, 30, 32		2			
	PRESSURE (PSIA)	14.7 normal Accident Profile 26, 27, 30,32		2			
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 100 accident		2			
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by Bebzail Mahin 6/24/83 Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-548G, P 4. BRI Calc. #5.51.055	1. Vendor is currently testing the component. The data will be reviewed when it is received. Equipment justification #3 in Appendix D is provided for CIA-RLY-21A. CIA-RLY-21B is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

QID # 283052

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-RLY-22A,B MANUFACTURER Agastat MODEL NUMBER EGPI-002 COMPONENT Relay FUNCTION/SERVICE Relay for CIA-PS-22 A,B LOCATION: BLDG R ELEVATION 548 COLUMN H.8/5.7 H.8/8.2	OPERATING TIME	4320 Hours		3			Note 1
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profiles 4,30,32		1			
	PRESSURE (PSIA)	14.7 Normal Accident Profiles 30,32					
	RELATIVE HUMITY (%)	40 Normal 90 Max Abnormal 100 Accident		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	8.5×10^4 10^4		2			
	AGING	40 Years		1			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Paragraph 3.11 2. EDS Study 0740-004-548P 3. BRI CIE Equipment List, Rev. 8, dated 6/1/83 4. BRI Calculation # 5.51.055	1. The equipment is not tested for 100% relative humidity. Equipment justification #4 in Appendix D is provided for CIA-RLY-22A for interim operation. CIA-RLY-22B is on Table B of the JIO so does not need qualification prior to fuel load.

WP-1081

WPPSS QID315023

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-SPV- (SEE NOTE 2) MANUFACTURER Marotta MODEL NUMBER MV 252-3 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE .5" Solenoid Valve for N_2 Bottle Disch. LOCATION: BLDG Reactor ELEVATION (See Note 2) COLUMN (See Note 2)	OPERATING TIME	4320 Hours	Equivalent to >4320, Hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident-Profile 4	221°. F	2	4	Materials Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 68 Accident	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.2×10^3	5×10^6	3	4	Materials test and Engineering Analysis	None
	AGING	40 years	40 Years	2	4	Materials Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 6)
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Meanno 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8 dated 6/1/83
2. FSAR Par. 3.11
3. EDS Study 0740-004-441D
4. QID 315023
5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83
6. BRI Calculation #5.51.055

NOTES

Qualified

1. These components are being tested to demonstrate their qualification to IEEE Stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

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WPPSS QID #315023

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

TAG NUMBERS	Elev.	Column
CIA-SPV-1A	440	N.0/4.3
-1B	440	N.1/7.0
-10A	440	N.1/4.3, 7.0
-10B	440	N.1/4.3, 7.0
-11A	440	N.1/4.3, 7.0
-11B	440	N.1/4.3, 7.0
-12A	440	N.1/4.3, 7.0
-12B	440	N.1/4.3, 7.0
-13A	440	N.1/4.3, 7.0
-13B	440	N.1/4.3, 7.0
-14A	440	N.1/4.3, 7.0
-14B	440	N.1/4.3, 7.0
-15A	440	N.1/4.3, 7.0
-15B	440	N.1/4.3, 7.0
-16B	440	N.1/4.3
-17B	440	N.1/7.0
-18B	440	N.1/4.3
-19B	440	N.1/7.0
-2A & 2B	440	N.1/4.3, 7.0
-3A	440	N.1/4.3, 7.0
-3B	440	N.1/4.3, 7.0
-4A	440	N.1/4.3, 7.0
-4B	440	N.1/4.3, 7.0
-5A	440	N.1/4.3, 7.0
-5B	440	N.1/4.3, 7.0
-6A	440	N.1/4.3, 7.0
-6B	440	N.1/4.3, 7.0
-7A	440	N.1/4.3, 7.0
-7B	440	N.1/4.3, 7.0
-8A	440	N.1/4.3, 7.0
-8B	440	N.1/4.3, 7.0
-9A	440	N.1/4.3, 7.0
-9B	440	N.1/4.3, 7.0

WP-1083

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meares 6/24/83

WPPSS QID#283013

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-TDS-1A, B	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4, 26, 27, 30, 32		2			
MANUFACTURER	PRESSURE (PSIA)	14.7 normal accident profile 26, 27 30, 32		2			
MODEL NUMBER COMPONENT	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 100 accident		2			
FUNCTION/SERVICE 3 sec. delay for CIA-PROGR-1A, B	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 550 548 COLUMN M.8/5.8 H.7/8.2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-548G, P 4. BRI Calc. #5.51.055	1. A documentation search is being performed to obtain qualification data. Requalification activities will be implemented, if required. Equipment justification #5 in Appendix D is provided for CIA-TDS-1A. CIA-TDS-1B is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

QID# 025002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-92B

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CMS-AY-1, 2,3,4 MANUFACTURER Beckman Instruments, Inc. MODEL NUMBER 7C(H_2) and 755 (O_2) COMPONENT H_2, O_2 Analyzer FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 548 COLUMN M6/4.5	OPERATING TIME	6 months	Note 1	3			
	TEMPERATURE (F)	90 max normal 104 max abnormal 106 Accident		1			
	PRESSURE (PSIA)	14.7					
	RELATIVE HUMITY (%)	40 normal 90 max abnormal		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	1×10^6	Note 2	2			
	AGING	40 years	Note 3	1			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-548E 3. BRI CIE list, REV 8, 6/1/83 4. BRI Calculation #5.51.055	1. Equipment justification #6 in Appendix D is provided for CMS-AY-1 and 3. CMS-AY-2 and 4 are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS QID #166003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-SS

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CMS-H-SR13/T5 to 8 -SR14/T5 to 8 MANUFACTURER Thermon Manufacturing Company MODEL NUMBER SSK COMPONENT Heater Cable FUNCTION/SERVICE LOCA Heat Trace LOCATION: BLDG Reactor ELEVATION 548 COLUMN Note 1	OPERATING TIME	4320 Hours	Equivalent to > 4320 Hours	1	3,5	Engineering Analysis and Sequential Tests	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	400	2	3,5	Engineering Analysis and Sequential Tests	None
	PRESSURE (PSIA)	14.7 Max.	14.7	2	3,5	Engineering Analysis and Sequential Tests	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Accident Profile 4	90	2	3	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1×10^6 (Note 2)	5.0×10^7	6	3,5	Engineering Analysis and Sequential Tests	None
	AGING	40 Years	40 Years	2	3, 5	Engineering Analysis and Sequential Tests	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 4)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Mehrine 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES

1. BR1 Class 1E Equipment List, Rev. 8 , 6/1/83
2. FSAR Paragraph 3. 11
3. QID #166003
4. BR1 Calculation 5.51.055
5. Test Report #02-6430-001, Sept. 23, 1981
6. EDS Calculations 0740-004-548E & 548F

NOTES

Qualified

1.

EPN	Column
CMS-H-SR13/T5 to CMS-H-SR13/T8	M.1/4.5
CMS-H-SR14/T5 CMS-H-SR14/T8	M.1/4.9

WP-1081

WPPSS QID #166003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-SS

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PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. The heater cables are attached to the piping of the containment oxygen and hydrogen monitors and the radiation level at the point of attachment was estimated to be 1×10^6 rads. The calculation is still in progress and the radiation level will be finalized when EDS calculations 0740-004 548E & 548F are completed.

WP-1083

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meares 6/24/83

WPPSS QID#

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-LE-(see Note 1) MANUFACTURER Electrosyn Technology Laboratories MODEL NUMBER 616 COMPONENT Level Element FUNCTION/SERVICE Suppression Pool Level Element LOCATION: BLDG C ELEVATION (see Note 1) COLUMN	OPERATING TIME	6 months		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55% Normal 90% Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	9×10^7		3			
	AGING	40 years		2			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Jamin Mizuno 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. WNP-2 Final Shielding Evaluation Report, Sept. 1982
4. BRI Calc.#5.51.005

NOTES

1.

Tag Number	Elevation	Coordinate
CMS-LE-3A	435	45 Deg. Az.
-3B	500	60 Deg. Az.
-4A	435	270 Deg.Az.
-4B	500	240 Deg.Az.
-5A	435	135 Deg.Az.
-5B	500	60 Deg.Az.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Equipment justification #7 in Appendix D is provided for CMS-LE-3A and 3B. CMS-LE-4A, 4B, 5A and 5B are on Table B of the JIO and do not require qualification prior to fuel load.
Prepared by: Bobby Mahan 6/24/83	Reviewed by: James Mearns 6/24/83

WPPSS QID #207024

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitor System TAG NUMBER CMS-LS-1,2,3,4 MANUFACTURER Fluid Components MODEL NUMBER 8-66 COMPONENT Level Switch Sensor Head FUNCTION/SERVICE Measure Drywell Flood Level LOCATION: BLDG Containment ELEVATION Note 1 COLUMN Note 1	OPERATING TIME	4320 Hours	Equivalent to >6 Months	1	3, 4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Ave.-Normal 150 Max-Abnormal Accident Profile 1	340	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1	58	2	3, 4	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	55 Max-Normal 90 Max-Abnormal Accident Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	3	Engineering Analysis	None
	RADIATION (RAD)	7.0×10^7	1×10^8	2	4	Sequential Test	None
	AGING	40 Years	7 Years	2	3, 4	Sequential Test and Engineering Analysis	None Note 2
	ACCURACY	N/A	N/A	5	N/A	N/A	N/A

FLOOD LEVEL ELEV: 570 Ft.
ABOVE FLOOD LEVEL?
YES NO X

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. B&R Class 1E Equipment List, Rev. 8, 6/1/83
2. FSAR Paragraph 3.11
3. QID No. 207024
4. Fluid Components, Inc. Report 7080053
5. Supply System Calculation IN-02-83-01

NOTES

Qualified

1.

EPN	Elevation (Ft.)
CMS-LS-1	503
CMS-LS-2	518
CMS-LS-3	551
CMS-LS-4	570

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WPPSS QID #207024

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-218 PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. A preventive maintenance surveilance program is being developed to extend the qualified life.

WP-1083

Reviewed by: [illegible] 6/24/83

WPPSS QID 209007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-59

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CMS-LT-1,2 MANUFACTURER ROSEMOUNT MODEL NUMBER 1151DP4D22-T0003PB COMPONENT Level Transmitter FUNCTION/SERVICE Suppression Chamber Water Level Monitoring LOCATION: BLDG R ELEVATION 465 COLUMN J 5/4.3	OPERATING TIME	4320 hours	4320 hours	1	6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 8	212°F	2	6	Sequential Test	None
	PRESSURE (PSIA)	14.7 normal Accident Profile 8	24.7	2	6	Sequential Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	6	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	2×10^6	3	5	Separate Test	None
	AGING	40 years	14 years	2	7	Engineering Analysis	None Note 2
	ACCURACY	3%	1.88 FSPE	9	6,7	Engineering Analysis and Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 8)

Prepared by: Behzad Mahmi 6/24/83 Reviewed by: James Meanns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report #0740-004- 548P
4. Rosemount report 97215A dated 2/9/12
5. Rosemount Report 127227 dated 12/27/72
6. Rosemount Report 37327B dated 3/28/73
7. QID# 209006
8. BRI Calc. #5.51.055
9. Supply Systems Calculation IN-02-83-01.

NOTES

Qualified (CMS-LT-2)

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2. (CMS-LT-1) Options are being explored to resolve this item. This component is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

QID #259003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58, 59

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CMS-PT-1, 2, 2R, 3, 4, 5, 6, 6R MANUFACTURER Rosemount MODEL NUMBER 1151GP4A22MBGE3 COMPONENT Pressure Transmitter FUNCTION/SERVICE Containment Pressure Transmitter LOCATION: BLDG R ELEVATION (See Note 3) COLUMN (See Note 3)	OPERATING TIME	6 months	Equivalent to>6 months	1	3,5,8	Separate Effects Engineering Analysis	None Note 1
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4	212°F	2	7	Sequential Test	None
	PRESSURE (PSIA)	14.7	24.7	2	7	Sequential Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	7	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/R	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4	2×10^6	4	6	Separate Effects	None
	AGING	40 years	14 years	2	8	Engineering Analysis	None See Note 2
	ACCURACY	3%	1.88 FSPE	10	8,7	Engineering Analysis, Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 9)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Par. 3.11
3. Rosemount Product Data Sheet 2256
4. EDS Study 0740-004-548P
5. Rosemount Report 97215A dated 2/9/72
6. Rosemount Report 127227 dated 12/27/72
7. Rosemount Report 37327B dated 3/28/73
8. QID file #259003
9. BRI Calc. #5.51.055
10. Supply System Calc.#In-02-83-01

NOTES

Qualified

1. Test data and equipment specification data ensure the component will operate 6 months at the required temperatures.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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WPPSS QID #259003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-58, 59 PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

3.

Tag Number	Elevation	Column
CMS-PT-1	555	M8/5.8
2	551	H7/8.2
2R	548	H7/8.2
3	501	N8/5.5
4	501	L4/9.3
5	555	M8/5.8
6	551	H7/8.2
6R	552	H7/8.2

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Prepared by: Behzad Makini 6/24/83 Reviewed by: James Mears 6/24/83

WPPSS QID #156001 WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CHS-PT-7 -8 MANUFACTURER Rosemount MODEL NUMBER 1153-GB7 -AB5 COMPONENT Pressure Transmitter FUNCTION/SERVICE Containment Pressure Monitor LOCATION: BLDG R ELEVATION 552, 543 COLUMN M.8/5.8 H.7/8.2	OPERATING TIME	6 Months	Equivalent to > 6.6 Months	1	4	Simultaneous test Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	318	2	4	Simultaneous test	None
	PRESSURE (PSIA)	14.7	87.7	2	4	Simultaneous test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Simultaneous test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.5×10^4	2.4×10^7	3	4	Sequential test	None
	AGING	40 Years	10 Years	2	4	Simultaneous test Engineering test	None Note 2
	ACCURACY		7.1% FSPE		4	Simultaneous test Engineering Analysis	Note 1

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Meeuns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Study C740-004-548G, P
4. QID #156009
5. BRI Calc. #5.51.055

NOTES

1. The required accuracy for this equipment is being investigated. The result will be incorporated prior to fuel load.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID# 277007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring System TAG NUMBER CMS-RE-27E,F MANUFACTURER Victoreen MODEL NUMBER 875 COMPONENT Radiation Monitor FUNCTION/SERVICE Containment Radiation ($1-10^5$ R/hr) LOCATION: BLDG C ELEVATION 516 COLUMN 45,300 Deg Az	OPERATING TIME	4320 hours	Equivalent to >6 months	3	2,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal Accident Profile 1	See Enclosed Profile	1	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1	See Enclosed Profile		5	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Max Abnormal Accident Profile 2	100%	1	5	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water	Chemical Spray	1	5	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.2×10^8	1	5	Sequential Test	None
	AGING	40 years	40 years	1	5	Sequential Test	None
	ACCURACY		Note 1		5	Simultaneous Test	Note 1

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Bekzul Makani 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. FSAR paragraph 3.11
2. QID # 277007
3. BRI CIE list Rev. 8, dated 6/1/83
4. BRI Calculation #5.51.055
5. Victoreen Report 950.301, 6/19/81

NOTES

1. The required accuracy is currently being evaluated. The tested accuracy is a function of dose rate with very good accuracy below 2×10^7 rad/hr.
2. Failures during type testing were attributed to failure of the electrical connectors. These components are not yet installed at WNP-2. Following installation, it will be verified that these components are installed in a qualified manner.

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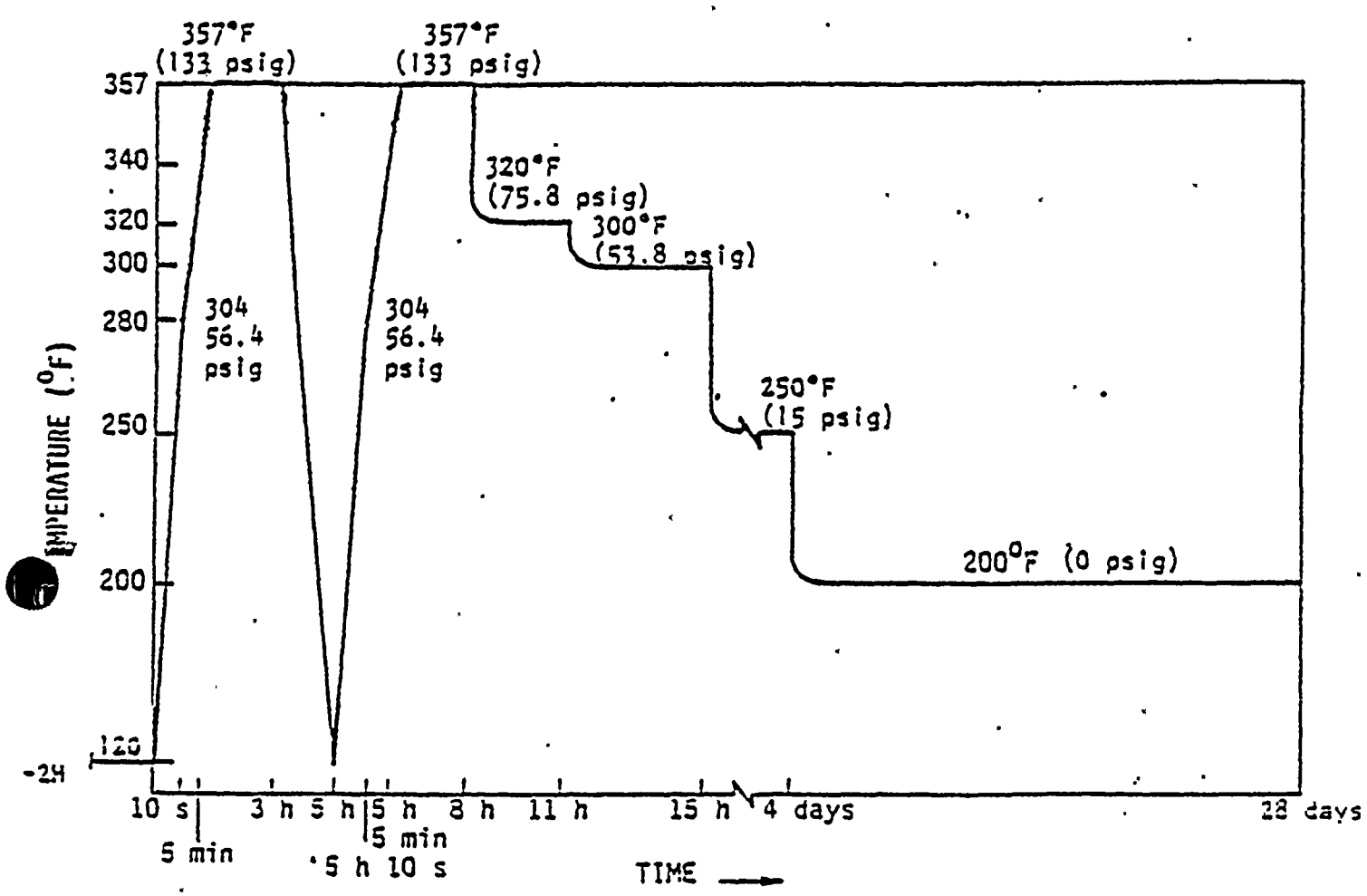

Required
Test Chamber Temperature Profile for Environment Simulation
(Combined PWR/BWR)

FIGURE VI-1

WPPSS QID #285012

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808 -SS

MPL:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-RMS-HTP 71 -HTP 80	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	104 Normal 106 Max. Abnormal		2			
MANUFACTURER General Electric	PRESSURE (PSIA)	14.7		2			
MODEL NUMBER CR2940YB203D	RELATIVE HUMITY (%)	50 Normal 90 Max. Abnormal		2			
COMPONENT Remote Manual Control Switch	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
FUNCTION/SERVICE Control Switch for CMS LOCA heat trace	RADIATION (RAD)	1.0×10^6		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 548 COLUMN M.1/4.4 M.1/4.7	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Irvana 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS study 0740-004-548E,F 4. BRI Calc. #5.51.055	1. Equipment justification 28 in Appendix D is provided for CMS-RMS-HTP71. CMS-RMS-HTP80 is on Table B of the JIO and does not require qualification prior to fuel load.

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WPPSS QID #025002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2800-92A

MPL:
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-SR-13, 14 MANUFACTURER Beckman Instruments, Incorporated MODEL NUMBER 771172 COMPONENT Sample Rack FUNCTION/SERVICE Sample Rack for H_2-O_2 Analyzer Equipment LOCATION: BLDG R ELEVATION 548 COLUMN M-3/4.5 M-3/4.7	OPERATING TIME	6 months	N/A	1	N/A	N/A	Note 1
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	N/A	2	N/A	N/A	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max abnormal Accident Profile 4	N/A	2	N/A	N/A	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	N/A	3	N/A	N/A	None
	AGING	40 Years	N/A	2	N/A	N/A	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared By: Behzad Mahini 6/24/83 Reviewed By: James Meyers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE List, Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS Study 0740-004-548E, F 4. BRI Calc. #5.51.055	1. Qualified. This component is metallic and not susceptable to environmental degradation.

WP-1081

WPPSS QID#339003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

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REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-TE-(see Note 1) MANUFACTURER HY-CAL Engineering Co. MODEL NUMBER TC2370CCA250TT68JXH7 COMPONENT Temperature Element FUNCTION/SERVICE Containment temperature monitor LOCATION: BLDG C ELEVATION (see Note 1) COLUMN	OPERATING TIME	6 months		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	7.0×10^7		3			
	AGING	40 years		2			
	ACCURACY	2%					

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev.8, dated 6/1/83.
2. FSAR Paragraph 3.11
3. WNP-2 Final Shielding Evaluation Report, Sept. 1982
4. BRI Calc.#5.51.005

NOTES

1.

Tag Number	Elevation	Coordinate
CMS-TE-1	517	115 Deg.Az.
-2	517	150 Deg.Az.
-4	550	280 Deg.Az.
-24	596	330 Deg.Az.
-25	596	210 Deg.Az.
-26	596	90 Deg.Az.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

-3	517	300 Deg.Az.
-27	553	210 Deg.Az.
-28	560	144 Deg.Az.
-29	560	72 Deg.Az.
-30	560	0 Deg.Az.
-31	560	288 Deg.Az.

2. Equipment justification #8 in Appendix D is provided for CMS-TE-1,2,26,27,29 and 30. CMS-TE-4,24,25,28 and 31 are on Table B of the JIO and do not require qualification prior to fuel load.

Prepared by: 6/24/83

Reveiwed by: 6/24/83

WPPSS QID# 339025

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-216

MPL:
PPD:

PAGE NO:
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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-TE-(See Note1) MANUFACTURER Weed Instrument Co. MODEL NUMBER 101-1-A-3-C-B-2-1 COMPONENT Temperature Element FUNCTION/SERVICE Temperature elements for Containment Return Air System fans. LOCATION: BLDG C ELEVATION COLUMN (See Note 1)	OPERATING TIME	6 months		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	7.0×10^7		3			
	AGING	40 years		2			
	ACCURACY	2.0%		2			

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: M. Nordeen 6/24/83

Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. WNP-2 Final Shielding Evaluation Report, September 1982.
4. BRI Calc.#5.51.005

NOTES

1.

Tag Number	Elevation	Coordinate
CMS-TE-5	504	72 Deg. Az.
-6	504	190 Deg. Az.
-8	560	355 Deg. Az.
-10	512	72 Deg Az.
-11	520	193 Deg. Az.
-13	549	355 Deg. Az.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	Continued 1

Tag Number	Elevation	Coordinate
CMS-TE-12	520	260 Deg. AZ.
-14	544	220 Deg. AZ.
-7	504	275 Deg. AZ.
-9	547	222 Deg. AZ.

2. These components will be replaced with qualified Weed TE (601 series) prior to fuel load.

By: Ali Nader 6/24/83 Ckd: James Moreno 6/24/83

WPPSS QID #355020

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Monitoring TAG NUMBER CMS-TS-4A to 4D, 5A to 5D, 8A to 8D, 9A to 9D MANUFACTURER ASCO MODEL NUMBER SC11AR/QT11A4R COMPONENT Temperature Switch FUNCTION/SERVICE Sample Rack 13 and 14 heat trace temperature switch LOCATION: BLDG. R ELEVATION 548 COLUMN (See Note 1)	OPERATING TIME	6 months		1			Note 2
	TEMPERATURE (F)	104 Normal 106 Max. Abnormal		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	50 Normal 90 Max. Abnormal		2			
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: Ali Nadir 6/24/83

Reviewed by: James Meard 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83.
2. FSAR Paragraph 3.11
3. EDS study 0740-004-548E,F
4. BRI Calc.#5.51.055

NOTES

1.

Tag Number	Coordinate
CMS-TS-4A to 4D	M.7/4.3
5A to 5D	M.7/4.5
8A to 8D	M.7/5.0
9A to 9D	M.7/5.0

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Equipment justification #9 in Appendix D is provided for CMS-TS-4A through 5D. CMS-TS-8A through 9D are on Table B of the JIO and do not require qualification prior to fuel load.

/ . 1. [illegible]

[illegible] Manager Division 6/24/83

WPPSS QID #213037

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Return Air TAG NUMBER CRA-M - (Note 1) MANUFACTURER Reliance MODEL NUMBER Note 1 COMPONENT Fan Motor FUNCTION/SERVICE Containment Return Air Fans LOCATION: BLDG C ELEVATION Note 1 COLUMN Note 1	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident Profile 1	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident Profile 1	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal accident Profile 2	100%	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Boric acid solution	2	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	8×10^8	2	4	Separate Test and Eng. Analysis	None
	AGING	40 years	40 Years	2	4	Sequential Test Eng. Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared by: Bekend Mahione 6/24/83 Reviewed by: James Mascus 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.1
3. BRI Calc. #5.51.055
4. Test Report #X-604, Rev. 2, 3/20/80. Qualification testing of Joy Axial Fan and Reliance electric motor per IEEE 323-74.

NOTES

Qualified.

1.

EPN	Frame Size	ID #	Coordinates
CRA-M-FN/3A	324TCZ	1YF277146A1Q8	536', 45°, R17
-FN/3B	324TCZ	1YF277146A4Q8	535', 175, R17
-FN/3C	324TCZ	1YF277146A6Q8	536, 315, R17

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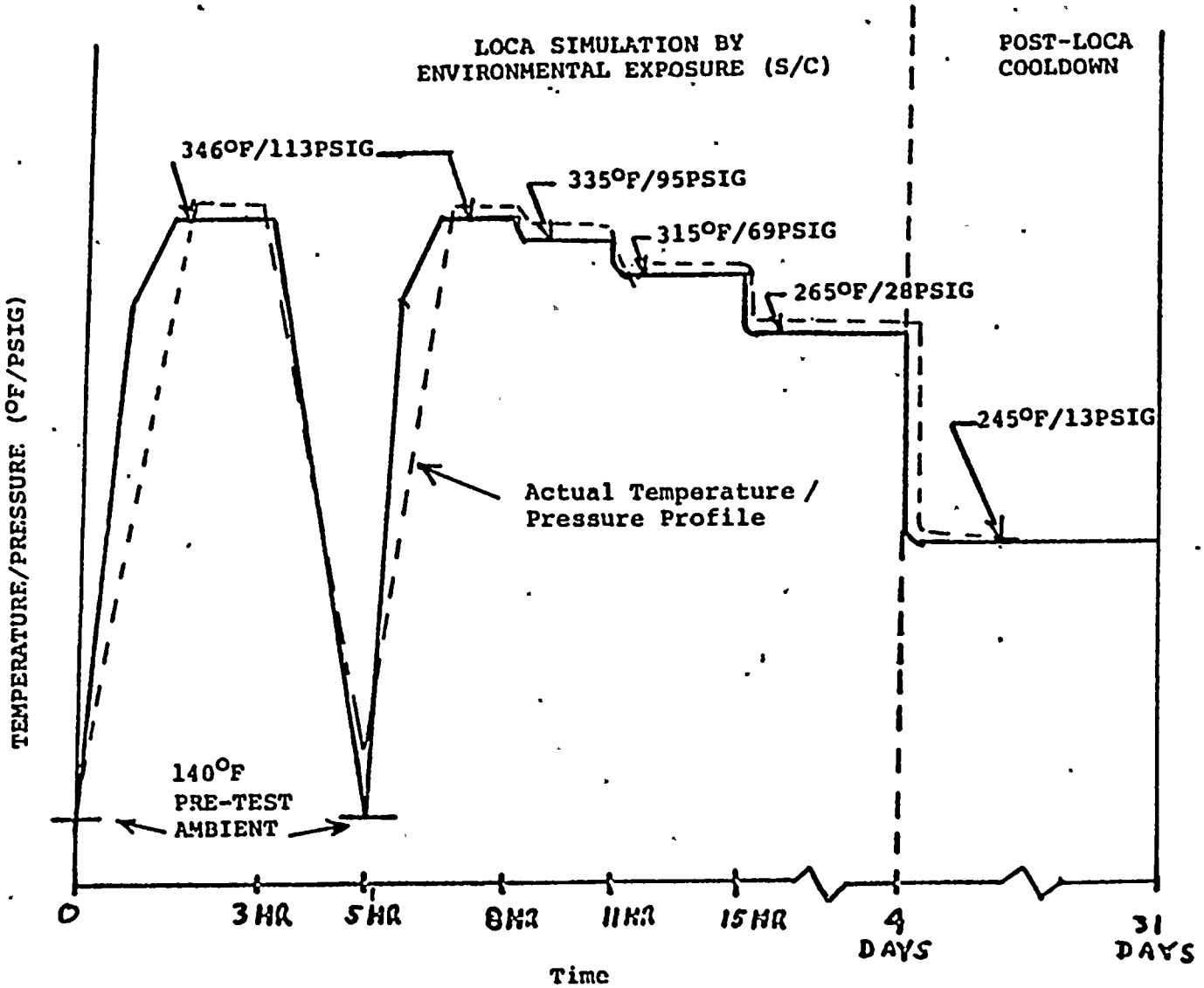

FIGURE 1

LOCA TEMPERATURE/PRESSURE PROFILE

WPPSS QID #213038

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Return Air TAG NUMBER CRA-M - (Note 1) MANUFACTURER Reliance MODEL NUMBER Note 1 COMPONENT Fan Motor FUNCTION/SERVICE Containment Return Air Fans LOCATION: BLDG C ELEVATION Note 1 COLUMN Note 1	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident - profile 1	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident - profile 1	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident - profile 2	100%	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Boric acid solution	2	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	8×10^8	2	4	Separate test and Eng. Analysis	None
	AGING	40 years	40 Years	2	4	Sequential Test Eng. Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.1
3. BRI Calc. #5.51.055
4. Test Report #X-604, Rev. 2, 3/20/80. Qualification testing of Joy Axial Fan and Reliance electric motor per IEEE 323-74.

NOTES

Qualified.

1. EPN	Frame Size	ID #	Coordinates
CRA-M-FN/4A	254TCZ	2YF277146A2 RB	572', 330°, R17
-FN/4B	254TCZ	2YF277146A1 RB	572', 206°, R17

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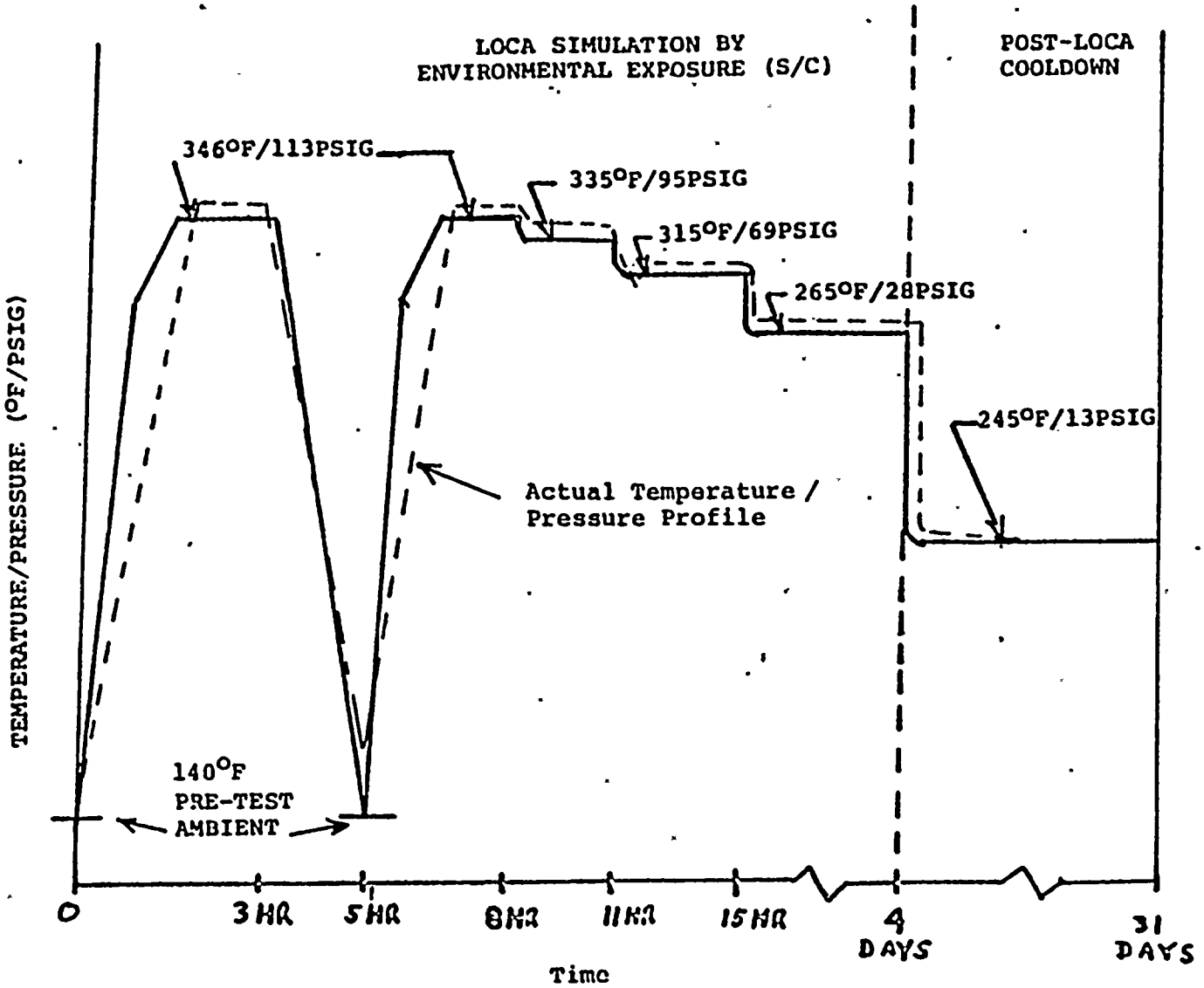

FIGURE 1

LOCA TEMPERATURE/PRESSURE PROFILE

WPPSS QID #213050

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Return Air TAG NUMBER CRA-M - (Note 1) MANUFACTURER Reliance MODEL NUMBER Note 1 COMPONENT Fan Motor FUNCTION/SERVICE Containment Return Air Fans LOCATION: BLDG C ELEVATION Note 1 COLUMN Note 1	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident profile 1	See enclosed test profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident Profile 1	See enclosed test profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100%	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Boric acid solution	2	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	8×10^8	2	4	Separate tests and Eng. Analysis	None
	AGING	40 years	40 years	2	4	Sequential Test Eng. Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mwaw 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.1
3. BRI Calc. #5.51.055
4. Test Report #X-604, Rev. 2, 3/20/80. Qualification testing of Joy Axial Fan and Reliance electric motor per IEEE 323-74.

NOTES

Qualified.

1.EPN	Frame No.	ID #	Coordinates
CRA-M-FN/5A	324TCZ	15F277146A5 QB	572', 175°, R17
-FN/5B	324TCZ	1YF277146A2 QB	572', 20°, R17
-FN/5C	324TCZ	1YF277146A7 QB	572', 270°, R17
-FN/5D	324TCZ	1YF277146A3 QB	572', 90°, R17

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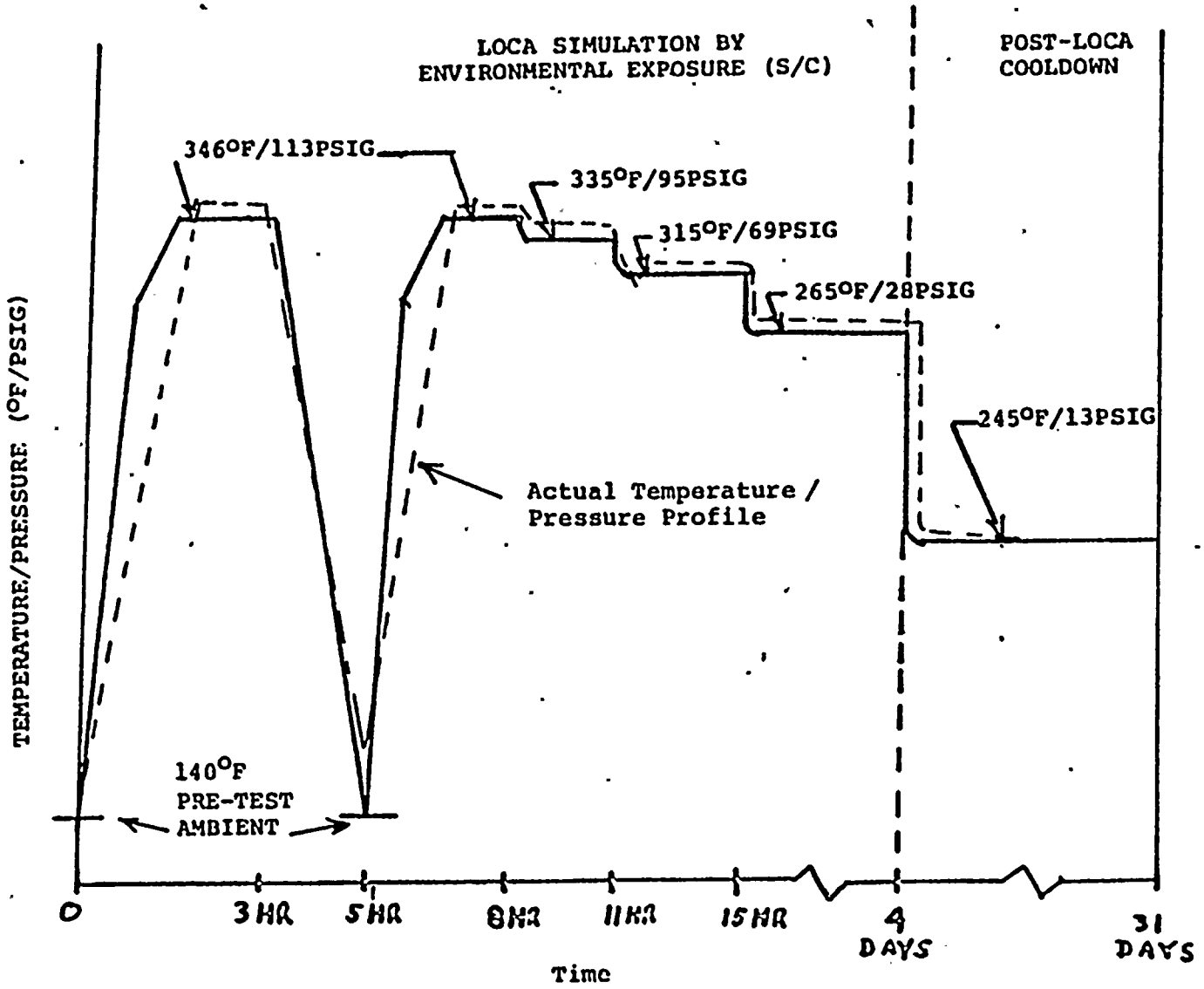

FIGURE 1

LOCA TEMPERATURE/PRESSURE PROFILE

WPPSS QID #315024

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-IR-3 MANUFACTURER The Boeing Company MODEL NUMBER X10175EM401 COMPONENT Instrument Rack FUNCTION/SERVICE CRD Instrument Rack LOCATION: BLDG R ELEVATION 522 COLUMN M.8/3.8	OPERATING TIME	6 Months	N/A	1	N/A	N/A	Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal	N/A	2	N/A	N/A	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal	N/A	2	N/A	N/A	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.3×10^4	N/A	3	N/A	N/A	None
	AGING	40 Years	N/A	2	N/A	N/A	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE List, Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Study 0740-004-522D 4. BRI Calculation # 5.51.055	1. Qualified. This component is metallic and not susceptable to environmental degradation.

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WPPSS QID248003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-POS-126XXXX See Note 2 MANUFACTURER Micro-Switch MODEL NUMBER BZE6-2RN72 COMPONENT Position Switch FUNCTION/SERVICE Indicate Position of Scram Inlet Valve LOCATION: BLDG R ELEVATION 528 COLUMN L5/8.4 and K2/8.4	OPERATING TIME	10 minutes	1 hour	3	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal, 104 abnormal profile 4,11,24 Accident	160°F	1	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7 PSIA normal Accident Profile 11,24	15.0	1	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100% accident	100	1	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	N/A	4	N/A	N/A
	RADIATION (RAD)	6.4×10^5	$1. \times 10^6$	2	4	Engineering Analysis	None
	AGING	40 years	40 years	1	4	Periodic Maintenance	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Ali Nadeem 6/24/83

Reviewed by: James Meeuns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. Para. 3.11 FSAR 2. EDS Study 0740-004-522B (worst case) 3. BRI C1E list, REV 8, 6/1/83 4. WPPSS Calculation 248003 5. BRI Calc. #5.51.055	1. Qualified

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WPPSS

QID248003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. CRD-POS-126XXXX

0219	1803	2643	3823	5019
0223	1807	2647	3827	5023
0227	1811	2651	3831	5027
0231	1815	2655	3835	5031
0235	1819	2659	3839	5035
0239	1823	3003	3843	5039
0243	1827	3007	3847	5043
0615	1831	3011	3851	5047
0619	1835	3015	3855	5051
0623	1839	3019	3859	5415
0627	1843	3023	4203	5419
0631	1847	3027	4207	5423
0635	1851	3031	4211	5427
0639	1855	3035	4215	5431
0643	1859	3039	4219	5435
0647	2203	3043	4223	5439
1011	2207	3047	4227	5443
1015	2211	3051	4231	5447
1019	2215	3055	4235	5819
1023	2219	3059	4239	5823
1027	2223	3403	4243	5827
1031	2227	3407	4247	5831
1035	2231	3411	4251	5835
1039	2235	3415	4255	5839
1043	2239	3419	4259	5843
1047	2243	3423	4607	
1051	2247	3427	4611	
1407	2251	3431	4615	
1411	2255	3435	4619	
1415	2259	3439	4623	
1419	2603	3443	4627	
1423	2607	3447	4631	
1427	2611	3451	4635	
1431	2615	3455	4639	
1435	2619	3459	4643	
1439	2623	3803	4647	
1443	2627	3807	4651	
1447	2631	3811	4655	
1451	2635	3815	5011	
1455	2639	3819	5015	

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By A. Nader 6/24/83 Ckd: James Mearns 6/24/83

WPPSS QID248003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-POS-127XXXX See Note 2 MANUFACTURER Micro-Switch MODEL NUMBER BZE6-2RH72 COMPONENT Position-Switch FUNCTION/SERVICE Indicate Position of Scram Outlet Valve LOCATION: BLDG R ELEVATION 528 COLUMN L5/8.4 and K2/8.4	OPERATING TIME	10 minutes	1 hour	3	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal, 104 abnormal Accident Profile 4,11,24	160^0F	1	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7 PSIA normal Accident Profile 11,24	15.0	1	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100% accident	100	1	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	4	N/A	N/A
	RADIATION (RAD)	6.4×10^5	1×10^6	2	4	Engineering Analysis	None
	AGING	40 years	40 years	1	4	Periodic Maintenance	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Ali Nasiri 6/24/83

Reviewed by: James Mirano 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. Para 3.11 FSAR 2. EDS Study 0740-004-522B (worst case) 3. BRI CIE list, Rev.8 dated 6/1/83 4. WPPSS Calculation 248003 5. BRI Calc. #5.51.055	1. Qualified

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WPPSS

QID248003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. CRD-POS-127XXXX

0219	1803	2643	3823	5019
0223	1807	2647	3827	5023
0227	1811	2651	3831	5027
0231	1815	2655	3835	5031
0235	1819	2659	3839	5035
0239	1823	3003	3843	5039
0243	1827	3007	3847	5043
0615	1831	3011	3851	5047
0619	1835	3015	3855	5051
0623	1839	3019	3859	5415
0627	1843	3023	4203	5419
0631	1847	3027	4207	5423
0635	1851	3031	4211	5427
0639	1855	3035	4215	5431
0643	1859	3039	4219	5435
0647	2203	3043	4223	5439
1011	2207	3047	4227	5443
1015	2211	3051	4231	5447
1019	2215	3055	4235	5819
1023	2219	3059	4239	5823
1027	2223	3403	4243	5827
1031	2227	3407	4247	5831
1035	2231	3411	4251	5835
1039	2235	3415	4255	5839
1043	2239	3419	4259	5843
1047	2243	3423	4607	
1051	2247	3427	4611	
1407	2251	3431	4615	
1411	2255	3435	4619	
1415	2259	3439	4623	
1419	2603	3443	4627	
1423	2607	3447	4631	
1427	2611	3451	4635	
1431	2615	3455	4639	
1435	2619	3459	4643	
1439	2623	3803	4647	
1443	2627	3807	4651	
1447	2631	3811	4655	
1451	2635	3815	5011	
1455	2639	3819	5015	

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By. al-n adler 6/24/83 Reviewed by: James Mcarme 6/24/83

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #316007

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2803-02C12

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-SPV-110A 110B MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJHT8316C37 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE 1.5" Sol. CAS-F-6 Discharge LOCATION: BLDG R ELEVATION 529, 528 COLUMN M.8/3.8 M8/3.8	OPERATING TIME	4320 Hours	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4,	Envelopes profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7 normal	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Profile 4,	(90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	6	N/A	None
	RADIATION (RAD)	5.8×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Vivarro 6/24/83

DOCUMENTATION REFERENCES

1 BRI CIE list, REV 8, 6/1/83
2 FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3 EDS Study 0740-004-522C
4 Calculation QID315004-1
5 Calculation QID315004-2
6 Calculation QID315004-3
7 BRI Calculation #5.51.055

NOTES

1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life.

Qualified

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WPPSS

QID #315020

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-SPV-117,118 See Note 2 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER HVA 904052-J COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Scram Solenoid Pilot LOCATION: BLDG R ELEVATION 530 COLUMN L5/8.4 and K2/8.4	OPERATING TIME	1.0 hour	6 hours	1	4	Simultaneous Test	None
	TEMPERATURE (F)	90 normal 104 abnormal profile 4, 11, 24	212	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 11, 24	Profile 24	2	7	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	7	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	7	N/A	None
	RADIATION (RAD)	1.0×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	6	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL? YES X NO (Ref. 8)

Prepared by: Behzad Mahini 6/24/83

Reviewed by: James Hiarns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Rev. 8, 6/1/83 2. FSAR Paragraph 3.11 WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-522J 4. GE Spec 38 3HA820 5. Calculation QID315004-2 6. Calculation QID315004-1 7. Calculation QID315004-3 8. BRI Calculation #5.51.055	1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified

WP-1061

WPPSS QID #315020

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12
MPL:
PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. TAG NUMBERS

0219	1803	2643	3823	5019
0223	1807	2647	3827	5023
0227	1811	2651	3831	5027
0231	1815	2655	3835	5031
0235	1819	2659	3839	5035
0239	1823	3003	3843	5039
0243	1827	3007	3847	5043
0615	1831	3011	3851	5047
0619	1835	3015	3855	5051
0623	1839	3019	3859	5415
0627	1843	3023	4203	5419
0631	1847	3027	4207	5423
0635	1851	3031	4211	5427
0639	1855	3035	4215	5431
0643	1859	3039	4219	5435
0647	2203	3043	4223	5439
1011	2207	3047	4227	5443
1015	2211	3051	4231	5447
1019	2215	3055	4235	5819
1023	2219	3059	4239	5823
1027	2223	3403	4243	5827
1031	2227	3407	4247	5831
1035	2231	3411	4251	5835
1039	2235	3415	4255	5839
1043	2239	3419	4259	5843
1047	2243	3423	4607	
1051	2247	3427	4611	
1407	2251	3431	4615	
1411	2255	3435	4619	
1415	2259	3439	4623	
1419	2603	3443	4627	
1423	2607	3447	4631	
1427	2611	3451	4635	
1431	2615	3455	4639	
1435	2619	3459	4643	
1439	2623	3803	4647	
1443	2627	3807	4651	
1447	2631	3811	4655	
1451	2635	3815	5011	
1455	2639	3819	5015	

WP-1083

Prepared by: Behrad Mahini 6/24/83 Reviewed by: James Means 6/24/83

WPPSS QID#

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

MPL:
PPD:

PAGE NO:
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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM	OPERATING TIME	.17 hours		1			Note 1
TAG NUMBER CRD-SPV-9,182	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4		2			
MANUFACTURER Valcor Engineering Corporation	PRESSURE (PSIA)	14.7		2			
MODEL NUMBER V070900-45S/N10-46	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4		2			
COMPONENT Solenoid Pilot Valve	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
FUNCTION/SERVICE Solenoid Valve to Control Rod Drive CRD-V-180/181 and CRD-V-10.	RADIATION (RAD)	5.3×10^4		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 525, 528 COLUMN J.1/4.8 J.2/4.6	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meaus 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-522P 4. BRI Calc.#5.51.005	1. These components are being purchased qualified from General Electric. Test data will be received and reviewed prior to fuel load.

WP-1081

WPPSS QID #324007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2303-02C12

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD- SV.-120/Note 2 -121/Note 2 -122/Note 2 -123/Note 2 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER HVA 1709662A COMPONENT Solenoid Pilot Valves FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 522 COLUMN K2/8.4 and L5/8.4	OPERATING TIME	0.17 Hours	6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Profile 4, 11, 24	Envelop profile 4 with 78C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 11, 24	Accident Profile 24	2	4/	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 Accident	100	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	6.4×10^5	6.4×10^5	3	4	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience, Engineering Analysis	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mumms 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E List Rev. 8 dated 6/1/83 2. FSAR Paragraph 3.11 WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-522J 4. Calculation 324007 5. BRI Calculation #5.51.055	1. These valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified

WP-1081

WPPSS QID #324007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

MPL:
PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. CRD-SV-120, 121, 122, 123

0219	1803	2643	3823	5019
0223	1807	2647	3827	5023
0227	1811	2651	3831	5027
0231	1815	2655	3835	5031
0235	1819	2659	3839	5035
0239	1823	3003	3843	5039
0243	1827	3007	3847	5043
0615	1831	3011	3851	5047
0619	1835	3015	3855	5051
0623	1839	3019	3859	5415
0627	1843	3023	4203	5419
0631	1847	3027	4207	5423
0635	1851	3031	4211	5427
0639	1855	3035	4215	5431
0643	1859	3039	4219	5435
0647	2203	3043	4223	5439
1011	2207	3047	4227	5443
1015	2211	3051	4231	5447
1019	2215	3055	4235	5819
1023	2219	3059	4239	5823
1027	2223	3403	4243	5827
1031	2227	3407	4247	5831
1035	2231	3411	4251	5835
1039	2235	3415	4255	5839
1043	2239	3419	4259	5843
1047	2243	3423	4607	
1051	2247	3427	4611	
1407	2251	3431	4615	
1411	2255	3435	4619	
1415	2259	3439	4623	
1419	2603	3443	4627	
1423	2607	3447	4631	
1427	2611	3451	4635	
1431	2615	3455	4639	
1435	2619	3459	4643	
1439	2623	3803	4647	
1443	2627	3807	4651	
1447	2631	3811	4655	
1451	2635	3815	5011	
1455	2639	3819	5015	

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Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meeuns 6/24/83

WPPSS QID #156009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge System TAG NUMBER CSP-DPT-4 5,6 MANUFACTURER Rosemount MODEL NUMBER 1153DB3 COMPONENT Differential Pressure Transmitter FUNCTION/SERVICE Suppression Chamber LOCATION: BLDG R ELEVATION 501 COLUMN L.2/9.3 N.1/4.8	OPERATING TIME	6 Months	Equivalent to > 6 Months	1	4	Simultaneous test Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	318	2	4	Simultaneous test.	None
	PRESSURE (PSIA)	14.7	87.7	2	4	Simultaneous test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Simultaneous test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	2.4×10^7	3	4	Sequential test	None
	AGING	40 Years	10 Years	2	4	Simultaneous test Engineering test	None Note 2
	ACCURACY		7.1% FSPE		4	Simultaneous test Engineering Analysis	Note 1

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83

Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Study 0740-004-501F, K
4. QID #156009
5. BRI Calc. #5.51.055

NOTES

1. This equipment is on Table B of the J10 so it does not require qualification prior to fuel load.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

PAGE NO:
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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge System TAG NUMBER CSP-POS-V/1 /2	OPERATING TIME	6 months	Equivalent To >6 months	2	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed LOCA profile	1	4	Simultaneous Test	None
MANUFACTURER NAMCO	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
MODEL NUMBER 74080100	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	1	5,6	Simultaneous Test	None
COMPONENT Limit Switches	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
FUNCTION/SERVICE Limit Switches for CSP-V-1, 2	RADIATION (RAD)	1.5×10^6	2.0×10^8	3	5	Engineering Analysis	None
	AGING	40 years	40 years	1	5	Engineering Analysis	None
LOCATION: BLDG R ELEVATION 508 COLUMN M.5/7.5, M.5/7.4	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8 dated 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-501I 4. ACME-Cleveland Report, "Qualification of NAMCO Control Limit Switch Model EA-740 dated 9/22/79 5. QID #200015 6. NAMCO Controls, Limit Switches General Catalog, copyright 1979 7. BRI Calc. #5.51.055	1. Qualified

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WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge System TAG NUMBER CSP-POS-V/3,4,5,6	OPERATING TIME	6 months	Equivalent To > 6 months	2	4,6	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed LOCA tested profile #1	1	4	Simultaneous Test	None
MANUFACTURER NAMCO	PRESSURE (PSIA)	14.7	See enclosed LOCA tested profile #1	1	4	Simultaneous Test	None
MODEL NUMBER EA74080100 COMPONENT Limit Switches	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	See enclosed LOCA tested profile #1	1	4	Simultaneous Test	None
FUNCTION/SERVICE Limit Switches for CSP-V-3, 4, 5, 6	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2.0×10^8	3	5	Engineering Analysis	None
	AGING	40 years	40 years	1	5	Engineering Analysis	None
LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (See Note 2)	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. BRI CIE list, Rev.8 dated 6/1/83
3. EDS Report 0740-004-471B, D,J
4. ACME-Cleveland Report, "Qualification of Namco Controls Limit Switch Model EA-740 dated 2/22/79
5. QID No. 200015
6. NAMCO Controls, Limit Switches General Catalog, copyright 1979
7. BRI Calc. #5.51.055

NOTES

1. Qualified
2.

Tag No.	Elev.	Column
CSP-POS-V/-3	483	M.6/7.6
-4	478	M.6/7.6
-5	477	M.7/7.6
-6	489	H.6/6.1

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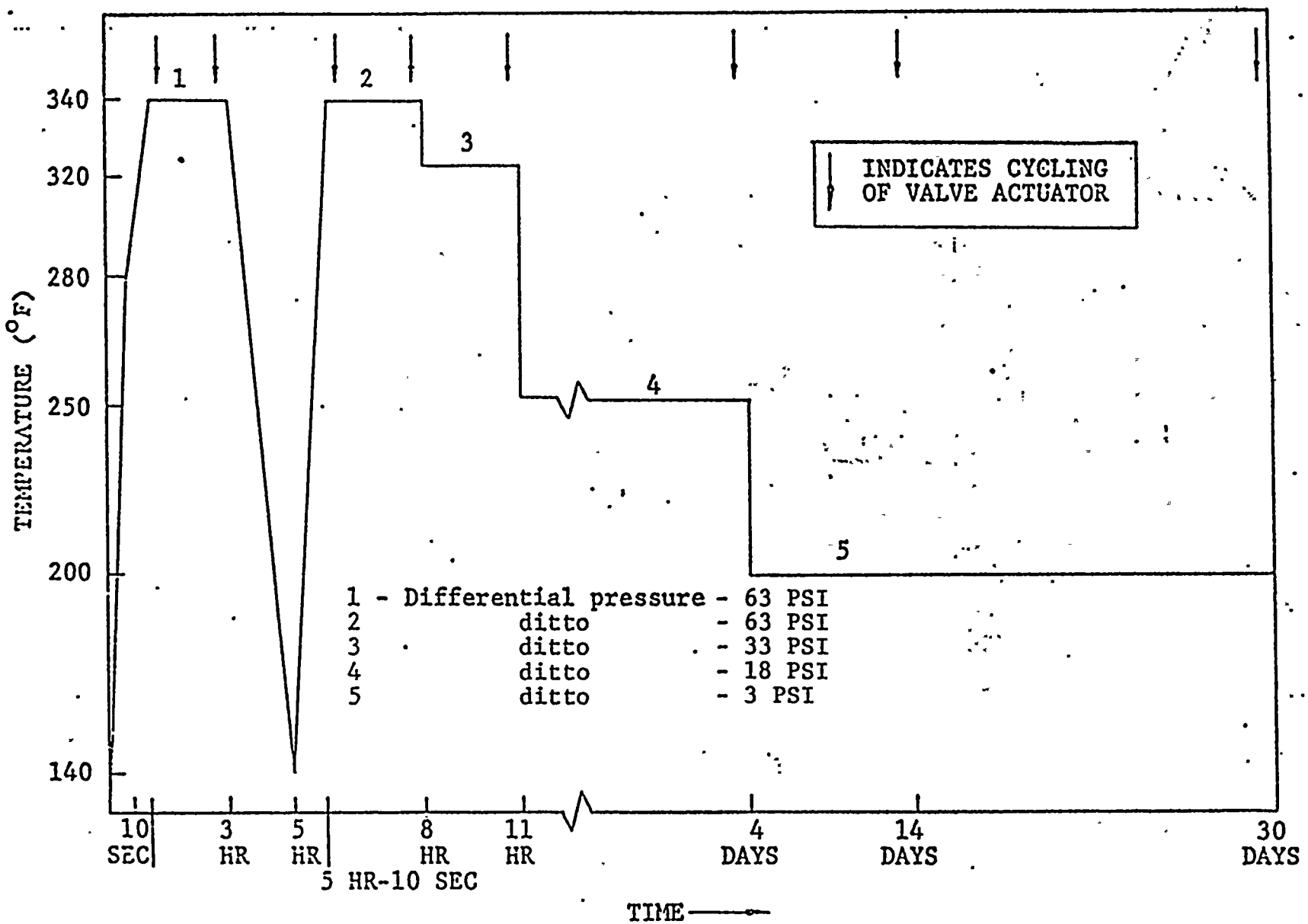

Fig 1
Test Chamber Temperature Profile for Accident Environment Simulation
(Taken from IEEE Standard 382-1972)

WPPSS QID #248002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-POS-V/ (See Note 1) MANUFACTURER Anderson, Greenwood & Co. MODEL NUMBER 04-3869-001 04-3869-002 COMPONENT Positioner FUNCTION/SERVICE Valve position indication LOCATION: BLDG R ELEVATION 491 475 491 COLUMN M.9/5.1 N.5/7.7 H.6/6.0	OPERATING TIME	6 months	Equivalent or >6 months	1	4,5	Sequential Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	Accident Profile 4	2	4,5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.7	2	4,5	Sequential Test Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4,5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	5×10^7	3	4	Engineering Analysis	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by Behzad Makini 6/24/83 Reviewed by James Murano 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report #0740-004-471B,D,J
4. QID #248002
5. Environmental Qualification Test Report on close switch for Anderson Greenwood Company Bellaire, Texas, Date 1/29/80.
6. BRI Calc. #5.5i.055

NOTES

1. Tag #

CSP-POS-V/10P1, 10P12, 10P2, 10P3, 10P4, 10P9, 7P1, 7P12, 7P2, 7P3, 7P4, 7P9, 8P1, 8P12, 8P2, 8P3, 8P4, 8P9

Qualified

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WPPSS QID #200009,

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge System TAG NUMBER CSP-POS-V/9 MANUFACTURER Namco MODEL NUMBER D2400X COMPONENT Limit Switches FUNCTION/SERVICE Limit Switch for CSP-V-9 LOCATION: BLDG R ELEVATION 490 COLUMN M.9/5.1	OPERATING TIME	6 months	Equivalent to or >6 months	1	4,5	Sequential Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	200°F	2	4,5	Sequential Test Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	2	4,5	Sequential Test and Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	5×10^5	5.0×10^7	3	5	Engineering Analysis	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Nahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8 dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-471B 4. Qualification of NAMCO Controls Limit Switch Model EA-170 Report Revision 1 dated 7/24/78 5. QID #200009, 6. BRI Calc. #5.51.055	Qualified

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WPPSS QID# 288015E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

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PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-RLY-ARC SPV 5 -ARC SPV 6 -ARC SPV 9 MANUFACTURER ASEA MODEL NUMBER RXMK1 COMPONENT Relay FUNCTION/SERVICE Control Relay for CSP-V-5,6,9 LOCATION: BLDG R ELEVATION 501 COLUMN N.0/4.8 L.4/9.4 N.0/4.8	OPERATING TIME	4320 hrs	>4320 hrs.	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Acc. Prof. 4	194	2,5	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2,5	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Acc. Prof. 4	90	2,5	4	Engineering Analysis	None
	CHEMICAL SPRAY	NA	NA	NA	NA	NA	None
	RADIATION (RAD)	7.9×10^4	10^6	3	4	Engineering Analysis	None
	AGING	40 years	40 years	2	4	Engineering Analysis	None
	ACCURACY	NA	NA	NA	NA	NA	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (REf. 5)

Prepared By Behzad Mahini 6/24/83 Reviewed By James Nuzzo 6/24/83

DOCUMENTATION REFERENCES	NOTES
1) BRI Equipment List, Rev. 8, 6/1/83 2) FSAR par 3.11 3) EDS REprot 0740-004-501K 4) QID 288015 E 5) BRI Calculation # 5.51.055	Qualified

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WPPSS QID #283041

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808- 58

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-RLY-CR 4 -CR 5 -CR 6 MANUFACTURER Struthers Dunn MODEL NUMBER 219XDXB COMPONENT Relay FUNCTION/SERVICE Control Relay for CSP-V-6 CSP-SPV-5 CSP-V-9 LOCATION: BLDG R ELEVATION 501 COLUMN L4/9.4 H/4.8 N/4.8	OPERATING TIME	4320 hours	4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90° Normal 104° Abnormal Accident Profile 4	150	2	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4	10^5	3	4	Engineering Analysis	None
	AGING	40 years	10 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Moana 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS Report 0740-004-501 K 4. QID #283041 5. BRI Calc. #5.51.055	Qualified

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WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-SPV-(See Note 2) MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER See Note 2 COMPONENT Solenoid Pilot valve FUNCTION/SERVICE Solenoid Pilot for CSP-V-3 LOCATION: BLDG R ELEVATION See Note 2 COLUMN	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Profile 4	Envelopes Profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal Profile 4	(<90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	6	N/A	None
	RADIATION (RAD)	5.0×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-004-471B (worst case)
4. Calculation QID315004-1
5. Calculation QID315004-2
6. Calculation QID315004-3
7. BRI Calculation #5.51.055

NOTES

1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life.

Qualified

WP-1081

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

TAG NUMBERS	ELEV.	LOCATION	MODEL
-1	501	N/5.1	
-10A	471	N/4.0	WJHT831654
-10B	471	N/4.0	WJHT831654
-2	501	L4/9.3	
-3	476	N/3.9	WJHT8316A76
-4	501	N/5.1	
-5	505	N/4.8	WJHT8316A74
-6	501	L4/9.3	
-7A	478	N/3.9	WJHT831654
-7B	476	N/3.9	WJHT831654
-8A	471	H4/6.8	
-8B	471	H4/6.8	
-9	505	N.0/4.9	WJNP8316A74E

6/24/83 6/24/83

WPPSS QID# 361012

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-93, -96, -97, -98 MANUFACTURER Target Rock MODEL NUMBER 82M-002 COMPONENT Solenoid Operated Valve FUNCTION/SERVICE Solenoid Valve LOCATION: BLDG REACTOR ELEVATION 471, 501, 501, 471 COLUMN M.7/7.7	OPERATING TIME	4320 Hours	Equivalent to >4320 hours	1	3,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	385	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Accident Profile 4	92	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^6	2.27×10^7	6	5	Sequential Test	None
	AGING	40 years	40 years	2	3,5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by Behzad Mahini 6/24/83 REviewed by James Moana 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Revision 8, 6/1/83 2. FSAR Paragraph 3.11 3. QID # 324002-E 4. BRI Calculation 5.51.055 5. Test Report #2375A, Target Rock Corporation 6. EDS Calculation 0740-004-471D, 501I	Qualified

WP-1081

WPPSS QID #036001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-62A

MPL:
PPD:

PAGE NO:
REVISION: 3
DATE: January 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-CBL-C/8, C/9, B/4, A/1 MANUFACTURER Okonite MODEL NUMBER 115-21-3180, 115-21-3182, 114-21-1013, 115-21-1029 COMPONENT Electrical Cable FUNCTION/SERVICE 14.4kV Power Cable, 14.4kv Power Cable, 4.16kv Power Cable, 6.9kv Power Cable LOCATION: BLDG All ELEVATION COLUMN	OPERATING TIME	6 months	Equivalent to 76 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water Spray	Chemical and Water Spray	2	4,5	Simultaneous Test and Engineering Analysis	None
	RADIATION (RAD)	7×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by James Mearns 6/24/83

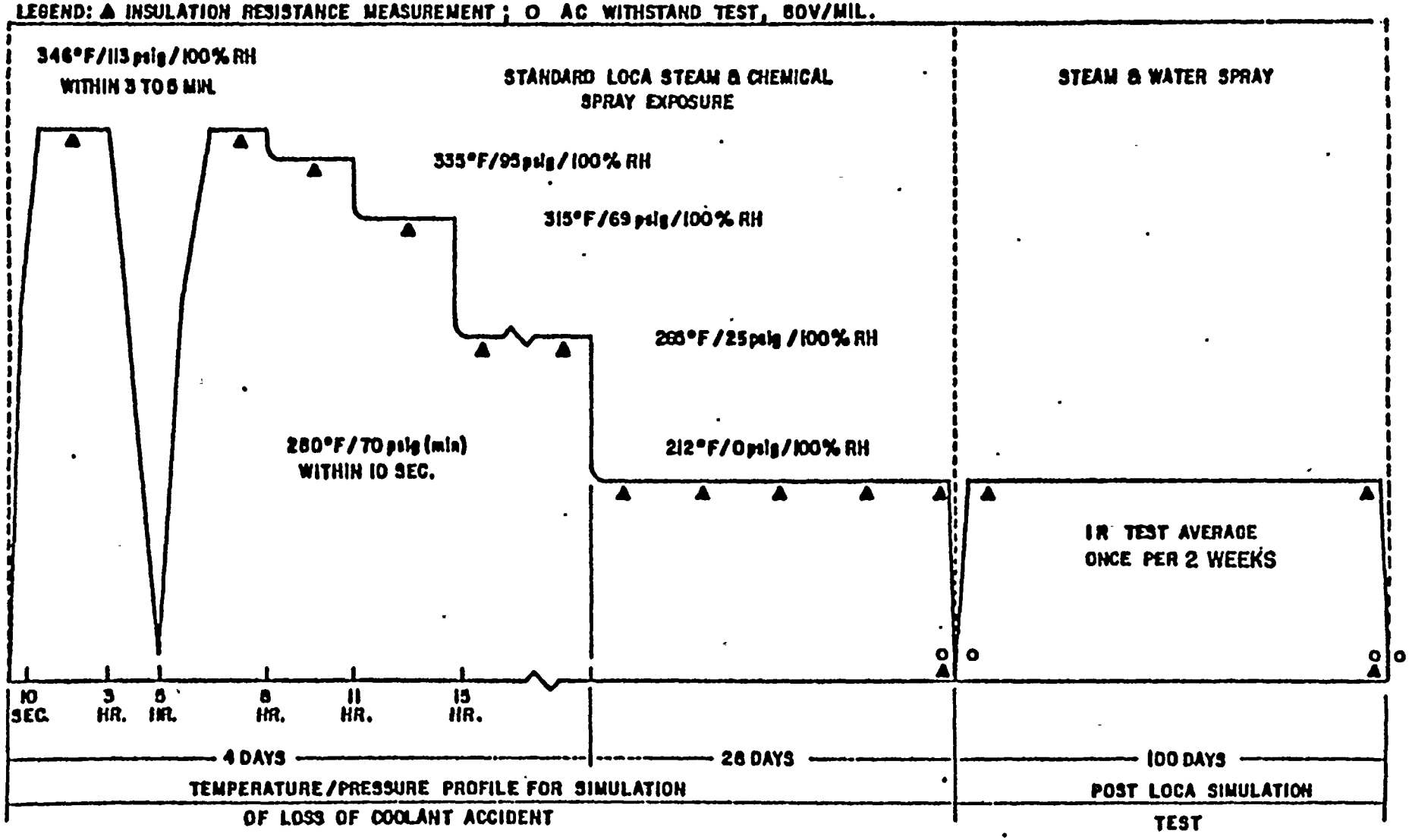
DOCUMENTATION REFERENCES	NOTES
1. WNP-2 Class 1E Equipment List, dated December 1982 2. FSAR Paragraph 3.11 3. FSAR Table 3.11-4 4. Okonite Engineering Summary No. 266, dated 7/17/75 5. QID #036001 6. BRI Calc. #5.51.055	Qualified

WP-1081

REVISION: 2
DATE: September, 1982

FIGURE II CABLE QUALIFICATION TEST PROFILE FOR LIFE & LOCA CONDITIONS

LEGEND: ▲ INSULATION RESISTANCE MEASUREMENT ; O AC WITHSTAND TEST, 60V/MIL.



OKONNITE CABLE

WPPSS QID #036002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-62 B

MPL:
PPD:

PAGE NO:
REVISION: 3
DATE: January 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-CBL-(Note 1) MANUFACTURER Raychem MODEL NUMBER Note 1 COMPONENT Electrical Cable FUNCTION/SERVICE Conduct Current LOCATION: BLDG General Plant ELEVATION COLUMN	OPERATING TIME	6 months	Equivalent to 76 months	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2	100	2	4,5	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water Spray	Chemical Spray	2	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,6	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Bedsad Mahine 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 Class 1E Equipment List, dated December 1982 2. FSAR Paragraph 3.11 3. FSAR Table 3.11-4 4. Tests of Raychem Thermofit Insulation Systems Under Simultaneous Exposure of Heat, Gamma Radiation, Steam and Chemical Spray. FIRL Report C4033-3, dated 1/75. 5. Raychem Report RABR-62B-75-028 Trans. 187-36B 6. QID# 036002 7. BRI Calculation #5.51.055	Qualified

WP-1081

WPPSS QID #036002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-62B

MPL:
PPD:

PAGE NO:
REVISION: 3
DATE: January, 1983

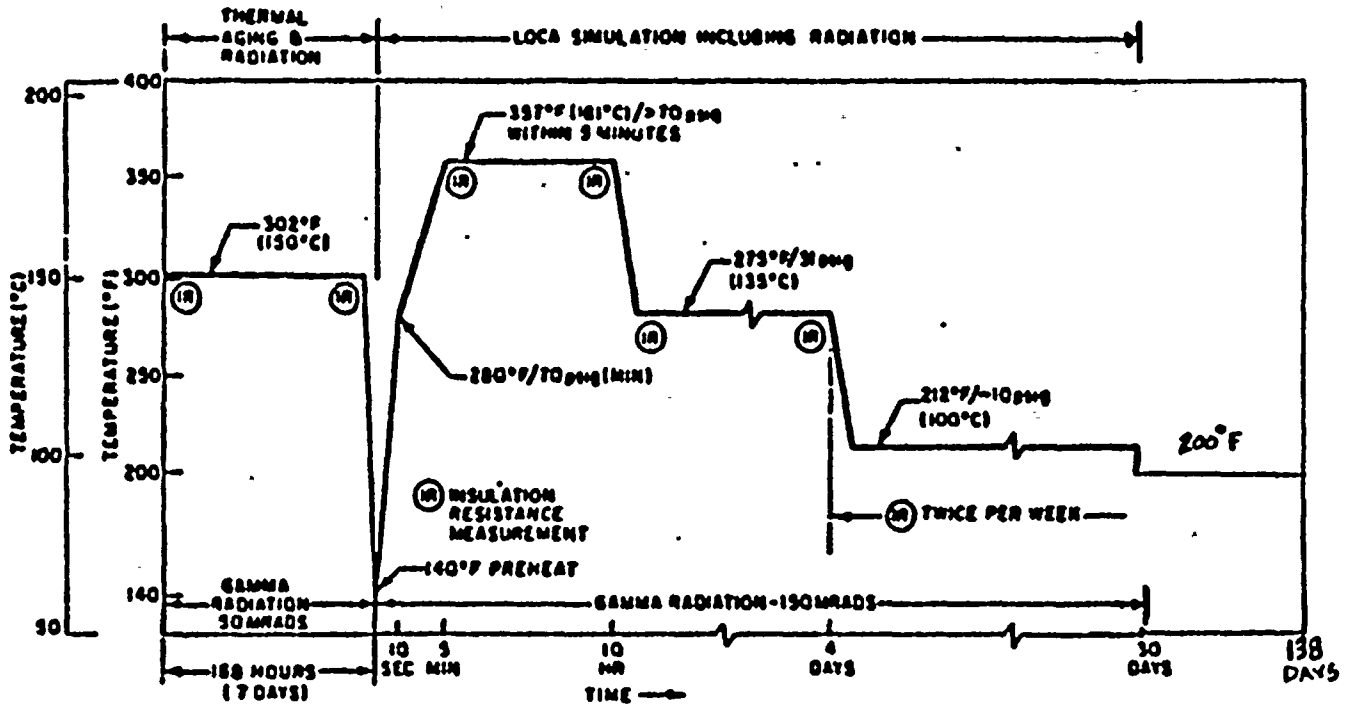
DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag Number	M/N
E-CBL-G2/1	W1TC12B6
-H1/1	J2TC10B10
-K2/1	60/7174-20
-J2/1	F6T2KX18A6
-J3/1	F2T2JX16A6
-J4/1	F2EX16A6
-K1/1	J2TC14B6C1
-H4/3	60/7176-14
-J1/1	F2T2X16A6
-H3/1	F5TC10B10
-H4/1	FB/2TC16B10
-K3/3	W1TC20B20
-K4/1	60/7237
-L1/1	F1TC1686
-L1/2	J3T1TC16B6
-L1/3	J3T1TC12B10
-L2/1	J12T2TC20B6
-L4/1	B12C20B10
-M1/21	7521D3330
-M4/22	10483
-M5/22	10481
-M6/26	10567 R.F.
-M7/18	10566 R.F.
-X100A/01	10496-750HM
-X100A/02	10495-1350HM
-G1/1	W1TC750B10
-G/14	60/7175

WP-1083

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meacum 6/24/83



RAYCHEM CABLE

WPPSS QID #036003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-62C

MPL:
PPD:

PAGE NO:
REVISION: 3
DATE: January 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Elotrical TAG NUMBER E-CBL-Note 1 MANUFACTURER Rockbestos MODEL NUMBER Note 1 COMPONENT Electrical Cable FUNCTION/SERVICE Note 1 LOCATION: BLDG All ELEVATION COLUMN	OPERATING TIME	6 months	Equivalent To 76 months	1	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal See Profile 1 Accident	See Enclosed Profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accidental Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water Spray	Boric Acid Spray	2	4,5	Simultaneous Test Engineering Analysis	None
	RADIATION (RAD)	7.0×10^7	2.0×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makine 6/24/83 Reviewed by: James Mcarus 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. WNP Class 1E Equipment List, dated December 1982 2. FSAR Paragraph 3.11 3. FSAR Table 3.11-4 4. Rockbestos Report "Qualification of Firewall III Class 1E Electric Cable" 11/2/79 5. QID# 036003 6. BRI Calc. #5.51.055	Qualified See Next Page

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WPPSS QID #036003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-62C

MPL:
PPD:

PAGE NO:
REVISION: 3
DATE: January 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

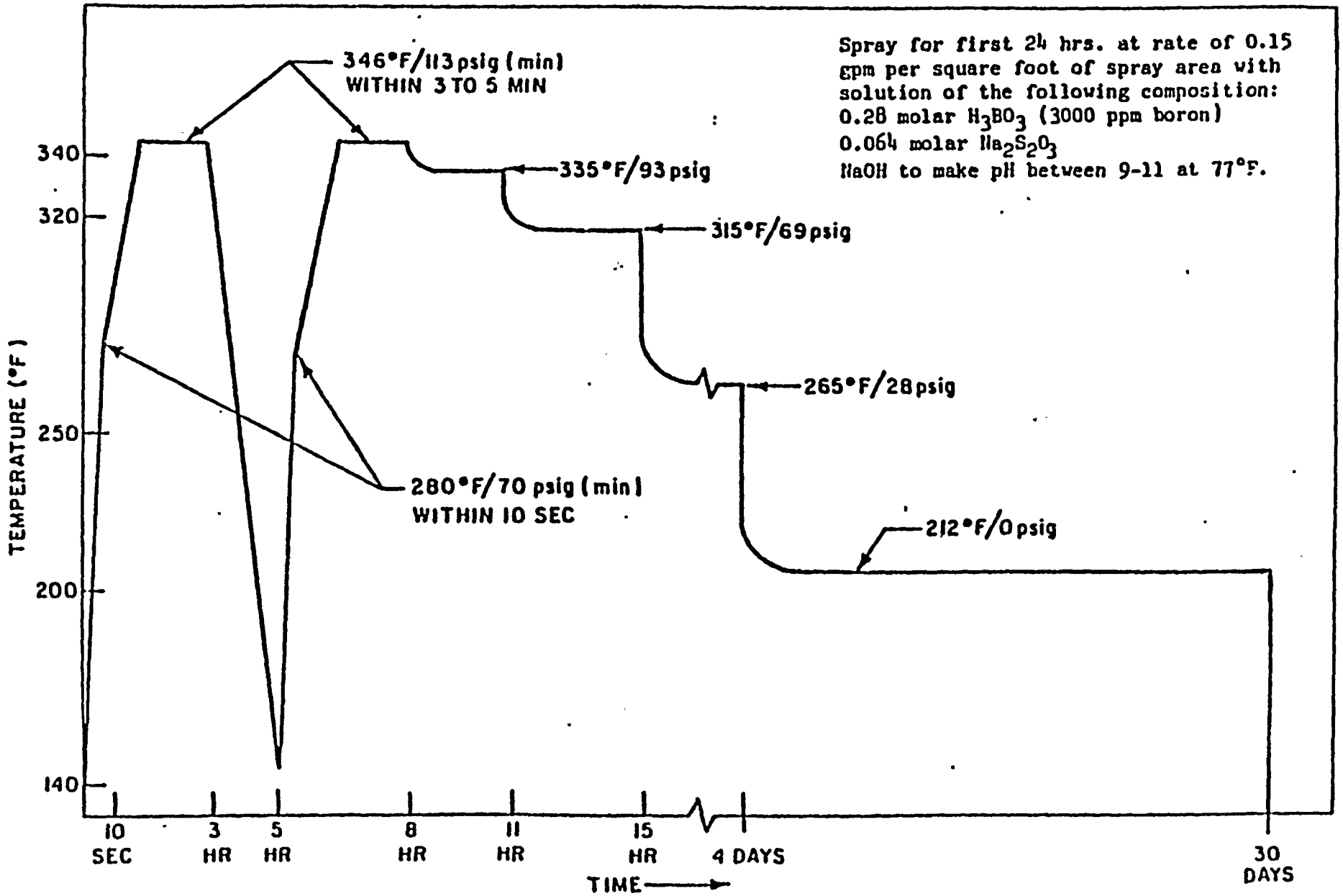
TAG #	M/N	FUNCTION
E-CBL-J1/1/C	I67-3154	T/C Cable
E-CBL-K2/1/C	I46-3633	T/C, Control Rod indication cable
E-CBL-H1/9	C52-3220	120 Vac & 125 Vdc Control Cable
E-CBL-H4/1/C	I46-3632	Instrument Cable
E-CBL-G1/14/C	P62-3296	480 Vac and 250 VDC
E-CBL-G1/5/C	P62-3289	Power Cable
E-CBL-K1/1/C	C53-3244	Indication, Annunciation, SV and Logic Control Cable

WP-1083

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meyers 6/24/83

LOCA Profile

REVISION: 2
DATE: September, 1982



ROCKBESTOS CABLE

LOCA PROFILE

WPPSS QID # 049001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-55

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical System TAG NUMBER E-CONN-X100 A/01 to X100 D/01 MANUFACTURER Amphenol MODEL NUMBER Jack # 82-503 COMPONENT Electrical Connector FUNCTION/SERVICE Source range NI connector LOCATION: BLDG C ELEVATION See COLUMN Note 1	OPERATING TIME	4320 hours	Equivalent to > 4320 hours	1	3,4	Engineering Analysis and Simultaneous Tests	None
	TEMPERATURE (F)	135 ave normal 150 max abnormal Accident Profile 1	392	2	3	Simultaneous Tests	None
	PRESSURE (PSIA)	14.7 normal 14.7 abnormal Accident Profile 1	135	2	3	Simultaneous Tests	None
	RELATIVE HUMITY (%)	55 max-normal 90 max-abnormal Accident Profile 2	Steam	2	3	Simultaneous Tests	None
	CHEMICAL SPRAY	Demineralized Water	Borated Water	2	3	Simutlaneous Tests	None
	RADIATION (RAD)	7×10^7	2.54×10^8	2	3,4	Sequential Tests	None
	AGING	40 years	35 years	2	3,4	Engineering Analysis and Sequential Tests	None Note 2
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Winquist 6/24/83

DOCUMENTATION REFERENCES

1. B & R Class IE equipment list, rev. 7
2. FSAR paragraph 3.11
3. Westinghouse report PEN-TR-83-01 dated January 11, 1983
4. QID 049001-E
5. BRI Calc. 5.5/.055

NOTES

Qualified

1.

EPN	ELEV.	COLUMN			
E-CONN-X100-A/01	507	98	D	AZ	R40
E-CONN-X100-B/01	507	102	D	AZ	R40
E-CONN-X100-C/01	511	315	D	AZ	R40
E-CONN-X100-D/01	511	322	D	AZ	R40

2. A preventive maintenance/surveillance program is being developed to extend the qualified life

WP-1981

WPPSS QID # 049002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-55

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical System TAG NUMBER E-CONN-X100 A/02 to -X100 D/02 MANUFACTURER Amphenol MODEL NUMBER Plug #28650 COMPONENT Electrical Connector FUNCTION/SERVICE Source range NI connector LOCATION: BLDG C ELEVATION See COLUMN Note 1	OPERATING TIME	4320 hours	Equivalent to > 4320 hours	1	3,4	Engineering Analysis and Simultaneous Tests	None
	TEMPERATURE (F)	135 normal 150 max abnormal Accident Profile 1	392	2	3	Simultaneous Tests	Tests
	PRESSURE (PSIA)	14.7 normal 14.7 abnormal Accident Profile 1	135	2	3	Simultaneous Tests	None
	RELATIVE HUMITY (%)	55 max-normal 90 max-normal Accident Profile 2	Steam	2	3	Simultaneous Tests	None
	CHEMICAL SPRAY	Demineralized Water	Borated Water	2	3	Simultaneous Tests	None
	RADIATION (RAD)	7×10^7	2.54×10^8	2	3	Sequential Tests	None
	AGING	40 years	35 years	2	3,4	Engineering Analysis and Sequential Tests	None Note 2
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Freeman 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8 dated 6/1/83
2. FSAR paragraph 3.11
3. Westinghouse report PEN-TR-83-01 dated January 11, 1983
4. QID 049001-E
5. BRI Calc. 5.5/.055

NOTES

Qualified

1.

EPN	ELEV.	COLUMN			
E-CONN-X100-A/02	507	98	D	AZ	R40
E-CONN-X100-B/02	507	102	D	AZ	R40
E-CONN-X100-C/02	511	315	D	AZ	R40
E-CONN-X100-D/02	511	322	D	AZ	R40

2. A preventive maintenance/surveillance program is being developed to extend the qualified life

WP-1881

WPPSS QID #049006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-CONN-X-102A/01 -X-102B/01 MANUFACTURER AMP MODEL NUMBER Solistrand 3413C COMPONENT Parallel Splice Connector FUNCTION/SERVICE Splice Wires LOCATION: BLDG C ELEVATION 534 COLUMN 185D & 219DAZ R40	OPERATING TIME	4320 hours	N/R (solid metal)	6	2,4	Engineering Analysis	None
	TEMPERATURE (F)	135 max. normal 150 max. abnormal Accident Profile 1	N/R (solid metal)	1	2,4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Max. Normal 16.7 max. Abnormal Accident Profile 1	N/R (solid metal)	1	2,4	Engineering Analysis	None
	RELATIVE HUMITY (%)	55 max. normal 90 max. abnormal Accident Profile 2	100 (salt fog)	1	3	Separate Effect	None
	CHEMICAL SPRAY	Deionized water	Salt fog	1	3	Separate Effect	None
	RADIATION (RAD)	7.0×10^7	N/R (solid metal)	1	2,4	Engineering Analysis	None
	AGING	40 years	N/R (solid metal)	1	2,4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. AMP Catalog No. 2005-8, 2/81 3. AMP technical report ELR221-11, 5/24/70 4. QID #049006 5. BRI Calculation #5.51.055 6. BRI CIE list, REV 8, 6/1/83	Qualified.

WP-1081

WPPSS QID# 049007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-Conn-X102A/02 E-Conn-X102B/02 MANUFACTURER Raychem MODEL NUMBER WCSF-N COMPONENT Shrink. Tube FUNCTION/SERVICE Insulate and Protect Solistrand Splice Connectors LOCATION: BLDG C ELEVATION 534 COLUMN 185° R40 219° R40	OPERATING TIME	6 months	Equivalent to >6 months	6	2,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 max. normal 150 max. normal Accident profile 1	See enclosed profile	1	2	Simultaneous Test	None
	PRESSURE (PSIA)	14,7 max. normal 16.7 max. abnormal Accident Profile 1	See enclosed profile	1	2	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 max. normal 90 max. abnormal accident profile 2	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water	50 ppm hydrozene to ph 10.5	1	3	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2×10^8	1	2	Sequential Test	None
	AGING	40 years	40 years	1	2,4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

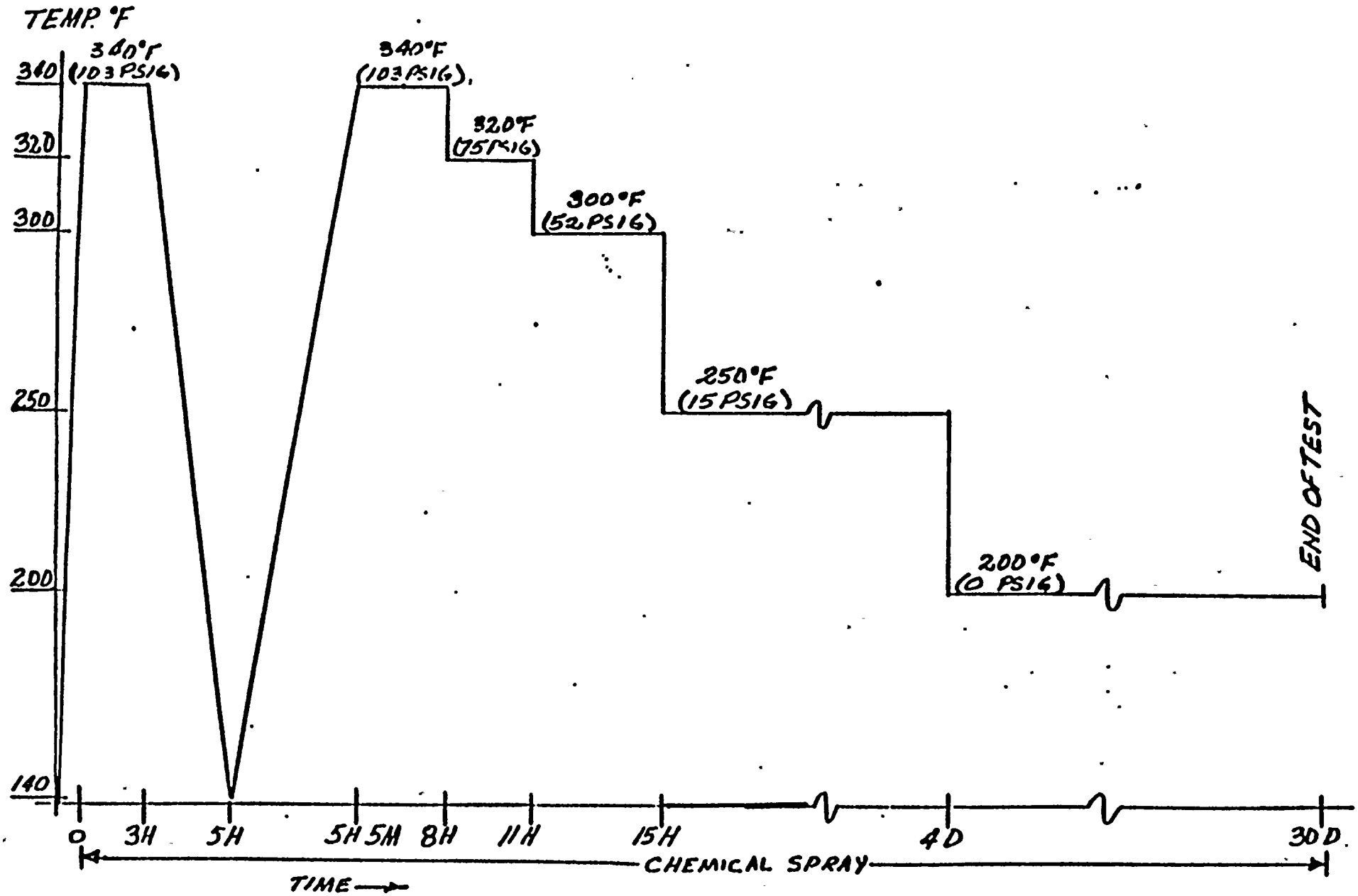
FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Wyle 58442-1, 5/15/82 3. Raychem EDR2001, 8/10/78 4. QID # 049007 5. BRI Calculation #5.51.055 6. BRI CIE list, REV 8, 6/1/83	Qualified

WP-1081

Revision: 2
Date: September 1982



ENVIRONMENTAL QUALIFICATION TEST PROFILE FOR RAYCHEM SPLICES

QID #185002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM: Electrical TAG NUMBER: E-IR-(note 2) MANUFACTURER: JELCO Inc MODEL NUMBER: N/A COMPONENT: Instrument Rack FUNCTION/SERVICE: Support Class IE Instruments LOCATION: BLDG R ELEVATION Note 2 COLUMN Note 2	OPERATING TIME	6 months	N/R	1	N/A	Note 1	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident-Various Profiles	N/R	2	N/A	Note 1	None
	PRESSURE (PSIA)	14.7 Normal Accident-Various Profiles	N/R	2	N/A	Note 1	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal 100 max accident	N/R	2	N/A	Note 1	None
	CHEMICAL SPRAY	N/A	N/R	2	N/A	Note 1	None
	RADIATION (RAD)	4.4×10^7	N/R	3	N/A	Note 1	None
	AGING	40 years	N/A	2	N/A	N/A	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Ali Nadeli 6/24/83

Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. WNP-2 Class IE Equipment List, dated December, 1982
2. FSAR Paragraph 3.11
3. EDS Report 0740-002-471J (Worst Case Rad Levels)
4. BRI Calculation #5.51.055

NOTES

1. The instrument racks are metallic. Therefore, the instrument racks are not susceptible to the environmental conditions. Qualified.

2. Tag Numbers:

E-IR-61	E-IR-66	E-IR-71
-62	-67	-72
-63	-68	-73
-64	-69	-74
-65	-70	

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. Continued

EPN	Elevation	Location
-61	422	N.1/3.5
-62	471	H.4/6.8
-63	501	L.4/9.4
-64	501	N.0/4.8
-65	471	N.0/4.0
-66	501	N.8/5.5
-67	548	M.8/5.7
-68	548	H.7/8.1
-69	522	N.0/8.1
-70	522	J.0/4.0
-71	522	J.0/6.9
-72	522	H.8/8.3
-73	522	H.4/4.2
-74	522	H.4/7.0

Prepared by: [illegible] 6/24/93
Reviewed by: [illegible] 6/24/93

QID #185003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM: Electrical TAG NUMBER: E-IR-(note 2) MANUFACTURER: GE MODEL NUMBER: COMPONENT: Instrument Rack FUNCTION/SERVICE: Support Class 1E Instruments LOCATION: BLDG R ELEVATION COLUMN Various Locations	OPERATING TIME	6 months	N/R	1	N/A	Note 1	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident-Various Profiles	N/R	2	N/A	Note 1	None
	PRESSURE (PSIA)	14.7 Normal Accident-Various Profiles	N/R	2	N/A	Note 1	None
	RELATIVE HUMITY (%)	40 max normal 90 abnormal 100 accident	N/R	2	N/A	Note 1	None
	CHEMICAL SPRAY	N/A	N/R	2	N/A	Note 1	None
	RADIATION (RAD)	4.4×10^7	N/R	3	N/A	Note 1	None
	AGING	N/A	N/A	N/A	N/A	N/A	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI-CIE List, Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-002-471J (worst case)
4. BRI Calculation #5.51.055

NOTES

1. The instrument racks are metallic. Therefore, the instrument racks are not susceptible to the environmental conditions. Qualified.
2. Tag Numbers

E-IR-P001	E-IR-P008	E-IR-P017	E-IR-P025	E-IR-P031
-P002	-P009	-P018	-P026	-P032
-P004	-P010	-P021	-P027	-P033
-P005	-P011	-P022	-P029	-P039
-P006	-P015	-P024	-P030	-P040

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-JB-(See Note 2) MANUFACTURER Fischbach and Lord MODEL NUMBER None COMPONENT Junction Box FUNCTION/SERVICE Terminal Box LOCATION: BLDG R ELEVATION COLUMN (See Note 2)	OPERATING TIME	6 months	N/A	1	N/A	N/A	Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal Various Accident Profiles	N/A	2	N/A	N/A	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Various Accident Profiles	N/A	2	N/A	N/A	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	N/A	3	N/A	N/A	None
	AGING	40 yrs.	N/A	2	N/A	N/A	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared By: [illegible] 6/24/83 Reviewed By: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Study 0740-004-548E, F
4. BRI Calculation # 5.51.055

NOTES

1. Qualified. This component is metallic and not susceptible to environmental degradation.
2.

Tag Number	Elevation	Coordinate
E-JB-HTP/7B/E	548	M.1/4.4
-HTP/8B/A	548	M.1/4.7
- TB/IR68/2	548	H.8/8.2
- TB/R484	572	M.4/5.8
- TB/R485	572	M.7/8.2

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QID #252002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-PP-7AE+ E-PP-8AE+	OPERATING TIME	4320 hours	Equivalent to >4320 hours	1	3	Materials Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	185°F	2	3	Materials Test and Engineering Analysis	None
MANUFACTURER Square D	PRESSURE (PSIA)	14.7	14.7	2	3	Engineering Analysis	None
MODEL NUMBER QM-02653-28EE	RELATIVE HUMITY (%)	40 Max. Normal 90 Max, Abnormal Accident Profile 4	90	2	3	Engineering Analysis	None
COMPONENT Power Distribution Panel	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Instrumentation and Control Power Panel	RADIATION (RAD)	7.1×10^4	1×10^5	5	3	Materials Test and Engineering Analysis	None
	AGING	40 years	10 years	2	3	Materials Test and Engineering Analysis	None Note 1
LOCATION: BLDG R ELEVATION 474 COLUMN N.2/9.3 N.0/8.5	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. QID #252002-E 4. BRI Cal. 5.51.055 5. EDS Calculation 0740-004-471D	Qualified 1. A preventive maintenance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #382003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-55

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-X-(see note 2) MANUFACTURER Westinghouse MODEL NUMBER 55-00-0002 COMPONENT Primary Containment Penetration FUNCTION/SERVICE (Note 2) LOCATION: BLDG C ELEVATION (Note 2) COLUMN (Note 2)	OPERATING TIME	6 months	Equivalent To >6 months	1	4,	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal Profile 1 Accident	340°F	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1 Accident	56 psig	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water Spray	Note 3	2	4	Engineering Analysis	None
	RADIATION (RAD)	7.0×10^7	1.2×10^8	3	4	Sequential Test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Separate Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Cliff Newlin 6/24/83 Reviewed by: James Meaney 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. FSAR Table 3.11-4 4. QID #382003-E 5. BRI Calculation #5.51.055	1. Qualified

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WPPSS QID #382003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-55 PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

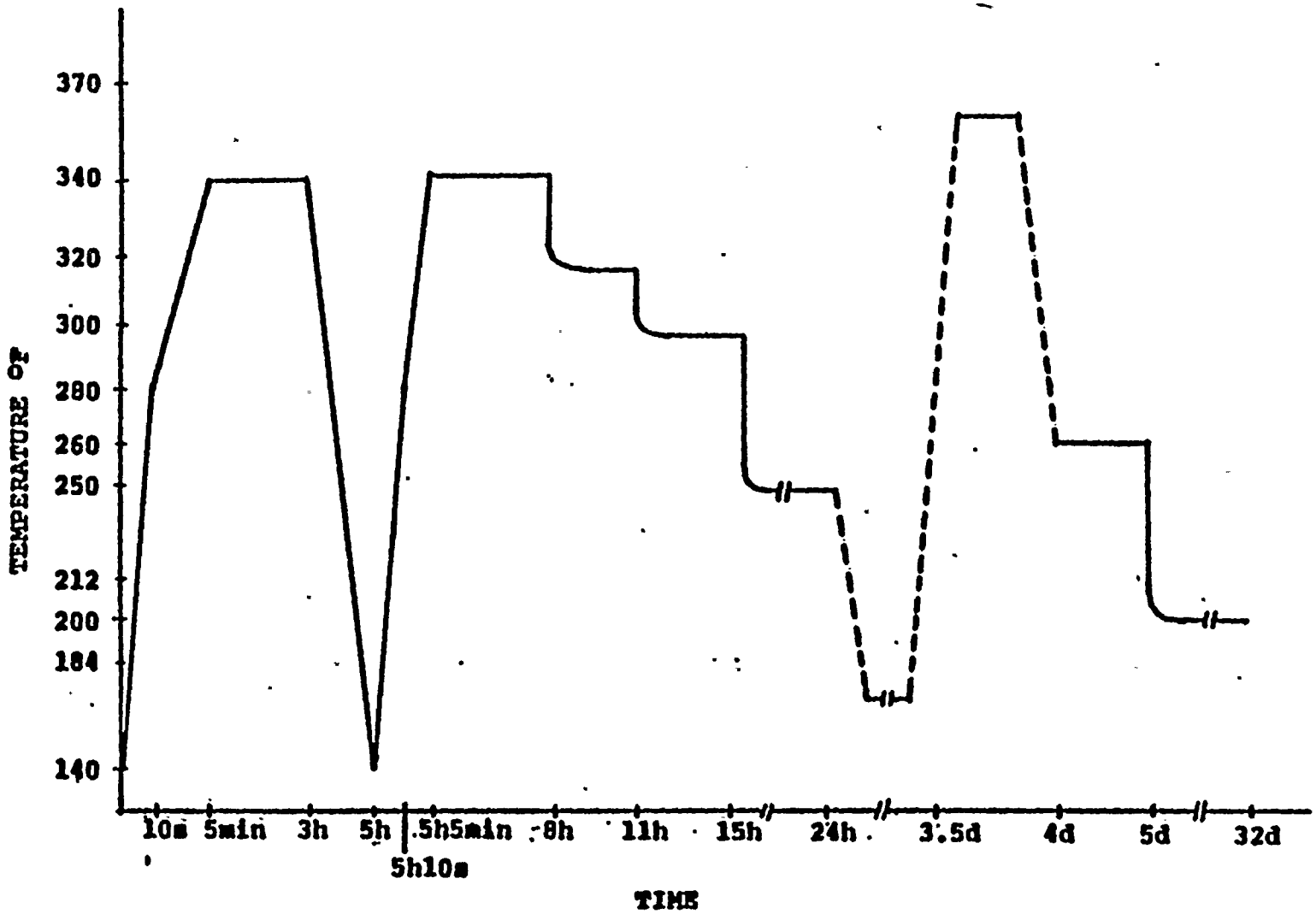
2.

Tag Number	Function/Service	Elev.	Azimuth
E-X-100A	Neu. Mont. Sys. Penetration	507	97
-100B	Neu. Mont. Sys. Penetration	507	103
-100C	Neu. Mont. Sys. Penetration	511	315
-100D	Neu. Mont. Sys. Penetration	511	327
-101A	CRD Position Ind. Penetration	511	130
-101B	CRD Position Ind. Penetration	511	138
-101C	CRD Position Ind. Penetration	511	312
-101D	CRD Position Ind. Penetration	511	318
-102A	T/C and RTD Penetration	534	189
-102B	T/C and RTD Penetration	534	218
-104A	Low Voltage Power Penetration	511	112
-104B	Low Voltage Power Penetration	511	115
-104C	Low Voltage Power Penetration	534	192
-104D	Low Voltage Power Penetration	534	222
-105A	Control & Indication Penetration	507	100
-105B	Control & Indication Penetration	511	135
-105C	Control & Indication Penetration	534	195
-105D	Control & Indication Penetration	534	225
-107A	Low Volt. Pwr./Cntl./Ind. Pene.	475	52
-107B	Low Volt. Pwr./Cntl./Ind. Pene.	475	240

3. The inboard end of the penetration is enclosed by the inboard penetration enclosure and, therefore, will not be exposed to demineralized water spray.

WP-1083

Prepared by: N. Nailen 6/24/83 Reviewed by: James Mearns 6/24/83



TEST PROFILE FOR W PENETRATION

Pressure Corresponds to
Saturated Steam Pressure

WPPSS QID #382001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Electrical TAG NUMBER E-X-(See note 2) MANUFACTURER Westinghouse MODEL NUMBER 55-00-0002 COMPONENT Primary Containment Penetration FUNCTION/SERVICE (Note 2) LOCATION: BLDG C ELEVATION (Note 2) COLUMN (Note 2)	OPERATING TIME	6 months	Equivalent to 6 Months	1	4	Simultaneous Test	Note 1
	TEMPERATURE (F)	135 Max Normal 150 Max Abnormal Profile 1 Accident	340°F	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1 Accident	56 psig	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water Spray	Note 3	2	4	Engineering Analysis	None
	RADIATION (RAD)	7.0×10^7	1.2×10^8	3	4	Sequential Test and Engineering Analysis	None
	AGING	40 years	40 Years	2	4	Sequential Test, Engineering Analysis	Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E List Rev. 8 dated 6/1/83 2. FSAR Paragraph 3.11 3. FSAR Table 3.11-4 4. QID #382001-E 5. BRI Calculation #5.51.055	Qualified

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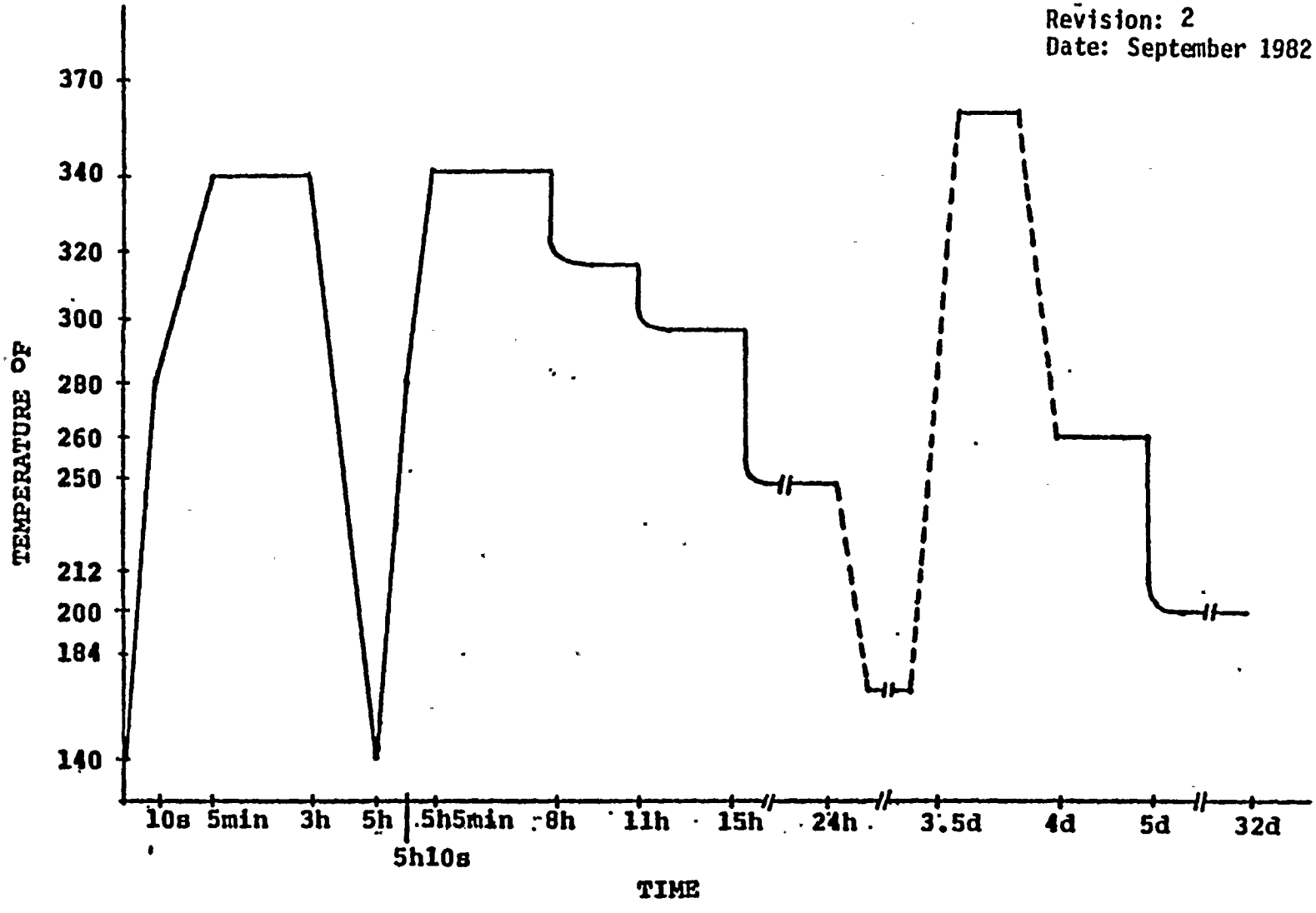
DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Tag Number / Function/Service / Elev. / Azimuth E-X-103A Med. Voltage Power Penetration 534 203 -103B Med. Voltage Power Penetration 534 212 -103C Med. Voltage Power Penetration 534 305 -103D Med. Voltage Power Penetration 534 322 3. The inboard end of the penetration is enclosed by the inboard penetration enclosure and, therefore, will not be exposed to demineralized water spray.

WP-1083

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

Revision: 2
Date: September 1982



TEST PROFILE FOR W PENETRATION

Pressure Corresponds to
Saturated Steam Pressure

QID #248005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Equipment Drains Radioactive TAG NUMBER EDR-POS-V/19 -V/20	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4		2			
MANUFACTURER Namco Controls	PRESSURE (PSIA)	14.7		2			
MODEL NUMBER 5AI-133 COMPONENT Position Switch	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4		2			
FUNCTION/SERVICE Position Switch for Containment Isolation Valve	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 468 COLUMN H.8/4.5	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR paragraph 3.11
3. EDS study 0740-004-441C
4. BRI Calc. #5.51.055

NOTES

1. Equipment justification #11 in Appendix D is provided for EDR-POS-V/20. EDR-POS-V/19 is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Equipment Drains Radioactive TAG NUMBER EDR-SPV- 19 and 20 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJHT 831654 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Containment Isolation Valve V-20 LOCATION: BLDG R ELEVATION 426,477 COLUMN N.1/3.6 N.0/3.9	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4	Envelopes profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Profile 4	(<90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	6	N/A	None
	RADIATION (RAD)	5.0×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by [illegible] 6/24/83

Reviewed by [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-004-471B (worst case)
4. Calculation QID315004-1
5. Calculation QID315004-2
6. Calculation QID315004-3
7. BRI Calc. #5.51.055

NOTES

1. The solenoid valves will be rebuilt on a schedule based on the 7-year Qualified life.

Qualified

WP-1081

WPPSS QID#207027E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO: 4
REVISION:
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Floor Drain Radioactive TAG NUMBER FDR: LS-41,42,43,44,45, 46 MANUFACTURER Magnetrol MODEL NUMBER BCS-751 COMPONENT Level Switch FUNCTION/SERVICE L.D.RHR Pump A-D L.D RCIC PMP.RM L.D LPCS PMP.RM L.D HPCS PMP.RM LOCATION: BLDG R ELEVATION 422 COLUMN	OPERATING TIME	4320 hours	> 4320 hours	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,5	300°	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 5	Accident Profile 5	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	1.2×10^7	3	4	Engineering Analysis and Separate Test	None
	AGING	40 years	40 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	4	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Ali Nadlin 6/24/83

Reviewed by: James Meacus 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. B & R Class 1E Equipment List rev.8 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-422 L 4. QID 207004E 5. Wyle Labs Type Test Program for Magnetol Level Switches 6. BIR Calc.#5.51.055	Qualified

WP-1081

WPPSS QID #248004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Floor Drain Radioactive TAG NUMBER FDR-POS-V/3 -V/4 MANUFACTURER Namco Controls MODEL NUMBER 5AI-133 COMPONENT Position Switch FUNCTION/SERVICE Position Switch for valve LOCATION: BLDG R ELEVATION 467 COLUMN M.0/4.1	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4		2			
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: Ali Nadeli 6/24/83 Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev.8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Study 0740-004-441C 4. BRI Calc.#5.51.055	1. Equipment justification #11 in Appendix D is provided for FDR-POS-V/4. FDR-POS-V/3 is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Floor Drain Radioactive TAG NUMBER FDR-SPV- 3, and 4 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJHT 831654 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Solenoid Pilot for Valve EDR-V-4 LOCATION: BLDG R ELEVATION 471, 477 COLUMN N/3.9 N.0/3.9	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4	Envelopes profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Profile 4	(<90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	6	N/A	None
	RADIATION (RAD)	5×10^5	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared By: [illegible] 6/24/83

Reviewed By: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-471B 4. Calculation QID315004-1 5. Calculation QID315004-2 6. Calculation QID315004-3 7. BRI Calculation #5.51.055	1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified

WP-1081

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Fuel Pool Cooling TAG NUMBER FPC-MO-153 FPC-MO-154 FPC-MO-156 MANUFACTURER Limitorque MODEL NUMBER SMB-000-5 SMB-00 COMPONENT Reliance Motor Operator AC Motor/Class B Insulation FUNCTION/SERVICE Operate FPC Valves LOCATION: BLDG R ELEVATION 452, 468 COLUMN K/7.9, J 9/8, K2/8.2	OPERATING TIME	6 months	Equivalent to >6 months	7	3,4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 maximum normal 104 maximum abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 maximum abnormal Accident Profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	9.94×10^5	2×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years	1	3,4,5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: James Meeuns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-441G 3. Limitorque report B0003 with addendum A dated 5/8/76 4. QID #221001 5. Limitorque report B0058 dated 1/11/80 6. BRI Calculation #5.51.055 7. BRI CIE list, REV 8, 6/1/83	1. Qualified

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TEMPERATURE PROFILE

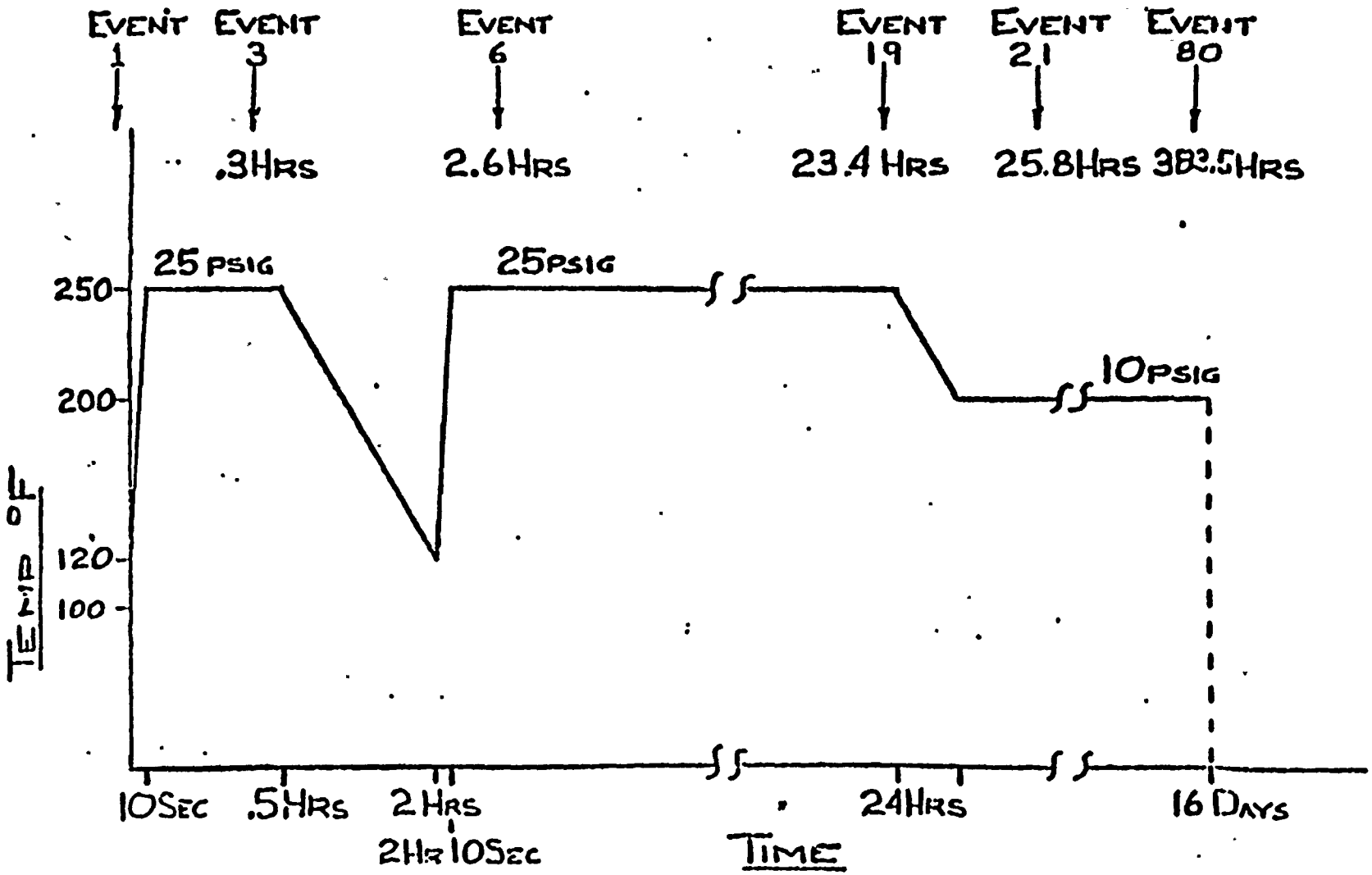

FIGURE 1

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Fuel Pool Cooling TAG NUMBER FPC-TE- 7 MANUFACTURER MODEL NUMBER COMPONENT Temperature Element FUNCTION/SERVICE Fuel pool and Recirculation line temps. LOCATION: BLDG R ELEVATION 467, 572 COLUMN	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	90 normal 104 abnormal accident profile 4		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 normal 90 abnormal accident profile 4		2			
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^9		2			
	AGING	40 years					
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO X

Prepared by: [illegible] 6/24/83

Reviewed by: James Mesarus 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-572K	1. A documentation search is being performed to obtain qualification data. Requalification activities will be implemented if required. This component is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS QID #140001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-N006
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-FIS-6 MANUFACTURER Barton MODEL NUMBER 289 COMPONENT Flow Indicating Switch FUNCTION/SERVICE HPCS-P-1 Discharge Flow Indication LOCATION: BLDG R ELEVATION 475 COLUMN L.2/3 :9	OPERATING TIME	24 hours	Equivalent to 76 months	1	4,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,9	150	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	Accident Profile 9	2	4,6	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5×10^5	3×10^6	3	4, 5	Separate Effect Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	13.4	1.5 FSPE	8	6	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Saden 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-471B 4. QID File #140001 5. Qualification Test Report for Barton 289 Switch, Report #R3-288A-1, 6. Test report for Barton pressure switch 289A GE Rpt. 05991, Rev. 1, 12/7/73. 7. BRI Calculation #5.51.055 8. Supply System Calc.#In-02-83-01	Qualified. 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #156003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-N005
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-FT-5 MANUFACTURER GE MODEL NUMBER 50-555-1118MAA4KCF COMPONENT Flow Transmitter FUNCTION/SERVICE HPCS-P-1 Discharge Flow Transmitter LOCATION: BLDG R ELEVATION 473 COLUMN L.2/3.9	OPERATING TIME	4320 Hours	Note 1	2	4		
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,9		1			
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9		1			
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	5.0×10^5		3			
	AGING	40 years		1			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 5)

Prepared by: Ali Naderi 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, REV 8, 6/1/83 3. EDS Report 0740-004-471B 4. WPPSS Letter GE-02-JLS-81-022 5. BRI Calculation #5.51.055	1. This component will be replaced by a Rosemount 1153 qualified to IEEE 323-1974 and 344-1975. (Ref.4) Equipment justification #13 in Appendix D is provided for HPCS - FT - 5.

WP-1081

QID#207002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-N002A,2B
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-LS-2A,B HPCS-LS-1A,B MANUFACTURER Magnetrol MODEL NUMBER 3.5-751-1X-MPG-M14HY COMPONENT Level Switch FUNCTION/SERVICE 2A,2B: Pool Level HPCS Valve Control 1A,1B: Emergency Switchover LOCATION: BLDG R ELEVATION (see Note 1) COLUMN	OPERATING TIME	24 hours	160 hours	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 8	300	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal Accident Profile 8	Accident Profile 8	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	1.2×10^7	3	4	Engineering Analysis and Separate Test	None
	AGING	40 years	40	2	4	Engineering Analysis and Separate Test	None
	ACCURACY	N/A	N/A	N/A	4	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Ali Tabini 6/24/83

Reviewed by: James Moreno 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8 dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-441F
4. QID 2070004
5. Wyle Labs Type Test Program of Magnetrol Level Switches
6. B & R Calc.#5.51.055

NOTES

Qualified

1. EPN	Elevation	Column
HPCS-LS-1A	446	H.6/5.0
-1B	446	H.6/5.0
-2A	467	J.5/4.3
-2B	468	L.8/7.9

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WPPSS QID213032

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E12

MPL: E22-C001A
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-M-P/1 MANUFACTURER General Electric MODEL NUMBER 5K6357XC10A COMPONENT Motor FUNCTION/SERVICE Drive Pump LOCATION: BLDG R ELEVATION 430 COLUMN M2/3.7	OPERATING TIME	4320 hours	94,746 hours	5	3,4 7,8	Sequential Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	1	3,4 7,8	Simultaneous Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	1	3,4 7,8	Simultaneous Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.6×10^6	5.5×10^6	2	3,4 7,8	Sequential Engineering Analysis	None
	AGING	40 years	40 years	1	3, 7,8	Sequential Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 9)

Prepared by: [illegible] 6/24/83 Reviewed by: James Mennes 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-422D 3. GE #22A4722, 3/25/80 (BWR 111-A-C5) 4. GE #NEDM-10672, 8/72 (BWR 111-A-05) 5. BRI CIE list, Rev.8, dated 6/1/83 6. B&R Calculation 9-46-02 7. GE #456HA898 8. Calculations 213 032-1, -2, -3, -4 9. BRI Calc. #5.51.055	1. Qualified.

WP-1081

QID #213016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-35A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-M-P/3 MANUFACTURER Westinghouse MODEL NUMBER 75D40786 COMPONENT Motor FUNCTION/SERVICE 15hp motor for HPCS-P-3 LOCATION: BLDG R ELEVATION 430 COLUMN L5/3.5	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	Accident Profile 8	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.9×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by [illegible] 6/24/83 Reviewed by: James Williams 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev.8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report #0740-004-422M 4. QID#213017 5. BRI Calc. #5.51.055	Qualified

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WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-F001
PPD: 21A1883

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-MO-1 MANUFACTURER Limitorque MODEL NUMBER SMB-000-25/P12B COMPONENT H. K. Porter Valve Motor Operator (AC/ Class B) FUNCTION/SERVICE Operate HPCS Valve 1 LOCATION: BLDG R ELEVATION 435 COLUMN M/4	OPERATING TIME	4320 Hours	Equivalent to > 6 months	4	2	Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	2	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	2	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100	1	2	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.6×10^6	2×10^7	3	2	Sequential Test	None
	AGING	40 years	40 years	1	2,5,6	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Test Report B0003, with Addendum A, prepared 5/8/76 3. EDS Study 0740-00-422D 4. BRI C1E list, REV 8, 6/1/83 5. Calculations in QID 221001 6. Limitorque test report B0058, dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-F012
PPD: 21A1880

EQUIPMENT DESCRIPTION	ENVIRONMENT	
	PARAMETER	FSAR
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-MO-12,15	OPERATING TIME	4320 Hours
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7
MODEL NUMBER SMB-2-40/C184Y SMB-	RELATIVE HUMIDITY (%)	40 normal 90 max abnormal Accident Profile 4
COMPONENT Electric Apparatus Valve Motor Operator (AC Motor Class B)	CHEMICAL SPRAY	N/A
FUNCTION/SERVICE Operate HPCS Valve 12 and 15	RADIATION (RAD)	1.6×10^6
	AGING	40 years
LOCATION: BLDG R ELEVATION 430, 455 COLUMN M/3.4, L.4/3.8	ACCURACY	N/A
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL? YES X NO (Ref. 4)		

Reference:
3. EDS Report 0740-004-441C
4. BRI Calc. #5.51.055

WP-1082

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-F010
PPD: 21A1881

EQUIPMENT DESCRIPTION	ENVIRONMENT	
	PARAMETER	FSAR
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-MO-10,11	OPERATING TIME	24 hours
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7
MODEL NUMBER SMB-3 COMPONENT	RELATIVE HUMIDITY (%)	40 normal 90 max abnormal Accident Profile 4
Valve Motor Operator* FUNCTION/SERVICE	CHEMICAL SPRAY	N/A
Operate HPCS Valve 10	RADIATION (RAD)	1.4×10^6
	AGING	40 years
LOCATION: BLDG R ELEVATION 452 COLUMN M/3.8	ACCURACY	N/A
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL? YES X NO Ref.4		

* (Reliance Class B)

Prepared By: Ali Naqvi 6/24/83
Reviewed By: James McGarvey 6/24/83

TEMPERATURE PROFILE

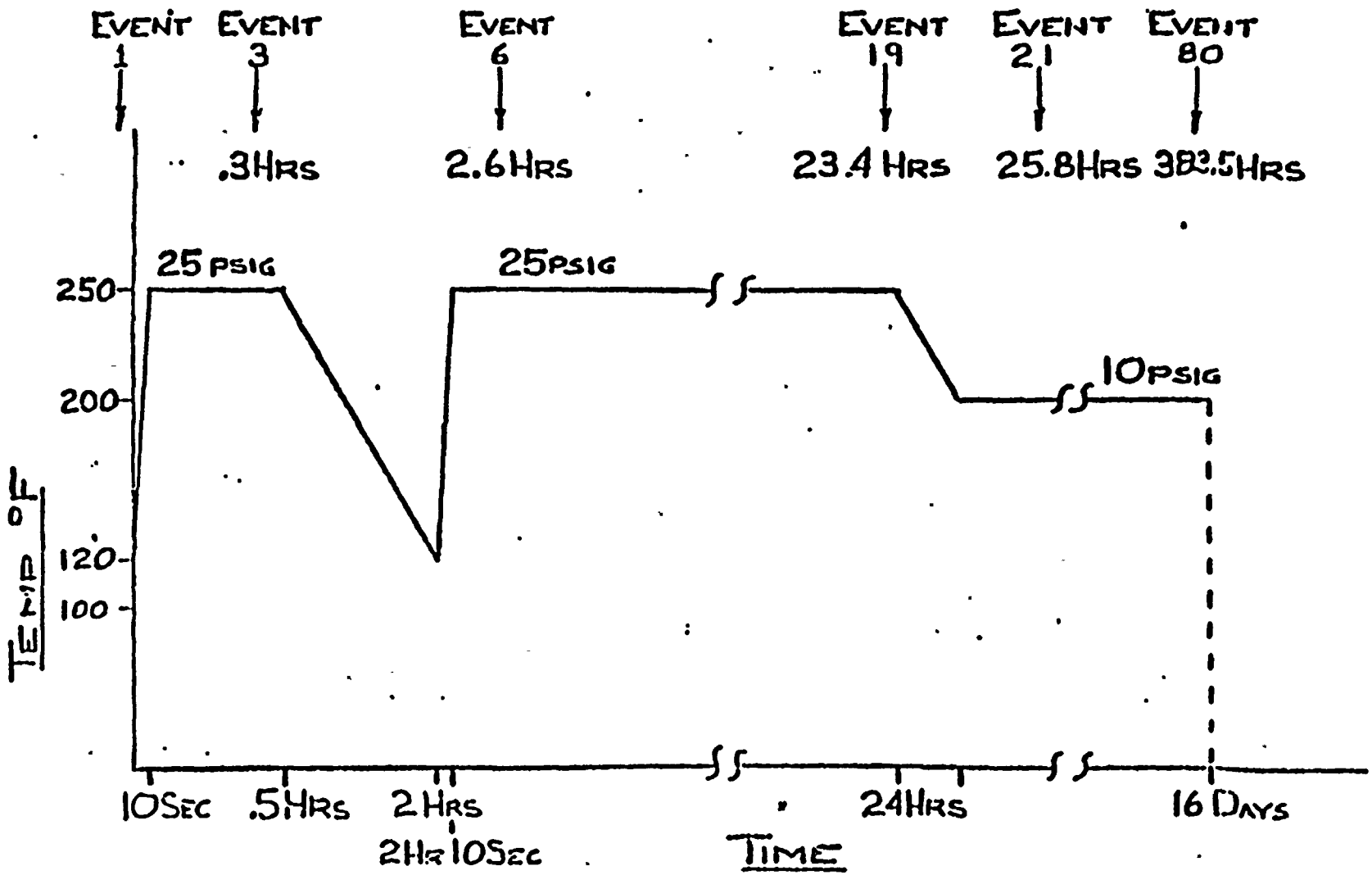

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-MO-23 MANUFACTURER Limitorque MODEL NUMBER SMB-4 COMPONENT FUNCTION/SERVICE Motor Operator HPCS-V-23 LOCATION: BLDG R ELEVATION 451 COLUMN L.6/3.9	OPERATING TIME	24 hours	Equivalent to >6 months	3	5, 7	Engineering Analysis, Simultaneous Test	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	See Enclosed Profile	1	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See Enclosed Profile	1	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Max Abnormal Accident Profile 4	100	1	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6	2×10^7	2	5	Sequential Test	None
	AGING	40 years	40 years	1	6, 7	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR paragraph 3.11 2. EDS Study 0740-004-441C 3. BRI CIE list Rev. 8, dated 6/1/83 4. BRI Calculation #5.51.055 5. Limitorque Test Report B0003, with addendum A dated 5/8/76 6. Limitorque Test Report B0058 dated 1/11/80 7. QID 221001	Qualified

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TEMPERATURE PROFILE

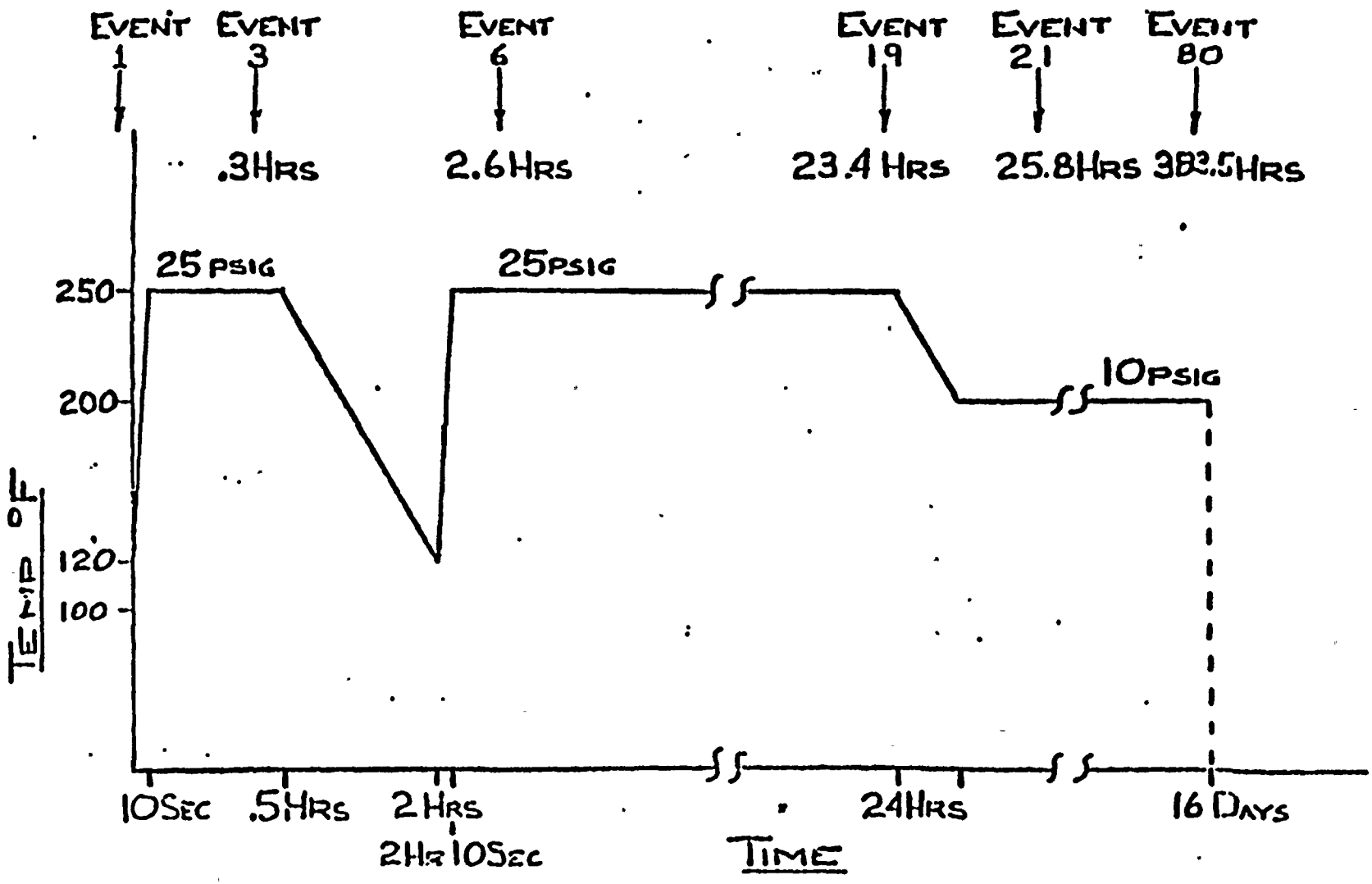

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-F001
PPD: 21A1883

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-MO-4	OPERATING TIME	4320 Hours	Equivalent to > 6 months	4	2	Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4, 11	See enclosed profile	1	2	Simultaneous Test	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7 Accident Profile 11	See enclosed profile	1	2	Simultaneous Test	None
MODEL NUMBER SMB-4	RELATIVE HUMITY (%)	40 normal 90 max abnormal 80 Accident	100%	1	2	Simultaneous Test	None
COMPONENT Valve Motor Operator (Reliance Class H) AC Motor	CHEMICAL SPRAY	N/A	N/A	1	2	N/A	None
FUNCTION/SERVICE Operate HPCS Valve 23	RADIATION (RAD)	8.3×10^5	1×10^7	3	2	Engineering Analysis	None
	AGING	40 years	40 years	1	2, 5, 6	Sequential Test and Engineering Analysis	None
LOCATION: BLDG R ELEVATION 540 COLUMN M.3/7.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	Nonte

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Nadeni 6/24/83

Reviewed by: James Meerna 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Test Report B0003, with Addendum A, prepared 5/8/76 3. EDS Study 0740-422D 4. BRI CIE list, REV 8, 6/1/83 5. Calculations in QID 221001 6. Limitorque Test Report B0058, dated 1/11/80 7. BRI Calc #5.51.055	Qualified

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TEMPERATURE PROFILE

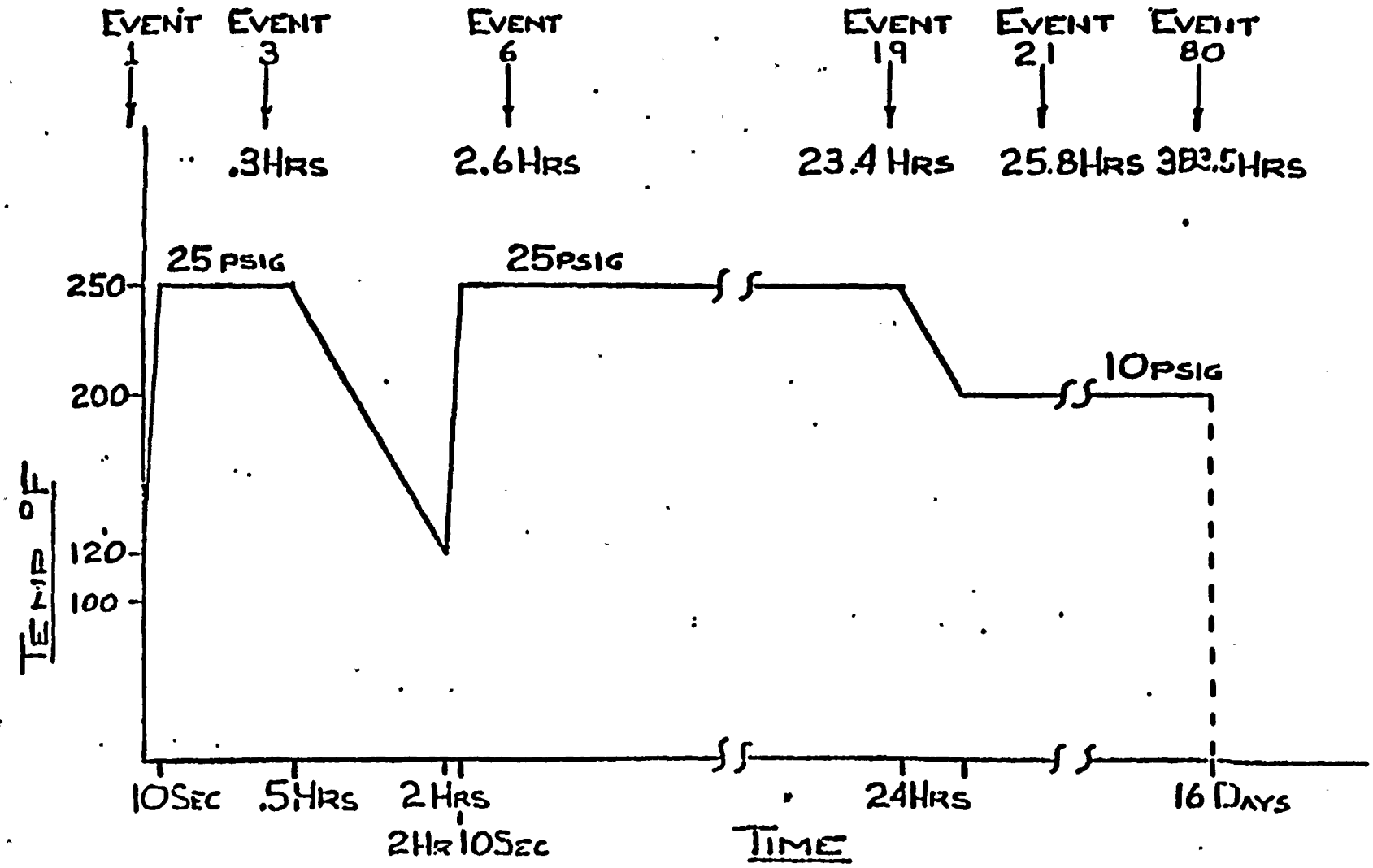

FIGURE 1

QID# 256016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL: E22-N012
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-PS-12 MANUFACTURER Static-O-Ring MODEL NUMBER 5N-AA3-X105TT COMPONENT Pressure Switch FUNCTION/SERVICE HPCS Pump Discharge Pressure Switch LOCATION: BLDG R ELEVATION 473 COLUMN L.2/3.9	OPERATING TIME	6 months	Equivalent to>6 months	1	3,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4,9	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	15.3	2	3,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	1.5×10^6	4	3	Engineering Analysis	None
	AGING	40 years	16 years	2	3	Engineering Analysis	None Note 1
	ACCURACY	3%	.38 FSPE	6	5, 3	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.7)

Prepared by: Ali Sadler 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8
2. FSAR Paragraph 3.11
3. QID file #256016
4. EDS Calculation file 0740-004-471B
5. Viking Lab, Inc. Test Letter Report #30203-2 dated November 30, 1973. Steam testing of Static-O-Ring Pressure Switch, P/N 12N-AA4-TTX10.
6. Supply System Calculation IN-02-83-01
7. BRI Calculation #5.51.055

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #361012

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM RCC Hydraulic Control TAG NUMBER HY-V-(See Note 1) MANUFACTURER Target Rock MODEL NUMBER 82M-002 COMPONENT Solenoid Operated Valve FUNCTION/SERVICE .75" Solenoid Isolation Valve LOCATION: BLDG Reactor ELEVATION 525 COLUMN (See Note 1)	OPERATING TIME	10 Minutes	Equivalent to >4320 Hours	1	3, 5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	385	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Accident Profile 4	92	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.8×10^5	2.27×10^7	6	5	Sequential Test	None
	AGING	40 Years	40 Years	2	3, 5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 4)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Ali Cadeli 6/24/83 Reviewed by: James Meiers 6/24/83

DOCUMENTATION REFERENCES

1. BRT Class 1E Equipment List, Rev. 8, 6/1/83
2. FSAR Paragraph 3.11
3. QID #324002-E
4. BR1 Calculation 5.51.055
5. Test Report #2375A, Target Rock Corporation
6. EDS Calculation 0740-004-522C, J

NOTES

Qualified

1.

Tag Number	Column
HY-V-17A,B	M.0/4.5, J.8/7.3
-18A,B	M.0/4.5, J.8/7.3
-19A,B	M.0/4.5, J.8/7.3
-33A,B	M.0/4.5, J.8/7.3
-34A,B	M.0/4.5, J.8/7.3
-35A,B	M.0/4.5, J.8/7.3

WP-1081

WPPSS QID #361009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM RCC Hydralic Control TAG NUMBER HY-V-20A -20B -36A -36B MANUFACTURER Marotta MODEL NUMBER MV250 COMPONENT Solenoid Operated Valve FUNCTION/SERVICE Solenoid Isolation Valve LOCATION: BLDG Reactor ELEVATION 525 COLUMN M.0/4.5 J.8/7.3 M.0/4.5 J.8/7.3	OPERATING TIME	10 minutes	Equivalent to>4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	221°F	2	4	Materials Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Max Normal 90 Max Abnormal 68 Accident	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.8×10^5	5×10^6	3	4	Materials Test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Materials Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS Calc. #0740-004-522 C,J 4. QID 315023 5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83 6. BRI Calc. #5.51.055	Qualified 1. These components are being tested to demonstrate their qualification to IEEE stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

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WPPSS QID #339004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Leak Detection TAG NUMBER LD-TE-1A, B, C, D, E, F	OPERATING TIME	24 hours	>24 hours	1	6	Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4,17,20,25	Profile 17	2	5,6	Simultaneous Test and Engineering Analysis	None
MANUFACTURER NECI	PRESSURE (PSIA)	Normal 14.7 accident profile 17, 20,25	33.5	2	5	Engineering Analysis	None
MODEL NUMBER (GE P/N) 145C3224P001	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 abnormal	100	2	6	Simultaneous Test	None
COMPONENT Temperature elements	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE	RADIATION (RAD)	8.4×10^5	2.0×10^8	3	6	Sequential Test	None
	AGING	40 years	24.5 years	2	5,6	Simultaneous Test and Engineering Analysis	Note 1 None
LOCATION: BLDG R ELEVATION 532, 554 COLUMN M.8/4.7 M.6/4.4 K.1/3.4 M.8/5.0 K.1/3.4 N.2/5.4	ACCURACY	5%	±.71%	7	6	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Reviewed By: [illegible] 6/24/83 Prepared By: James Murrow 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-522F 4. BRI Calc. #5.51.055 5. WNP-2 OID 339004, Rev. 2 6. PYCo Qualification of Class 1E Equipment for Nuclear Power Generating Stations per IEEE 323/74, Test Procedure No. 16436, Rev. 1, dated 4-5-82.	Qualified. 1. This qualified life will be factored into surveillance/preventive maintenance schedules for these components.

7. Supply System Calculation IN-02-83-01.

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WPPSS QID #339004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Leak Detection TAG NUMBER LD-TE (Note 2) MANUFACTURER Pyco MODEL NUMBER (Note 2) COMPONENT Temperature Element FUNCTION/SERVICE Steam leak detection in RWCU pump room, RWCU Hx room, steam tunnel, RCIC room, RHR room LOCATION: BLDG R ELEVATION COLUMN (Note 2)	OPERATING TIME	24 hours	> 24 hours	2	6	Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4, 6, 7, 17, 20	Profile 17	1	4,6	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7 normal Accident profile 6,7,17,20	33.5	1	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal 100 accident	100	1	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4×10^6	2.0×10^8	3	6	Sequential Test	None
	AGING	40 years	24.5 years	1	4,6	Simultaneous Test and Engineering Analysis	Note 1
	ACCURACY	5%	±.71%	7	6	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83

Reviewed by: James [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, Rev. 8, dated 6/1/83 3. EDS Report 0740-004-4411 4. QID 339004, Rev. 2 5. BRI Calc. #5.51.055 6. PYCO "Qualification Test Report - Air Temperature Thermocouple PYCO Model #02-9036", Document #122675, 12/26/75 7. Supply System Calculation IN-02-83-01.	Qualified. 1. This qualified life will be factored into surveillance/preventive maintenance schedules for these components.

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DOCUMENTATION REFERENCES (Cont'd)

NOTES (Cont'd)

2.

EPN	Elevation	Column	Model Number
LD-TE-18A	R466	M.0/9.0	145C3224P001*
-18B	R466	L.8/9.0	↓
-18C	R466	M.7/9.0	↓
-18D	R466	K.0/9.0	145C3224P001*
-27A,C	R429	L.5/9.3	102-9039-08
-27B,D	R430	K.7/9.4	102-9039-08
-28A	R466	L.3/9.3	145C3224P001*
-28B	R465	K.9/9.3	↓
-28C	R466	L.3/9.3	↓
-28D	R465	K.9/9.3	145C3224P001*
-2A	R532	M.3/4.7	102-9039-08
-2B	R532	M.3/4.7	↓
-2C	R532	M.8/5.4	↓
-2D	R532	M.8/5.4	102-9039-08
-2E	R563	L.9/4.4	02-9039-08-6
-2F	R563	L.9/4.4	02-9039-08-6
-30A	R526	J.0/5.9	102-9039-08
-30B	R526	J.0/5.9	↓
-30C	R526	J.0/6.4	↓
-30D	R526	J.0/6.1	↓
-3A	R532	M.5/4.6	↓
-3B	R532	M.5/4.6	↓
-3C	R532	M.8/5.3	↓
-3D	R532	M.8/5.3	102-9039-08
-3E	R563	L/4.1	145C3224P001*
-3F	R563	L/4.1	145C3224P001*
-4A	R467	J.0/7.5	102-9039-08
-4B	R467	J.0/7.5	102-9039-08
-6A	R467	H.4/7.5	145C3224P001*
-6B	R466	H.4/7.5	145C3224P001*
-5A	R436		145C3224PI*
-5B	R436		145C3224PI*

*General Electric purchase part drawing number.

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

WPPSS QID #339004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Leak Detection TAG NUMBER LD-TE-(Note 2) MANUFACTURER Pyco MODEL NUMBER (GE PPD#) 145C3224P001 COMPONENT Temperature Element FUNCTION/SERVICE Steam Leak Detection in the Steam Tunnel LOCATION: BLDG R ELEVATION 502 COLUMN (Note 2)	OPERATING TIME	24 hours	24 hours	1	5,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	125 Normal 140 Max. Abnormal Accident Profile 3	250	2	5,6	Simultaneous Test and Engineering Analysis	None Note 1
	PRESSURE (PSIA)	14.7 normal Accident Profile 3	14.7	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	50 Max.Normal 98 Max. Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	2.0×10^8	3	5	Sequential Test	None
	AGING	40 years	40 years	2	5,6	Simultaneous Test and Engineering Analysis	None
	ACCURACY	5%	1.4%	7	5	Simultaneous Testing and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.8)

Prepared by: Ali Nadir 6/24/83

Reviewed by: James Meaney 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev. 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-5010
4. BRI Calc. #5.51.055
5. PYCO "Qualification Test Report Air Temperature Thermocuple PYCO Model #02-9036", Document 122675 dated 12/26/75
6. QID #339004-E
7. ~~Supply System Calculation IN-02-83-01~~
8. BRI Calc.#5.51.055

NOTES

Qualified

1. These Thermocouples perform their safety function(steam leak detection) when temperatures in the area reach 160°F, and are not required to operate thereafter:

EPN	Column	EPN	Column
LD-TE-29A	H.4/5.8	LD-TE-31A	H.7/5.8
-29B	H.4/5.8	-31B	H.7/5.6
-29C	H.4/6.6	-31C	H.7/6.6
-29D	H.4/6.2	-31D	H.7/6.2

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WPPSS QID # 140001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL: E21-N004
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-FIS-4 MANUFACTURER Barton MODEL NUMBER 289A COMPONENT Flow Indication Switch FUNCTION/SERVICE LPCS-P-1 Discharge Flow Indication LOCATION: BLDG R ELEVATION 475 COLUMN K.0/4.2	OPERATING TIME	24 hours	Equivalent to>6 months	1	4, 6	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,9	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	Accident Profile 9	2	4, 6	Simultaneous Test Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	3×10^6	3	4,5	Separate Test, Engineering Analysis	None
	AGING	40 years	12 Years	2	4	Engineering Analysis	None Note 1
	ACCURACY	17.9%	1.5 FSPE	8	4,6	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Vaiten 6/24/83 Reviewed by: James Murano 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-471A 4. QID File #140001 5. Qualification Test Report for Barton 289 Switch, Report #R3-288A-1 6. Qualification Text report for 289, Radiation, Seismic. GE Rpt. 05991, Rev.1,12/7/73. 7. BRI Calculation #5.51.055 8. Supply System Calc. #In-02-83-01	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #156003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL: E21-N003
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-FT-3 MANUFACTURER GE MODEL NUMBER 555 COMPONENT Flow Transmitter FUNCTION/SERVICE LPCS Discharge Flow Indication Pump 1 LOCATION: BLDG R ELEVATION 473 COLUMN K.0/4.2	OPERATING TIME	4320 Hours	Note 1	2	4		
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4, 9		1			
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9		1			
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	5.0×10^5		3			
	AGING	40 years		1			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 5)

Prepared by: Ali Naidu 6/24/83 Reviewed by: James Meazna 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, REV 8, 6/1/83 3. EDS Report #0740-004-471A 4. WPPSS Letter GE-02-JLS-81-022 5. BRI Calculation #5.51.055	1. This component will be replaced by Rosemount 1153 qualified to IEEE 323-1974 and 344-1975.(Ref. 4) These components are on Table B of the JIO and do not require qualification prior to fuel load.

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WPPSS

QID213032

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL: E21-C001 A
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-M-P/1 MANUFACTURER General Electric MODEL NUMBER 5K6347XC65A/PZ42 COMPONENT Motor FUNCTION/SERVICE Drive Pump LOCATION: BLDG R ELEVATION 429 COLUMN K2/3.8	OPERATING TIME	4320 hours	94,746 hours	5	3,4 7,8	Sequential Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	1,6	3,4 7, 8	Simultaneous Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100% & Steam	1	3,4 7,8	Simultaneous Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	5.5×10^6	2	3,4 7,8	Sequential Engineering Analysis	None
	AGING	40 years	40 years	1	3, 7,8	Sequential Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 9)

Prepared by: Alistair 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-422C 3. GE #22A4722 (BWR 11-A-05) 4. GE #NEDM-10672, 8/72 (BWR 111-A-05) 5. BRI CIE list Rev.8, dated 6/1/83 6. B&R Calculation 9-46-02 7. GE #456HA898 8. Calculations 213032-1, -2, -3, -4 9. BRI Calc. #5.51.055	1. Qualified.

WP-1081

WPPSS QID #213016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-35A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-M-P/2 MANUFACTURER Westinghouse MODEL NUMBER 7504786 COMPONENT FUNCTION/SERVICE 15hp motor for LPCS-P-2 LOCATION: BLDG R ELEVATION 424 COLUMN J.7/3.6	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Mx Normal 104 Max Abnormal Accident Profile 4	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	Normal 14.7	Accident Profile 8	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.9×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Al Nader 6/24/83 Reviewed by: James Mizarna 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. IRI CIE list Rev.8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report #0740-004-422 C 4. QID #213017 5. BRI Calc. #5.51.055	Qualified

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WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL: E21-F011
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-MO-1 -11 -12 MANUFACTURER Limitorque MODEL NUMBER SMB-0-40/T56 SMB-000 SMB-3 COMPONENT Valve Motor Operator (Reliance Class B) AC Motor FUNCTION/SERVICE Operate LPCS Valve 1,11,12	OPERATING TIME	4320 hours	Equivalent to>6 months	4	2	Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	2	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	N/A	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max normal Accident Profile 4	Steam for 24 hours 100% for 15 days	1	2	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	2×10^7	3	2	Sequential Test	None
	AGING	40 years	40 years	1	2,5,6	Sequential Test and Engineering Analysis	None
LOCATION: BLDG R ELEVATION 452, 425, 456 COLUMN K.2/4.0 K.2/3.5 K.0/3.6	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Nader 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Test Report B0003, with Addendum A, prepared 5/8/76 3. EDS Study 0740-004-422C 4. BRI CIE list Rev.8, dated 6/1/83 5. Calculations in QID 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

WP-1081

TEMPERATURE PROFILE

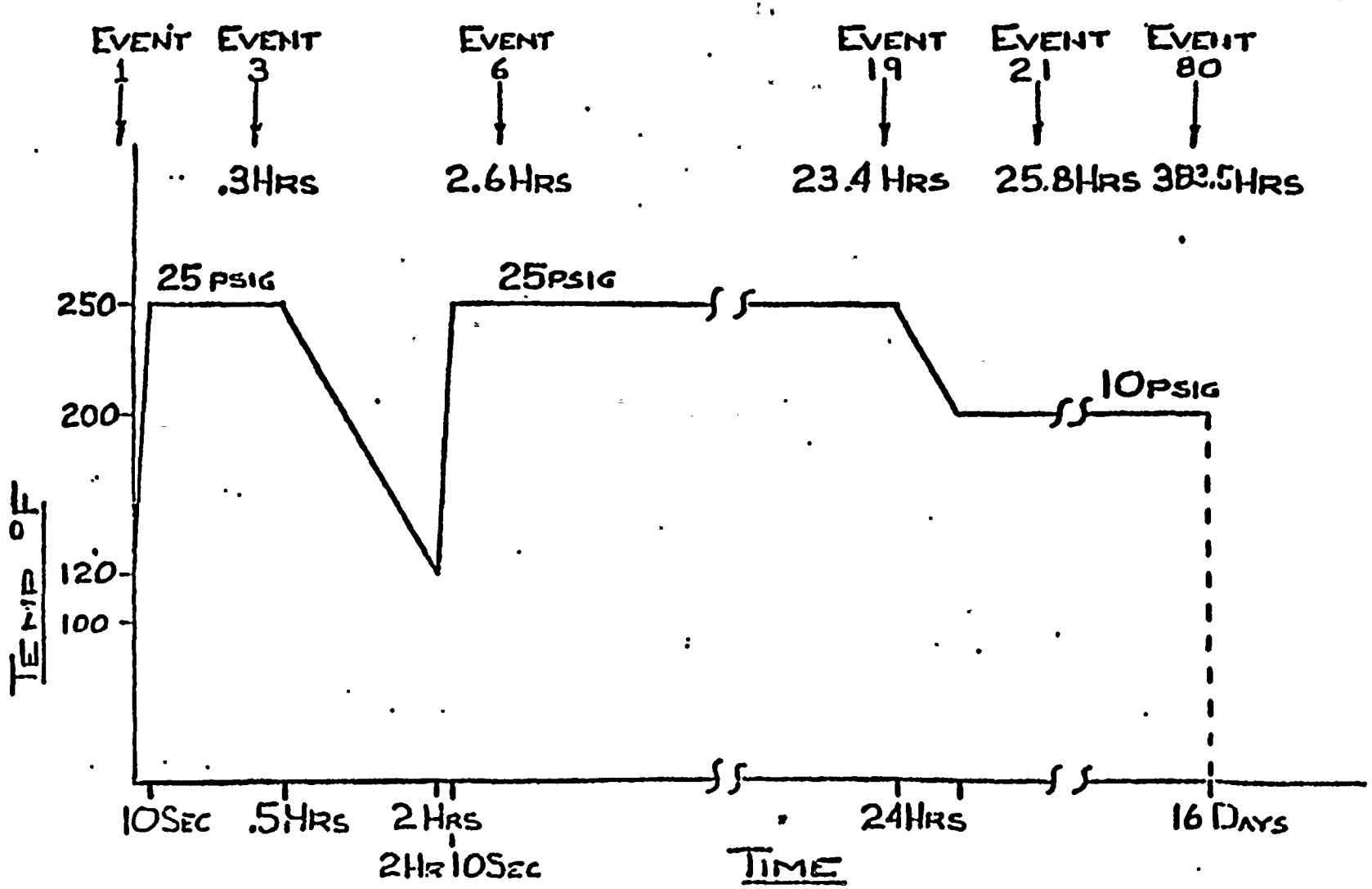

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-MO-5 MANUFACTURER Limitorque MODEL NUMBER SMB-3-100/254UR3 COMPONENT Motor Operator - Reliance, RH insulation/AC Motor FUNCTION/SERVICE Operates LPCS injection valve (isolation valve) LOCATION: BLDG R ELEVATION 525 COLUMN L8/4.3	OPERATING TIME	4320 Hours	Equivalent to >6 months	4	3	Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,11,24	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11,24	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal 100 accident	100	1	3	Simultaneous Test	
	CHEMICAL SPRAY	N/A	N/R	N/A	N/A	N/A	None
	RADIATION (RAD)	6.4×10^5	2.04×10^8	5	3	Sequential Test	None
	AGING	40 years	40 years +	1	2, 3 5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Al Naden 6/24/83

Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report B600376A dated 3/13/76 4. BRI Class 1E List Rev. 8, dated 6/1/83 5. QID #221001 6. BRI Calculation #5.51.055	Qualified.

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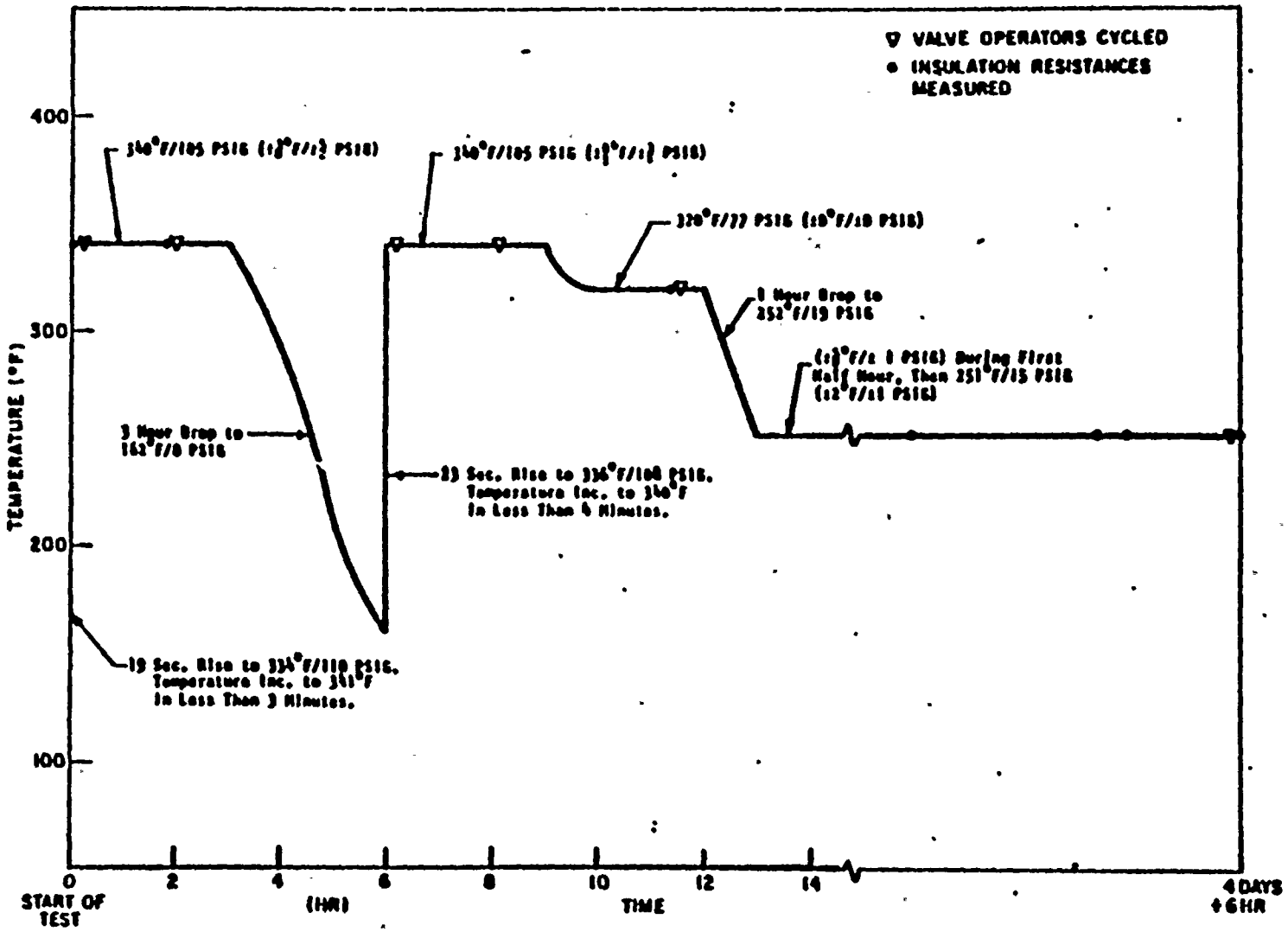

Figure 3. Actual Steam Exposure Profile

F-C3441

QID #245003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02, 02H22

MPL: E21-N005
PPD:

PAGE NO:
REVISION: 4
DATE:. July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM: Low Pressure Core Spray TAG NUMBER: LPCS-PIS-1	OPERATING TIME	24 hours		1			Note 1
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 9		2			
MANUFACTURER: Robertshaw	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9		2			
MODEL NUMBER: SP-222-C	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident		2			
COMPONENT: Pressure Indicating Switch	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE: LPCS Pump 1 Pressure Indicating Switch	RADIATION (RAD)	5×10^5		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 475 COLUMN K/4.2	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Ali Nasseri 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report #0740-004-471A
4. BRI Calc. #5.51.055

NOTES

1. No steam test has been conducted for these components. Replacement options are being evaluated. These components are on Table B of the JIO so do not require qualification prior to fuel load.

WP-1881

WPPSS QID#256005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL: E21-N009
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-PS-9 MANUFACTURER Barksdale MODEL NUMBER P1H-M340SS-V COMPONENT Pressure Switch FUNCTION/SERVICE LPCS Pump discharge to ADS LOCATION: BLDG R ELEVATION 471 COLUMN K/4.2	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Engineering Analysis and Simultaneous Test	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 9	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	14.95	2	4,5	Engineering Analysis and Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5×10^5	2×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY		5.3%	N/A	5	Simultaneous Test	

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: James Meanns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report #0740-004-471A
4. QID# 256005
5. Barksdale Environmental (Steam) Test Delaval Turbine Inc., Barksdale Controls Division Test Procedure 9993, dated August 13, 1975.
6. BRI Calc. #5.51.055

NOTES

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2. The accuracy is under investigation. The equipment is on Table B of JIO, therefore, it does not have to be qualified prior to fuel load.

WP-1041

WPPSS QID #067002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C51

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Local Power Range Monitor TAG NUMBER LPRM-DET- (see Note 1) MANUFACTURER General Electric MODEL NUMBER 163C1154G1 COMPONENT Detector FUNCTION/SERVICE Power Range Detector Assembly LOCATION: BLDG C ELEVATION 501 COLUMN (See Note 1)	OPERATING TIME	.17 hours		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	2.04×10^8		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

By: [illegible] 6/24/83

Chkd: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR paragraph 3.11
3. WNP-2 Final Shielding Evaluation Report, Sept. 1982.
4. BRI Calc. E5.51.055

NOTES

1.

Tag Numbers	Coordinate
LPRM-DET-12BCD	In Reactor Pressure Vessel
-13CDA	In Reactor Pressure Vessel
-14ABD	In Reactor Pressure Vessel
-15ABC	In Reactor Pressure Vessel
-16BCD	In Reactor Pressure Vessel
-21ABC	In Reactor Pressure Vessel
-22DAB	In Reactor Pressure Vessel

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	-23CDA In Reactor Pressure Vessel -24BCD In Reactor Pressure Vessel -25ABC In Reactor Pressure Vessel -26DAB In Reactor Pressure Vessel -27CDA In Reactor Pressure Vessel -31CDA In Reactor Pressure Vessel -32DAB In Reactor Pressure Vessel -33ABC In Reactor Pressure Vessel -34BCD In Reactor Pressure Vessel -35CDA In Reactor Pressure Vessel -36DAB In Reactor Pressure Vessel -37ABC In Reactor Pressure Vessel -41CDA In Reactor Pressure Vessel -42BCD In Reactor Pressure Vessel -43ABC In Reactor Pressure Vessel -44DAB In Reactor Pressure Vessel -45CDA In Reactor Pressure Vessel -46BCD In Reactor Pressure Vessel -47ABC In Reactor Pressure Vessel -51ABC In Reactor Pressure Vessel -52BCD In Reactor Pressure Vessel -53CDA In Reactor Pressure Vessel -54DAB In Reactor Pressure Vessel -55ABC In Reactor Pressure Vessel -56BCD In Reactor Pressure Vessel -57CDA In Reactor Pressure Vessel -61ABC In Reactor Pressure Vessel -62DAB In Reactor Pressure Vessel -63CDA In Reactor Pressure Vessel -64BCD In Reactor Pressure Vessel -65ABC In Reactor Pressure Vessel -66DAB In Reactor Pressure Vessel -72DAB In Reactor Pressure Vessel -73ABC In Reactor Pressure Vessel -74BCD In Reactor Pressure Vessel -75CDA In Reactor Pressure Vessel 2. Equipment justification #14 in Appendix D is provided for the above LPRM detectors.
Prepared by: Ali Nadir 6/24/83	Reviewed by: Behzad Mahini 6/24/83

WPPSS QID#049003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B13

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Local Power Range Monitor TAG NUMBER LPRM-CONN-(See Note 1) MANUFACTURER Amphenol MODEL NUMBER X901-200 COMPONENT Connector FUNCTION/SERVICE Connector for LPRM detector LOCATION: BLDG C ELEVATION 501 COLUMN Beneath Reactor Pressure Vessel	OPERATING TIME	.17 hours		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	7.0×10^7		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: [illegible] 6/24/83

Reviewed by: James Mc[illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev.8, dated 6/1/83.
2. FSAR Paragraph 3.11
3. WNP-2 Final Shielding Evaluation Report, Sept. 1982
4. BRI Calc.#5.51.055

NOTES

1. Tag Numbers / Coordinate

Tag Numbers	Coordinate
LPRM-CONN-12BCD	Beneath Reactor Pressure Vessel
-13CDA	Beneath Reactor Pressure Vessel
-14ABD	Beneath Reactor Pressure Vessel
-15ABC	Beneath Reactor Pressure Vessel
-16BCD	Beneath Reactor Pressure Vessel
-21ABC	Beneath Reactor Pressure Vessel

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	-22DAB Beneath Reactor Pressure Vessel -23CDA Beneath Reactor Pressure Vessel -24BCD Beneath Reactor Pressure Vessel -25ABC Beneath Reactor Pressure Vessel -26DAB Beneath Reactor Pressure Vessel -27CDA Beneath Reactor Pressure Vessel -31CDA Beneath Reactor Pressure Vessel -32DAB Beneath Reactor Pressure Vessel -33ABC Beneath Reactor Pressure Vessel -34BCD Beneath Reactor Pressure Vessel -35CDA Beneath Reactor Pressure Vessel -36DAB Beneath Reactor Pressure Vessel -37ABC Beneath Reactor Pressure Vessel -41CDA Beneath Reactor Pressure Vessel -42BCD Beneath Reactor Pressure Vessel -43ABC Beneath Reactor Pressure Vessel -44DAB Beneath Reactor Pressure Vessel -45CDA Beneath Reactor Pressure Vessel -46BCD Beneath Reactor Pressure Vessel -47ABC Beneath Reactor Pressure Vessel -51ABC Beneath Reactor Pressure Vessel -52BCD Beneath Reactor Pressure Vessel -53CDA Beneath Reactor Pressure Vessel -54DAB Beneath Reactor Pressure Vessel -55ABC Beneath Reactor Pressure Vessel -56BCD Beneath Reactor Pressure Vessel -57CDA Beneath Reactor Pressure Vessel -61ABC Beneath Reactor Pressure Vessel -62DAB Beneath Reactor Pressure Vessel -63CDA Beneath Reactor Pressure Vessel -64BCD Beneath Reactor Pressure Vessel -65ABC Beneath Reactor Pressure Vessel -66DAB Beneath Reactor Pressure Vessel -72DAB Beneath Reactor Pressure Vessel -73ABC Beneath Reactor Pressure Vessel -74BCD Beneath Reactor Pressure Vessel -75CDA Beneath Reactor Pressure Vessel 2. Equipment justification #15 in Appendix D is provided for the above LPRM connectors.
Prepared by: [illegible] 6/24/83	Reviewed by: James Meares 6/24/83

WPPSS QID # 049008 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-CONN-(Note 1) MANUFACTURER CONAX MODEL NUMBER N-11111-01 COMPONENT Electrical connector seal assemblies FUNCTION/SERVICE Electrical connectors for position switches for main steam valves LOCATION: BLDG See ELEVATION Note 1 COLUMN	OPERATING TIME	4320 hours	4320 hours	1	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident Profile 1	See enclosed profile	2	4	Simultaneous Tests	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident Profile	See enclosed profile	2	4	Simultaneous Tests	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100%	2	4	Simultaneous Tests	None
	CHEMICAL SPRAY	Demineralized water	Chemical spray 24 hrs. demin. H_2O 29 days	2	4	Simultaneous Tests	None
	RADIATION (RAD)	7×10^7	2.238×10^8	2	4	Sequential Test	None
	AGING	40 years	40 years	2	3	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref 5)

Prepared by: Ali Nadir 6/24/83 Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev 8, dated 6/1/83 2. FSAR paragraph 3.11 3. QID 049008 E 4. CONAX IPS 409 Qualification report for conductor modules for Arkansas Nuclear 1, unit 2	Qualified See Note 1 Next Page

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WPPSS QID # 049008 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:
MPL:
PPD:

PAGE NO:
REVISION: 4
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	1.

EPN	LOCATION
MS-CONN-V22A/J1	C 513 5 D AZ R27
-V22A/J2	C 513 5 D AZ R27
-V22A/J3	C 513 5 D AZ R27
-V22A/J4	C 513 5 D AZ R27
-V22B/J1	C 513 5 D AZ R27
-V22B/J2	C 513 15 D AZ R27
-V22B/J3	C 513 15 D AZ R27
-V22B/J4	C 513 15 D AZ R27
-V22C/J1	C 513 345 D AZ R27
-V22C/J2	C 513 345 D AZ R27
-V22C/J3	C 513 345 D AZ R27
-V22C/J4	C 513 345 D AZ R27
-V22D/J1	C 513 355 D AZ R27
-V22D/J2	C 513 355 D AZ R27
-V22D/J3	C 513 355 D AZ R27
-V22D/J4	C 513 355 D AZ R27
-V28A/J1	R 513 H.7/5.9
-V28A/J2	R 513 H.7/5.9
-V28A/J3	R 513 H.7/5.9
-V28B/J1	R 513 H.7/5.8
-V28B/J2	R 513 H.7/5.8
-V28B/J3	R 513 H.7/5.8
-V28C/J1	R 513 H.7/5.6
-V28C/J2	R 513 H.7/5.6
-V28C/J3	R 513 H.7/5.6
-V28D/J1	R 513 H.7/6.1
-V28D/J2	R 513 H.7/6.1
-V28D/J3	R 513 H.7/6.1

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/ / / /

N.L. Bekaad Mahini 6/24/83

FORM NO. 0056

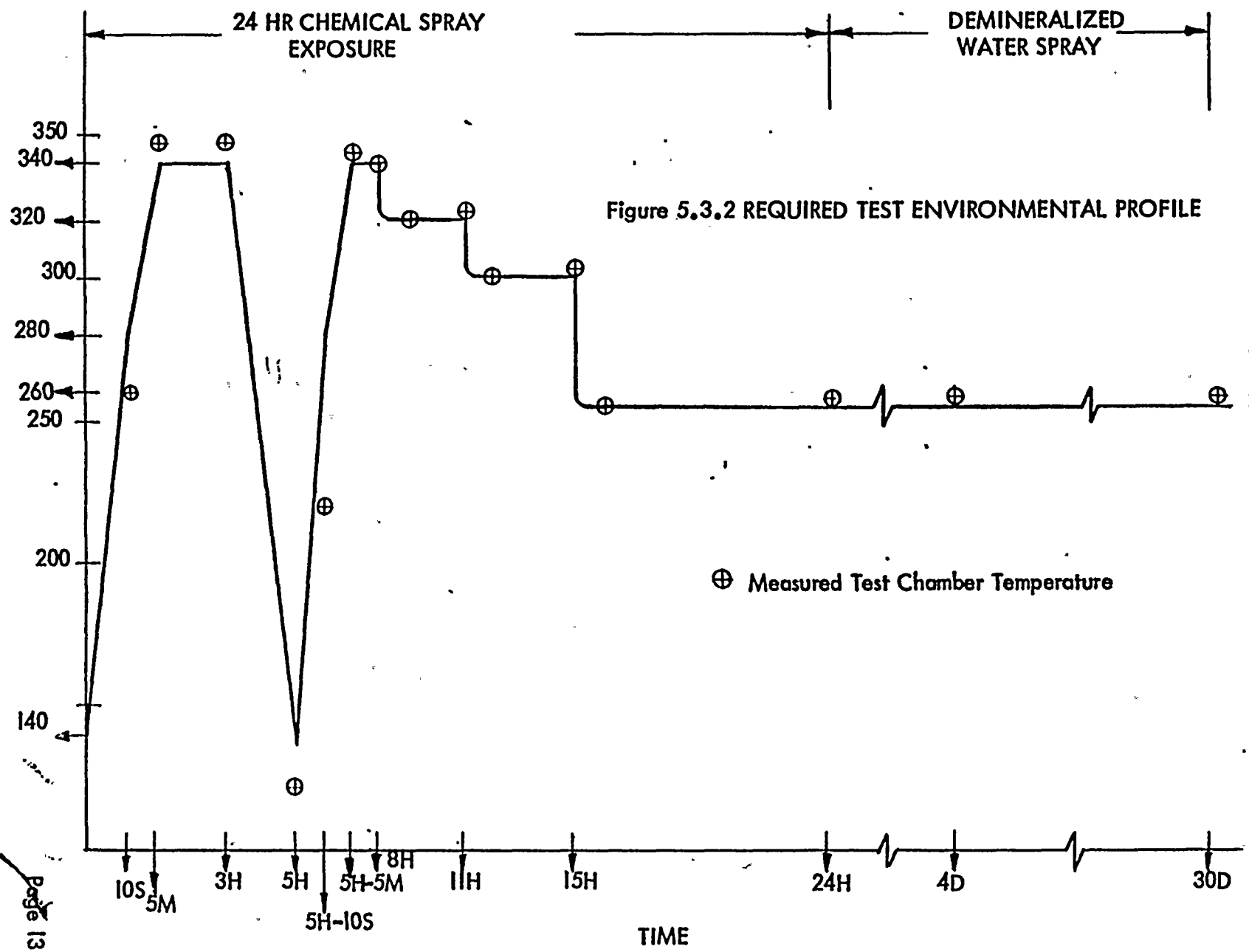

Figure 5.3.2 REQUIRED TEST ENVIRONMENTAL PROFILE

CONAX

CONAX CORPORATION
2300 Walden Ave., Buffalo, New York 14225

NUCLEAR

No. IPS-409

WPPSS QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31

MPL: E31-N010D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-DPIS-11A, B, C, D MS-DPIS-10A, B, C, D MANUFACTURER Barton MODEL NUMBER 288A, 288 COMPONENT Differential Pressure Indicating Switch FUNCTION/SERVICE Isolation Valve Control LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (See Note 2)	OPERATING TIME	17 hrs.	Equivalent to > 6 months	1	4,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5×10^5	3×10^6	3	4, 5	Separate Effect Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	Note 1
	ACCURACY	1.8%	1.5 FSPE	8	4,6	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83

Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Report 0740-004-471B
4. QID File #086001
5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1
6. Test Report for Barton Pressure Switch 289A GE report 05991, Rev. 1 12/7/71.
7. BRI Calculation #5.51.055
8. Supply System Calc. #In-02-83-01

NOTES

Qualified

1. A preventative maintenance program is being developed to extend the qualified life.
2.

EPN	ELEV.	COLUMN	EPN	ELEV.	COLUMN
MS-DPIS-10A	501	H.7/7.3	MS-DPIS-11A	506	H.6/7.3
-10B	471	H.5/7.9	-11B	475	M.6/8.1
-10C	471	M.5/4.5	-11C	475	M.5/4.5
-10D	505	L.9/3.7	-11D	505	L.9/3.6

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WPPSS QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-DPIS-810A -810B -810C -810D MANUFACTURER ITT Barton MODEL NUMBER 288A COMPONENT Diff. Press. Indicating Switch FUNCTION/SERVICE Main Steam Line C High Flow LOCATION: BLDG R ELEVATION 501,471,471,505 COLUMN H.7/7.3 L.9/3.7 M.5/7.9 M.5.4.5	OPERATING TIME	4320 hours	Equivalent to>6 months	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal: 14.7	Accident Profile 9	2	4,6	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4	3.0×10^6	3	4,5	Separate Test and Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	1.8%	1.5 FSPE	8	4,6	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83

Reviewed by: Behzad Makini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8 dated 6/1/83 2. WNP-2 FSAR paragraph 3.11 3. EDS report 0740-004-501K,-471D 4. QID file #086001 5. Qualification test report for Barton 288A switch, report #R3-288A-1 6. Test report for Barton Pressure Switch 289A, GE report 05991, 12/7/73 7. BRI Calc. #5.51.055 8. Supply System Calculation TN-02-83-01.	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1981

WPPSS QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31

MPL: E31-N008A,B,C,D,9A,B,C,D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-DPIS-8A, B, C, D 9A, B, C, D MANUFACTURER ITT Barton MODEL NUMBER 288A, 0288 (8A,9A) COMPONENT Differential Pressure Indicating Switch FUNCTION/SERVICE PCIS Hi Steam Flow Line A LOCATION: BLDG R ELEVATION (See Note 2) COLUMN H.6/7.3 H.5/7.9 H.5/4.5 L.9/3.6	OPERATING TIME	.17 Hours	Equivalent to > 6 months	1	4,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	3×10^6	3	4, 5	Separate Effect Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	1.8%	1.5 FSPE	8	4,6	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ab Nadir 6/24/83 Reviewed by: Behzad Makire 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Study 0740-004-471B, E, -571B, K
4. QID File #086001
5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1
6. Test Report for Barton Pressure switch 289A GE Report 05991, Rev. 1, 12/7/73
7. BRI Calculation #5.51.055
8. Supply System Calc. #In-02-83-01

NOTES

Qualified.

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

EPN	ELEV.	EPN	ELEV.
MS-DPIS-8A	505	MS-DPIS-9A	504
-8B	475	-9B	475
-8C	475	-9C	475
-8D	505	-9D	475

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WPPSS QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-LIS-100A,B MANUFACTURER ITT Barton MODEL NUMBER 288A COMPONENT Level Indicating Switch FUNCTION/SERVICE Reactor High Level LOCATION: BLDGR ELEVATION 526 COLUMN J.5/7.2,N.7/5.8	OPERATING TIME	24 hours	Equivalent to >24 hours	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,11,23	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11,23	Accident Profile 23	2	4,6	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.8×10^5	3.0×10^6	3	4,5	Separate Test and Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	3.3%	1.5 FSPE	8	4,5	Simultaneous Test Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Nadri 6/24/83

Reviewed by: Behzad Mahmi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8 dated 6/1/83 2. WNP-2 FSAR paragraph 3.11 3. EDS report 0740-004-522K,C 4. QID file #086001 5. Qualification test report for Barton 288A switch, report #R3-288A-1 6. Test report for Barton pressure switch 289A, GE report 05991, Rev. 1, 12/7/73 7. BRI Calc. #5.51.055 8. Supply System Calculation IN-02-83-01.	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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QID #198001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: B22-N024A,B,C,D: B22-N031A,B,C,D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-LIS-24A, B, C, D -31A, B, C, D MANUFACTURER Barton MODEL NUMBER 288A COMPONENT Level Indicating Switch FUNCTION/SERVICE Main Steam Level Indication LOCATION: BLDG R ELEVATION 526 COLUMN J.5/7.2,J.7/4.0,N.7/5.8,M.8/6.8 J.5/7.4,N.8/5.8,J.5/7.1,N.7/5.8	OPERATING TIME	24 hours	Equivalent to > 6 months	1	4, 5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,23,11	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 23,11	Accident Profile 23	2	4, 5	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	3×10^6	3	4, 5	Separate Effect Engineering Analysis	None Note 1
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	3.3 %	1.5 FSPE	8	4,5	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Nadir 6/24/83 Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-5221H 4. QID File #198001,3,4,5 5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1 6. Test report for Barton pressure switch 289A GE Report 05991, Rev. 1, 12/7/73 7. BRI Calculation #5.51.055 8. Supply System Calc. #In-02-83-01	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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WPPSS QID #198001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: B22-N037A,B,C,D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-LIS-37A, B, C, D -38A, B MANUFACTURER Barton MODEL NUMBER 288A COMPONENT Level Indicating Switch FUNCTION/SERVICE Main Steam Level Indication LOCATION: BLDG R ELEVATION 526 COLUMN J.7/4.7,H.8/6.6,J.7/4.7,H.7/6.8 J.9/4.5,H.7/6.8	OPERATING TIME	24 hours	24 hours	1	4, 5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4.11	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11	Accident Profile 11	2	4, 5	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 80 accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	3×10^6	3	4, 5	Separate Effect Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	3.3%	1.5 FSPE	8	4,5	Simultaneous Test, Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-522H 4. QID File #198001,3,6 5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1 6. Test report for Barton pressure switch 289A GE Report 05991, rev.1, 12/7/73. 7. BRI Calculation #5.51.055 8. Supply System Calc. #In-02-83-01	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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WPPSS QID #199001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: B22-N026A,B
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-LITS-26 A,B,C,D 44 A,B (Note 2) MANUFACTURER Barton MODEL NUMBER 760 COMPONENT Level Indicating Transmitter Switch FUNCTION/SERVICE MS Level LOCATION: BLDG R ELEVATION (See Note 1) COLUMN J/4.5 M.7/4.7 J.7/4.8 J.7/8.0 N.7/5.7 M.7/6.8	OPERATING TIME	6 months	Equivalent to >6 months	1	5	Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 11	Profile 4	2	5	Engineering Analysis	None
	PRESSURE (PSIA)	14.7 normal Accident profile 11	14.7	2	5	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 80 Accident	90%	2	5	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	9.6×10^3	1.0×10^4	Note 4	5	Engineering Analysis	None
	AGING	40 years		2	5		Note 3
	ACCURACY	3.3%	1.5%	6	5	Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Ali Nadir 6/24/83 Reviewed by: Behzad Makani 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-522 K,P
4. BRI Calc.#5.51.055
5. QID File#199001
6. Supply System Calculation IN-02-83-01.

NOTES

1.

EPN	Elev.	EPN	Elev.
MS-LITS-26A	530	-44A	475
-26B	527	-44B	475
-26C	526		
-26D	526		

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. The evaluation summarized on this worksheet applies to MS-LITS-26A,B. LITS-44A is being replaced prior to fuel load. LITS-26C,D,44B are on Table B of the JIO and do not require qualification prior to fuel load. 3. A qualified life is currently being calculated. 4. A component specific dose calculation was performed to determine the required TID.

Prepared by : A. Nowki 6/24/83

Reviewed by: B Seyed Mahini 6/24/83

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL: B22-F016
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-MO-16 MANUFACTURER Limitorque MODEL NUMBER SMB-00-7.5/L56 COMPONENT Motor Operator - Reliance, RH insulation /AC Motor FUNCTION/SERVICE Operates drain isolation valve LOCATION: BLDG C ELEVATION 504 COLUMN 2° AZ	OPERATING TIME	4320 Hours	Equivalent to > 6 months	4	3	Simultaneous Test	None
	TEMPERATURE (F)	135 max. normal 150 max. abnormal Accident: see profile 1	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident: see profile 1	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 max. normal 90 max. abnormal Accident profile 2	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Chemical Spray pH 10	1	3,5	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	3	Sequential Test	None
	AGING	40 years	40 years	1	2,3,5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83

Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report 600376A dated 5/13/76 4. BRI C1E list, REV 8, 6/1/83 5. QID #221001 6. BRI Calculation #5.51.055	Qualified.

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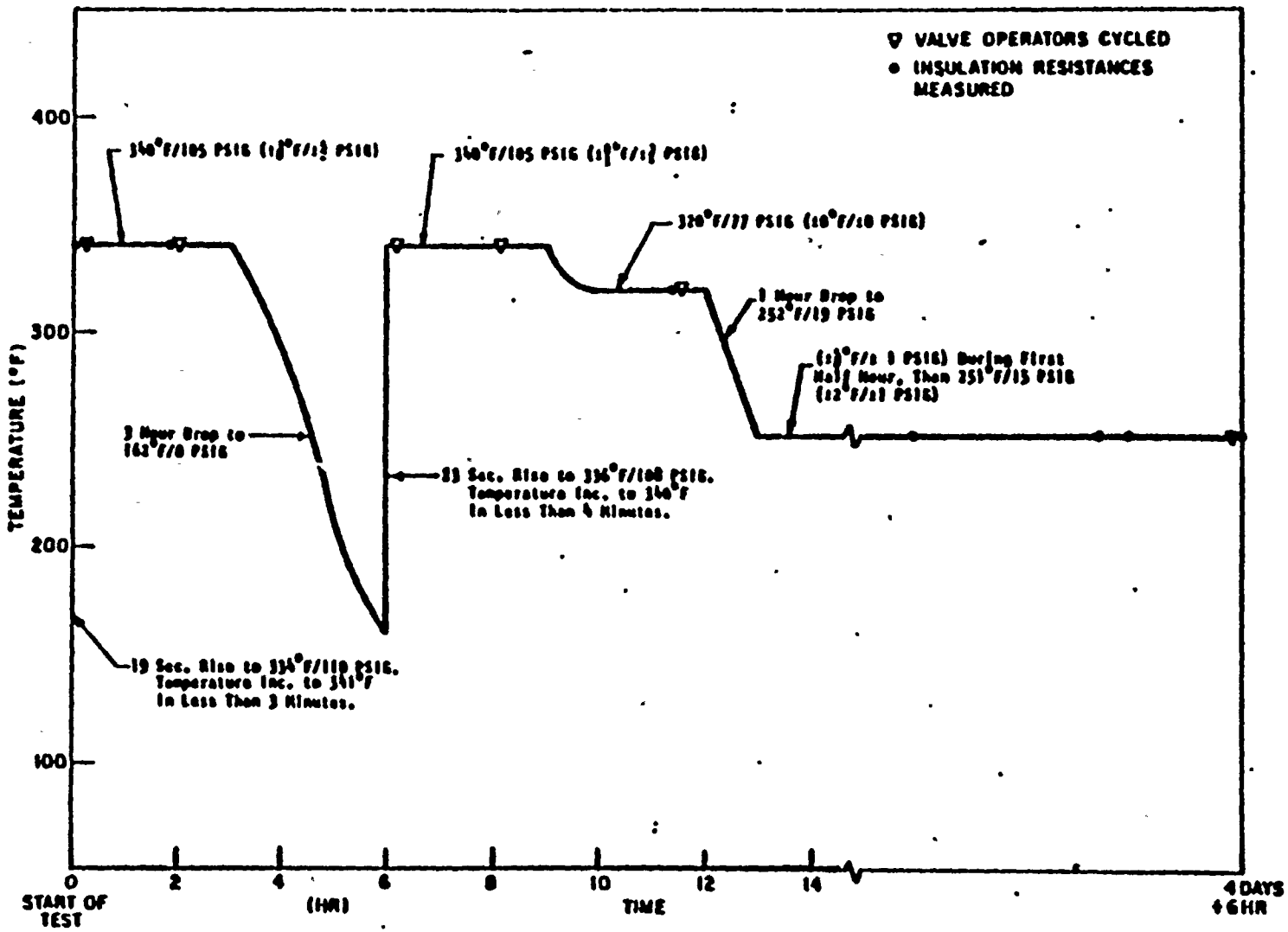

F-C3441

Figure 3. Actual Steam Exposure Profile

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL: B22-F019
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-MO-19 MANUFACTURER Limitorque MODEL NUMBER SMB-000 -5/D56A COMPONENT Porter Peerless Valve Motor Operator DC Motor/Class H Ins. FUNCTION/SERVICE Operate MS Valve 19 LOCATION: BLDG R ELEVATION 504 COLUMN H7/6	OPERATING TIME	4320 Hours	Equivalent to 6 months	1	3,4	Simultaneous Testing	None
	TEMPERATURE (F)	125 normal 140 max. abnormal accident--profile 3,4	See enclosed profile	1	3	Simultaneous Testing	None
	PRESSURE (PSIA)	Normal 14.7 Accident profile 3	See enclosed profile	1	3	Simultaneous Testing	None
	RELATIVE HUMITY (%)	50 normal 98 max. abnormal 100 accident	100%	1	3	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	1×10^7	2	3	Sequential Testing	None
	AGING	40 years	40 years+	1	3,4	Sequential Testing, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Ali Nadim 6/24/83 Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-5010 3. Limitorque Report B0009, 4/30/76 4. Applicability calculations in QID #221001 5. BRI CIE list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	Qualified.

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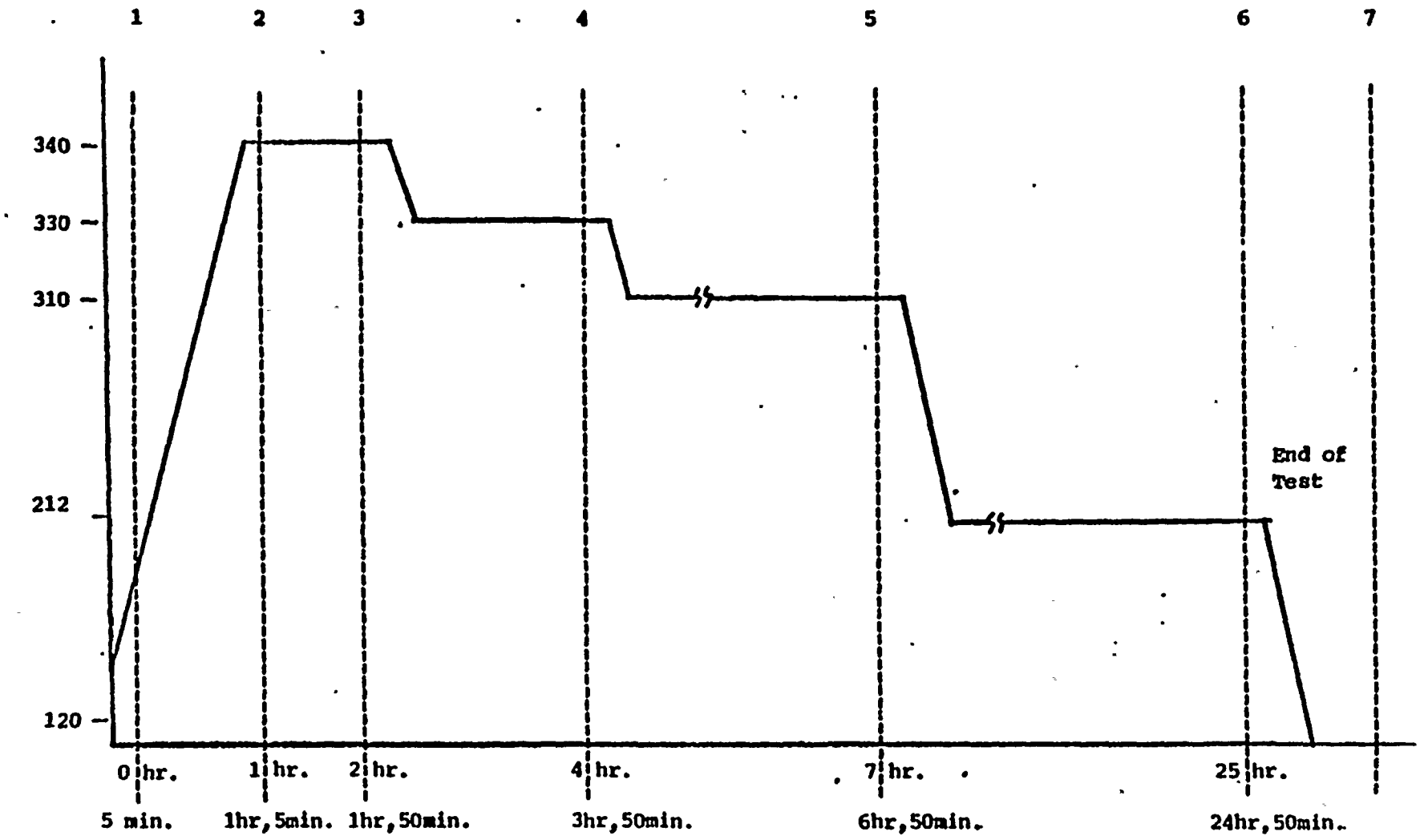
1
2
3
4
5
6
7
340
330
310
212
120
TEMP.
(°F)
End of
Test
0 hr.
5 min.
1 hr.
1hr,5min.
2 hr.
1hr,50min.
4 hr.
3hr,50min.
7 hr.
6hr,50min.
25 hr.
24hr,50min.

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL: B22-F067A, B, C, D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-MO-67A 67B 67C 67D MANUFACTURER Limitorque MODEL NUMBER SMB-000 COMPONENT Reliance Valve Motor Operator AC/Class RH Insulation FUNCTION/SERVICE Operate MS Valves 67A, 67B, 67C and 67D LOCATION: BLDG R ELEVATION 501 COLUMN H7/5.8, H7/6.4 H.2/5.9, H.2/5.3, H.2/6.1 H.2/6.1	OPERATING TIME	24 hours	Equivalent to >30 days	1	3	Simultaneous Test	None
	TEMPERATURE (F)	125 normal 140 max. abnormal accident--profile 3,4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 3	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	50 normal 98 max. abonrmal 100 accident	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	2.04×10^8	2	3	Sequential Test	None
	AGING	40 years	40 years+	1	3,4	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83 Reviewed by: Behzad Mahini 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8 dated 6/1/83 2. EDS Study 0740-004-5010 3. Limitorque Report 600376A, 5/13/76, B0058 dated 1/11/80 4. QID #221001 5. BRI Calculation #5.51.055	Qualified.

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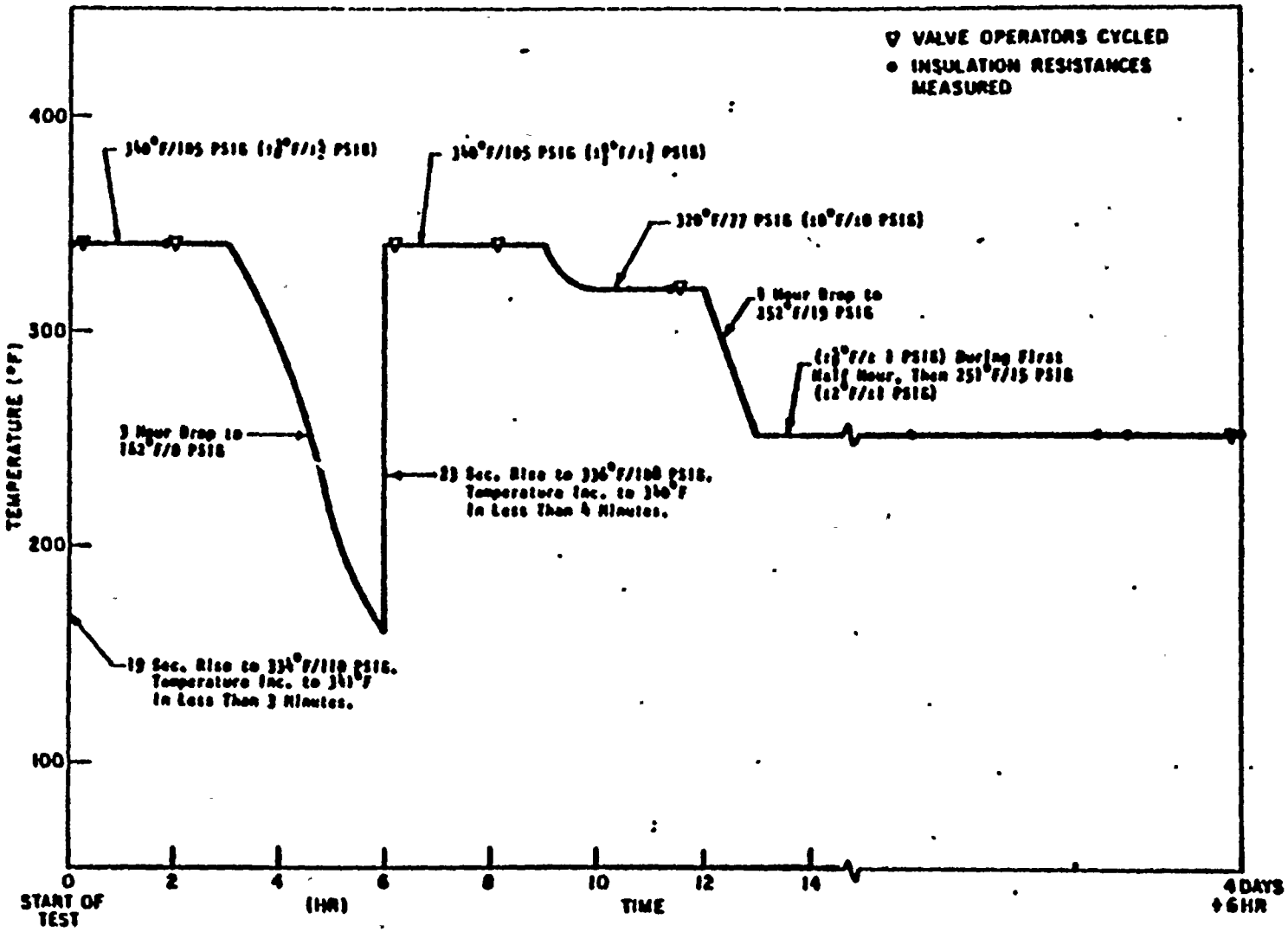

Figure 3. Actual Steam Exposure Profile

F-C3441

QID#246001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-C0442

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-POE-(Note 1) MANUFACTURER Technology for Energy Corporation MODEL NUMBER BBN-424-ISO COMPONENT Accelerometer (sensor) FUNCTION/SERVICE To monitor the safety/relief valves positions LOCATION: BLDG Containment ELEVATION COLUMN Note 1	OPERATING TIME	6 months	Equivalent to >6 months	1	3,5	Engineering Analysis and Sequential Tests	None
	TEMPERATURE (F)	135 Ave. Normal 150 Max. Abnormal Accident Profile 1	510	2	5	Simultaneous Tests	None
	PRESSURE (PSIA)	14.7 Max. Normal 14.7 Max. Abnormal Accident Profile 1	98	2	5	Simultaneous Tests	None
	RELATIVE HUMITY (%)	55 Max. Normal 90 Max. Abnormal Accident Profile 2	100	2	5	Simultaneous Tests	None
	CHEMICAL SPRAY	Demineralized Water	Borated Water	2	5	Simultaneous Tests	None
	RADIATION (RAD)	7×10^7	4.22×10^8	2	5	Sequential Tests	None
	AGING	40 years	40 years	2	3,5	Engineering Analysis and Sequential Tests	None
	ACCURACY	N/A	N/A	6	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE Equipment list, Rev.8 dated 6/1/83
2. FSAR Paragraph 3.11
3. QID#246001
4. BRI Calc.#5.51.055
5. Test Report #517-TR-03, Rev.2
6. SS Calculation IN-02-83-01

NOTES

Qualified

1.

EPN	Elevation	Column
MS-POE-1A	547	24 D AZ
-1B	547	45 D AZ
-1C	547	313 D AZ
-1D	547	333 D AZ
-2A	547	35 D AZ
-2B	547	60 D AZ

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

HS-POE -2C	547	305 D AZ
-2D	547	32 D AZ
-3A	547	45 D AZ
-3B	547	67 D AZ
-3C	547	293 D AZ
-3D	547	315 D AZ
-4A	547	60 D AZ
-4B	547	75 D AZ
-4C	547	288 D AZ
-4D	547	305 D AZ
-5B	547	80 D AZ
-5C	547	279 D AZ

By: Ali Nadein 6/24/83

Ckd: [illegible] 6/24/83

WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Stream TAG NUMBER MS-POS- (See Note 1) MANUFACTURER Namco Controls MODEL NUMBER EA740-86010 COMPONENT Position Switch FUNCTION/SERVICE Position Switch for Valve LOCATION: BLDG ELEVATION (See Note 1) COLUMN	OPERATING TIME	6 months		1			Note 2
	TEMPERATURE (F)	135 Normal 150 Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	7.0×10^7		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

By: [illegible] Ckd: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR paragraph 3.11
3. WNP-2 Final Shielding Evaluation report, September 1982
4. BRI Calc. #5.51.055

NOTES

1.

Tag Numbers	Elevation	Coordinate
MS-POS-V/22A/1	C 513	5 Deg. Az. Rad.27
-V/22A/2	C 513	5 Deg. Az. Rad.27
-V/22A/3	C 513	5 Deg. Az. Rad.27
-V/22A/4	C 513	5 Deg. Az. Rad.27
-V/22B/1	C 513	315 Deg. Az. Rad.27
-V/22B/2	C 513	315 Deg. Az. Rad.27
-V/22B/3	C 513	315 Deg. Az. Rad.27
-V/22B/4	C 513	315 Deg. Az. Rad.27

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WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B
MPL:
PPD:

PAGE NO: 2
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DATE: July 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

-V/22C/1	C 513	345 Deg. Az. Rad.27
-V/22C/2	C 513	345 Deg. Az. Rad.27
-V/22C/3	C 513	345 Deg. Az. Rad.27
-V/22C/4	C 513	345 Deg. Az. Rad.27
-V/22D/1	C 513	355 Deg. Az. Rad.27
-V/22D/2	C 513	355 Deg. Az. Rad.27
-V/22D/3	C 513	355 Deg. Az. Rad.27
-V/22D/4	C 513	355 Deg. Az. Rad.27
-V/28A/1	R 513	H.7/5.9
-V/28A/2	R 513	H.7/5.9
-V/28A/3	R 513	H.7/5.9
-V/28B/1	R 513	H.7/5.8
-V/28B/2	R 513	H.7/5.8
-V/28B/3	R 513	H.7/5.8
-V/28C/1	R 513	H.7/5.6
-V/28C/2	R 513	H.7/5.6
-V/28C/3	R 513	H.7/5.6
-V/28D/1	R 513	H.7/6.1
-V/28D/2	R 513	H.7/6.1
-V/28D/3	R 513	H.7/6.1

2. Qualification documentation has been reviewed and found acceptable. However, final verification of acceptability is not complete and is scheduled for completion by August 1, 1983.

WP-1983

B. [illegible] 6/24/83 Ckd: [illegible] 6/24/83

WPPSS QID#249002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-C0442

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-POT-(Note 2) MANUFACTURER Technology for Energy Corporation MODEL NUMBER 504B COMPONENT Sensor Preamplifier (Charge Converter) FUNCTION/SERVICE To monitor the safety/relief valves positions LOCATION: BLDG Containment ELEVATION COLUMN Note 2	OPERATING TIME	6 months	Equivalent to > 6 months	1	3,5	Engineering Analysis and Simultaneous Test	None
	TEMPERATURE (F)	135 Ave. Normal 150 Max. Abnormal Accident Profile 1	510	2	5	Simultaneous Tests	None
	PRESSURE (PSIA)	14.7 Max. Normal 14.7 Max. Abnormal Accident Profile 1	98	2	5	Simultaneous Tests	None
	RELATIVE HUMITY (%)	55 Max. Normal 90 Max. Abnormal Accident Profile 2	Steam	2	5	Simultaneous Tests	None
	CHEMICAL SPRAY	Demineralized Water	Borated Water	2	5	Simultaneous Tests	None
	RADIATION (RAD)	7×10^7	2.22×10^8	2	5	Sequential Tests	None
	AGING	40 years	5 years	2	3,5	Engineering Analysis and Sequential test	None Note 1
	ACCURACY	N/A	N/A	6	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref.4)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE equipment list, Rev.8 dated 6/1/83 2. FSAR Paragraph 3.11 3. QID#249002 4. BRI Calc.#5.51.055 5. Test Report #517-TR-03, Rev.2 6. WPPSS Calculation 1N-02-83-01	Qualified 1. A preventative maintenance/surveillance program is being developed to extend the qualified life.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

EPN	Elevation	Column
MS-POT-1A	547	24 D AZ
-1B	547	45 D AZ
-1C	547	313 D AZ
-1D	547	333 D AZ
-2A	547	35 D AZ
-2B	547	60 D AZ
-2C	547	305 D AZ
-2D	547	321 D AZ
-3A	547	45 D AZ
-3B	547	67 D AZ
-3C	547	293 D AZ
-3D	547	293 D AZ
-4A	547	60 D AZ
-4B	547	75 D AZ
-4C	547	288 D AZ
-4D	547	305 D AZ
-5B	547	D AZ
-5C	547	279 D AZ

By: [illegible] 6/24/83 Okd by: [illegible] 6/24/83

WPPSS QID# 256002

MPL: B22-N020A-D
B22-N023A-D
B22-N045A-D

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: (See Above)
PPD:

PAGE NO:
REVISION: 3
DATE: January 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-PS-20A-D MS-PS-23A-D MS-PS-45A -D MANUFACTURER Barksdale MODEL NUMBER B1T-H12SS-GE, B2T-H12SS-TC COMPONENT Pressure Switch FUNCTION/SERVICE See Note 2 LOCATION: BLDG R ELEVATION See Note 3 COLUMN See Note 3	OPERATING TIME	24 hours	Equivalent to>6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 11	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11	Accident Profile 11	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	2×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY		2.33 FSPE		5	Simultaneous Test	Note 4

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [signature] 6/24/83 Reviewed by: [signature] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR paragraph 3.11
3. EDS Report No. 0740-004-522H
4. QID 256002
5. Barksdale Environmental Test. Delaval Turbine Inc. Test Procedure 9993 Report dated August 13, 1975.
6. BRI Calc. #5.51.055

NOTES

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. Function/Service

MS-PS-20A-D Main Steam Isolation Valve Scram Interlock

MS-PS-23A-D High Vessel Pressure

MS-PS-45A-D Main Steam Pressure

3.

Tag Number	Elevation	Column
MS-PS-20A	524	J.5/7.1
-20B	526	J.8/4.7
-20C	524	N.8/5.8
-20D	524	M.8/6.6
-23A	524	J.5/7.1-M/N B2T-M12SS-TC
-23B	524	J.8/4.7
-23C	526	N.8/5.8
-23D	524	M.8/6.7
-45A	524	J.5/4.5
-45B	524	J.5/4.5
-45C	524	M.7/6.8
-45D	524	M.7/6.8

4. The required accuracy for this equipment is being investigated. The results will be incorporated before the fuel load.

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

WPPSS QID# 256002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-PS-39A-H -39J-N -39P,R,S U,V MANUFACTURER Barksdale MODEL NUMBER B1T-M12SS-GE COMPONENT Pressure Switch FUNCTION/SERVICE Relief Valve Pressure Switch LOCATION: BLDG R ELEVATION See Note 3 COLUMN See Note 3	OPERATING TIME	4320 hours	Equivalent to >6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4,11	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11	Accident Profile 11	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.3×10^4	2×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR paragraph 3.11
3. EDS Report No. 0740-004-522P
4. QID #256002
5. Barksdale Environmental Test. Delaval Turbine Inc. Test Procedure 9993 Report dated August 13, 1975.
6. BRI Calc.#5.51.055

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2. The equipment has passive function (Use Code 2). Therefore, accuracy is not applicable.

WP-1081

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	3.

Tag Number	Elevation	Column
MS-PS-39-H,J,K,L	526	J.9/4.5
All others	524	J.9/4.5

WP-1083

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #256016

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: B22-N047A-D, N088A-D
PPO:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-PS-47A-D MS-PS-48A-D MANUFACTURER Static-O-Ring MODEL NUMBER See Note 2 COMPONENT Pressure Switch FUNCTION/SERVICE Drywell Pressure Switch LOCATION: BLDG R ELEVATION See Note 2 COLUMN See Note 2	OPERATING TIME	24 hours	Equivalent to>6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4,11,23	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11,23	15.3	2	4,5	Simulataneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^5	1.5×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4.	Engineering Analysis	None
	ACCURACY	.05 psig	.05 psig	6	5	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Ali Naderi 6/24/83 Reviewed by: Ali L Pal 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-5221I
4. QID 256016
5. Viking Lab. Inc. Test Letter Report #30203-2 dated 11/20/73. Steam testing of Static-O-Ring Pressure Switch, P/N 12N-AA4-TTX10.
6. Supply System Calculation IN-02-83-01
7. BRI Calculation #5.51.055

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

Tag#	Model #	Column	Elevation
MS-PS-47A	12N-AA5-X10TT	J.5/7.1	526
MS-PS-47C	12N-AA5-X10TT	J.3/7.0	524
MS-PS-47B,D	12N-AA5-X10TT	N.8/5.8	524
MS-PS-48A,C	12N-AA5-X1051TT	J.5/4.5	529
MS-PS-48B,D	12N-AA5-X1051TT	M.7/6.8	526

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WPPSS QID #259001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: #2808-02B22

MPL: B22-N051
PPD: 163C1292

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-PT-51A -51B MANUFACTURER Bailey MODEL NUMBER KG556110EAAA1WEW COMPONENT Pressure Transmitter FUNCTION/SERVICE Transmit Reactor Pressure LOCATION: BLDG R ELEVATION 523 COLUMN J.4/7.1 M.7/6.8	OPERATING TIME	4320 Hours	Note 1	4	5		
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,11	!	1			
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11		1			
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal $<$80% max. accident		1			
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5		3			
	AGING	40 years		1			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. PPD 163C1292 3. EDS Study 0740-004-522P, H 4. BRI CIE list, REV 8, 6/1/83 5. WPPSS Letter GE-02-JLS-81-022 6. BRI Calc. #5.51.055	1. These transmitters are being replaced with Rosemount 1153, Series D, qualified to 323-74 and 344-75. (Ref. 5) Qualification documentation has been reviewed and found acceptable. However, final verification of acceptability is not complete and is scheduled for completion by August 1, 1983.

WP-1081

WPPSS QID #277002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02D17

MPL: D17-N003
PPD: 237X731

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-RE-3A, B, C, D MANUFACTURER General Electric MODEL NUMBER 237X731G001 COMPONENT Radiation Element FUNCTION/SERVICE Main steam lines radiation monitors LOCATION: BLDG R ELEVATION 508 COLUMN 117/5.9,5.6,6.4,6.1	OPERATING TIME	0.17 hours	Note 1	3			
	TEMPERATURE (F)	125 normal 140 max. abnormal Accident - profile 4		1			
	PRESSURE (PSIA)	14.7		1			
	RELATIVE HUMITY (%)	50 max. normal 98 max. abnormal Accident Profile 4		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	4.2×10^6		2			
	AGING	40 years		1			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Study 0740-004-501 0
3. BRI CIE list, REV 8, 6/1/83
4. BRI Calc. #5.51.055

NOTES

1. Discussions are being held with General Electric to obtain qualification data. Requalification activities will be implemented, if required.

   Equipment justification #16 in Appendix D is provided for MS-RE-3A and 3B. MS-RE-3C and 3D are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS QID #315011

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL: B22-F022
PPD: 732E150V

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-SPV-(See Note 1) MANUFACTURER Asco MODEL NUMBER HTX-8320A20 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Operate Inboard Main Steam Isolation Valves LOCATION: BLDG C ELEVATION 515 COLUMN 5°, 15°, 345°, 355°	OPERATING TIME	.17 hours		1			Note 2
	TEMPERATURE (F)	135 normal 150 max abnormal Accident - profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 normal 90 max abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized water		2			
	RADIATION (RAD)	7.0×10^{7}		2			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8 dated 6/1/83
2. FSAR Para 3.11
3. BRI Calculation #5.51.055

NOTES

1. MS-SPV-22A2, -22A3; MS-SPV-22B2, -22B3; MS-SPV-22C2, -22C3; MS-SPV-22D2, -22D3

2. To be replaced with NP8320A173E, see letter GE-02-JLS-81-023.

Qualification documentation has been reviewed and found acceptable. However, final verification of acceptability is not complete and is scheduled for completion by August 1, 1983.

WP-1081

WPPSS QID #315008

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-SPV-(See Note 1) MANUFACTURER Crosby Valve and Gage Co. MODEL NUMBER IMF-2 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Solenoids for main steam relief valves LOCATION: BLDG C ELEVATION 543 COLUMN Various	OPERATING TIME	4320 Hours					Note 2
	TEMPERATURE (F)	135 normal 150 max. abnormal Accident - profile 1					
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident - profile 1					
	RELATIVE HUMITY (%)	55 normal 90 max. abnormal Accident Profile 2					
	CHEMICAL SPRAY	Demineralized water					
	RADIATION (RAD)	7.0×10^7					
	AGING	40 years					
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Ali Nadeni 6/24/83

Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. G.E. PED Engr. Memo No. 126-62, 1/15/75
3. BRI CIE list, REV 8, 6/1/83
4. QID 315008
5. BRI Calculation #5.51.055

NOTES

1. EPN: MS-SPV-3DA, 3DB, 4AA, 4AB, 4BA, 4BB, 4CA, 4CB, 4DA, 4DB, 5BA, 5BB, 5CA, 5CB
2. These components have been purchased qualified from General Electric. The qualification documentation will be received and reviewed prior to fuel load.

WP-1081

WPPSS QID #315011

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL: B22-F028
PPD: 732E150V

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-SPV-(See Note 1) MANUFACTURER Asco MODEL NUMBER HTX-8320A20 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Operate Outboard Main Steam Isolation Valves LOCATION: BLDG R ELEVATION 513 COLUMN 11.3/5.9, 5.6, 6.4, 6.1	OPERATING TIME	17 hours		1			Note 2
	TEMPERATURE (F)	125 normal 140 max abnormal Accident - profile 3,4		2			
	PRESSURE (PSIA)	14.7 Normal		2			
	RELATIVE HUMITY (%)	55 max normal 100 max accident		2			
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Para 3.11
3. EDS Study 0740-004-501 0
4. BRI Calculation #5.51.055

NOTES

1. MS-SPV -28A2 -28A3; MS-SPV -28B2 -28B3; MS-SPV -28C2 -28C3; MS-SPV -28D2 -28D3

2. To be replaced with NP8320A173E, see letter GE-02-JLS-023.

Qualification documentation has been reviewed and found acceptable. However, final verification of acceptability is not complete and is scheduled for completion by August 1, 1983.

WP-1081

WPPSS QID #156001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-FT-3A, B, C, D MANUFACTURER Rosemount MODEL NUMBER 1153 COMPONENT Flow Transmitter FUNCTION/SERVICE Loops A,B,C, and D to manifold LOCATION: BLDG R ELEVATION 477 (A,C), 474 COLUMN H.4/5.7 (A,B) H.4/5.8 (C,D)	OPERATING TIME	4320 hours	4320 hours	1	4	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	318° F	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	87.7 psig	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Max. Abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2.4×10^7	3	4,5	Sequential Test	Note 1
	AGING	40 years	10 years	2	4	Simultaneous Test Engineering Analysis	None
	ACCURACY	5.0%	7.1% FSPE	7	4	Simultaneous Test Engineering Analysis	Note 1

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared By: [illegible] 6/24/83 Reviewed By: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Par. 3.11
3. EDS Study 0740-004-471J, Rev. 5
4. QID 156009
5. ROC between C. Speck and R. Chin, 2/2/83.
6. BRI Calculation #5.51.055
7. SS Calculation IN-02-83-01

NOTES

1. Options are being explored to resolve this item. These components are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS QID# 164004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-H-A,B,C,D	OPERATING TIME	24 hr.		3			Note 1
	TEMPERATURE (F)	40 max normal 90 max abnormal Accident Profile 4		1			
MANUFACTURER Chromalox	PRESSURE (PSIA)	14.7					
MODEL NUMBER 14HTV1-CT COMPONENT	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4		1			
FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
Heater	RADIATION (RAD)	4.4×10^7		2			
	AGING	40 years		1			
LOCATION: BLDG 477 ELEVATION COLUMN H.4/5.3 H.4/5.7	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

By: [illegible] 6/24/83 Okd by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-471J 3. BRI Class 1E Equipment List, Revision 8, 6/1/83 4. BRI Calculation #5.51.055	1. A documentation search is currently being performed. These components are on Table B of the JIO in Appendix D so qualification is not required prior to fuel load.

WP-1081

WPPSS QID #213020

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD: QID 213020

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-M-FN/1 -FN/2 MANUFACTURER Westinghouse MODEL NUMBER TBFC/76D56668 COMPONENT 1.5 hp Motor FUNCTION/SERVICE Motor for MSLC fans LOCATION: BLDG R ELEVATION 473,501 COLUMN H.4/6.3 H.6/7.3	OPERATING TIME	24 hours	6 months	1	4	Simultaneous Test and Engineering Analysis	none
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident profile 4,9,10	410°	2	4	Simultaneous Test and Engineering Analysis	none
	PRESSURE (PSIA)	Normal 14.7 Accident profile 9, 10	Accident Profile 9	2	4	Engineering Analysis	none
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	4	Sequential test	none
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Sequential Testing	none
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	none
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 5)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Rev. 8 dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report #0740-004-471J 4. QID 213020 5. BRI Calculation #5.51.055	Qualified 1. The motor insulation type is being identified. The evaluation will be completed when the data is obtained.

WP-1881

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-MO-1A -1B -1C -1D MANUFACTURER Limitorque MODEL NUMBER SMC-04-3/42 COMPONENT Valve Motor Operator (Reliance Class B) FUNCTION/SERVICE Operate MSLC Valves LOCATION: BLDG R ELEVATION COLUMN H5/5.5	OPERATING TIME	4320 hours	16 days	6	3	Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	Steam for 24 hours 100% for 15 days	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2×10^7	2	3	Sequential Test	Note 1
	AGING	40 years	40 years +	1	3,4	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR paragraph 3.11
2. EDS Study 0740-004-471J
3. Limitorque B0003 with Addendum A, dated 5/8/76 (BWR 054-C-04)
4. QID #221001
5. BRI Calculation #5.51.055
6. BRI CIE list Rev. 8 dated 6/1/83

NOTES

1. These components are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

TEMPERATURE PROFILE

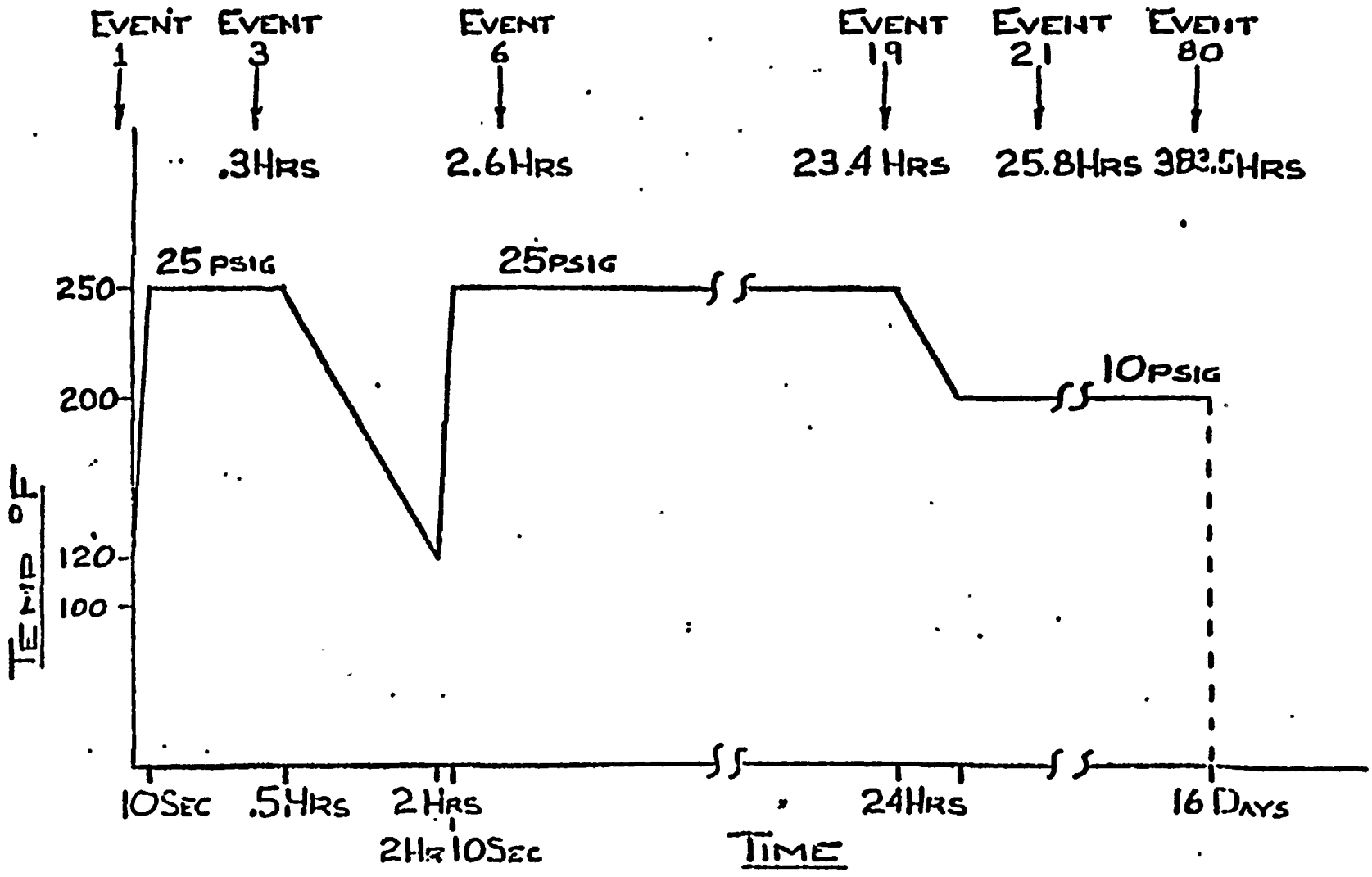

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-MO-See Note 1 MANUFACTURER Limitorque MODEL NUMBER COMPONENT Reliance Motor Operator AC/Class RH Insulation FUNCTION/SERVICE Operate MSLC Valves LOCATION: BLDG R ELEVATION COLUMN See Note 1	OPERATING TIME	24 Hours	Equivalent to >6 Months	1	3	Simultaneous Test	None
	TEMPERATURE (F)	125 Normal 140 Max. Abnormal Accident Profile 3	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 3	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	50 Normal 98 Max. Abnormal 100 Accident	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	2.04×10^8	2	3	Simultaneous Test	None
	AGING	40 Years	40 Years +	1	3,4	Simultaneous Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Paragraph 3.11
2. EDS Study 0740-004-5010
3. Limitorque Report 600376A, 5/13/76, B0058 dated 1/11/80
4. QID #221001
5. BRI Calculation #5.51.055
6. BRI CIE List, Rev. 8, 6/1/83

NOTES

Qualified

1.

EPN	Elev.	Coordinates
MSLC-MO-10	504	H.4/6.6
-2A	505	H.4/5.7

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

EPN	Elev.	Coordinates
HSLC-MO-2B	505	H.4/5.3
-2C	505	H.7/6.4
-2D	505	H.5/6.1
-3A	505	H.3/5.9
-3B	505	H.3/5.3
-3C	505	H.7/6.4
-3D	505	H.3/6.1
-4	504	H.3/6.4
-5	504	H.3/6.3
-9	504	H.3/6.2

WP-1083

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

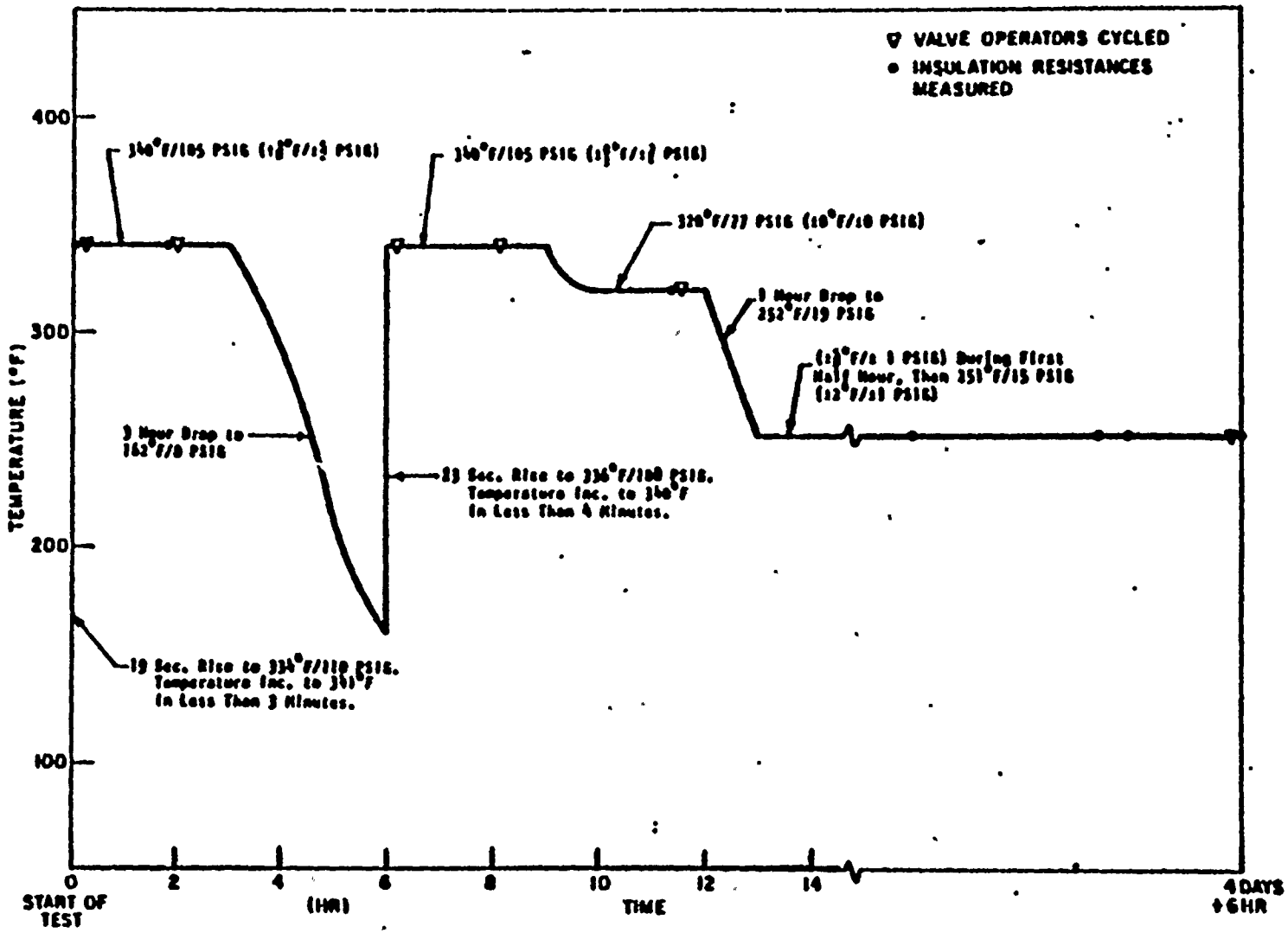

Figure 3. Actual Steam Exposure Profile

F-C3441

QID #256007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-PS-20, 24, 25, 60, 7A, 7B, 7C, 7D, 70A, 70B 70C, 70D, 8A,B,C,D MANUFACTURER Barton MODEL NUMBER 288A, 288 COMPONENT Pressure Switch FUNCTION/SERVICE LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (See Note 2)	OPERATING TIME	6 months	6 months	1	4, 6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.7	2	4, 6	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.3×10^4	3×10^6	3	4, 5	Separate Effect · Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	4.0%	1.5 FSPE	8	6,4	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Report 0740-004-522K, 522P
4. QID File #256007
5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1,
6. Test report for Barton pressure Switch 289A GE report 05991, Rev. 1, 12/7/73.
7. BRI Calc. #5.51.055
8. Supply System Calc.#In-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

EPN	ELEV.	COLUMN	EPN	ELEV.	COLUMN
MSLC-PS-20,24,60	528	H.4/7.1	MSLC-PS-8AtoD	528	H.4/4.2
-25	526	H.4/7.1	-70C	526	H.4/4.2
-70A,B,D	528	H.4/4.2	-7B	528	H.4/3.2
-7A,C	528	H.4/4.2	-7D	522	H.4/4.2

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QID #4156001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER HSLC-PT/10A-D 12A-D MANUFACTURER Rosemount MODEL NUMBER 1153-GB5 COMPONENT Pressure Transmitter FUNCTION/SERVICE Leakage Pressure Transmitter LOCATION: BLDG R ELEVATION 528, 526 COLUMN H.3/3.7	OPERATING TIME	6 Months	Equivalent to > 6.6 Months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	318	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	87.7	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.3×10^4	2.4×10^7	3	4	Sequential Test	None
	AGING	40 Years	10 Years	2	4	Simultaneous Test, Engineering Test	None
	ACCURACY		7.1 % FS PE		4	Simultaneous Test, Engineering Analysis	Note 1

FLOOD LEVEL ELEV: (Ref. 5)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Study 0740-004-471J, Rev. 5
4. QID # 156009
5. BRI Calculation # 5.51.055

NOTES

1. The required accuracy is being investigated. The equipment is on table B of JIO so it does not require qualification prior to fuel load.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

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QID #156001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Stream Leakage Control TAG NUMBER MSLC-PT-11 13 MANUFACTURER Rosemount MODEL NUMBER 1153-GB4 COMPONENT Pressure Transmitter FUNCTION/SERVICE Valve Hydraulic Pressure LOCATION: BLDG R ELEVATION 529 COLUMN H.3/6.7	OPERATING TIME	6 Months	Equivalent to > 6 months	1	4	Simultaneous test Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	318	2	4	Simultaneous test	None
	PRESSURE (PSIA)	14.7	87.7	2	4	Simultaneous test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Simultaneous test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.0×10^4	2.4×10^7	3	4	Sequential test	None
	AGING	40 Years	10 Years	2	4	Simultaneous test Engineering test	None Note 2
	ACCURACY		7.1% FSPE		4	Simultaneous test Engineering Analysis	Note 1

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, 6/1/83
2. FSAR Para. 3.11
3. EDS Study 0740-004-522K
4. QID #156009
5. BRI Calc. #5.51.055

NOTES

1. The required accuracy for this equipment is being investigated. The result will be incorporated prior to fuel load.
2. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID # 283011 E
283015 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-RLY-(See Note 1)	OPERATING TIME	4320 hours	> 4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90° normal 104° abnormal Accident Profile 4	194	2	4	Engineering Analysis	None
MANUFACTURER ASEA	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
MODEL NUMBER See Note 1 COMPONENT Relay	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
FUNCTION/SERVICE Control interlock	CHEMICAL SPRAY	N/A	N/A			N/A	None
	RADIATION (RAD)	5.3×10^4	10^5	3	4	Engineering Analysis	None
	AGING	40 years	> 40 years	2	4	Engineering Analysis	None
LOCATION: BLDG R ELEVATION See COLUMN Note 1	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: [illegible] 6/22/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. ERI CIE list, Rev.8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS report 0740-004-522P 4. QID 283015-E	Qualified

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WPPSS

QID # 283011 E
QID # 283015 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:
MPL:
PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

NOTE 1

EPN	MODEL #	LOCATION
MSLC-RLY-CR/1	RXMH2	R 526 H.4/7.1
-CR/3	"	R 526 H.4/7.1
-CR/4	"	R 522 H.4/7.1
-CR/10	"	R 527 H.4/4.2
-CR/11	"	R 527 H.4/4.2
-CR/12	"	R 527 H.4/4.2
-CR/13	"	R 527 H.4/4.2
-CR/1A	"	R 528 H.4/4.2
-CR/1B	"	R 528 H.4/4.2
-CR/1C	"	R 527 H.4/4.2
-CR/1D	"	R 527 H.4/4.2
-CR/5A1	"	R 528 H.4/4.2
-CR/5A2	RXMK1	R 527 H.4/4.2
-CR/5B1	"	R 527 H.4/4.2
-CR/5B2	"	R 527 H.4/4.2
-CR/5C1	RXMH2	R 527 H.4/4.2
-CR/5C2	RXMK1	R 528 H.4/4.2
-CR/5D1	RXMH2	R 527 H.4/4.2
-CR/5D2	RXMK1	R 528 H.4/4.2
-CR/6A1	RXMH2	R 528 H.4/4.2
-CR/6A2	RXMK1	R 528 H.4/4.2
-CR/6B1	RXMH2	R 528 H.4/4.2
-CR/6B2	RXMK1	R 528 H.4/4.2
-CR/6C1	RXMH2	R 527 H.4/4.2
-CR/6C2	RXMK1	R 528 H.4/4.2
-CR/6D1	RXMH2	R 527 H.4/4.2
-CR/6D2	RXMK1	R 528 H.4/4.2
-CR/8	RXMK2	R 528 H.4/4.2
-CR/9	RXMH2	R 528 H.4/4.2

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6/24/83 6/24/83

WPPSS QID #283041

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-RLY-CR/5 MANUFACTURER Struthers Dunn MODEL NUMBER 219XDXP COMPONENT Relay FUNCTION/SERVICE Atmosphere pressure control interlock LOCATION: BLDG R ELEVATION 522 COLUMN H.4/7.1	OPERATING TIME	24 hours	4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident - profile 4	150	2	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	2.0×10^4	10^5	3	4	Engineering Analysis	None
	AGING	40 years	10 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared By: [illegible] 6/24/83 Reviewed By: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-522K 4. QID 283041 5. BRI Calc. #5.51.055	Qualified

WP-1001

WPPSS QID#283013E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-TD-(note 1) MANUFACTURER Agastat MODEL NUMBER 7012AE COMPONENT Time Delay FUNCTION/SERVICE Time Delay Pickup Relay LOCATION: BLDG R ELEVATION COLUMN see Note 1	OPERATING TIME	4320 hours	>4320 hours	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,11	160°F	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.7	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 11	95%	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	5.3×10^4	1×10^7	3	5	Sequential Test	None
	AGING	40 years	10 years	2	5	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref.6)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-522P
4. QID 283013E
5. MCC Powers Report, Rev. Sept. 3, 1979, "Environmental Qualification of the Safety Related Instruments for La Salle Nuclear Power Station"
6. BRI Calc. file#5.51.055

NOTES

Qualified

1.

EPN	LOCATION	
MSLC-TD-TK/2	526'	H.4/7.1
-TK/2A	528'	H.4/4.2
-TK/2B	528'	H.4/4.2
-TK/2C	528'	H.4/4.2
-TK/2D	528'	H.4/4.2

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	HSLC-TD -TK/3A 528' H.4/4.2 -TK/3B 527' H.4/4.2 -TK/3C 548' H.4/4.2 -TK/3D 528' H.4/4.2 -TK/4A 528' H.4/4.2 -TK/4B 528' H.4/4.2 -TK/4C 528' H.4/4.2 -TK/4D 528' H.4/4.2

By: Ali Nadiri

Ckd: [illegible] 6/24/83

WPPSS QID# 339003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-TE-10A, B, C, D	OPERATING TIME	24 hr.		3			Note 1
	TEMPERATURE (F)	40 max normal 90 max abnormal Accident Profile 4		1			
MANUFACTURER Hycal	PRESSURE (PSIA)	14.7					
MODEL NUMBER TC-2370-C-A-250-TT COMPONENT	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4		1			
Temperature Element FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
MSLC heater control	RADIATION (RAD)	4.4×10^7		2			
	AGING	40 years		1			
LOCATION: BLDG R ELEVATION 477 COLUMN H.4/5.7 H.4/5.8	ACCURACY	N/A					
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL? YES X NO (Ref. 4)	By: [illegible]		Ckd: [illegible] 6/24/83				

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-471J 3. BRI Class 1E Equipment List, Revision 8, 6/1/83 4. BRI Calculation #5.51.055	1. A documentation search is currently being performed. These components are on Table B of the JIO in Appendix B so do not require qualification prior to fuel load.

WP-1081

WPPSS QID #324002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Process Instrumentation TAG NUMBER PI-V-X-250, 251, 253, 256, 257, 259, 262, 263, 264, 266, 267, 268	OPERATING TIME	4320 hours	Equivalent to > 6 months	4	3,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max.normal 104 max. abnormal Accident Profile 4	See enclosed profile.	1	3	Simultaneous Test	None
MANUFACTURER Target Rock	PRESSURE (PSIA)	14.7	N/R	1	N/	N/A	None
MODEL NUMBER 1021010-1-8-1-S COMPONENT Root Value	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	92	1	3	Simultaneous Test	None
FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	2.27×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years	1	3,5	Sequential Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION Note 1 COLUMN	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Report 0740-004-522P, 522H
3. TRC Report 2375A, QID 324002
4. BRI CIE list, REV 8, 6/1/83
5. QID #324002
6. BRI Calc. #5.51.055

NOTES

Qualified

	EPN	Elev.	Column
1.	PI-SV-250,251	537	M.8/6.3
	253	536	J.0/4.1
	256,257		J.5/4.8
	259		K/15
	262,263		M.8/6.3
	264,266		
	267		
	268		J.8/4.5

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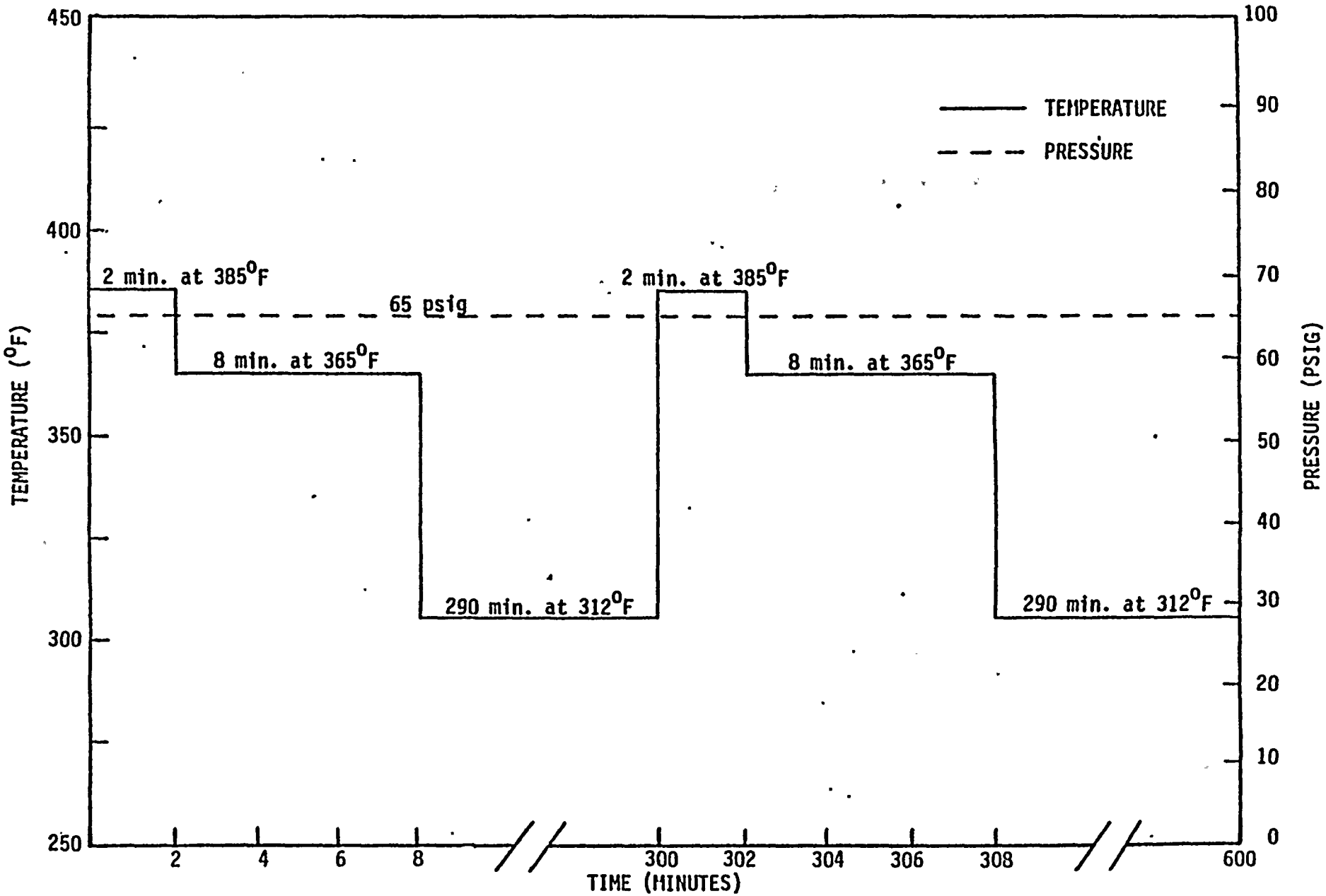
Revision: 2
Date: September 1982



ENVIRONMENTAL QUALIFICATION TEST PROFILE FOR TARGET ROCK SOLENOID VALVES

WPPSS QID #324002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Process Instrumentation TAG NUMBER PI-V-X-265, 269	OPERATING TIME	6 months	Equivalent to >. 6 months	4	3,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
MANUFACTURER Target Rock MODEL NUMBER 1021010-3-8-1-S	PRESSURE (PSIA)	14.7 PSIA	N/R	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Accident Profile 4	92	1	3	Simultaneous Test	None
COMPONENT Root Valve FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	2.27×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years	1	3,5	Sequential Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION 479 COLUMN See Note 1	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Report 0740-004-471A, 471D
3. TRC Report 2375A, QID 324002
4. BRI C1E list, REV 8, 6/1/83
5. QID #324002
6. BRI Calc. #5.51.055

NOTES

Qualified

1.

EPN	Elev.	Column
PI-SV-265	479	-
PI-SV-269	479	J.1/4.6

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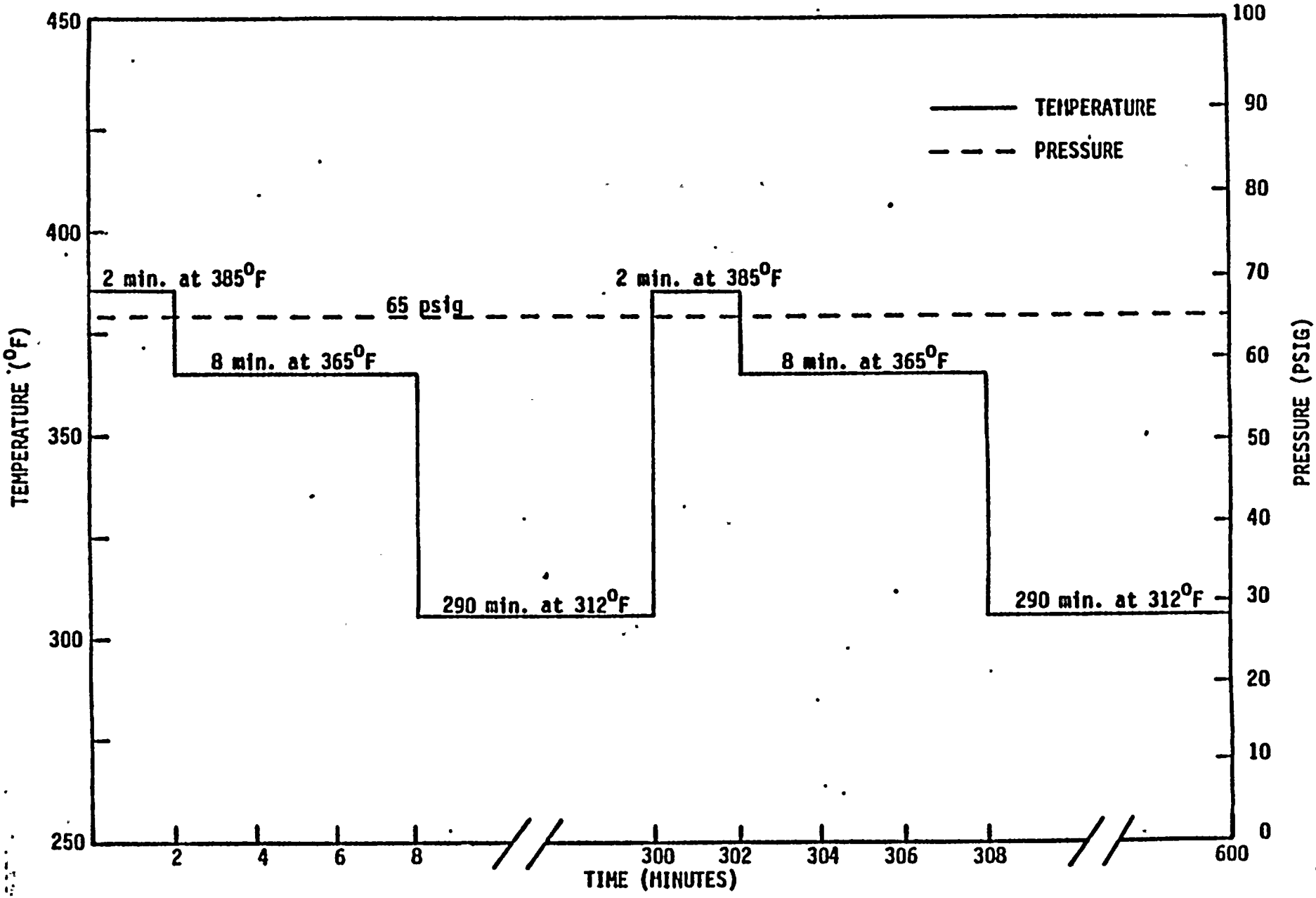
Revision: 2
Date: September 1982



ENVIRONMENTAL QUALIFICATION TEST PROFILE FOR TARGET ROCK SOLENOID VALVES

WPPSS QID 361015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Process Sampling Radioactive TAG NUMBER PSR-V-(See Note 2) MANUFACTURER Target Rock MODEL NUMBER 82M-001 COMPONENT Solenoid Operated Valve FUNCTION/SERVICE Containment Isolation Solenoid Valve, Penetration X77AC, AD LOCATION: BLDG Reactor ELEVATION (See Note 2) COLUMN (See Note 2)	OPERATING TIME	4320 Hours	Equivalent to >4320 Hours	1	3, 5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	385	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Accident Profile 4	92	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	2.27×10^7	6	5	Sequential Test	None
	AGING	40 Years	40 Years	2	3, 5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 4)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: [illegible] 6/24/83

Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8, 6/1/83
2. FSAR Paragraph 3, 11
3. QID #324002
4. BRI Calculation 5.51.055
5. Test Report #2375A, Target Rock Corporation
6. EDS Calculation 0740-004-501K1

NOTES

Qualified (All except PSR-V-X77A/1,3)

1. (PSR-V-X-77A/1,3): These EPN are on Table B of the JIO and do not require qualification prior to fuel load.

2.

Tag Numbers	Bldg.	Elevation	Column	Function/Service
PSR-V-X77A/1	C	501		ISO.Pene. X77AC
-X77A/2	R	503	J.6/8.0	ISO.Pene. X77AC
-X77A/3	C	501.		ISO.Pene. X77AD
-X77A/4	R	503	J.6/7.4	ISO.Pene. X77AD

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WPPSS QID # 361014

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Process Sampling Radioactive TAG NUMBER PSR-V-(Note 1)	OPERATING TIME	4320 hours	Equivalent to >4320 hours	2	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 Max. Normal 150 Max. Abnormal Accident Profile 1	See Enclosed Profile	1	3	Simultaneous Test	None
MANUFACTURER Valcor	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident Profile 1	See Enclosed Profile	1	3	Simultaneous Test	None
MODEL NUMBER 526-5940 COMPONENT	RELATIVE HUMITY (%)	55 Max. Normal 90 Max. Abnormal Accident Profile 2	100	1	3	Simultaneous Test	None
Solenoid Valve FUNCTION/SERVICE	CHEMICAL SPRAY	Demineralized Water	Borated Water	1	3	Simultaneous Test	None
Containment Isolation Solenoid Valve	RADIATION (RAD)	7.1×10^7	2×10^8	1	3	Sequential Test	None
	AGING	40 years	40 years	1	3,4	Sequential Test and Engineering Analysis	None
LOCATION: BLDG C ELEVATION COLUMN Note 1	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Ali Nakir 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. FSAR paragraph 3.11
2. BRI CIE list Rev. 8, dated 6/1/83
3. Report QR 52600-5940-2, Qualification Test Report on SNUPPS Solenoid Valves, 7/11/79, with Attachments I through XII
4. QID # 361014
5. BRI Calc. #5.51.055

NOTES

Qualified

1.

EPN	Elev.	Coordinates
PSR-V-X73/1	C522	
-X73/2	R534	H.5/4.8
-X80/1	C522	
-X80/2	R534	M.2/7.4
-X82/1	R476	M.7/7.7
-X82/2	R476	M.7/7.7

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	1. Continued

EPN	Elev.	Corordinates
PSR-V-X82/7	R476	M.4/7.7
-X82/8	R476	M.6/7.7
-X83/1	R476	M.4/7.7
-X83/2	R476	M.6/7.7
-X84/1	R477	J.0/4.9
-X84/2	R477	J.0/4.9
-X88/1	R455	N.2/6.1
-X88/2	R455	N.2/6.2

By Ali Nasseri 6/24/83 Ckd: [illegible] 6/24/83

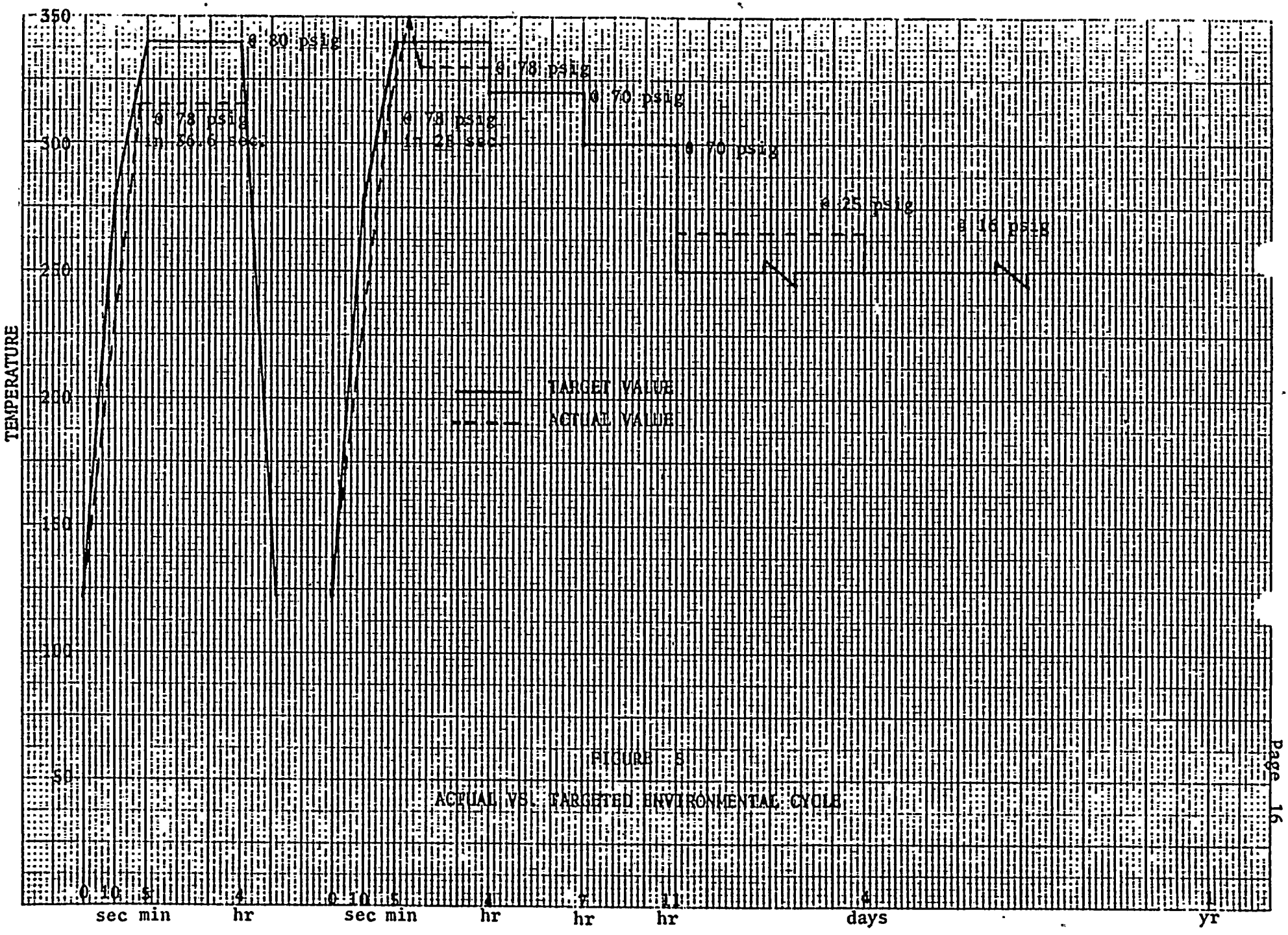

FIGURE 8

ACTUAL VS. TARGETED ENVIRONMENTAL CYCLE

WPPSS QID# 361015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Process Sampling Radioactive TAG NUMBER PSR-V-003/A -003/B	OPERATING TIME	4320 hours	Equivalent to >4320 hours	1	3,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4	385	2	5	Simultaneous Test	None
MANUFACTURER Target Rock	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
MODEL NUMBER 82 M-001 COMPONENT Solenoid Operated Valve	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Accident Profile 4	92	2	5	Simultaneous Test	None
FUNCTION/SERVICE 3/8" Solenoid Valve RHR Loop A,B system boundary	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.6×10^6	2.27×10^7	6	5	Sequential Test	None
	AGING	40 years	40 years	2	3,5	Sequential Test and Engineering Analysis	None
LOCATION: BLDG Reactor ELEVATION 432,431 COLUMN K.9/8.7,L.1/8.8	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. QID# 324002 4. BRI Calculation 5.51.055 5. Test Report #2375A Target Rock Corporation 6. EDS Calculation 0740-004-422 I1,J1	Qualified

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WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-MO-104 MANUFACTURER Limitorque MODEL NUMBER SMB-0 COMPONENT Reliance Motor Operator AC/Class RH Insulation FUNCTION/SERVICE Motor Operator for RCC-V-104 LOCATION: BLDG R ELEVATION 517 COLUMN K.0/4.3	OPERATING TIME	4320 Hours	Equivalent to > 6 months	1	4,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See Enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	2.6×10^6	2.04×10^8	3	4	Sequential Test	None
	AGING	40 years	N/A	2	4,5,6	Separate Effects and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Robert Makins 6/24/83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-501S 4. Limitorque Report 600376A dated 5/13/76 5. Limitorque Report B0058 dated 1/11/80 6. QID # 221001 7. BRI Calculation #5.51.055	Qualified

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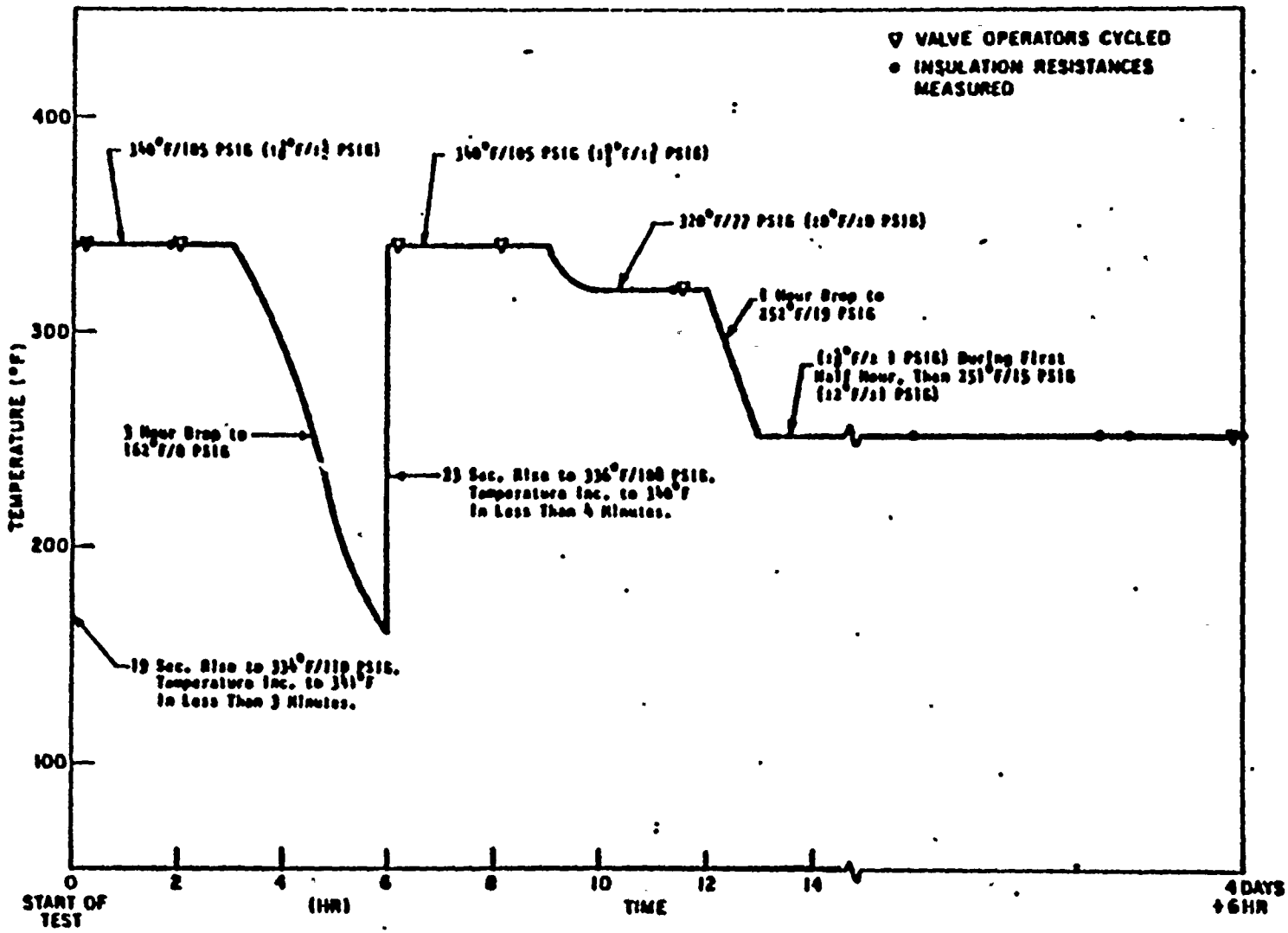

Figure 3. Actual Steam Exposure Profile

F-C3441

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-MO-129 -130 -131 MANUFACTURER Limitorque MODEL NUMBER SMB COMPONENT Reliance AC Motor Class B Insulation FUNCTION/SERVICE Operate RCC Valves LOCATION: BLDG R ELEVATION 559 COLUMN 129 130 K.6/9.3 131 K.5/9.2	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	3,4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.5×10^5	2×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years	1	3,4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Williams 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev 6, 6/1/83 2. EDS Study 0740-004-548L 3. Limitorque Report B0003 with Addendum A dated 5/8/76 in BWR-054-C-04 4. Calculations in QID 221001 5. BRI Calc. #5.51.055	1. Qualified

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TEMPERATURE PROFILE

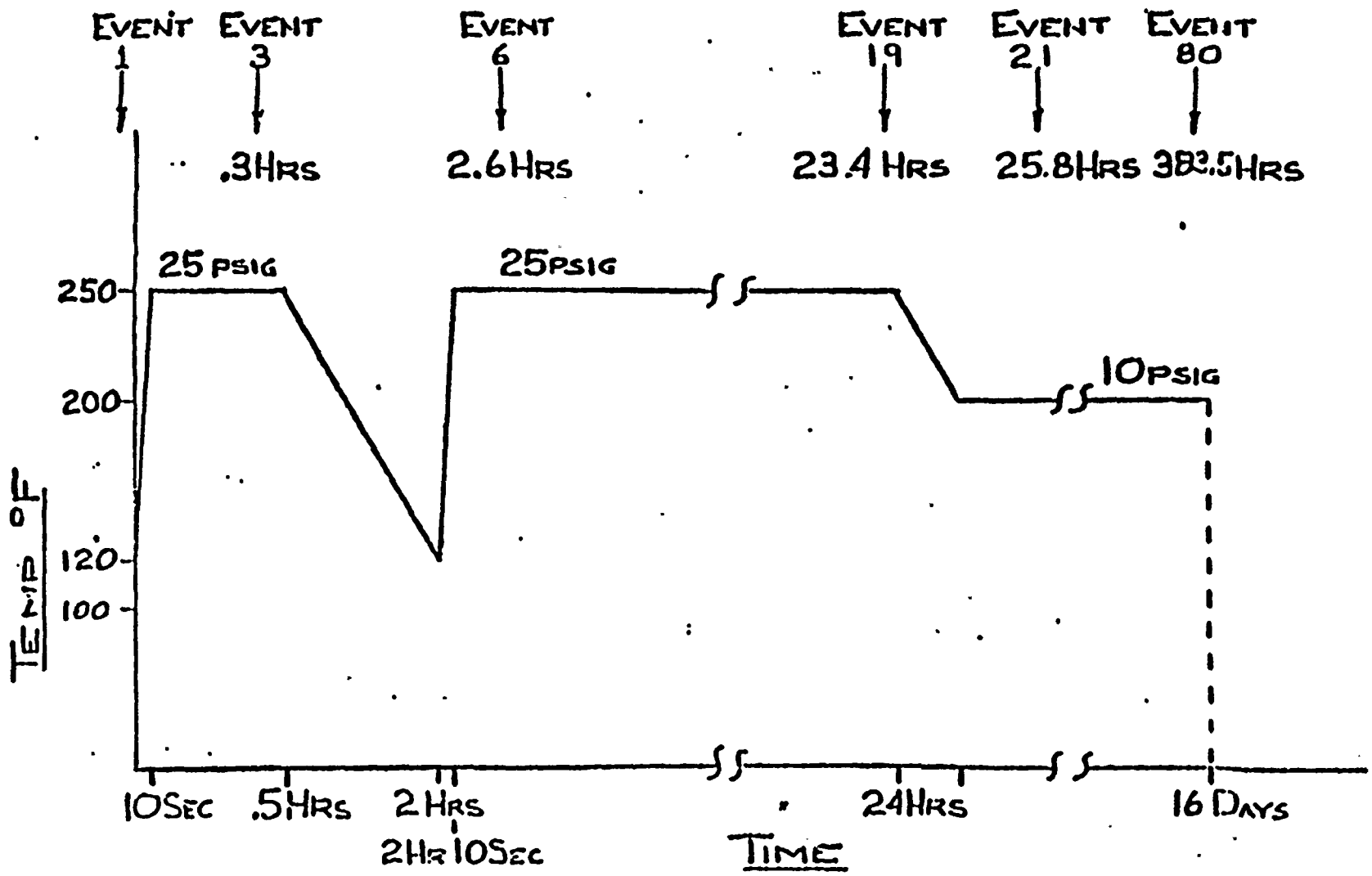

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-MO-40 MANUFACTURER Limitorque MODEL NUMBER SMB-0-10/L56 COMPONENT Motor Operator Motor Reliance, Class RH Insulation/AC Motor FUNCTION/SERVICE 0.7 HP 2.3A Motor Operator RCC-V-40 LOCATION: BLDG C ELEVATION 517 COLUMN 78° AZ	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	3,4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident--profile 1	See enclosed profile	2	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident--profile 1	See enclosed profile	2	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident--profile 2	100	2	3	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water	Chemical Spray pH 10	1	3	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	2	3	Sequential Test	None
	AGING	40 years	40 years +	2	3,4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6.24.83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. Limitorque Test Report 600376A dated 5/13/76 4. QID 221001 5. Limitorque Test Report B0058 dated 1/11/80 6. BRI Calculation #5.51.055	Qualified

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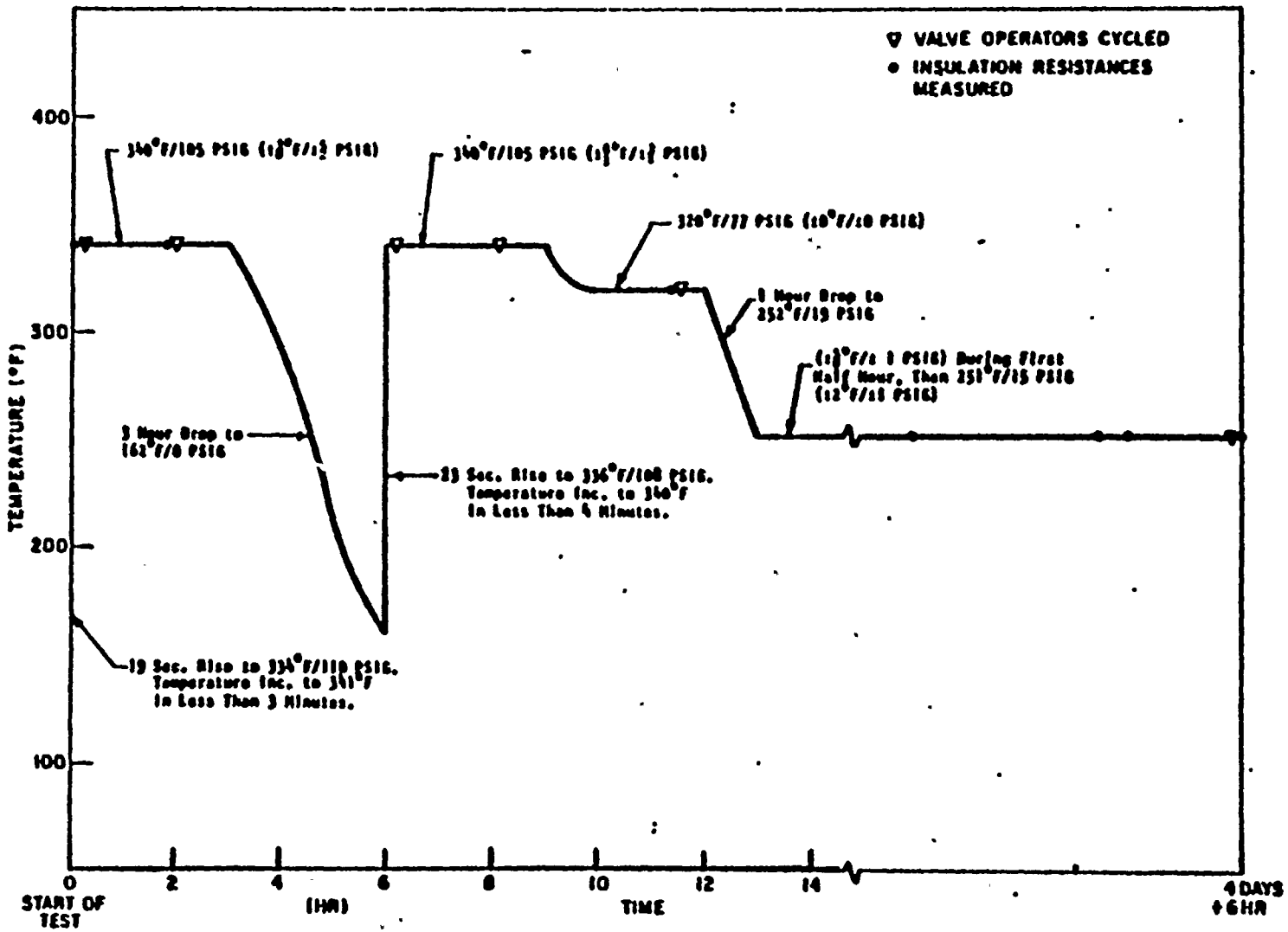

F-C3447

Figure 3. Actual Steam Exposure Profile

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-MO-5 RCC-MO-21 MANUFACTURER Limitorque MODEL NUMBER SMB-0-15/M56 COMPONENT AC Motor Operator Reliance, Ins. B FUNCTION/SERVICE 1HP 2.8A Motor Operator RCC-V-5 LOCATION: BLDG R ELEVATION 515 COLUMN K5/4.1, K4/4.2	OPERATING TIME	4320 hours	Equivalent to > 4320 hours	1	4	Engineering Analysis, Sequential Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.6×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4, 5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Ali Vaiki 6/24/83

Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-501 S 4. Limitorque Test Report B0003, 5/8/76 5. QID 221001 6. BRI Calc. #5.51.055	Qualified.

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TEMPERATURE PROFILE

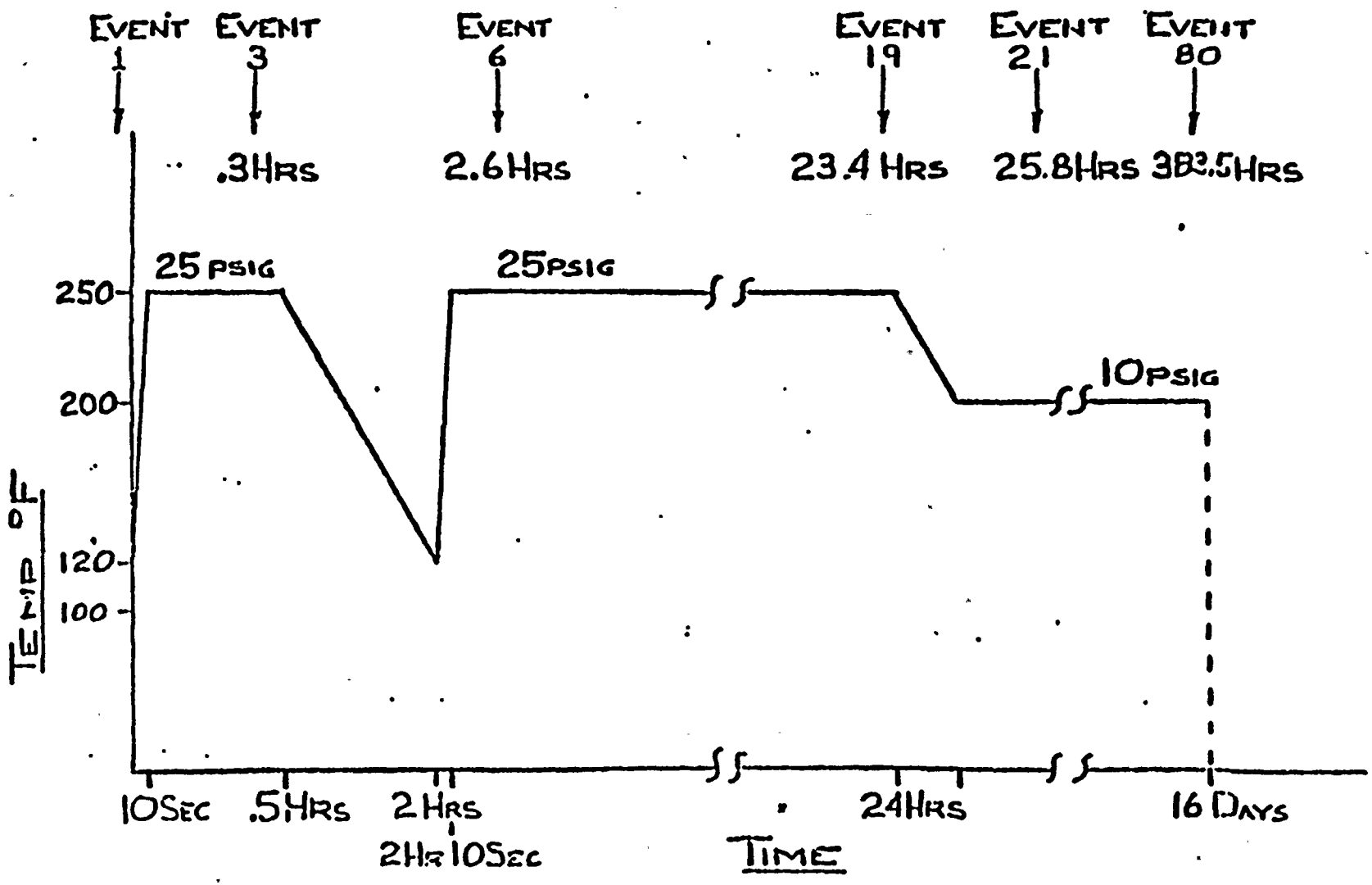

FIGURE 1

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-CNTR-C002 - EHO-C002 - SE-C002 - SS-1 - SV-C002 MANUFACTURER (See Note 2) MODEL NUMBER (See Note 2) COMPONENT (See Note 2) FUNCTION/SERVICE RCIC Turbine Control LOCATION: BLDG R ELEVATION 422 COLUMN (See Note 2)	OPERATING TIME	24 hr		3			Note 1
	TEMPERATURE (F)	40 max normal 90 max abnormal		1			
	PRESSURE (PSIA)	14.7		1			
	RELATIVE HUMITY (%)	40 normal 90 max abnormal		1			
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)			2			
	AGING	40 years		1			
	ACCURACY	N/A					

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Williams 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-422L 3. BRI CIE List, Rev. 8, dated 6/1/83 4. BRI CAlculation #5.51.055	1. Qualification options are currently being explored with General Electric. These components are on Table B of the JIO in Appendix D so qualification is not required prior to fuel load.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-02 PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

Tag	Man	Model	Component	Column
RCIC-CNTR-C002	Square D	HCG-1	Contactor	H.6/7.4
-EHO-C002	Woodward Govenor	EGR	Hydraulic Actuator	H.6/7.4
-SE-C002	Woodward Govenor	1680-622	Magnetic Pickup Sensor	H.6/7.4
-SS-1	Micro-switch	BZLNZ	Overspeed Trip	H.7/6.9
-SV-C002	GE	CR9503	Throttle Valve	H.3/71

Prepared By: _____

Reviewed By: James McCarns 6/24/83

WP-1083

QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E51

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-DPIS-13 A, B -7 A, B MANUFACTURER Barton MODEL NUMBER 288A COMPONENT Differential pressure switch FUNCTION/SERVICE RCIC Steam high flow LOCATION: BLDG R ELEVATION 471 COLUMN L.0/8.0 K.9/3.9	OPERATING TIME	24 hours	Equivalent to >6 months	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4	212	2	6	Simultaneous Test	
	PRESSURE (PSIA)	14.7	N/A	2	4,6	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal accident profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	3×10^6	3	4,5	Separate Test Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	1.5	1.5 FSPE	8	6	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Williams 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragrapn 3.11
3. EDS Report 0740-004-471A, D
4. QID File #086001
5. Qualification Test Report for Barton 288 Switch, Report #R3-288A-1
6. Test Report for Barton Pressure Switch 289A, GE Report 05991, Rev. 1, 12/7/73.
7. BRI Calculation #5.51.055
8. SS Calc. IN-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #140001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-FIS-2 MANUFACTURER ITT Barton MODEL NUMBER 289A COMPONENT Flow Indicating Switch FUNCTION/SERVICE RCIC System Flow LOCATION: BLDG R ELEVATION 471 COLUMN L.0/8.0	OPERATING TIME	24 hours	Equivalent to>24 hours	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,9	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	Accident Profile 9	2	4,6	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	3.0×10^6	3	4,5	Separate Test and Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8, dated 6/1/83 2. WNP-2 FSAR paragraph 3.11 3. EDS report 0740-004-471D 4. QID file #086001 5. Qualification test report for Barton 288A switch, report #R3-288A-1 6. Test report for Barton pressure switch 289A, GE report 05991, Rev. 1, 12/7/73 7. BRI Calc. #5.51.055	Qualified 1. A preventive maintenacne/surveillance program is being developed to extend the qualified life. 2. The component is passive and use code 2. Therefore, the accuracy is not required.

WP-1081

WPPSS QID #156005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-FT-3 MANUFACTURER Rosemount MODEL NUMBER 1151 P5A22MBX COMPONENT Flow Transmitter FUNCTION/SERVICE Flow Transmitter to H22-P017 LOCATION: BLDG R ELEVATION 474 COLUMN L.0/8.0	OPERATING TIME	6 Months	Equivalent to >6 Months	1	4,5,7	Engineering Analysis, Separate Effects	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4	212°F	2	6	Sequential Effect	None
	PRESSURE (PSIA)	Normal 14.7	24.7	2	6	Sequential Effect	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	6	Sequential Effect	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	
	RADIATION (RAD)	7.1×10^4	2×10^6	3	5	Separate Effects	None
	AGING	40 Years	14 Years	2	7	Engineering Analysis	None Note 1
	ACCURACY		1.88%		7	Simultaneous Test	Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 8)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE Equipment List, Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Study 0740-004-471D
4. Rosemount Report 97215A dated 2/9/72
5. Rosemount Report 127227 dated 12/27/72
6. Rosemount Report 37327B dated 3/28/73
7. QID file 156005
8. BRI Calculation # 5.51.055

NOTES

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2. This component is on Table B of the JIO, so it does not require qualification prior to fuel load.

WP-1081

WPPSS QID#207004E, 207002E, 207011E, 207020E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-LS-(note 1) MANUFACTURER Magnetrol MODEL NUMBER Note 1 COMPONENT Level Switch FUNCTION/SERVICE Note 2 LOCATION: BLDG R ELEVATION COLUMN Note 1	OPERATING TIME	24 hours	24 hours	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,5,8, 32,25	300°	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 5,8, 32,25	Accident Profile 25	2	4,5	Simultaneous Test and Eng. Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 5,8, 32,25	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	2.83×10^6	1.2×10^7	3	4	Engineering Analysis and Separate Test	None
	AGING	40 years	40 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	4	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL (Ref.6)
YES X NO

Prepared by: Behzad Makini 6-24-83 Reviewed by: James Marino 6/24/83

DOCUMENTATION REFERENCES

1. Burns and Roe Electrical Equipment List Rev.8
2. FSAR paragraph 3.11
3. EDS-Report-0740-004-422L Rev.2
4. QID 207004E
5. Wyle Labs Type Test Program of Magnetrol Level Switches 43235-1 5/2/77 Rev.A
6. BRI Calc.#5.51.055

NOTES

Qualified

1.

	Model#	Loc.
RCIC-LS-3	751-SPX-M14	426' H.4/7.4-422L
-4	402-XXS-SP-M14	565' J.0/9.0-N
-5	402-XXS-SP-M14	563' N.0/9.0-J
-6	402-XXS-S1-M14	550' L.8/4.3-548B

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	-10 5.0-751-1X-MPG M13HY 426' J.7/7.3 -15A 3.5-751-1X-MPG-M14HY 446' H.4/5.0 -15B 3.5-751-1X0MPG-M14HY 446' J.4/5.0 RCIC-LS-11 is on Table B of JIO. The qualification prior to fuel load is not required. 2. RCIC-LS-3 Level Switch for Turb Exhaust Drip. -4-6 Level Switch for RCIC Steam Trips -10 Level Switch for Drip Pot -11 Level Switch for RCIC Bar.Cond. Vacuum Tank Lev. -15A,B Emergency Switchover
Prepared by:	Reviewed by: James Means 6/24/83

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-1, 10, -22, 45, 46 -59	OPERATING TIME	6 Months	6 Months	1	4, 5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90° Normal 104° Abnormal Accident Profile 4, 5	See Enclosed Profile	2	5	Simultaneous Test, Engineering Analysis	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7	See Enclosed Profile	2	5	Simultaneous Test	None
MODEL NUMBER SMB-000	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4, 5	100%	2	5	Simultaneous Test	None
COMPONENT DC or AC Motor W/B Insulation	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
FUNCTION/SERVICE Motor operator for RCIC-V-1, 10, 22, 45, 46, 59	RADIATION (RAD)	1.2×10^7	2×10^7	2	4	Sequential Test	None
	AGING	40 Years	40 Years	2	4	Sequential Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION Note 1 COLUMN	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL? (Ref. 6)
YES X NO

Prepared by: Bekyd Mahini 6-24-83 Reviewed by: James Nivens 6/24/83

DOCUMENTATION REFERENCES

1. Burns & Roe Class 1E Electrical Equipment Generic List Rev. 6
2. FSAR Paragraph 3.11
3. EDS report 0740-004-422L
4. QID 221001 E
5. Limitorque Report B0003 with Add. A dated 5/8/76
6. BRI Calculation # 5.51.055

NOTES

Qualified

1.

EPN	Elevation	Coordinates
RCIC-MO-1	430	H6/7.2
-10	430	H4/6.6
-22	448	H6/8.0
-45	430	H3/7.2
-46	430	H3/7.2
-59	446	H5/8.2

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TEMPERATURE PROFILE

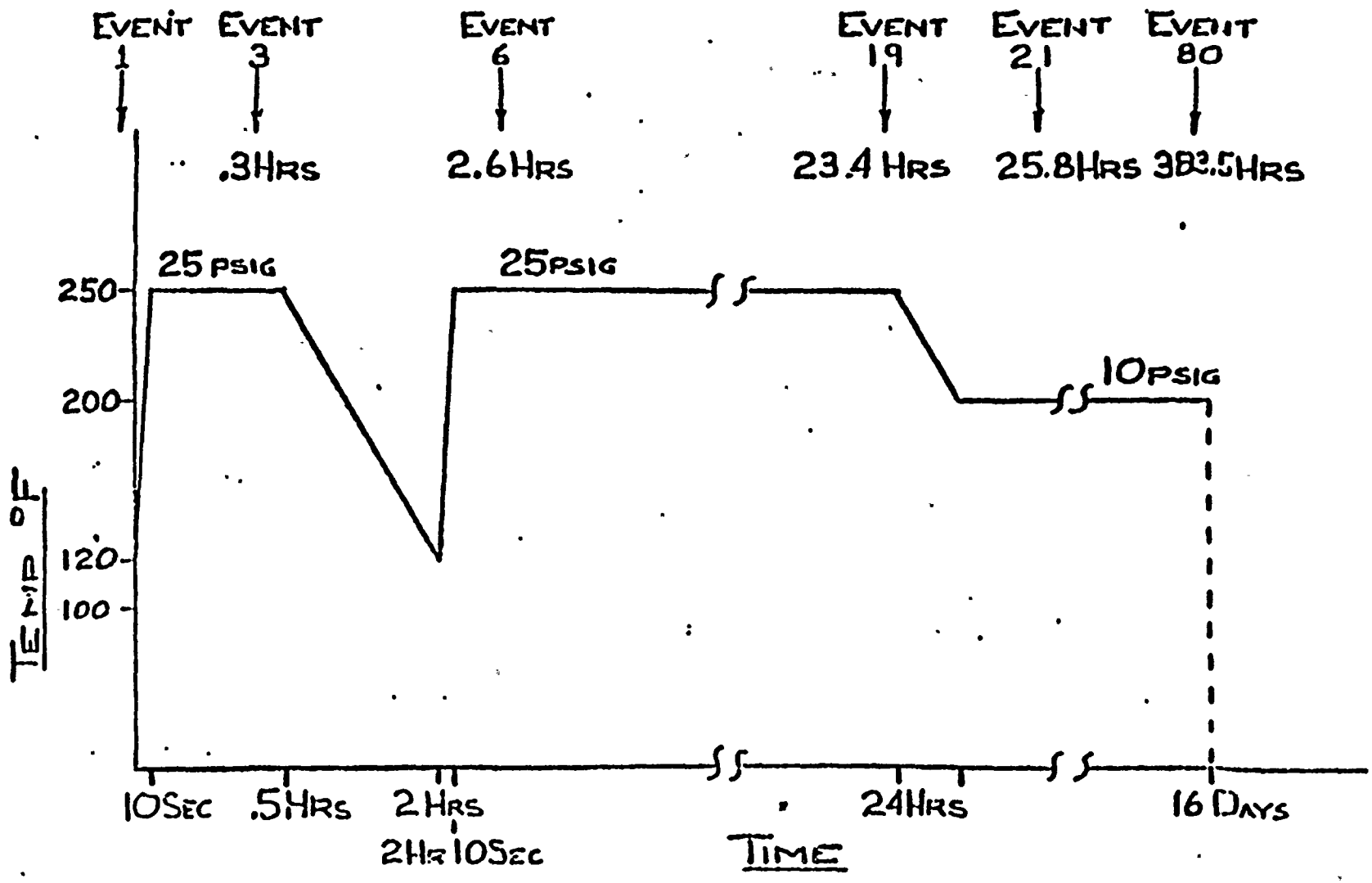

FIGURE 1

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-8	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident: See profile 4	See enclosed profile	1	3	Simultaneous Test	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7 normal Accident--profile 13,15	See enclosed profile	1	N/A	N/A	None
MODEL NUMBER SMB-00-7.5/D56C	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	1	3	Simultaneous Test	None
COMPONENT Porter - Peerless Valve motor operator DC Motor/Class H	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
FUNCTION/SERVICE Operate RCIC Valves	RADIATION (RAD)	2.6×10^6	1×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years+	1	3, 4	Sequential Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION 510 COLUMN J.1/4.9	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6.24-83 Reviewed by: James Myers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. EDS Study 0740-004-501S 3. Limitorque Report B0009, 4/30/76 4. QID 221001 5. BRI Calculation #5.51.055	Qualified.

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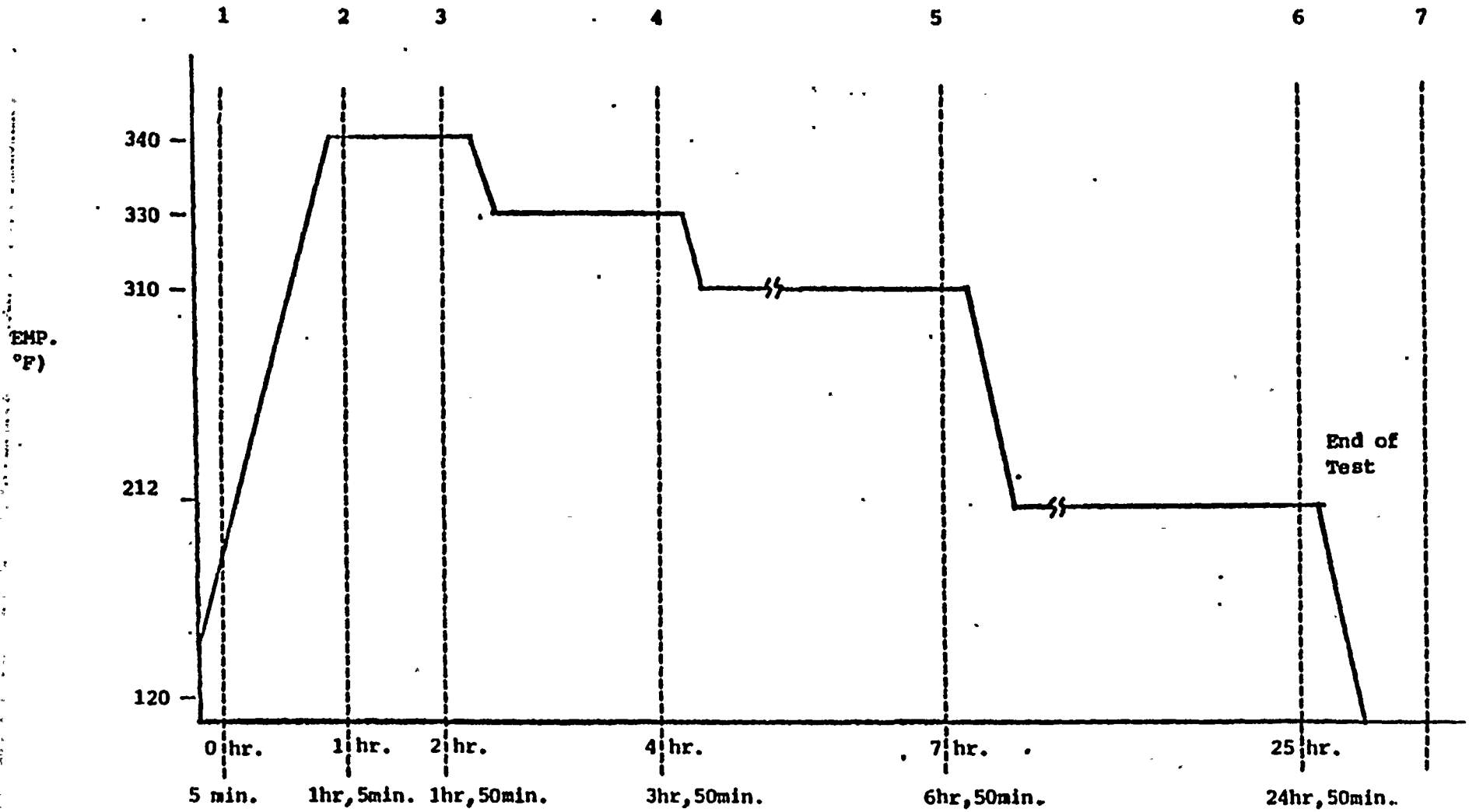
1
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5
6
7
340
330
310
EMP.
°F)
212
120
End of
Test
0 hr.
5 min.
1 hr.
1hr,5min.
2 hr.
1hr,50min.
4 hr.
3hr,50min.
7 hr.
6hr,50min.
25 hr.
24hr,50min.

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-13 RCIC-MO-64 MANUFACTURER Limitorque MODEL NUMBER SMB-0-40/D202G SMB-2-80/DS224B COMPONENT Porter Peerless Valve Motor Operator DC Motor/Class RH Ins. DC Motor/Class H Ins. FUNCTION/SERVICE Operate RCIC valves LOCATION: BLDG R ELEVATION 551 548 COLUMN M5/5.7 L7/4.6	OPERATING TIME	4320 hours	Equivalent to > 6 months	5	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 maximum normal 104 maximum abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 maximum abnormal Accident Profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.4×10^6	1×10^7	2	3	Sequential Test	None
	AGING	40 years	40+ years	1	3, 4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Malikzi 6.24.83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-548B 3. Limitorque Report B0009, 4/30/76 4. Application calculations in QID 221001 5. BRI CIE list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	Qualified.

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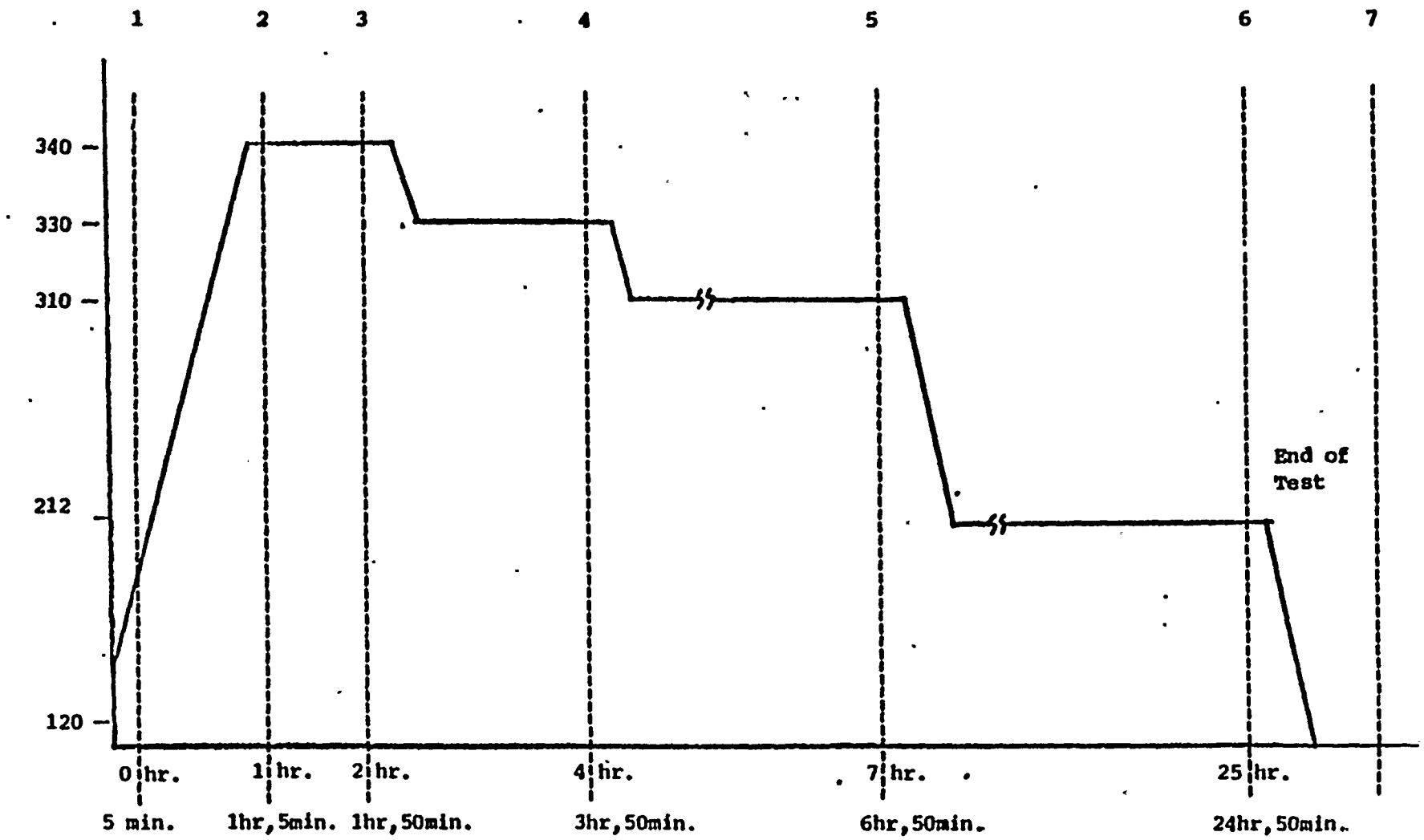
1
2
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5
6
7
340
330
310
212
120
EMP.
°F)
End of
Test
0 hr.
5 min.
1 hr.
1hr,5min.
2 hr.
1hr,50min.
4 hr.
3hr,50min.
7 hr.
6hr,50min.
25 hr.
24hr,50min.

QID#221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-19 MANUFACTURER Limitorque MODEL NUMBER SMB-000-5/p56 COMPONENT Motor operator AC Motor/Class B Insulation FUNCTION/SERVICE Motor operator for RCIC-V-19 LOCATION: BLDG R ELEVATION 441I COLUMN J.4/7.7	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	4,5	Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4, 6, 7	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 accident profile 6, 7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 100 max. accident	100%	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test & Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Boyd Mahini 6-24-83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-441I 4. Limitorque Test Report B0003, with Addendum A dated 5/8/76 5. Calculations in QID# 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

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TEMPERATURE PROFILE

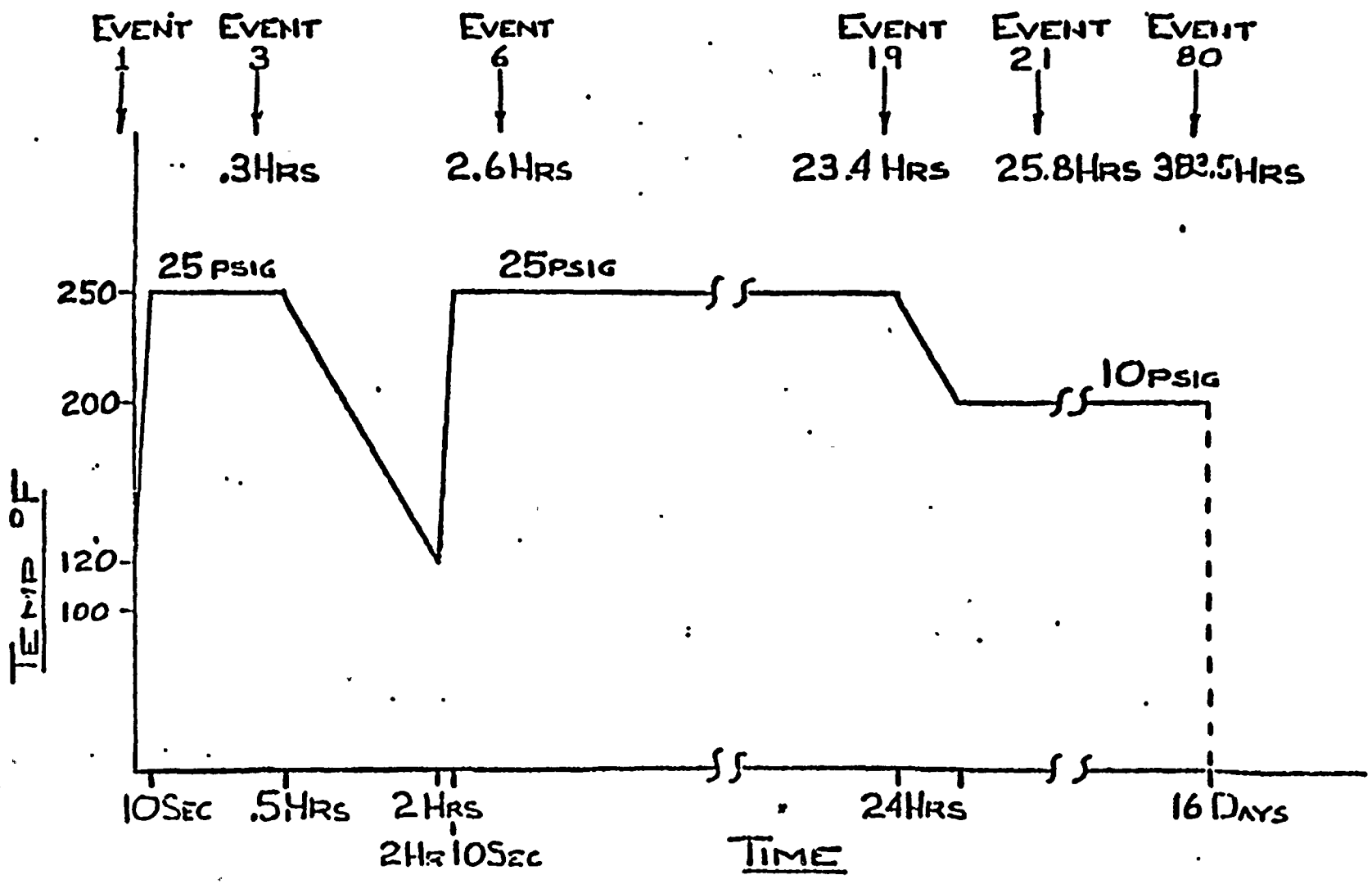

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-31 MANUFACTURER Limitorque MODEL NUMBER SMB-00-15/B56 COMPONENT - Motor Operator Motor: Reliance Insulation: Class B FUNCTION/SERVICE AC Motor Operates suppression pool suction valve 31 LOCATION: BLDG R ELEVATION 450 COLUMN H.7/6.8	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	4	Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,6,7	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 6,7	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	2.0×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-441I 4. Limitorque Test Report B0003, with Addendum A dated 5/8/76 5. QID 221001 6. Limitorque test report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

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TEMPERATURE PROFILE

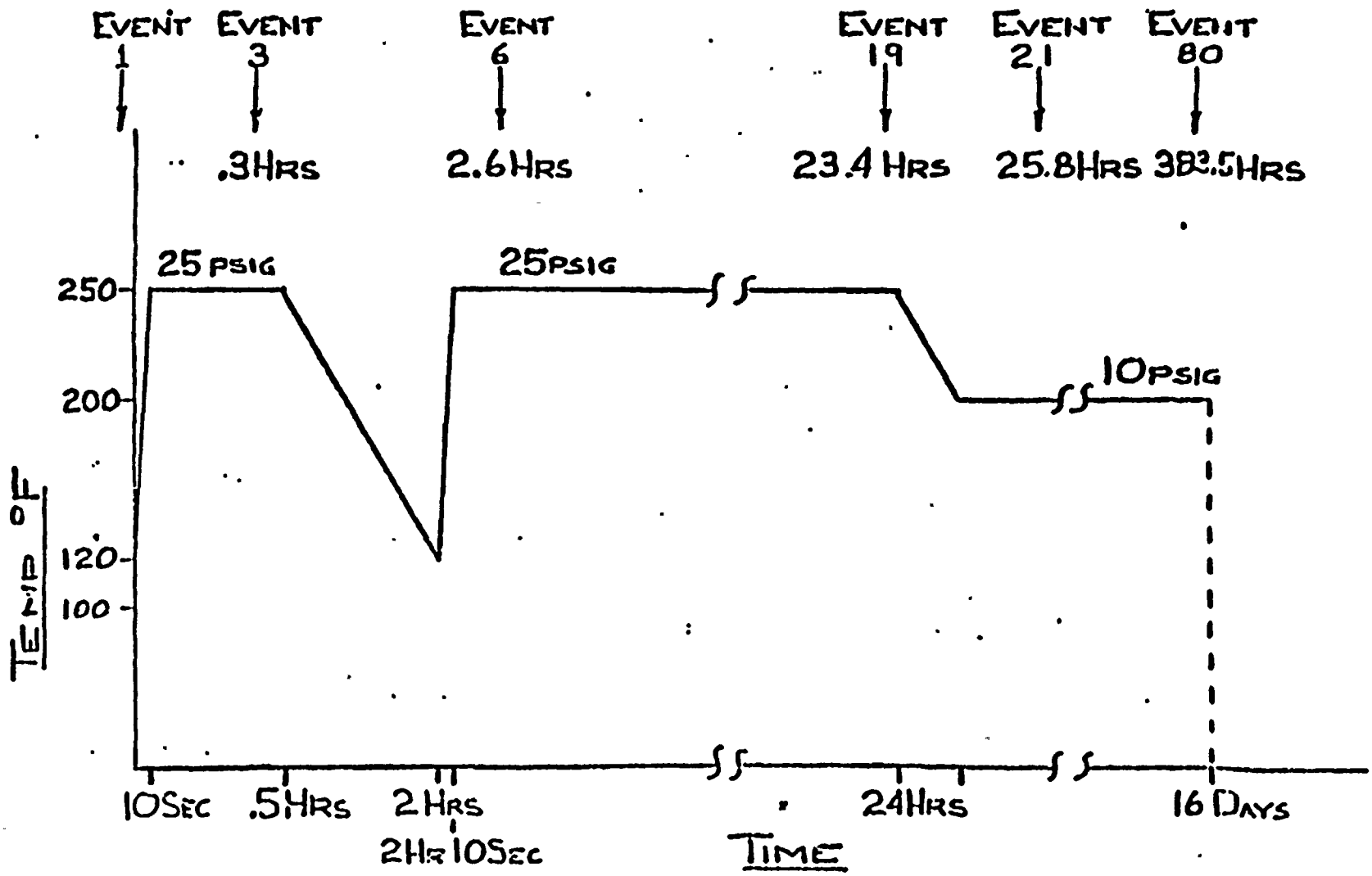

FIGURE 1

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-63	OPERATING TIME	4320 Hours	Equivalent to > 6 months	4	3	Simultaneous Test	None
	TEMPERATURE (F)	135 max. normal 150 max. abnormal Accident - see profile 1	See enclosed profile	1	3	Simultaneous Test	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7 max. normal 16.7 max. abnormal Accident - see profile 1	See enclosed profile	1	3	Simultaneous Test	None
MODEL NUMBER SMB-2-60/D215R2	RELATIVE HUMITY (%)	55 max. normal 90 max. abnormal Accident Profile 2	100	1	3	Simultaneous Test	None
COMPONENT Motor Operator - Reliance, RH insulation/AC Motor	CHEMICAL SPRAY	Demineralized water	Chemical Spray pH 10	1	3, 5	Simultaneous Test	None
FUNCTION/SERVICE Operates RCIC Steam Supply	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	3	Sequential Test	None
	AGING	40 years	40 years	1	2, 5	Sequential Test, Engineering Analysis	None
LOCATION: BLDG C ELEVATION 556' COLUMN 131 Deg.	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Williams 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report B600376A dated 5/13/76 4. BRI CIE list, REV 8, 6/1/83 5. QID #221001 6. BRI Calculation #5.51.055	Qualified.

WP-1081

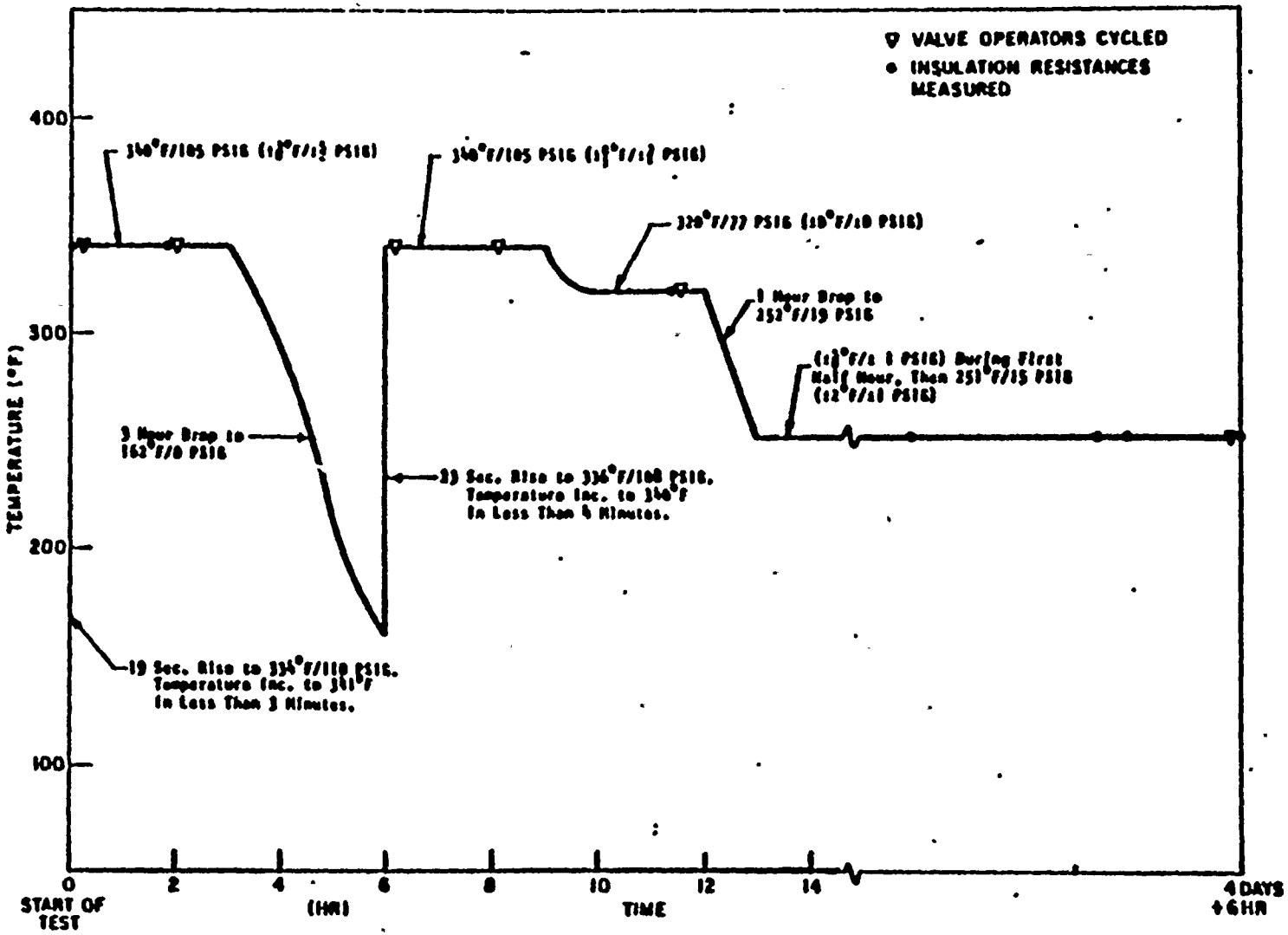

Figure 3. Actual Steam Exposure Profile

F-C3441

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM - Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-68 MANUFACTURER Limitorque MODEL NUMBER SMB-015/DTS6F COMPONENT - Motor Operator Motor: DC Insulation: Class B Porter Peerless FUNCTION/SERVICE Operator Turbine Exhaust Isolation Valve LOCATION: BLDG R ELEVATION 474 COLUMN J.9/6.7	OPERATING TIME	4320 hours	Equivalent to >6 months	1	4, 5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.8×10^6	1×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Bekzad Makine 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-4711 4. Limitorque Test Report B0003 dated 5/8/76 5. QID 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

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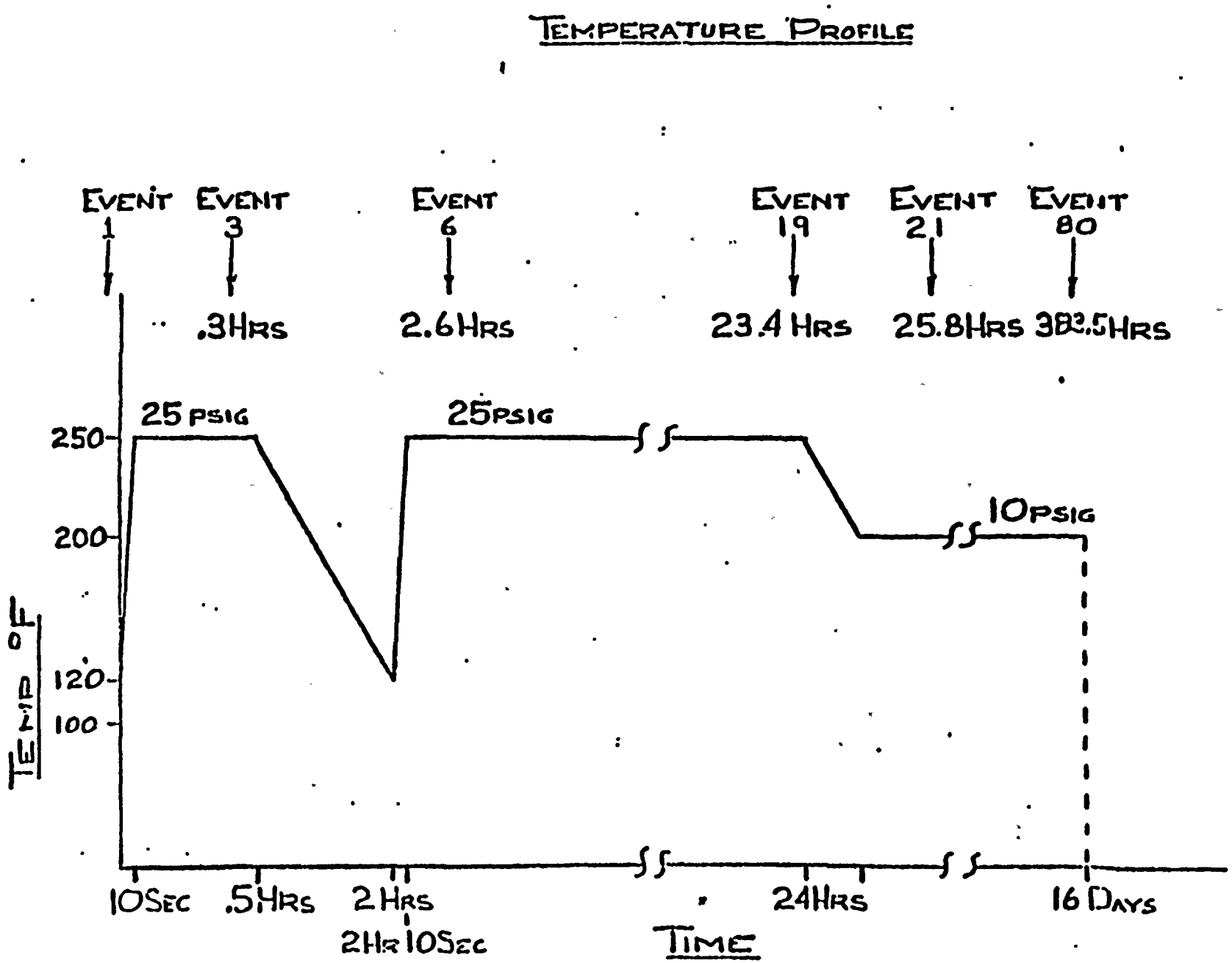
TEMPERATURE PROFILE
EVENT 1
EVENT 3
EVENT 6
EVENT 19
EVENT 21
EVENT 80
.3HRS
2.6HRS
23.4 HRS
25.8HRS
383.5HRS
25 PSIG
25PSIG
10PSIG
250
200
120
100
TEMP °F
10SEC
.5HRS
2 HRS
2HR 10SEC
24HRS
16 DAYS
TIME

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-69 MANUFACTURER Limitorque MODEL NUMBER SMB-000 COMPONENT Porter-peerless Motor Operator DC Motor/ Class RH FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 466 COLUMN H6/6.6	OPERATING TIME	4320 hours	Equivalent to > 6 months	1	4, 5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,6,7	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 6,7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4×10^6	2.04×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years+	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Moravec 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-491I 4. Limitorque Report 600376A, 5/13/76 5. QID 221001 6. Limitorque Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

WP-1081

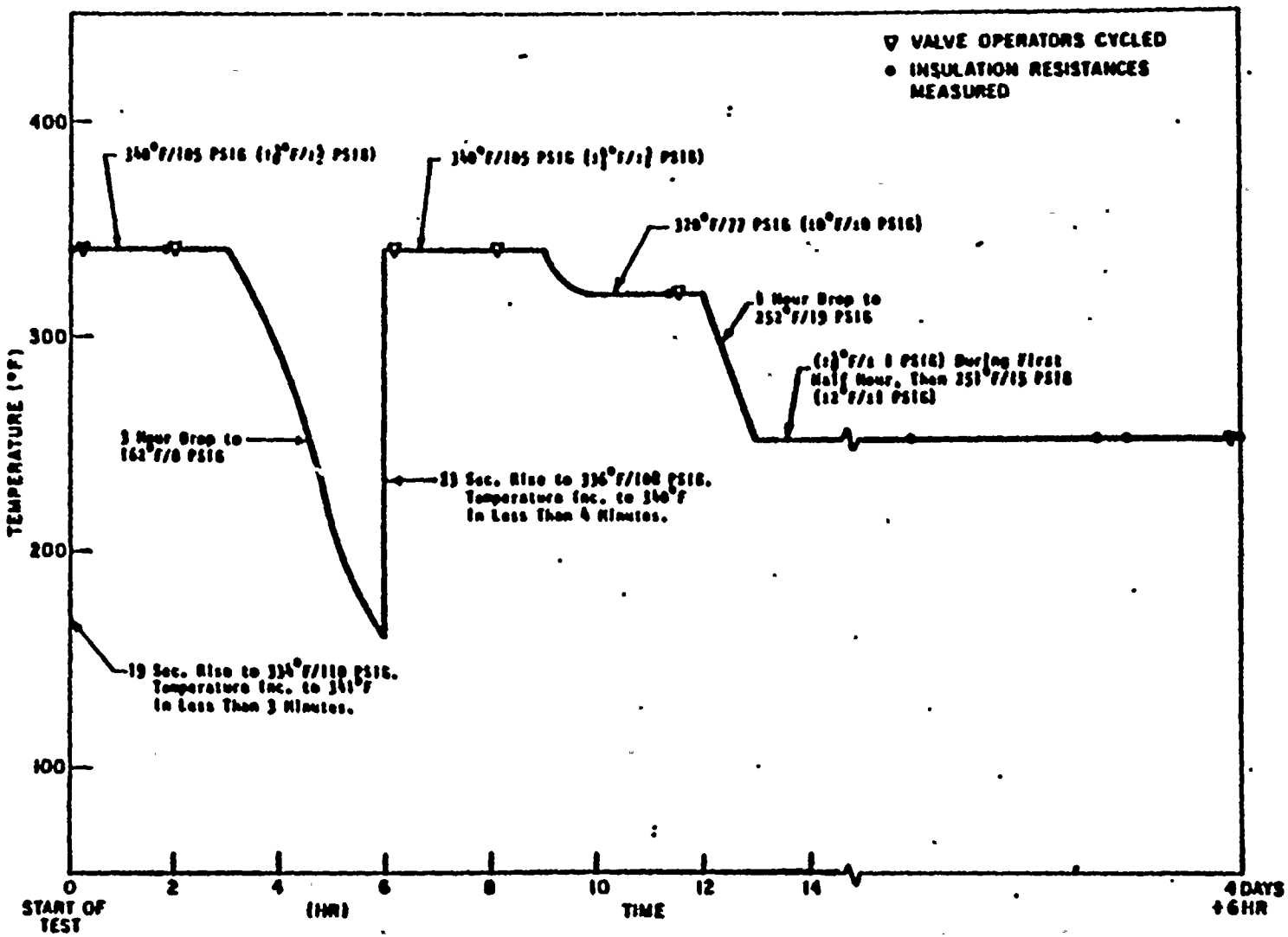

Figure 3. Actual Steam Exposure Profile

F-C3447

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO-76	OPERATING TIME	4320 hours	Equivalent to > 6 months	2	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	135 normal 150 abnormal accident--profile 1	See enclosed profile	1	4	Simultaneous Test	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7 normal 16.7 abnormal accident--profile 1	See enclosed profile	1	4	Simultaneous Test	None
MODEL NUMBER SMB-000	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100	1	4	Simultaneous Test	None
COMPONENT Reliance Motor Operator .33 HP MO for RCIC-V-76 AC Motor Class RH INS FUNCTION/SERVICE	CHEMICAL SPRAY	Demineralized water	Chemical Spray ph 10	1	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	4	Sequential Test	None
	AGING	40 years	40 years	1	4,5	Sequential Test and Engineering Analysis	None
LOCATION: BLDG C ELEVATION 556 COLUMN 125 AZ	ACCURACY	N/A	N/A		N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makiri 6/24/83 Reviewed by: James Meiers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI C1E list, REV 8, 6/1/83 3. Limitorque Report B0058 dated 1/11/80 4. Limitorque Report 600376A dated 5/13/76 5. QID# 221001 6. BRI Calculation #5.51.055	Qualified

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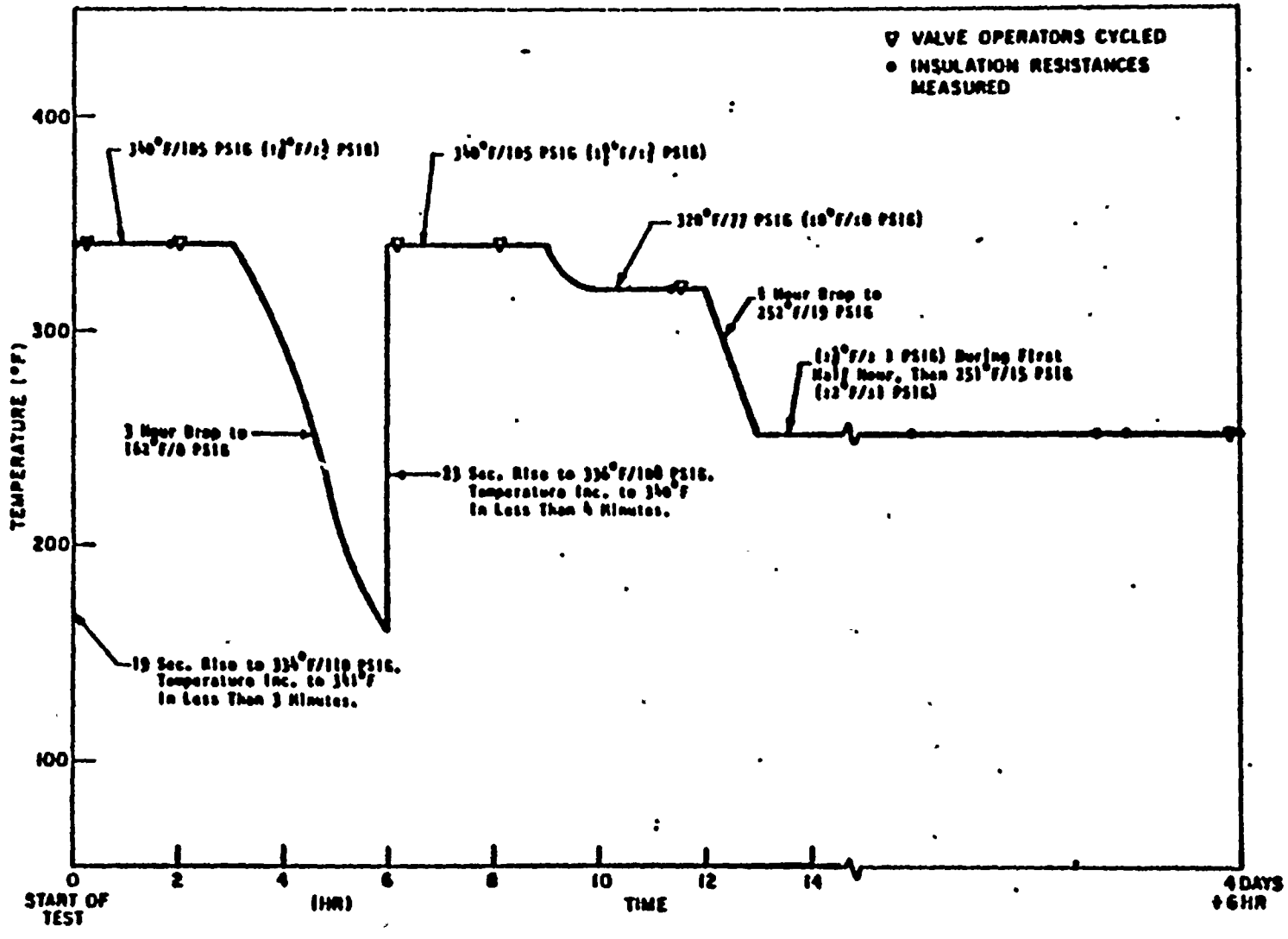


Figure 3. Actual Steam Exposure Profile

F-C3441

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

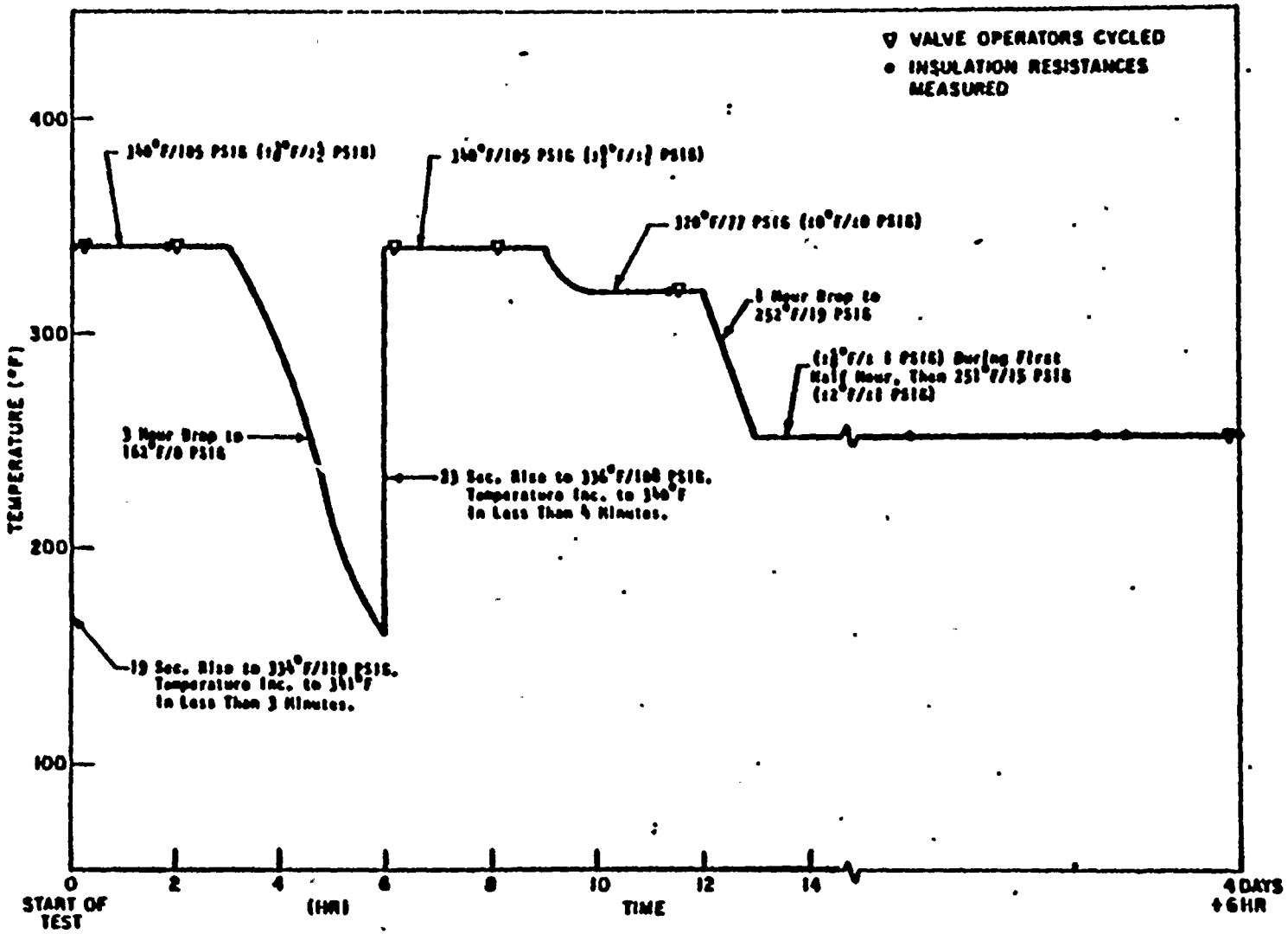
EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-MO- 80,86	OPERATING TIME	4320 Hours	Equivalent to >6 months	1	4, 5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4	See enclosed profile	2	4	Simultaneous Test	None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7	See enclosed profile	2	N/A	N/A	None
MODEL NUMBER SMB-000-5	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	4	Simultaneous Test	None
COMPONENT Reliance Motor Operator AC Motor Class RH Ins.	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Operators for Valves RCIC-V-110 and 113	RADIATION (RAD)	4.8×10^6	2.04×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years +	2	4,5	Sequential Test, Engineering Analysis	None
LOCATION: BLDG R ELEVATION 476 COLUMN J.4/7.5	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-471I 4. Limitorque Test Report 600376A dated 5/13/76 5. QID 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

WP-1081



F-C3441

Figure 3. Actual Steam Exposure Profile

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC- (See Note 2)	OPERATING TIME	4320		3			Note 1
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4		1			
MANUFACTURER Note 2	PRESSURE (PSIA)	14.7					
MODEL NUMBER Note 2 COMPONENT	RELATIVE HUMITY (%)	40 Normal 90 Max. Abnormal Accident Profile 4		1			
FUNCTION/SERVICE	CHEMICAL SPRAY	N/A		1			
-Valve Position, Switch -Aux. Cooling Supply -Suction Pressure -Lube Oil Pressure Switch -Pump Motor	RADIATION (RAD)	1.2×10^7		2			
	AGING	40 Years		1			
LOCATION: BLDG R ELEVATION Note 2 COLUMN Note 2	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO / (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Moore 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Paragraph 3.11 2. EDS Study 0740-004-471D 3. BRI CIE List, Rev. 8, 6/1/83 4. BRI Calculation # 5.51.055	1. This equipment is on Table B of the JIO so it does not require qualification prior to fuel load.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

DOCUMENTATION REFERENCES (Cont'd)

NOTES (Cont'd)

2.

Tag Number	Manufacturer	Model Number	Elevation	Location
RCIC-POS-V/1	NAMCO	D1200G	427	H.6/7.4
RCIC-PS-1	ASCO	SC11AR	424	H.6/7.3
RCIC-PS-34	ROBERT SHAW	613	437	H.7/7.3
RCIC-PS-7	SQUARE D	9012ACW	422	-
RCIC-PT-4,7	BAILEY	556	473	K.9/8.2
-5	BAILEY	556	473	L.1/8.2
-8	BAILEY	556	473	L.0/8.2
RCIC-RLY-CR1,2	STRUTHERS DUNN	219BBXP,DC	422	H.4/7.1
RCIC-M-P/3	WESTINGHOUSE	TBDP/256T	422	J.0/B.3

Prepared by:

Reviewed by: James Myers 6/24/83

WP-1083

QID#200006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO: 4
REVISION:
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-POS-(see Note 1)	OPERATING TIME	24 hours	24 hours	1	4	Simultaneous Test	None
	TEMPERATURE (F)	90 Max.Normal 104 Max.Abnormal Accident Profile 4,5	340	2	4	Simultaneous Test	None
MANUFACTURER NAMCO	PRESSURE (PSIA)	14.7 Accident Profile 5	84.7	2	4	Simultaneous Test	None
MODEL NUMBER EA-18031302	RELATIVE HUMITY (%)	40 Normal 90 Max.Abnormal 100 Accident	100	2	4	Simultaneous Test	None
COMPONENT Position Switch	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Valve position indication for RCIC-V-25,26,4,5,54	RADIATION (RAD)	1.2×10^7	2.04×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential test and Engineering Analysis	None
LOCATION: BLDG R ELEVATION 423 COLUMN (see Note 1)	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Behzad Makani 6-24-83

Reviewed by: James Minnes 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8 dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Calculation 0740-004-422L
4. "Qualification of NAMCO Controls Limit Switch Model EA-180 to IEEE Standards 344 ('75),323 ('74) and 382 ('72)" Rev.1 dated September 5, 1978.
5. QID#200006-E
6. BRI Calc.#5.51.055

NOTES

1. Qualified

Tag Number	Column
RCIC-POS-V/25	H.5/7.0
-V/26	H.5/7.0
-V/4	N.5/6.8
-V/5	H.3/6.8
-V/54	H.7/7.0

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WPPSS QID #256005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-PS-22A,B,C,D	OPERATING TIME	24 Hours	Equivalent to > 6 months	1	4,5	Simultaneous Test and Engineering Analysis.	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	212° F.	2	4	Simultaneous Test	None
MANUFACTURER Barksdale	PRESSURE (PSIA)	14.7 normal 90 max. abnormal Accident profile 4	N/A	2	N/A	N/A	None
MODEL NUMBER P1H-M85SS-V	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	100%	2	4	Simultaneous Test	None
COMPONENT Pressure Switch	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Steam line pressure penetration monitoring	RADIATION (RAD)	5.0×10^5	2.0×10^6	3	5	Engineering Analysis	None
	AGING	40 years	16 years	2	5	Engineering Analysis	None See Note 1
LOCATION: BLDG R ELEVATION 474 COLUMN L.0/8.0 L.0/4.0	ACCURACY	30.0%	5.3	7	5	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared By: Behzad Mahini 6/24/83 Reviewed By: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-471A,D 4. Barksdale Environmental Test Procedure No. 9993, 6/23/75. 5. QID File #256005 6. BRI Calc. #5.51.055 7. Supply System Calc. #In-02-83-01	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID#256016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-PS-6	OPERATING TIME	24 hours	> 6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,9	212°	2	4	Simultaneous Test	None
MANUFACTURER Static-O-Ring	PRESSURE (PSIA)	14.7 Normal Accident Profile 9	15.3	2	4	Simultaneous Test and Engineering Analysis	None
MODEL NUMBER 6N-AA21-X10-VSTT	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	4	Simultaneous Test	None
COMPONENT Pressure Switch FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
RCIC pump suction pressure	RADIATION (RAD)	7.1×10^4	1.5×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	Note 1 None
LOCATION: BLDG R ELEVATION 471 COLUMN L/8	ACCURACY		9.7 FSPE		5	Simultaneous Test	Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS Report 0740-004-4710 4. QID 256016 E 5. Viking Lab, Inc. Test Letter Report 30203-2 11/20/73 6. BRI Calc.#5.51.055	1. A preventative maintenance/surveillance program is being developed to extend the qualified life. 2. The required accuracy is being investigated. This equipment is on Table B of the JIO and qualification is not required prior to fuel load.

WP-1081

QID # 256005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor core isolation cooling TAG NUMBER RCIC-PS-9A,9B, 12A-D, 20,21 MANUFACTURER Barksdale MODEL NUMBER Note 3 COMPONENT Pressure Switch FUNCTION/SERVICE Pressure Switch for Turbine Discharge LOCATION: BLDG R ELEVATION COLUMN Note 3	OPERATING TIME	24 hours	Equivalent to > six months	1	3,4	Engineering Analysis and Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,9	212	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 9	14.95	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 Accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	2×10^6	6	3	Engineering Analysis	None
	AGING	40 years	16 years	2	3	Engineering Analysis	None Note 1
	ACCURACY		5.3% of full scale		3,4	Simultaneous Test and Engineering Analysis	Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR paragraph 3.11
3. QID 256002
4. Barksdale environmental test/delaval turbines inc. test report # 9993, dated 8/13/75
5. BRI Calc. 5.51.055
6. EDS Calculation 0740-004-471A

NOTES

1. A preventive maintenance/surveillance program is being developed to extend the qualified life
2. The required accuracy is being investigated. This equipment is on Table B of the JIO and qualification is not required prior to fuel load.

WP-1081

DOCUMENTATION REFERENCES (Cont'd)

Prepared by: _____

NOTES (Cont'd)

3.

Tag Number	Elevation	Column	Model No.
RCIC-PS-9A,B	427	H.4/8.5	P1H-M85SS-V
-12A	475	L.0/8.0	P1H-M85SS-V
-12B	475	L.0/4.0	P1H-M85SS-V
-12C	473	L.0/8.0	P1H-M85SS-V
-12D	473	L.0/4.0	P1H-M85SS-V
-20	474	L.0/8.0	P1H-M340SS-V
-21	473	L.1/8.2	P1H-M83SS-V

Reviewed by: James Meares 6/24/83

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling System TAG NUMBER RCIC-SPV-(see note 1) MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER NP831654E COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE (See Note 1) LOCATION: BLDG R ELEVATION COLUMN (See Note 1)	OPERATING TIME	6 months	Equivalent to >6 months	1	5,6	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	346	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	124.7	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Accident Profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.4×10^4	2×10^8	3	5	Sequential test	None
	AGING	40 years	40 years	2	5,6	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref.6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Meaux 6/24/83

DOCUMENTATION REFERENCES

1. 3RI CIE list, Rev.8, dated 6/1/83
2. FSAR Para3.11 & WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-004-501K,471J
4. Calculation QID315004
5. ASCO Test Report No.AQS 21678/TR, Rev.A, July, 1979.
6. 8RI Calculation #5.51.055

NOTES

Qualified

1.Tag Number	Function/Service	Elev.	Column
RCIC-SPV-25	Pilot Valve for RCIC-V-25	478	H.4/6.8
-26	Pilot Valve for RCIC-V-26	504	L.4/9.3
- 4	Pilot Valve for RCIC-V- 4	428	H.4/6.8
- 5	Pilot Valve for RCIC-V- 5	506	L.4/9.3
-54	Pilot Valve for RCIC-V-54	477	H.4/6.8

WP-1081

WPPSS QID 342009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-TIS-10A, B MANUFACTURER Ashcroft MODEL NUMBER 1165 COMPONENT Temperature switch FUNCTION/SERVICE Turbine governer and coupling temperature LOCATION: BLDG R. ELEVATION 422 COLUMN	OPERATING TIME	24 hours		3			Note 1
	TEMPERATURE (F)	40 max normal 90 max abnormal		1			
	PRESSURE (PSIA)	14.7					
	RELATIVE HUMITY (%)	40 normal 90 max abnormal		1			
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)			2			
	AGING	40 years		1			
	ACCURACY	N/A					

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Bchyd Mahine 6/24/83 Reviewed by: James Meeres 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-422L 3. BRI Class 1E Equipment List, Revision 8, 6/1/83 4. BRI Calculation #5.51.055	1. A documentation search is currently being performed. These components are on Table B of the JIO in Appendix D and do not require qualification prior to fuel load.

WP-1881

WPPSS QID #091001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-59
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Exhaust Air TAG NUMBER REA-DPT-(Note 2) MANUFACTURER Rosemont MODEL NUMBER 1151DP3022MBGE01 COMPONENT Differential pressure transmitter FUNCTION/SERVICE Secondary containment pressure control LOCATION: BLDG R ELEVATION 576 COLUMN Note 2	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5,7	Engineering Analysis, Separate effects	None
	TEMPERATURE (F)	90 normal 104 abnormal accident profile 4	212°F	2	5	Sequential Test	None
	PRESSURE (PSIA)	14.7	24.7 PSIA	2	6,7	Sequential Test	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal accident profile 4	100	2	7	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^6	2×10^6	3	5	Separate effects	None
	AGING	40 years	14 years	2	7	Engineering Analysis	None See Note 1
	ACCURACY	2%	1.88%	9	7	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 8)

Prepared By: Behzad Makizi 6/24/83

Reviewed By: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-572 C, F, I, L, N
4. Rosemont Report 97215A, 2/9/72
5. Rosemont Report 127227, 12/27/72
6. Rosemont Report 37327B dated 3/28/73
7. QID File #091001
8. BRI Calculation #5.51.055
9. Supply System Calculation IN-02-83-01

NOTES

Qualified

1. A Preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #091001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-59
MPL:
PPD:

PAGE NO:
REVISION: 4
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. EPN — Column
	REA-DPT-1A1 — H.3/8.2
	REA-DPT-1A2 — M.7/3.5
	REA-DPT-1A3 — N.8/3.9
	REA-DPT-1A4 — H.8/9.4
	REA-DPT-1B1 — H.3/5.2
	REA-DPT-1B2 — N.7/3.5
	REA-DPT-1B3 — H.8/7.6
	REA-DPT-1B4 — N.1/9.4
Prepared by:	Reviewed by: James Meares 6/24/83

WP-1083

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Exhaust Air TAG NUMBER REA-M-AD/8 -POS-AD/8 MANUFACTURER Barber Coleman/Namco MODEL NUMBER MA410/EA700 COMPONENT Motor Position Switch FUNCTION/SERVICE Motor and Position Indication for REA-AD/8 LOCATION: BLDG R ELEVATION 559 COLUMN L.0/8.1	OPERATING TIME	4320 hr		3			Note 1
	TEMPERATURE (F)	40 max normal 90 max abnormal Accident Profile 4		1			
	PRESSURE (PSIA)	14.7		1			
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	1.0×10^5		2			
	AGING	40 years		1			
	ACCURACY	N/A					

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meaurus 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-548K 3. BRI CIE List, Rev. 8, dated 6/1/83 4. BRI Calculation #5.51.055	1. A documentation search is currently being performed. These components are on Table B of the JIO in Appendix B so qualification is not required prior to fuel load.

WP-1681

WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

PAGE NO: 4
REVISION:
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Exhaust Air TAG NUMBER REA-POS-V/1,2	OPERATING TIME	6 months	Equivalent To or > 6 months	1	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	340	2	4	Simultaneous Test	None
MANUFACTURER Namco	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
MODEL NUMBER 74080100 COMPONENT Limit Switches	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
FUNCTION/SERVICE Limit Switch on REA-V-1 and REA-V-2	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
LOCATION: BLDG R ELEVATION 593 COLUMN H.5/6.2, H.4/6.4	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: [illegible] 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572N 4. Qualification of NAMCO Controls Limit Switch Model EA-740 to IEEE Stds. 344 (1975), 323 (1974) and 382 (1972), Rev. 1, dated 2/22/79; Rev. 0, dtd. 2/20/78 5. QID #200010 6. BRI Calc. #5.51.055	Qualified.

WP-1081

QID #277001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02D17

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Exhaust Air TAG NUMBER REA-RE-9A,B,C,D MANUFACTURER General Electric MODEL NUMBER 194 X 927G COMPONENT Radiation Monitor FUNCTION/SERVICE Rx Vent Radiation Exhaust Air Plenum Radiation LOCATION: BLDGR ELEVATION 591 COLUMN M.1/4.3 M.5/4.3	OPERATING TIME	4320 Hours	Equivalent to >4320 hours	3	5	Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	Profile 4	1	5	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	1	5	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Max Abnormal Accident Profile 4	90%	1	5	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.0×10^4	3.0×10^4	2	5	Engineering Analysis	None
	AGING	40 years		1			Note 1
	ACCURACY						Note 2

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES

1. FSAR paragraph 3.11
2. EDS Study 0740-004-572C
3. BRI CIE list Rev. 8, dated 6/1/83
4. BRI Calculation #5.51.055
5. QID #277001

NOTES

1. A qualified life is currently being calculated.
2. The required accuracy is currently being identified.

WP-1081

WPPSS QID # 283011E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Exhaust Air TAG NUMBER REA-RLY-CR1 CR2 MANUFACTURER ASEA MODEL NUMBER RXMK1 COMPONENT Relay FUNCTION/SERVICE Control relay for isolation valves LOCATION: BLDG R ELEVATION 527, 554' COLUMN J/0/6.9 H.7/8.2	OPERATING TIME	4320 hours	> 4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90° normal 104° abnormal Accident Profile 4	194	2	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A			N/A	None
	RADIATION (RAD)	8.5×10^4	10^6	3	4	Engineering Analysis	None
	AGING	40 years	> 40 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (ref 5)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Neans 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS report 0740-004-548P 4. QID 283045E	Qualified

WP-1081

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Exhaust Air TAG NUMBER REA-SPV-V/1,2	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4	Envelopes Profile 4 >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
MANUFACTURER Automatic Switch (ASCO)	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
MODEL NUMBER WJHT8316E35 WJHT3318E32 COMPONENT	RELATIVE HUMITY (%)	40 max. normal 90 max. normal Profile 4	(<90%)	2	6	Engineering Analysis	Note 1
Solenoid Pilot Valve FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
Reactor Building Normal Exhaust Isolation	RADIATION (RAD)	8.5×10^4	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
LOCATION: BLDG R ELEVATION 523 554 COLUMN J.0/6.9, H.7/8.2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared By Behzad Mahini 6/24/83 Reviewed By: James Meaves 6/24/83

DOCUMENTATION REFERENCES

1. BRI C1E list, REV 8, 6/1/83
2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-004-548P
4. Calculation QID 315004-1
5. Calculation QID 315004-2
6. Calculation QID 315004-3
7. BRI Calculation #5.51.055

NOTES

1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life.

Qualified

WP-1081

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Feedwater TAG NUMBER RFW-MO-65A RFW-MO-65B MANUFACTURER Limitorque MODEL NUMBER SMB-4-250/326UR4 COMPONENT Reliance Motor Operator RH Insulation AC Motor FUNCTION/SERVICE Motor Operator for RFW-V-65A RFW-V-65B LOCATION: BLDG R ELEVATION 504 COLUMN H5/6.3 H5/5.7	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Simultaneous Test	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 3, 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident profile 3	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	2.04×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Separate Effect, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Richard Mathine 6/24/83 Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-5010 4. Limitorque Reports, 60037(A dated 5/13/76 5. QID#221001 6. Limitorque Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

WP-1081

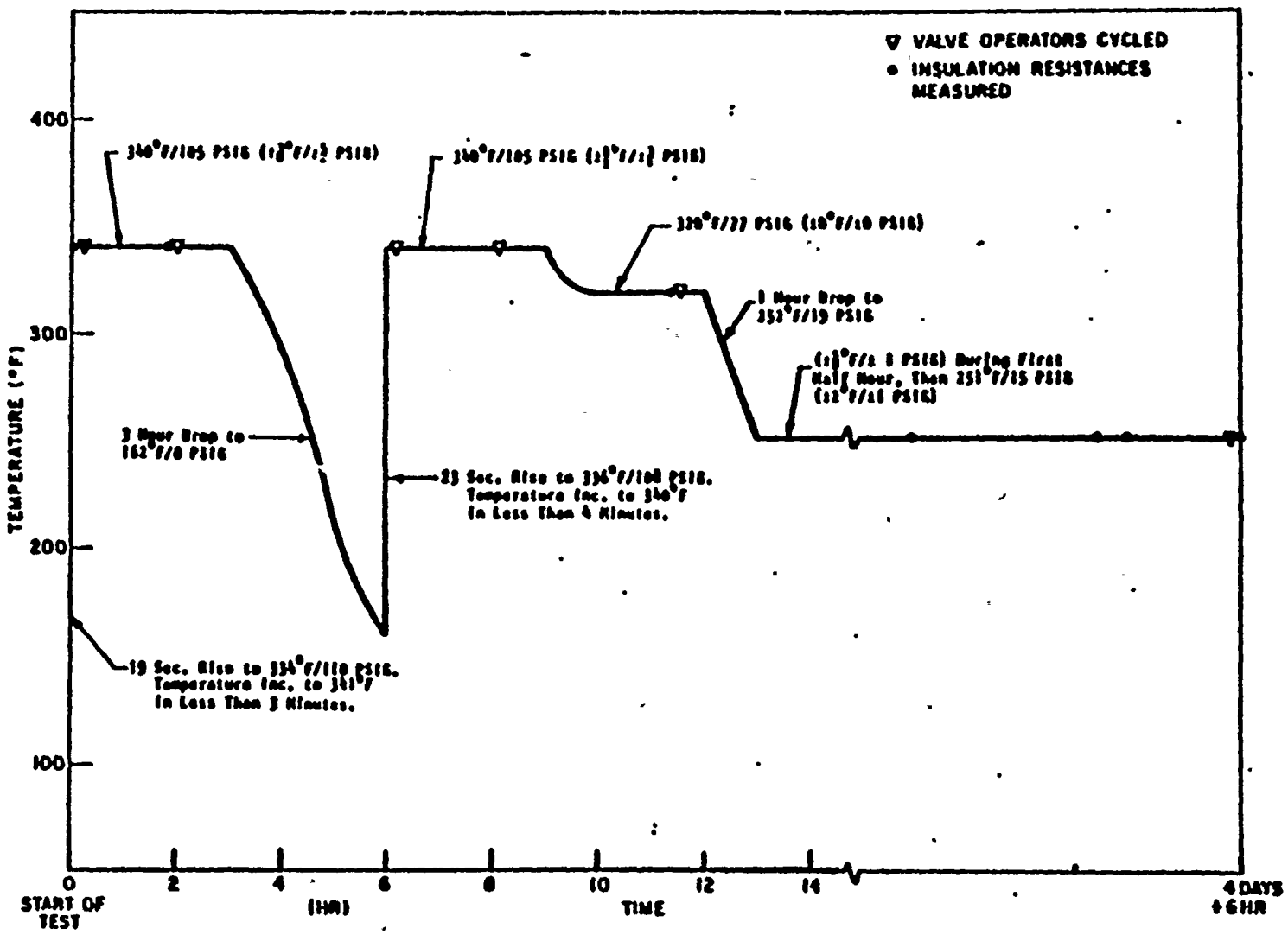

Figure 3. Actual Steam Exposure Profile

F-C3441

WPPSS QID. #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-58

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Feedwater TAG NUMBER RFW-SPV-32A1 -32A2 -32B1 -32B2 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJHT831654 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Solenoid Pilot for RFW-V-32A -32B LOCATION: BLDG R ELEVATION 505, 506 COLUMN N.0/4.9	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4	Envelopes Profile 4 with>8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Profile 4	(<90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.6×10^4	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Richard Makins 6/24/83 Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES

1. BRI C1E list, REV 8, 6/1/83
2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-094-501F (Pinpoint Study)
4. Calculation QID315004-1
5. Calculation QID315004-2
6. Calculation QID315004-3
7. BRI Calculation #5.51.055

NOTES

1 The Solenoid valves will be rebuilt on a schedule based on the 7-year qualified life.

Qualified.

WP-1981

WPPSS QID #086001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02 E12

MPL: E31-N012A,B,29A,B,9A,B,C
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-DPIS-12A RHR-DPIS-12B MANUFACTURER Barton MODEL NUMBER 288 A COMPONENT Differential Pressure Indicating Switch FUNCTION/SERVICE Measure Differential Pressure for Suction Flow LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (See Note 2)	OPERATING TIME	6 months	Equivalent to > 6 months	1	4,6	Engineering Analysis, Simultaneous Test	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,10,16	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 10,16	Accident Profile 10,16	2	4,6	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 80% accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.7×10^5	3.0×10^6	3	4, 5	Separate Effect, Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	2%	1.5 FSPE	8	6	Engineering Analysis and Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8 , 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-501B and 501K
4. QID File #086001
5. Qualification Test Report for Barton 289 switch, Report #R3-288A-1 (QSR-027-01)
6. Test Report for Barton Pressure Switch GE Report 05991, Rev. 1, 12/7/73.
7. BRI Calculation #5.51.055
8. SS Calculation IN-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

EPN	ELEV.	COLUMN
RHR-DPIS-12A	501	J.6/3.6
-12B	505	H.8/9.3

WP-1081

WPPSS QID #140001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E12

MPL: E12-N010A,B,C
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-FIS-10A, B, C MANUFACTURER ITT Barton MODEL NUMBER 289 A COMPONENT Flow Indicating Switch FUNCTION/SERVICE Shutdown Cooling Loop "A", "B" flow; Loop "C" flow to vessel LOCATION: BLDG R ELEVATION 505,503,505 COLUMN J.6/3.6 H.9/9.3 H.7/9.3	OPERATING TIME	6 months	Equivalent to > 6 months	1	4, 6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4, 10	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 10	Accident Profile 10	2	4,6	Simultaneous Test, Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal <80% max. accident	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.7×10^5	3×10^6	3	4, 5	Separate Effect, Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	7.5%	1.5% FSPE	8	5,6	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by Behzad Makini 6/24/83 Reviewed by: James Marrone 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Par. 3.11
3. EDS Study 0740-004-501B, K
4. QID File #140001
5. Qualification Test Report for Barton 289 Switch, Report #R3-288A-1
6. Test report of Barton pressure switch 289A GE Report 05991, Rev. 1, 12/7/73.
7. BRI Calculation #5.51.055
8. Supply System Calc. #In-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID #156005

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL: E12-N015A
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-FT-15A MANUFACTURER Rosemount MODEL NUMBER 1151DPSE22 COMPONENT Flow Transmitter FUNCTION/SERVICE Flow Transmitter to Cooling Loop A LOCATION: BLDG R ELEVATION 503 COLUMN J.6/3.6	OPERATING TIME	6 months	Equivalent to >6 months	1	4,5,7	Engineering Analysis, Separate Effects	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4, 10	212°F	2	6	Sequential Effect	None
	PRESSURE (PSIA)	Normal 14.7 Accident profile 10	24.7	2	6	Sequential Effect	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal <80% accident	100	2	6	Sequential Effect	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.7×10^5	2×10^6	3	5	Separate Effects	None
	AGING	40 years	14 years	2	7	Engineering Analysis	None Note 1
	ACCURACY	2.5%	1.88%	9	5,7	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 8)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Nieuwa 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. FDS Study 0740-004-501B 4. Rosemount Report 97215A dated 2/9/72 5. Rosemount Report 127227 dated 12/27/72 6. Rosemount Report 37327B dated 3/28/73 7. QID file 156005 8. BRI Calc. #5.51.055 9. Supply System Calculation IN-02-83-01	1. A preventive maintenance/surveillance program is being developed to extend the qualified life. Qualified

WP-1001

WPPSS QID #156003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL: E12-N015A
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-FT-15B,C MANUFACTURER Bailey MODEL NUMBER 555111 BMAA4HBM 555111 BMAA4HCF COMPONENT Flow Transmitter FUNCTION/SERVICE Flow Transmitter to Cooling Loop B,C LOCATION: BLDG R ELEVATION 503 COLUMN H8/9.3 H.9/9.3	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4,10		2			
	PRESSURE (PSIA)	Normal 14.7 Accident profile 10		2			
	RELATIVE HUMITY (%)	40 normal 90 abnormal $<$80% accident		2			
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4		3			
	AGING	40 years		2			
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Bekzad Mahini 6/24/83 Reviewed by: James Mirenna 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Par. 3.11
3. FDS Study 0740-004-501K
4. WPPSS Letter GE-02-JLS-81-022
5. BRI Calculation #5.51.055

NOTES

1. These components are being replaced by transmitters qualified to IEEE 323-74 and 344-75. (Ref.4) These components are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

QID #207011

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-LS-10A RHR-LS-11C RHR-LS-10B RHR-LS-11D RHR-LS-10C RHR-LS-10D RHR-LS-11A RHR-LS-11B MANUFACTURER Magnetrol MODEL NUMBER 751-SPX-M14 COMPONENT Level Switch FUNCTION/SERVICE RHR Drain Pot Loop B (LS-10A,B,C,D) Loop A (LS-11A,B,C,D) LOCATION: BLDG R ELEVATION 474 COLUMN 10A,C,D M.2/7.8 10B M.0/7.8 11A,B,C,D K.0/8.0	OPERATING TIME	4320 Hours	Equivalent to >4320 hours	1	5	Simultaneous Test	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	300	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.7	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	1.2×10^7	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	N/A	N/A	7	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8 , 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-471E and 471F
4. QID# 207011
5. BWR Equipment Qualification Summary Report QSR-030-H-1
6. BRI Calc. #5.51.055
7. SS Calculation File #IN-02-83-01

NOTES

qualified
1. A preventive maintenance surveillance program is recommended to extend the qualified life.

WP-1081

WPPSS

QID213032

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E 12

MPL: E12-C002
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-M-P/-2A -2B -2C MANUFACTURER General Electric MODEL NUMBER 5K6339XC122A COMPONENT Motor FUNCTION/SERVICE Drive Pumps LOCATION: BLDG R ELEVATION 429 COLUMN K2/8.5, L8/8.5, H7/4.6	OPERATING TIME	4320 hours	94,746 hours	5	3,4 7,8	Sequential Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	1,6	3,4 7,8	Simultaneous Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100% & Steam	1	3,4 7,8	Simultaneous Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	2.5×10^6	5.5×10^6	2	3, 7,8	Sequential Engineering Analysis	None
	AGING	40 years	40 years	1	3,4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 9)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Navarro 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-4221 (worst case) 3. GE #22A4722 (BWR 111-A-05) 4. GE #NEDM-10672, 8/72 (BWR 111-A-05) 5. BRI CIE list, REV 8, 6/1/83 6. B&R Calculation 9-46-02 7. GE #456HA898 8. Calculations 213032-1, -2, -3, -4 9. BRI Calc. #5.51.055	1. Qualified.

WP-1081

WPPSS QID #213016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-35A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-M-P/3 MANUFACTURER Westinghouse MODEL NUMBER 75D40786 COMPONENT Motor FUNCTION/SERVICE 15hp motor for RHR-P-3+ LOCATION: BLDG R ELEVATION 429 COLUMN H.4/4.8	OPERATING TIME	6 months	6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4,8	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 8	Accident Profile 8	2	4,	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.9×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 Years	2	4	Simultaneous Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Makani 6.24.83 Reviewed by: James Nieuns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report #0740-004-422M 4. QID# 213017 5. BRI Calc. #5.51.055	Qualified

WP-1061

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-11A -MO-11B MANUFACTURER Limitorque MODEL NUMBER SMB-000-5/K48 COMPONENT - Motor Operator Motor: Reliance, B insulation, AC Motor FUNCTION/SERVICE Operate HX to suppression pool valve 11A, 11B LOCATION: BLDG R ELEVATION 476 COLUMN K.2/8.2 L.8/8.0	OPERATING TIME	24 hours	Equivalent to >6 months	1	4	Engineering Analysis Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8 dated 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-471F, E 4. Limitorque Test Report B0003, with Addendum A dated 5/8/76 5. QID #221001 6. Limitorque Test report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

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TEMPERATURE PROFILE

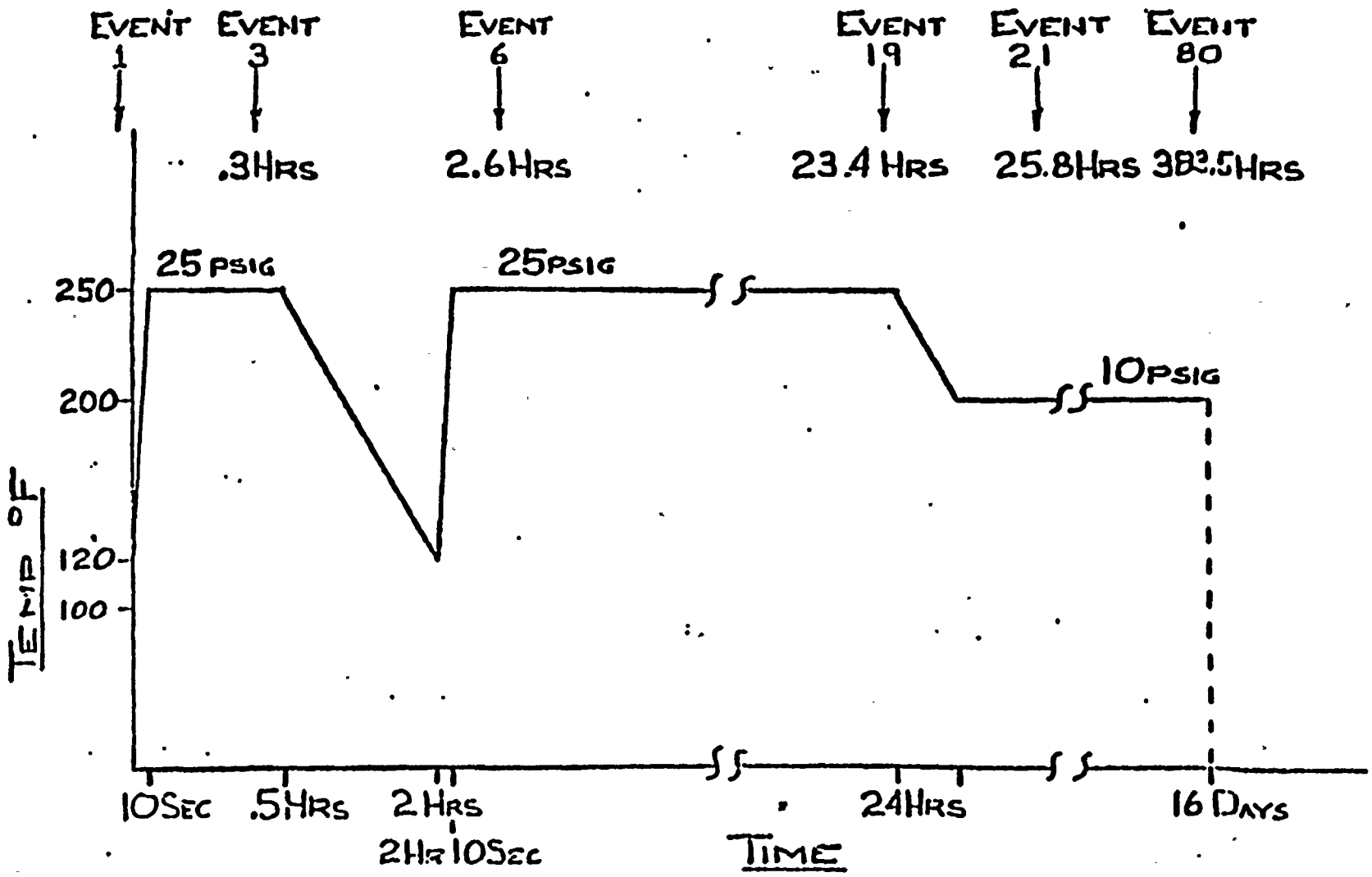

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-124A -124B -125A -125B MANUFACTURER Limitorque MODEL NUMBER SMC-04-5/42 COMPONENT Reliance Motor Operator AC Motor/Class B Ins. FUNCTION/SERVICE Operate RHR Valves -124A -124B -125A -125B LOCATION: BLDG R ELEVATION 473 COLUMN K3/8.1, K9/8.1 L5/8, L4/8	OPERATING TIME	24 Hours	Equivalent to > 6 months	3	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	Steam for 24 hours 100% for 15 days	1	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	2×10^7	2	4,5	Sequential Test	None
	AGING	40 years	40 years	1	4,5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-471F (worst case) 3. BRI CIE list, REV 8, 6/1/83 4. Limitorque Reports B0003, 5/76; B0058, 1/11/80 5. QID #221001 6. BRI Calculation #5.51.055	Qualified.

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TEMPERATURE PROFILE

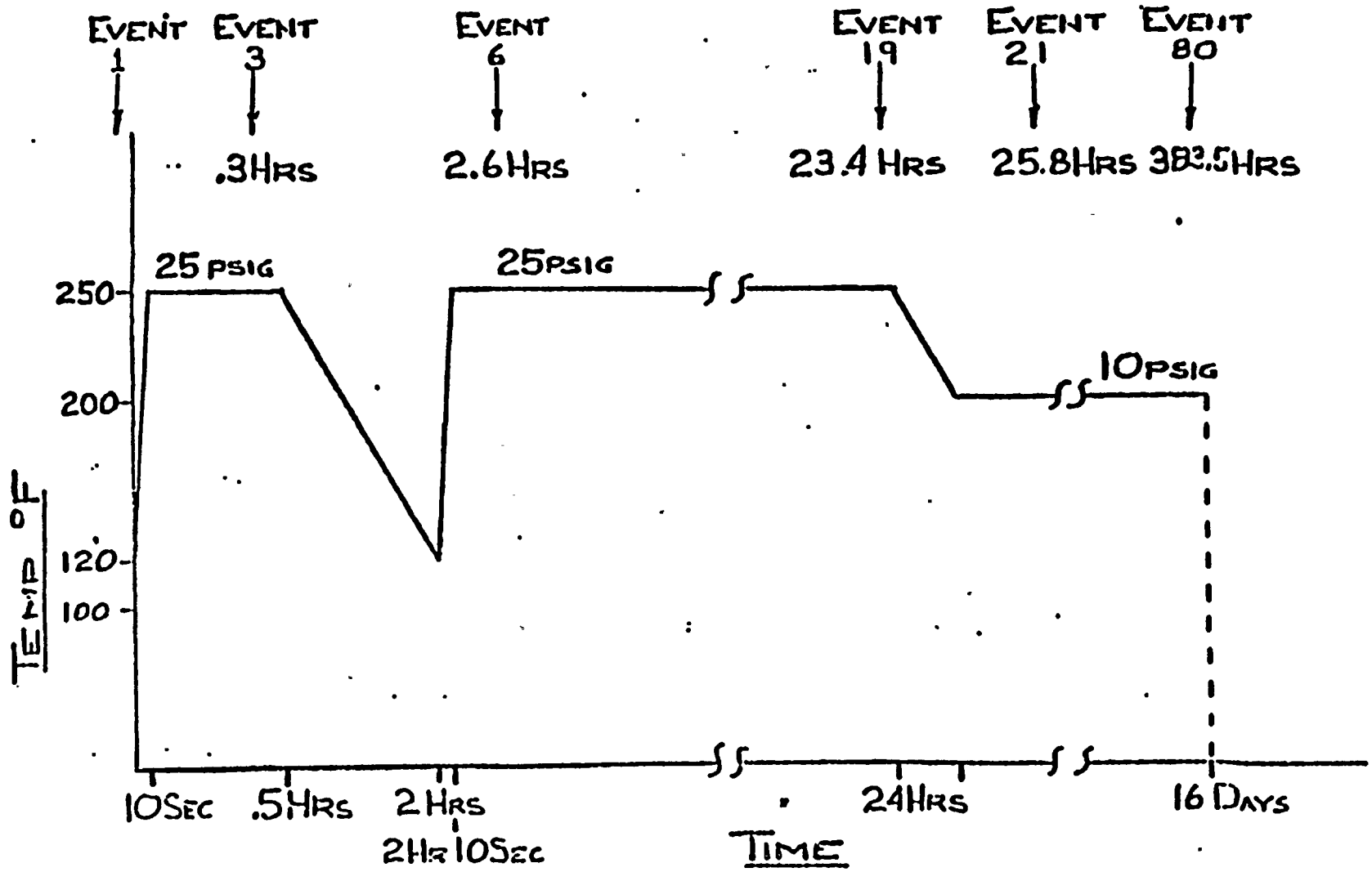

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-134A, 134B MANUFACTURER Limitorque MODEL NUMBER SMC-04-5 COMPONENT Motor Operator Motor: Reliance, B insulation/AC motor FUNCTION/SERVICE RHR-V-139A, 139B LOCATION: BLDG R ELEVATION 548, 551 COLUMN K.1/9.0 L.5/9.2	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^5	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years +	2	4, 5	Simultaneous Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nadir 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-548L, M 4. Limitorque Test Report B0003 5. QID 221001 6. BRI Calculation #5.51.055	Qualified.

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TEMPERATURE PROFILE

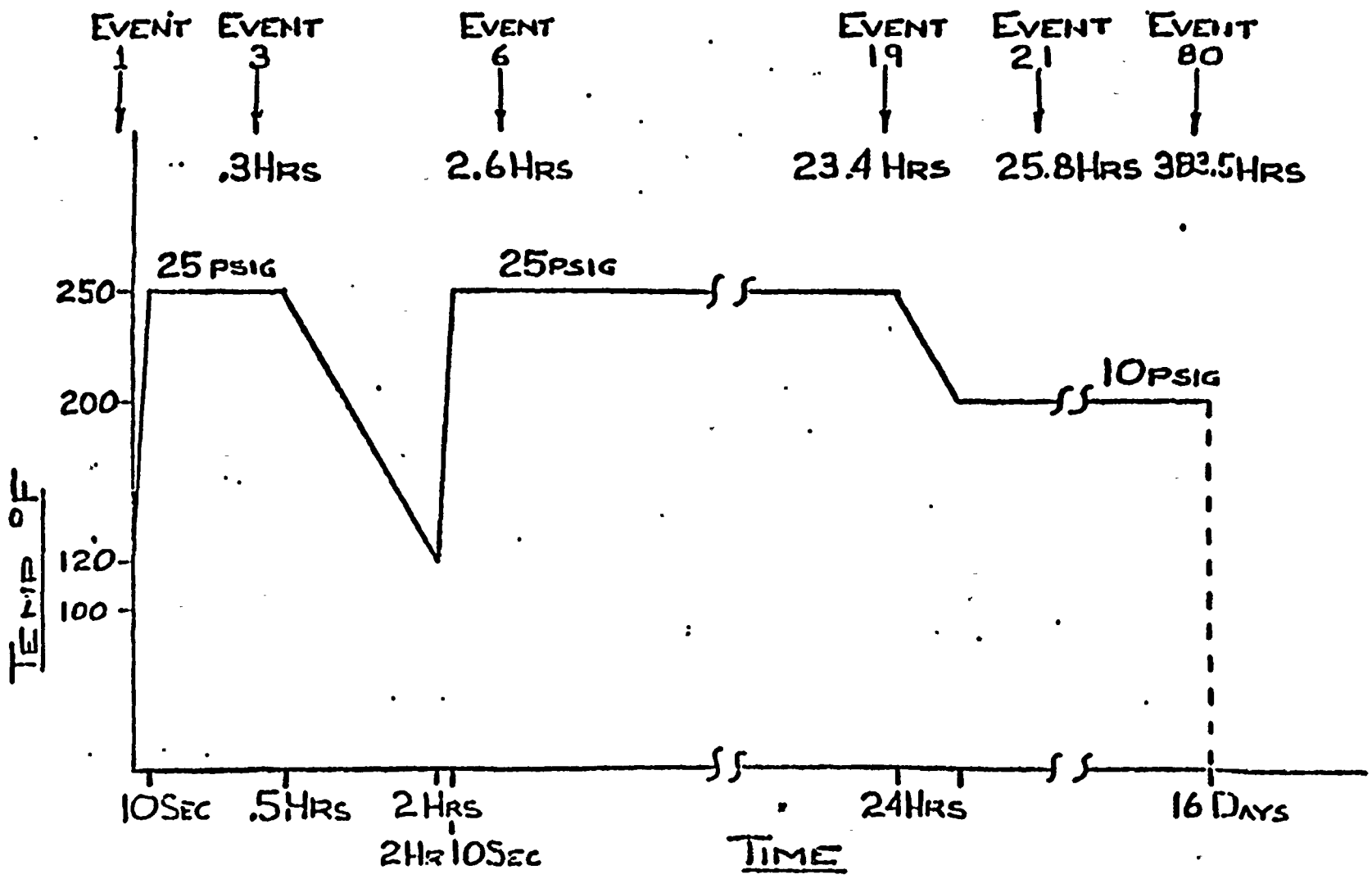

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-16A,B -17A,B	OPERATING TIME	24 hours	Equivalent to >6 months	5	3	Simultaneous Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous	None None
MANUFACTURER Limitorque	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
MODEL NUMBER SMB-2-80/C215Y	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100	1	3	Simultaneous Test	None
COMPONENT Electric Apparatus Valve Motor Operator AC Motor/Class B Ins.	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
FUNCTION/SERVICE Operate RHR Valve	RADIATION (RAD)	3.4×10^6	2×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years +	1	3,4,6	Sequential Test Engineering Analysis	None
LOCATION: BLDG R ELEVATION 556,516 COLUMN L/4.4, J.7/8.1 L/4.4, J.5/8.0	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: Thomas Devers 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-548B 3. Limitorque Report B0003 with Addendum A (BWR-054-C-04) 4. QID #221001 5. BRI CIE list, REV 8, 6/1/83 6. Limitorque Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

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TEMPERATURE PROFILE

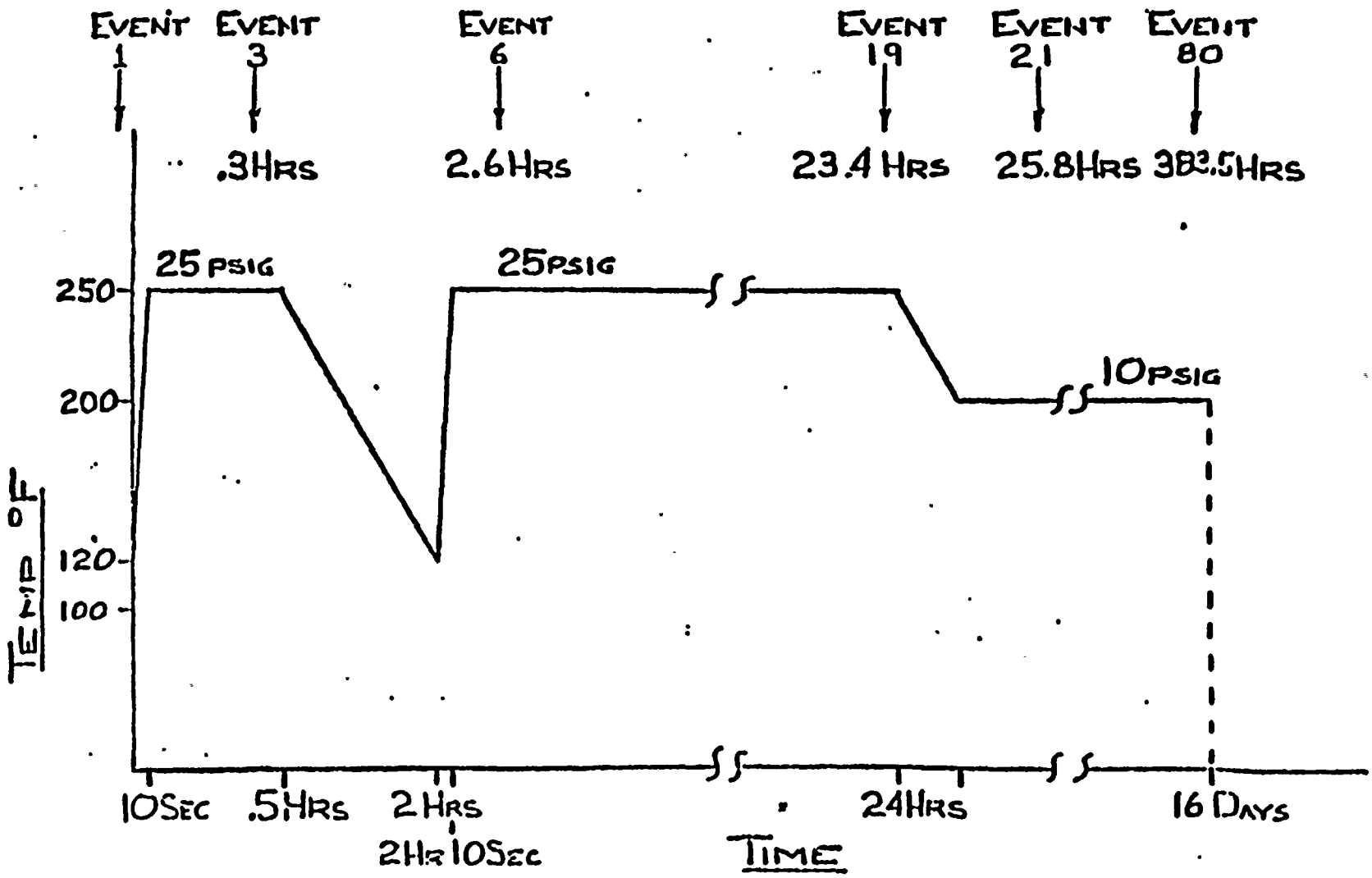

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-21 MANUFACTURER Limitorque MODEL NUMBER SMB-3-80/213R3 COMPONENT Motor Operator Motor: Reliance B Insulation/AC Motor FUNCTION/SERVICE Operates Loop Test Return Valve 21 LOCATION: BLDG R ELEVATION 450 COLUMN H.4/5.7	OPERATING TIME	24 Hours	Equivalent to>6 months	1	4,5	Engineering Analysis, Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,8	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 8	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Bekzad Mahini 6-24-83 Reviewed by: James Meares 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-441J 4. Limitorque Test Report B0003 with Addendum A dated 5/76 5. QID 221001 6. Limitorque test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

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TEMPERATURE PROFILE

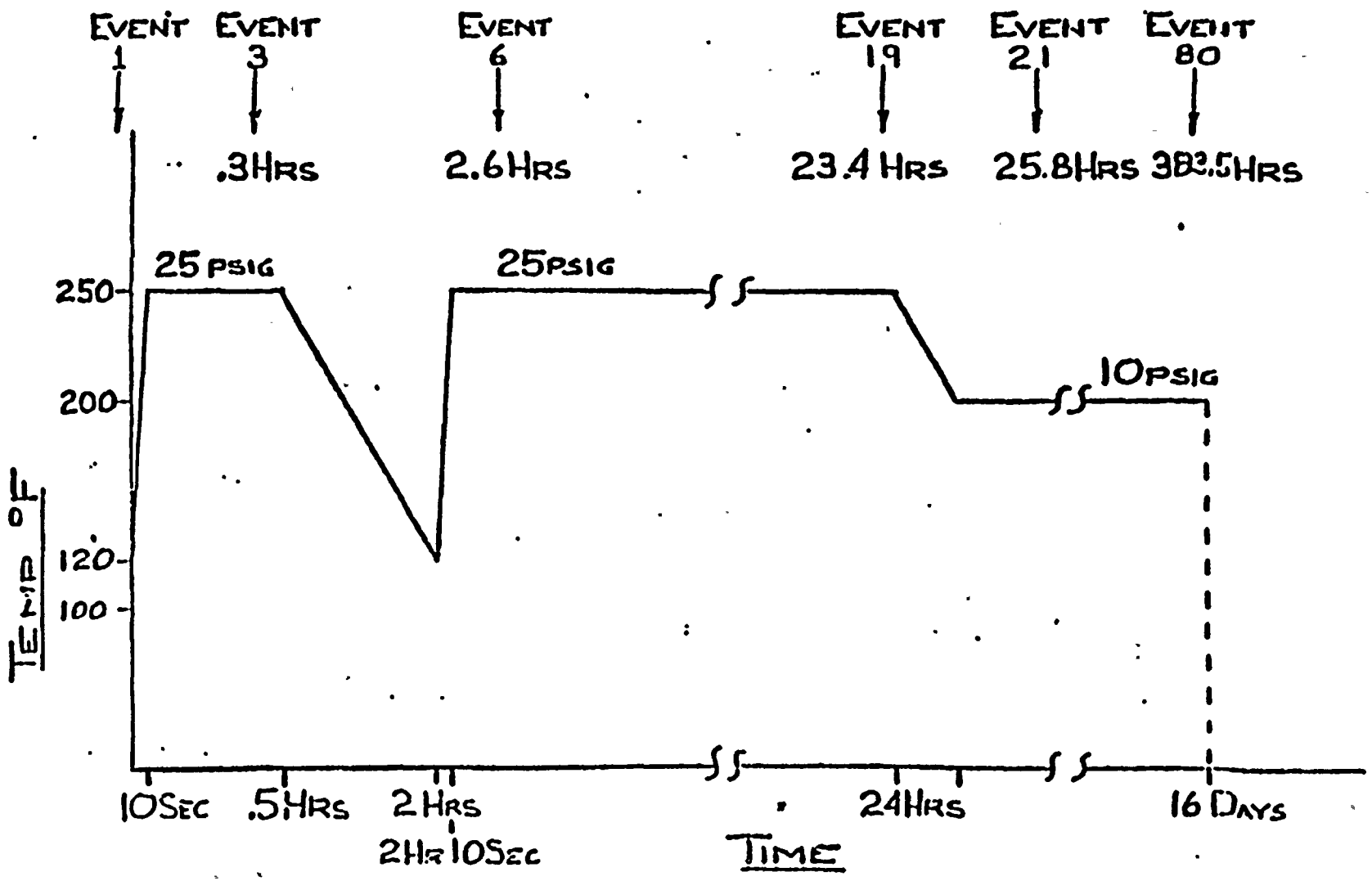

FIGURE 1

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-23 MANUFACTURER Limitorque MODEL NUMBER SMB-0-15/D56F COMPONENT Porter Peerless Valve Motor Operator DC Motor/Class H Ins. FUNCTION/SERVICE Operate RHR Valve LOCATION: BLDG R ELEVATION 553, COLUMN M.4/5.4	OPERATING TIME	24 Hours	Equivalent to > 6 months	5	3,4	Simultaneous Testing, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Testing	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Testing	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	100%	1	3	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.6×10^6	1×10^7	2	3	Sequential Testing	None
	AGING	40 years	40 years+	1	3,4	Sequential Testing, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-548.H 3. Limitorque Report B0009, 4/30/76 4. QID #221001 5. BRI CIE list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	Qualified.

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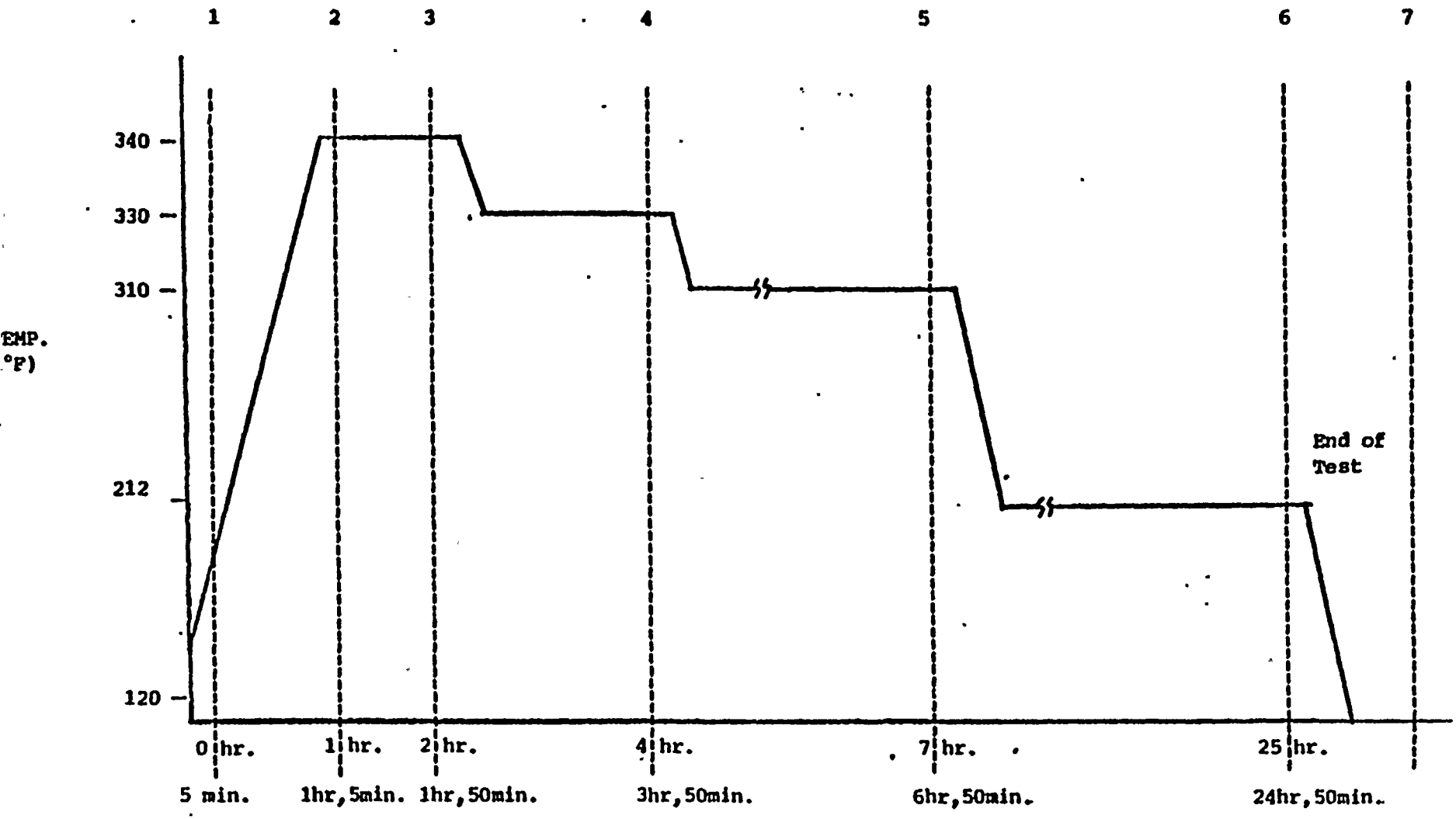
1
2
3
4
5
6
7
340
330
310
212
120
EMP.
°F)
End of
Test
0 hr.
1 hr.
2 hr.
4 hr.
7 hr.
25 hr.
5 min.
1hr,5min.
1hr,50min.
3hr,50min.
6hr,50min.
24hr,50min.

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-24A -MO-24B MANUFACTURER Limitorque MODEL NUMBER SMB-3-80/213R3 COMPONENT Motor Operator Motor: Reliance, B insulation AC Motor FUNCTION/SERVICE Operates Loop Test Return Valve LOCATION: BLDG R ELEVATION 479 COLUMN K.1/8.2 L.8/8.2	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Engineering Analysis, Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-471F, E 4. Limitorque Test Report B0003 with Addendum A dated 5/76 5. QID 221001 6. Limitorque test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

WP-1081

TEMPERATURE PROFILE

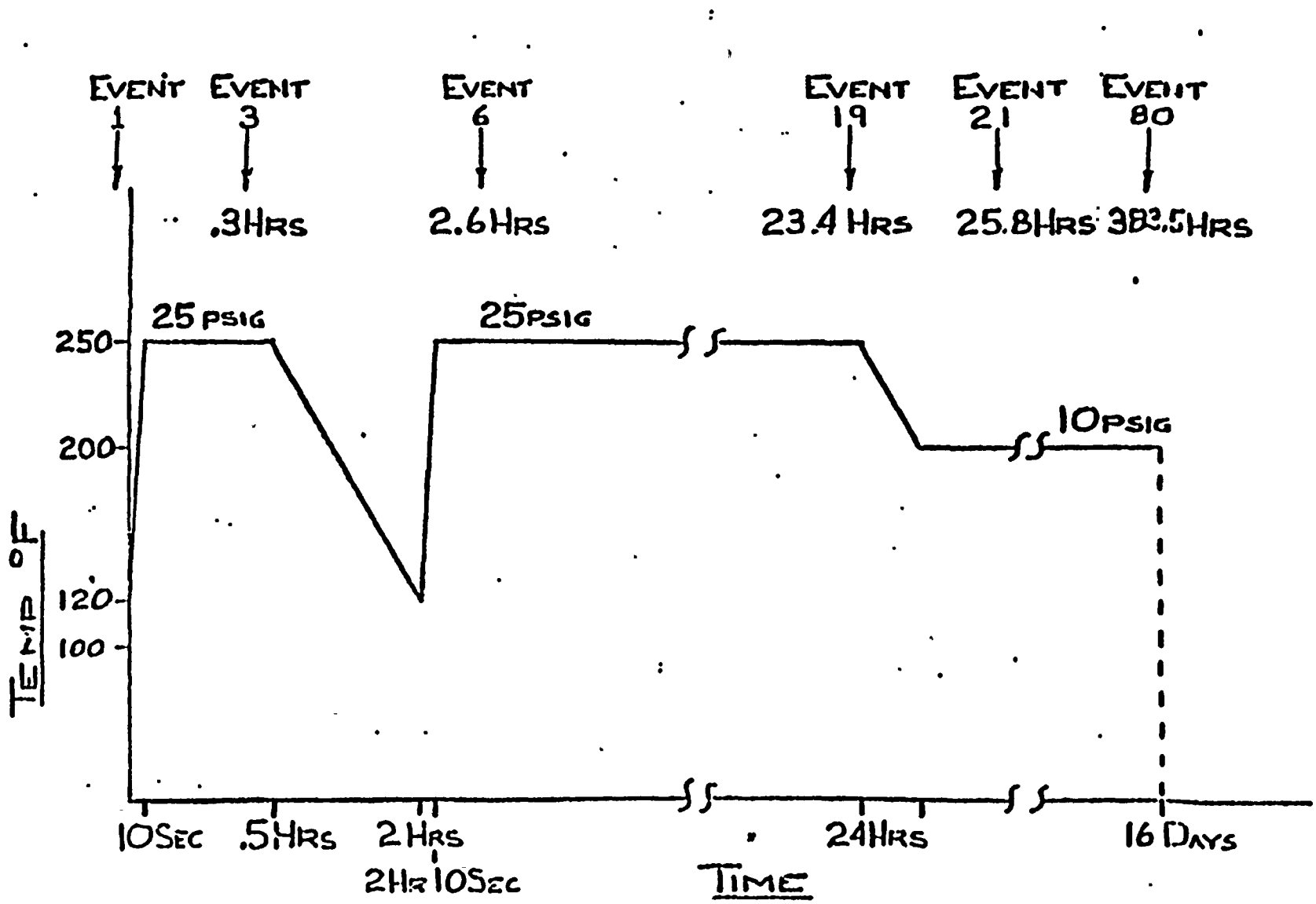

FIGURE 1

QID #221001 E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-26A -26B MANUFACTURER Limitorque MODEL NUMBER SMN-000-5/K48 COMPONENT 3 Phase Reliance AC Motor W/B Insulation FUNCTION/SERVICE Motor Operator for RHR-V-26A -26B LOCATION: BLDG R ELEVATION 476,476 COLUMN K.5/8.2 L.2/8.1	OPERATING TIME	6 months	6 months	4	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See Enclosed Profile	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See Enclosed Profile	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	2×10^7	2	5	Sequential Test	None
	AGING	40 years	40 years	2	4	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Bekzad Makizi 6/24/83 Reviewed by: James Means 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS Report 0740-004-471F 4. QID 221001E 5. Limitorque Report B0003 with Add A dated 5/8/76 6. BRI Calc. #5.51.055	Qualified

WP-1081

TEMPERATURE PROFILE

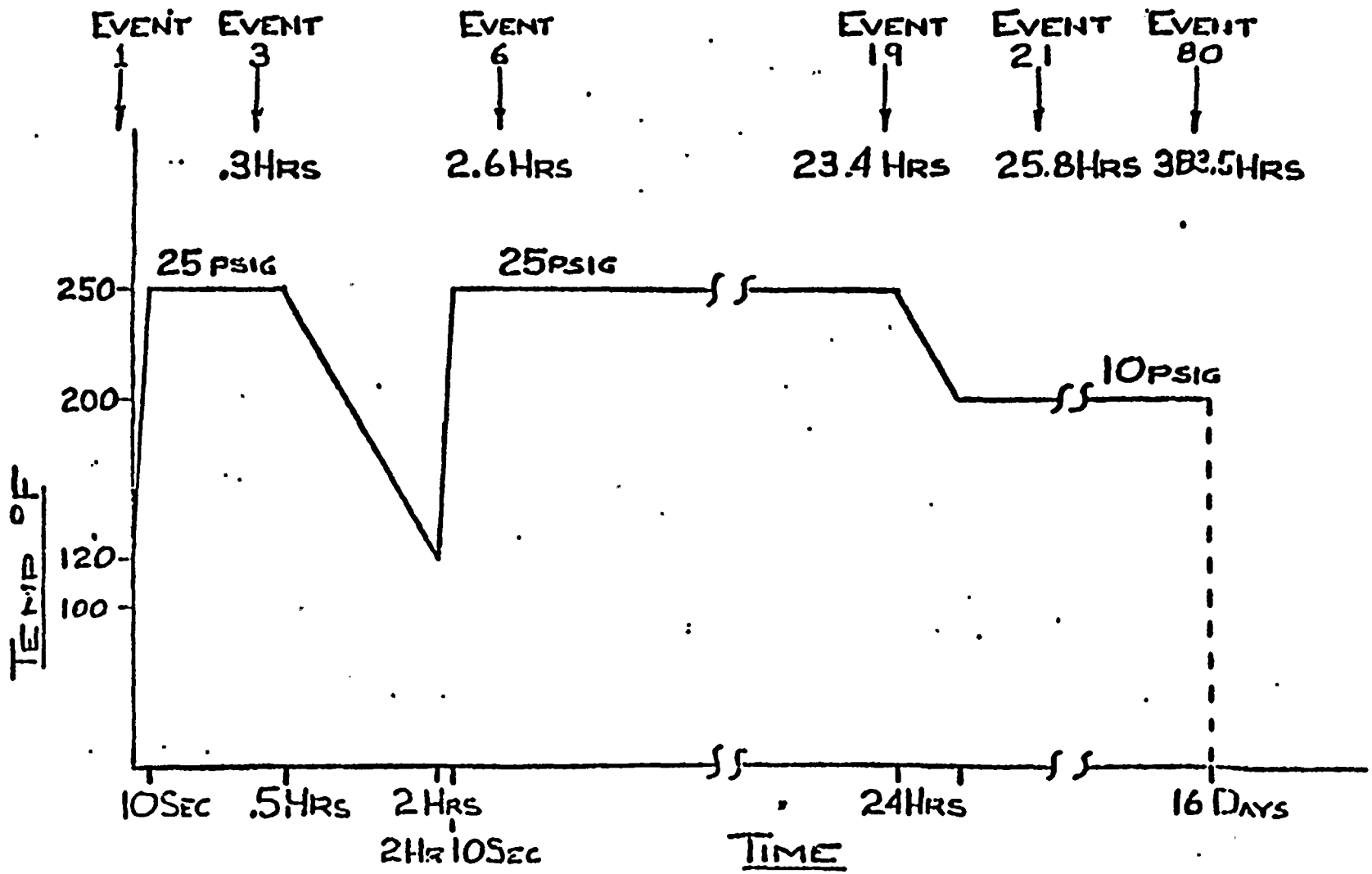

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-27A -MO-27B MANUFACTURER Limitorque MODEL NUMBER SMB-00-7.5/L56 COMPONENT - Motor Operator Motor: Reliance, B insulation/AC Motor FUNCTION/SERVICE Operates wetwell spray valve LOCATION: BLDG R ELEVATION 493 COLUMN K.2/4.1 M2/7.9	OPERATING TIME	24 hours	Equivalent to>6 months	1	4	Engineering Analysis, Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,9	see enclosed profile	2	4,5	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 9	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6.24.83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-471A, E 4. Limitorque Test Report B0003 with Addendum A dated 5/76 5. QID 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

WP-1081

TEMPERATURE PROFILE

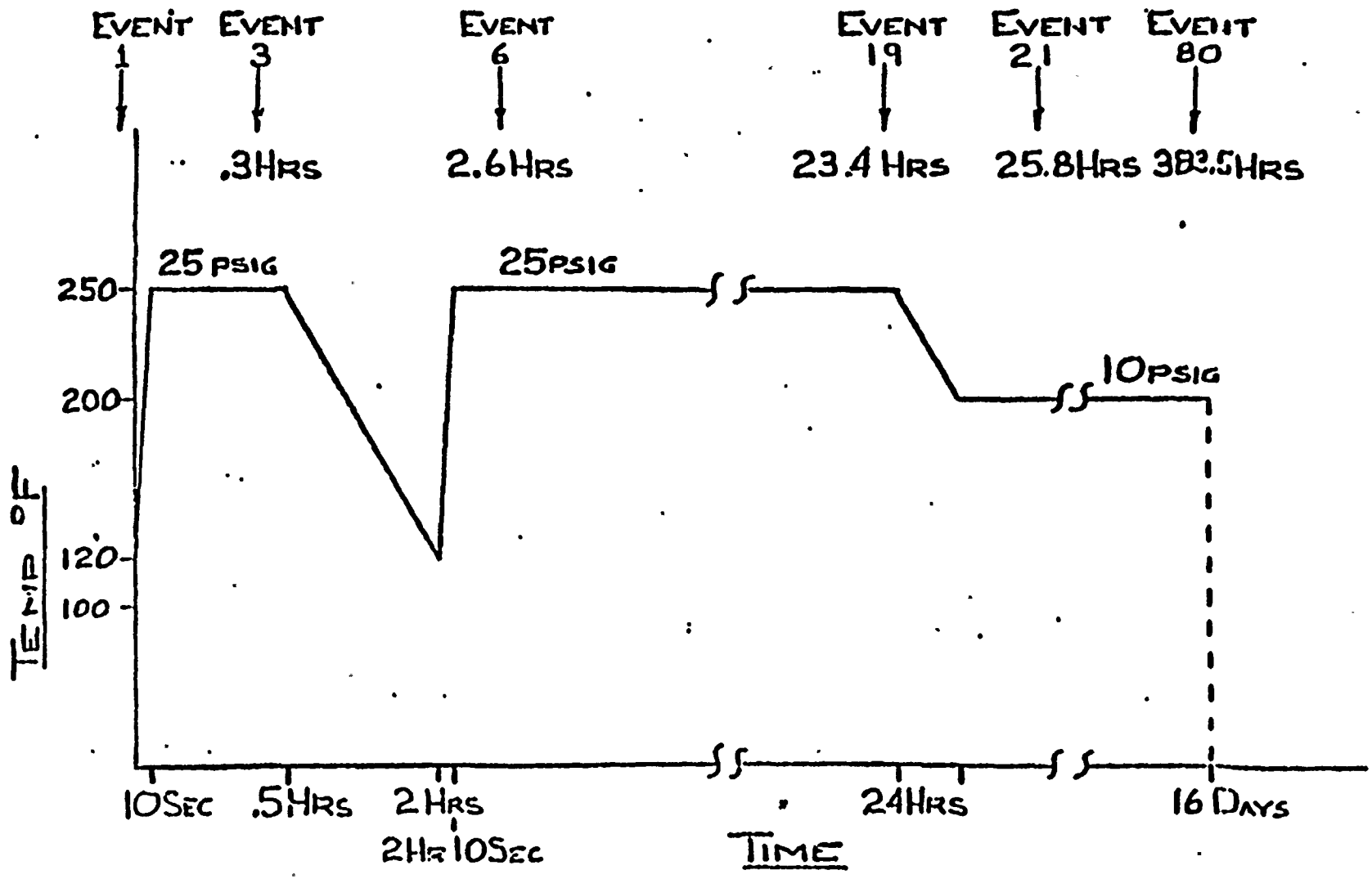

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual heat removal TAG NUMBER RHR-MO-(See Note 1) MANUFACTURER Limitorque MODEL NUMBER SMB-1-40/T56 SMB-3-150/256VR3 SMB-0-40/T56 COMPONENT Motor Operator - Reliance, RH insulation AC Motor FUNCTION/SERVICE Operates LPCI injection valve LOCATION: BLDG R ELEVATION See Note 1 COLUMN See Note 1	OPERATING TIME	6 months	Equivalent to>6 months	4	3,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,16,18,21	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 16,18,21	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal 100 accident	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2.04×10^8	5	3	Sequential Test	None
	AGING	40 years	40 years	1	2, 3 6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Meeuns 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. Limitorque Report B0058 dated 1/11/80
3. Limitorque Report B600376A dated 5/13/76
4. BRI C1E list, REV 8, 6/1/83
5. EDS Study 0740-004-548 J,N
6. QID #221001
7. BRI Calculation #5.51.055

NOTES

Qualified

1.

Tag #	Elevation	Column
RHR-MO-3A	558	J7/8.6
-3B	558	M2/8.6
-42A	522	H8/5.7
-42B	522	N.0/5.8
-42C	529	H8/6.1
-4C	454	J/4.1
-47A	582	J6/8.6
-47B	582	H3/8.6

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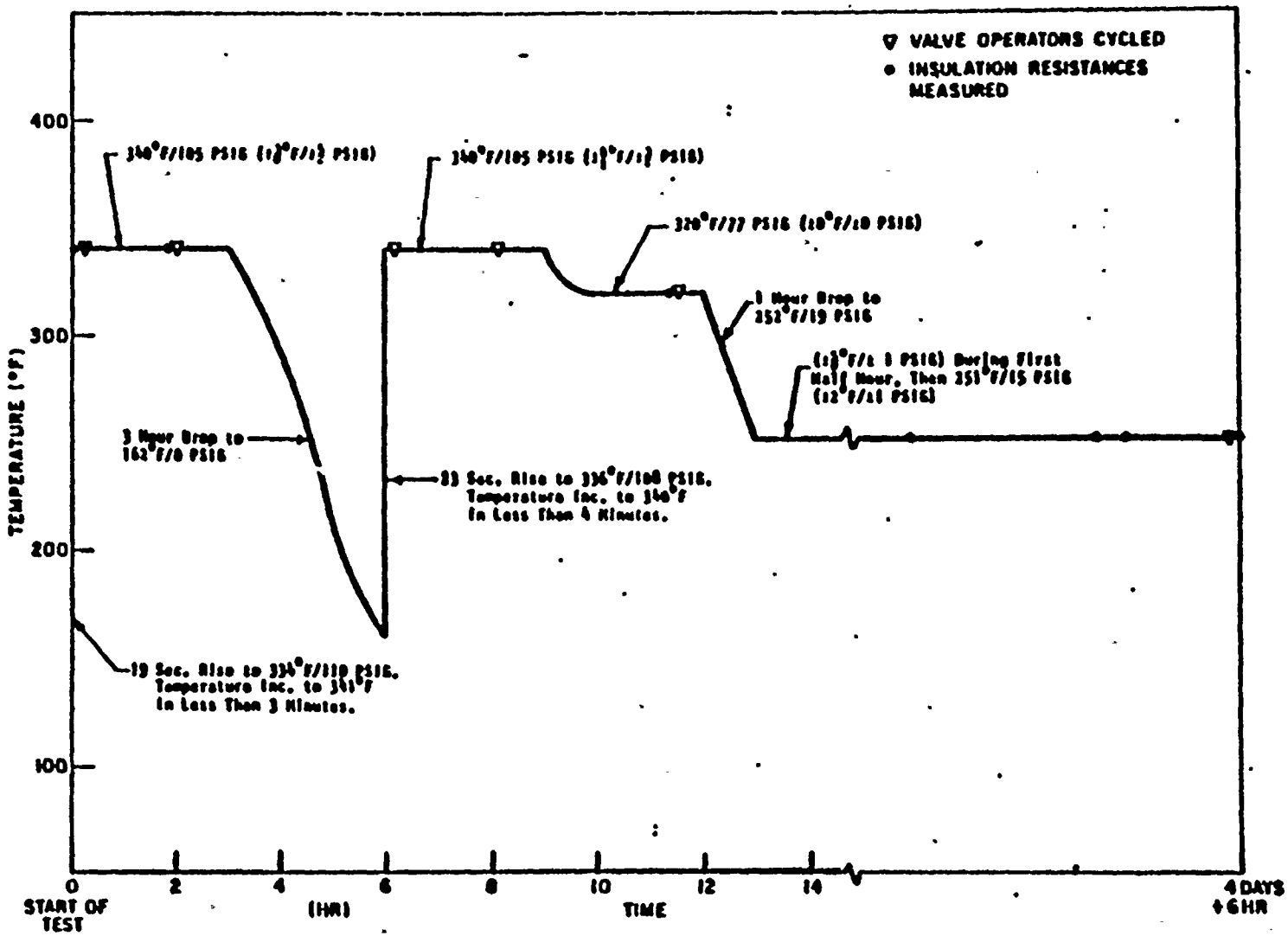


F-C3447

Figure 3. Actual Steam Exposure Profile

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-40 MANUFACTURER Limitorque MODEL NUMBER SMB-000-2/D56AA COMPONENT Porter Peerless Valve Motor Operator DC Motor/Class B FUNCTION/SERVICE Operate RHR Valve 40 LOCATION: BLDG R ELEVATION 553 COLUMN M.3/85	OPERATING TIME	6 months	Equivalent to > 6 months	1	3,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed profile	2	3	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7	See enclosed profile	2	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	1×10^7	6	3	Engineering Analysis	None
	AGING	40 years	40 years	2	3,4,5	Separate Effect and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. Limitorque Report B0003 with Addendum A dated 5/8/76 4. Limitorque Report B0058 dated 1/11/80 5. QID #221001 6. EDS Study 0740-004-548J 7. BRI Calculation #5.51.055	Qualified.

WP-1001

TEMPERATURE PROFILE

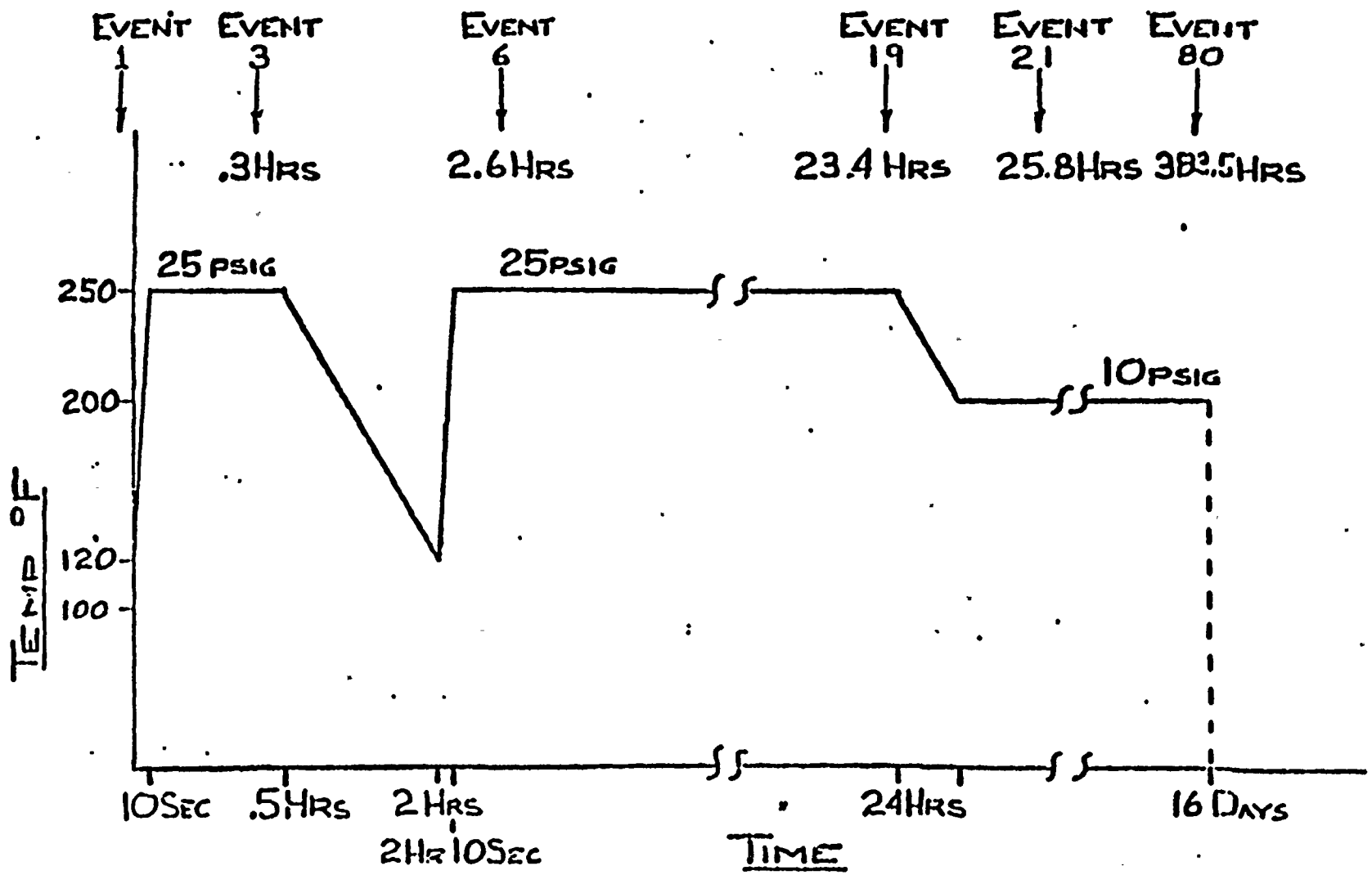


FIGURE 1

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-49 MANUFACTURER Limitorque MODEL NUMBER SMB-000-5/K48 COMPONENT - Motor Operator Motor: Reliance, B insulation/AC Motor FUNCTION/SERVICE Operates RHR discharge to Radwaste LOCATION: BLDG R ELEVATION - 553 COLUMN M5/8.5	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	see enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	see enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mcarna 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS study 0740-004-548J 4. Limitorque Test Report B0003 with Addendum A dated 5/76 5. QID 221001 6. Limitorque test report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

WP-1081

TEMPERATURE PROFILE

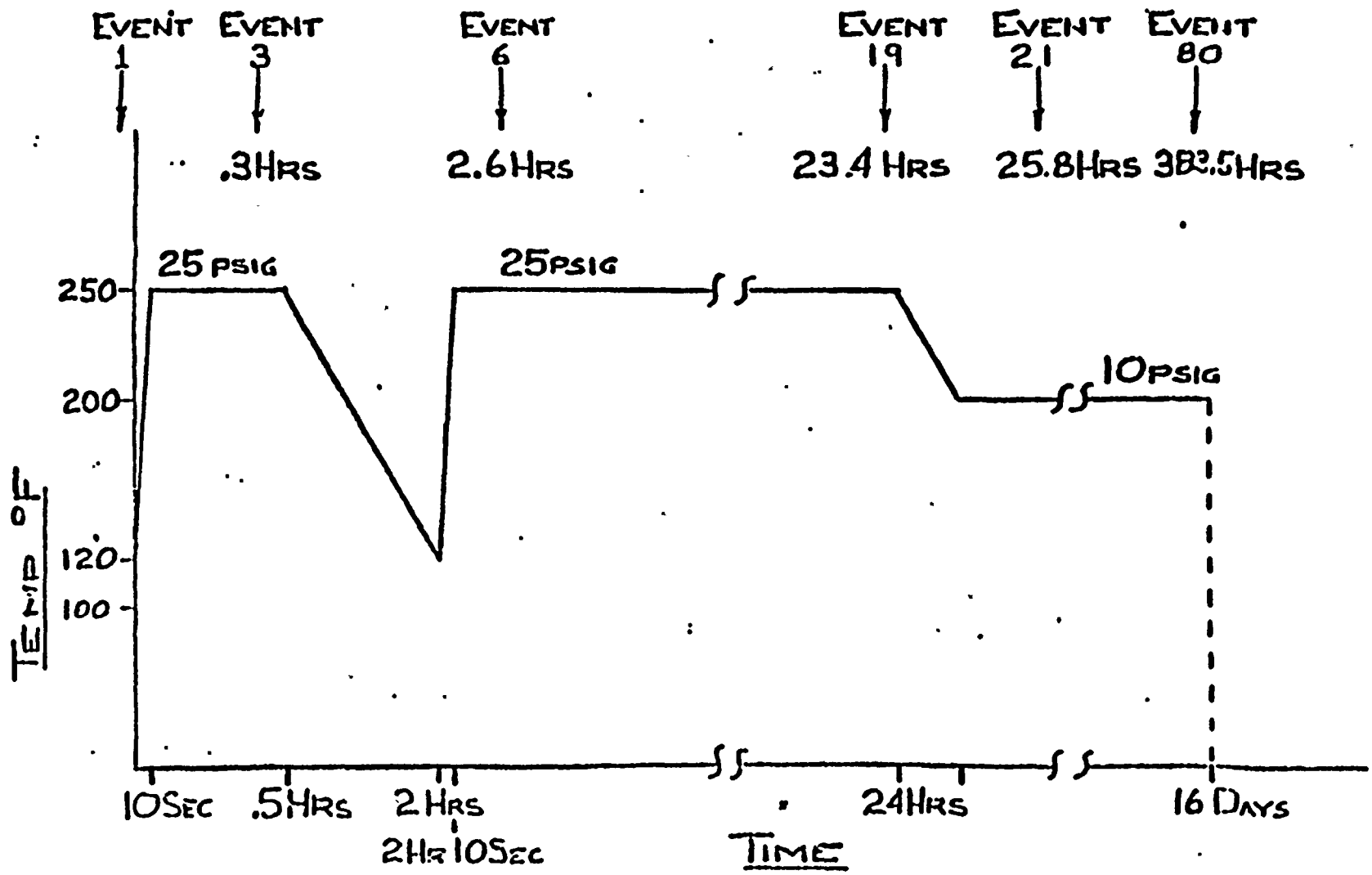


FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-4A,B MANUFACTURER Limitorque MODEL NUMBER SMB-0-40/T56 COMPONENT Reliance Valve Motor Operator AC Motor/Class B Insulation FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 450 COLUMN K8/8.3	OPERATING TIME	6 months	Equivalent to >6 months	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.7×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahboni 6-24-83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-441G,F 4. Limitorque Report B0003 dated 5/8/76 5. Limitorque Report B0058 dated 1/11/80 6. QID #221001 7. BRI Calc. #5.51.055	Qualified

WP-1061

TEMPERATURE PROFILE

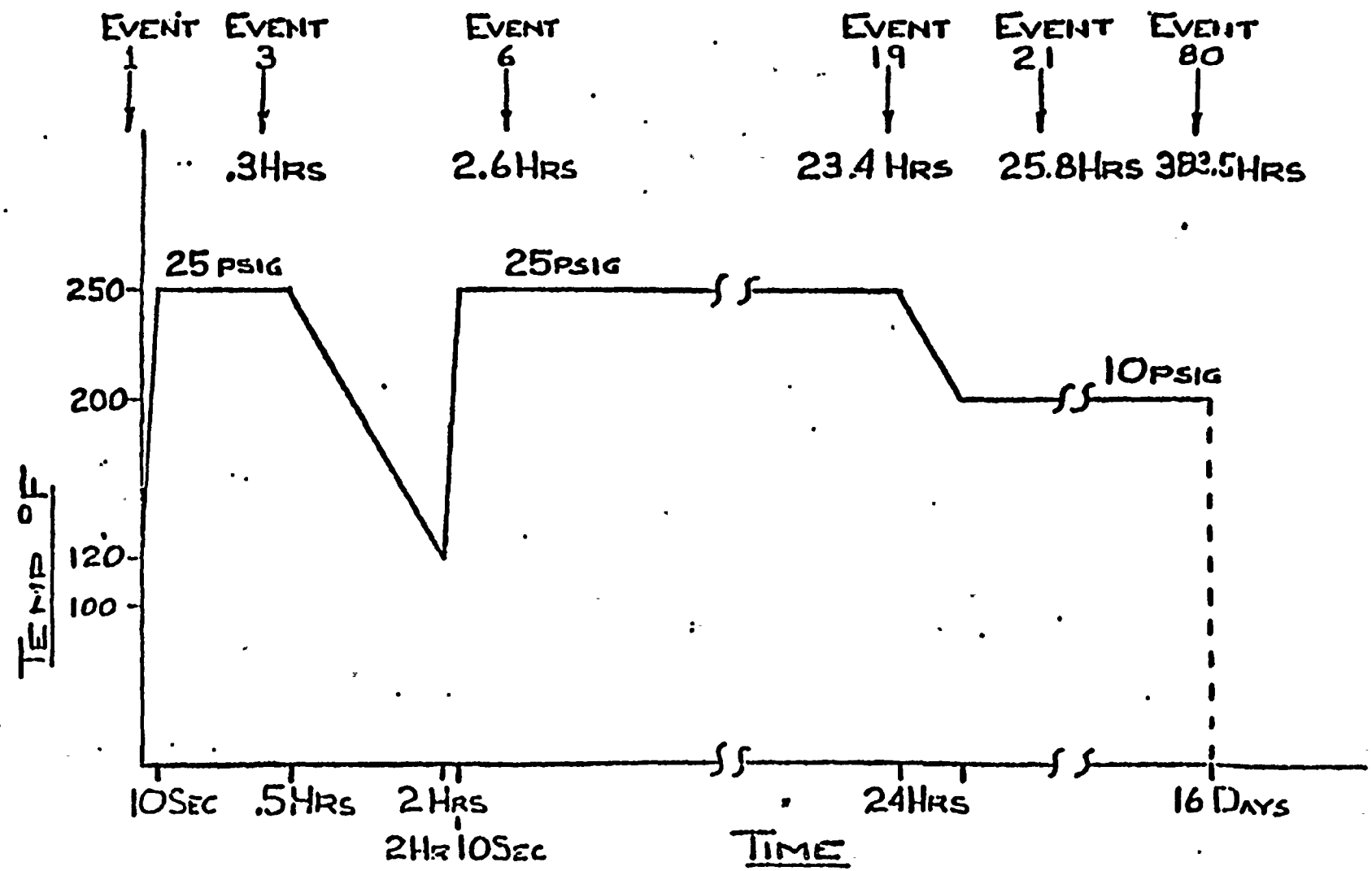


FIGURE 1

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-52A -52B -48A -48B MANUFACTURER Limitorque MODEL NUMBER SMB-00-10/L56 SMB-3-80/213R3 COMPONENT - Motor Operator Motor: Reliance, B insulation/AC Motor FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 580,555 COLUMN H.8/9 N/9 J/8.7 M.8/8.7	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Engineering Analysis Simultaneous Test	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	see enclosed profile No. T-1	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	see enclosed profile No. T-1	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6-24-83 Reviewed by: James Meeres 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-548J 4. Limitorque Test Report B0003 with addendum A dated 5/76 5. QID 221002 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified.

WP-1001

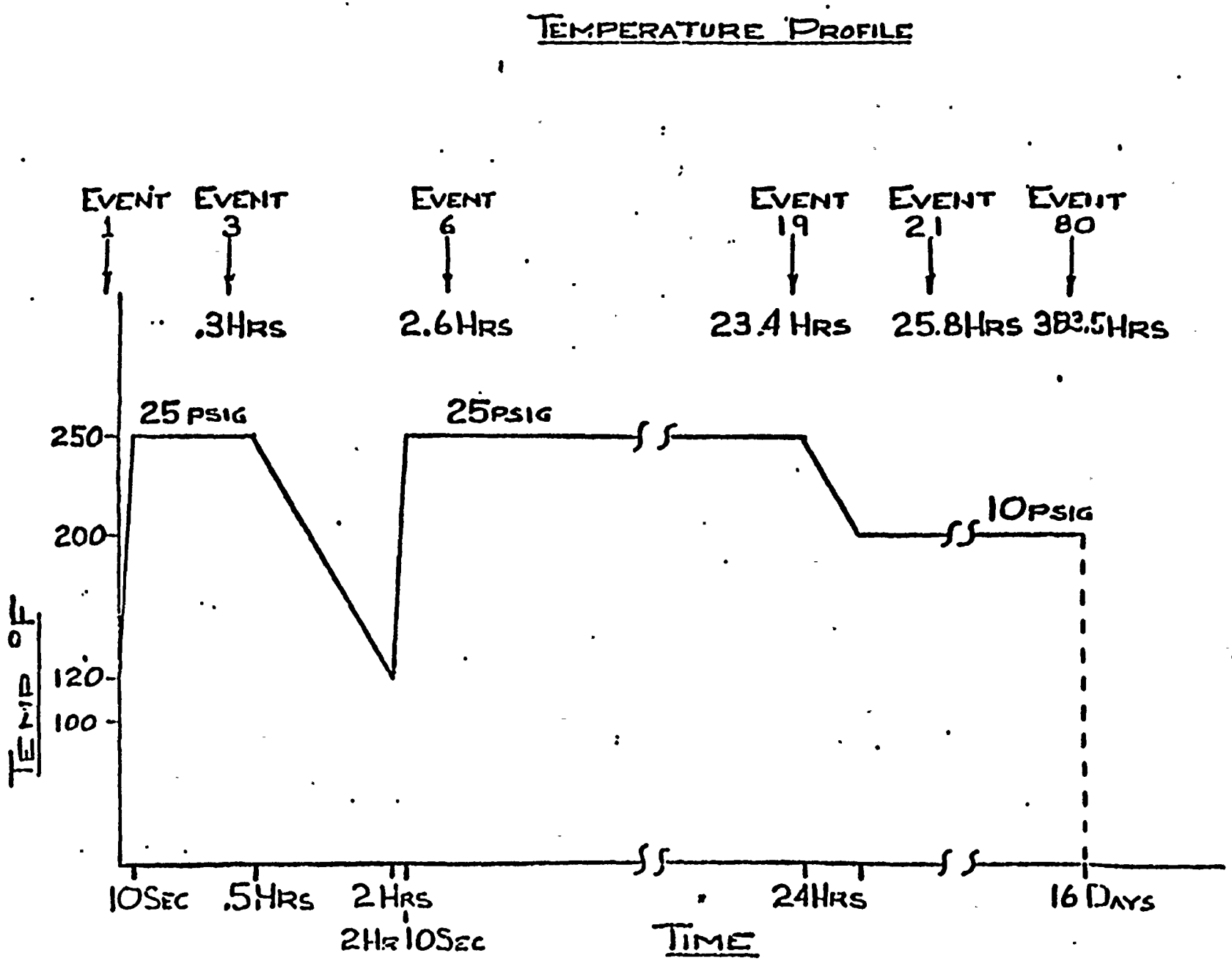

TEMPERATURE PROFILE
EVENT 1
EVENT 3
EVENT 6
EVENT 19
EVENT 21
EVENT 80
.3HRS
2.6HRS
23.4 HRS
25.8HRS
382.5HRS
25 PSIG
25PSIG
10PSIG
250
200
120
100
TEMP °F
10SEC
.5HRS
2 HRS
2HR 10SEC
24HRS
16 DAYS
TIME

FIGURE 1

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B, 41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-53A -MO-53B -MO-6A -MO-6B MANUFACTURER Limitorque MODEL NUMBER SMB-0-25/R56 SMB-2-60/215RZ COMPONENT Motor Operator - Reliance, RH insulation AC Motor FUNCTION/SERVICE Operates SD cooling injection valve LOCATION: BLDG R ELEVATION 516, 435 COLUMN K8/4.1 L.2/8.2 K6/8 L3/8.3	OPERATING TIME	6 months	Equivalent to>6 months	4	3, 6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Accident Profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	2.6×10^6	2.04×10^8	5	3	Sequential Test	None
	AGING	40 years	40 years +	1	2, 3 6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report 600367A dated 5/13/76 4. BRI CIE list, REV 8, 6/1/83 5. EDS Study 0740-004-501M,S 6. QID #221001 7. BRI Calculation #5.51.055	Qualified.

WP-1081

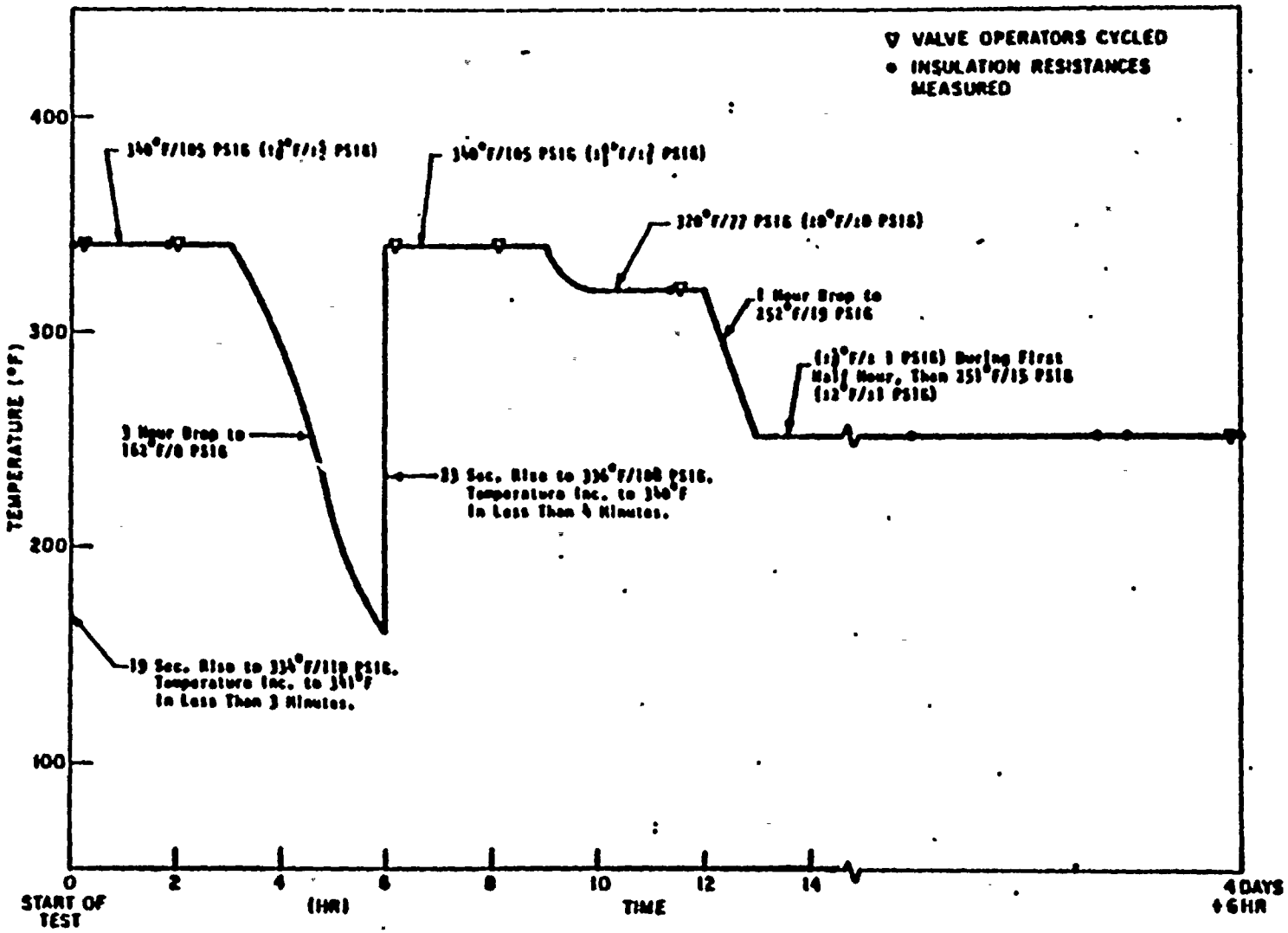


Figure 3. Actual Steam Exposure Profile

F-C3447

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-64A -64B -64C MANUFACTURER Limitorque MODEL NUMBER SMB-000 -5/K48 COMPONENT Reliance Motor Operator AC Motor/Class B Ins. FUNCTION/SERVICE Operate RHR Valves LOCATION: BLDG R ELEVATION 448,444,446 COLUMN K/9.0,M/7.4,J/4.9	OPERATING TIME	6 months	Equivalent to > 6 months	1	3,4	Simultaneous Testing, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4,8	See enclosed profile	1	3	Simultaneous Testing	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 8	See enclosed profile	1	3	Simultaneous Testing	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal 100 max. accident	Steam from 24 hrs 100% from 15 days	1	3	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	2	3	Sequential Testing	None
	AGING	40 Years	40 Years	1	3,4,5	Sequential Testing, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI C1E list, REV 8, 6/1/83 2. EUS Study 0740-004-441J (worst case) 3. Limitorque Report B0003 with addendum A, 5/8/76 in BWR054-C-04 4. Calculations in QID 221001 5. Limitorque Report B0058 dated 1/11/80 6. BRI Calculation #5.51.055	Qualified.

WP-1081

TEMPERATURE PROFILE

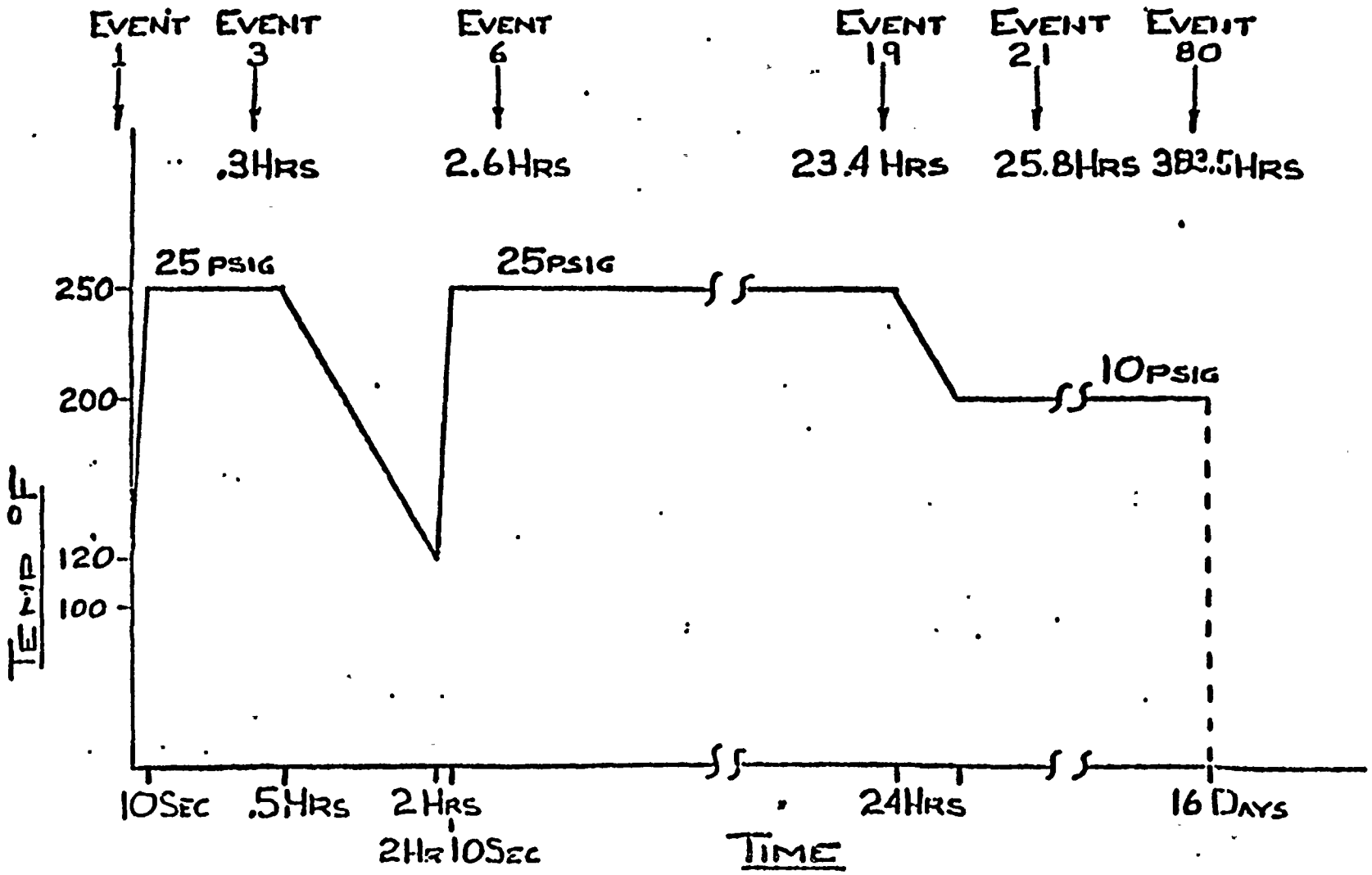


FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

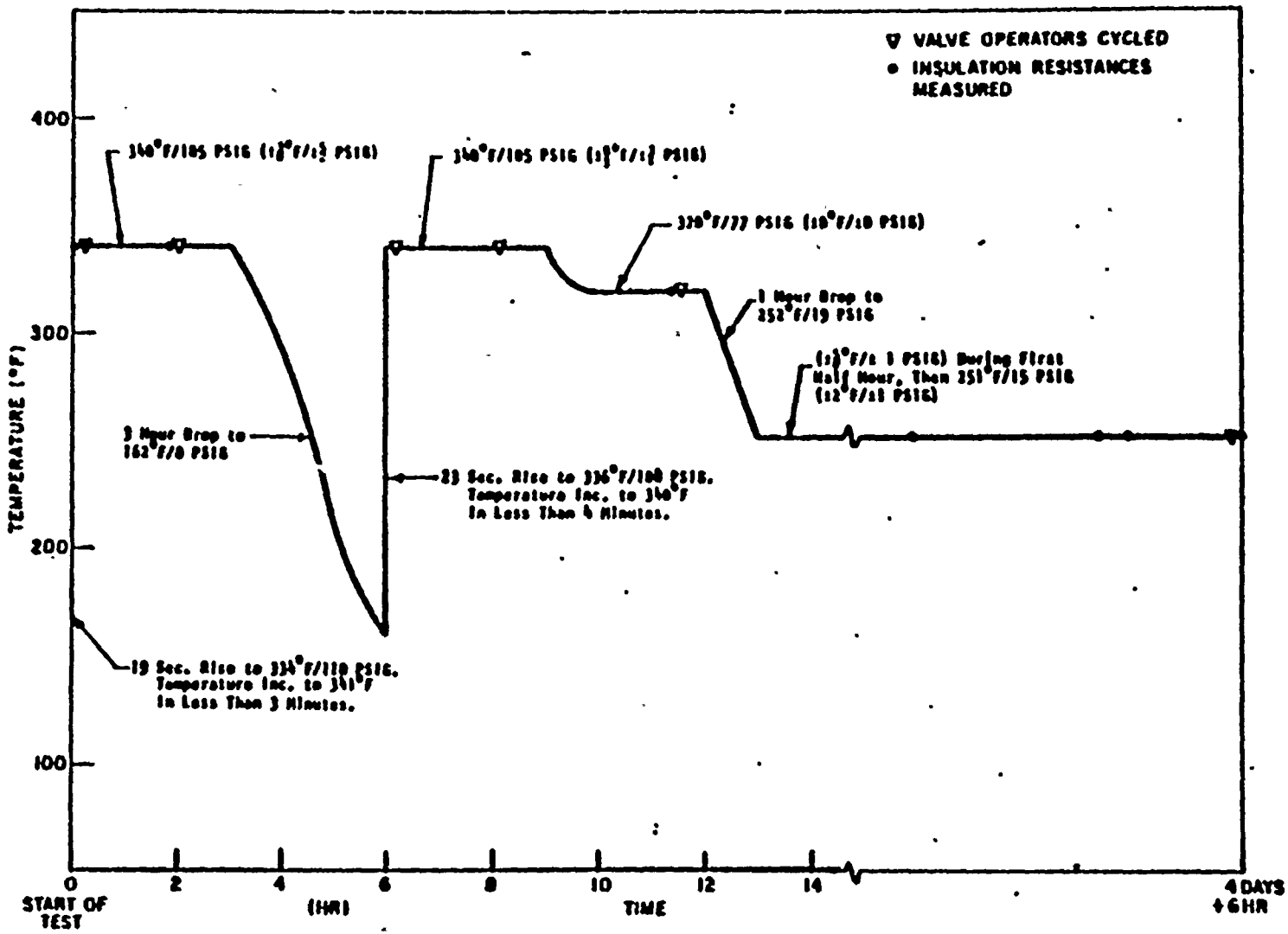
EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual heat removal TAG NUMBER RHR-MO-68A RHR-MO-68B MANUFACTURER Limitorque MODEL NUMBER SMB-0-40/T56 COMPONENT Motor Operator- Reliance, RH insulation AC Motor FUNCTION/SERVICE Operates RHR heat exchanger inlet valve LOCATION: BLDG R ELEVATION 548 COLUMN J/9.2 M.8/9.3	OPERATING TIME	6 months	Equivalent to>6 months	4	3,6	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal Accident profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/R	1	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2.04×10^8	5	3	Sequential Test	None
	AGING	40 years	40 years +	1	2, 3, 6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Mears 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report B600376A dated 5/13/76 4. BRI C1E list, REV 8, 6/1/83 5. EDS Study 0740-004-548J, N 6. QID #221001 7. BRI Calculation #5.51.055	Qualified.

WP-1081



F-C3447

Figure 3. Actual Steam Exposure Profile

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-73A, B 74A, B MANUFACTURER Limitorque MODEL NUMBER SMC-04-5 COMPONENT Motor Operator Reliance, Class B Insulation AC Motor FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 590 COLUMN J.9/9.2,M.2/9.1 J.9/9.1,M.3/9.1	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^6	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4, 5	Simultaneous Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-572L, I 4. Limitorque Test Report B0003, B0058 5. QID 221001 6. BRI Calculation #5.51.055	Qualified.

WP-1081

TEMPERATURE PROFILE

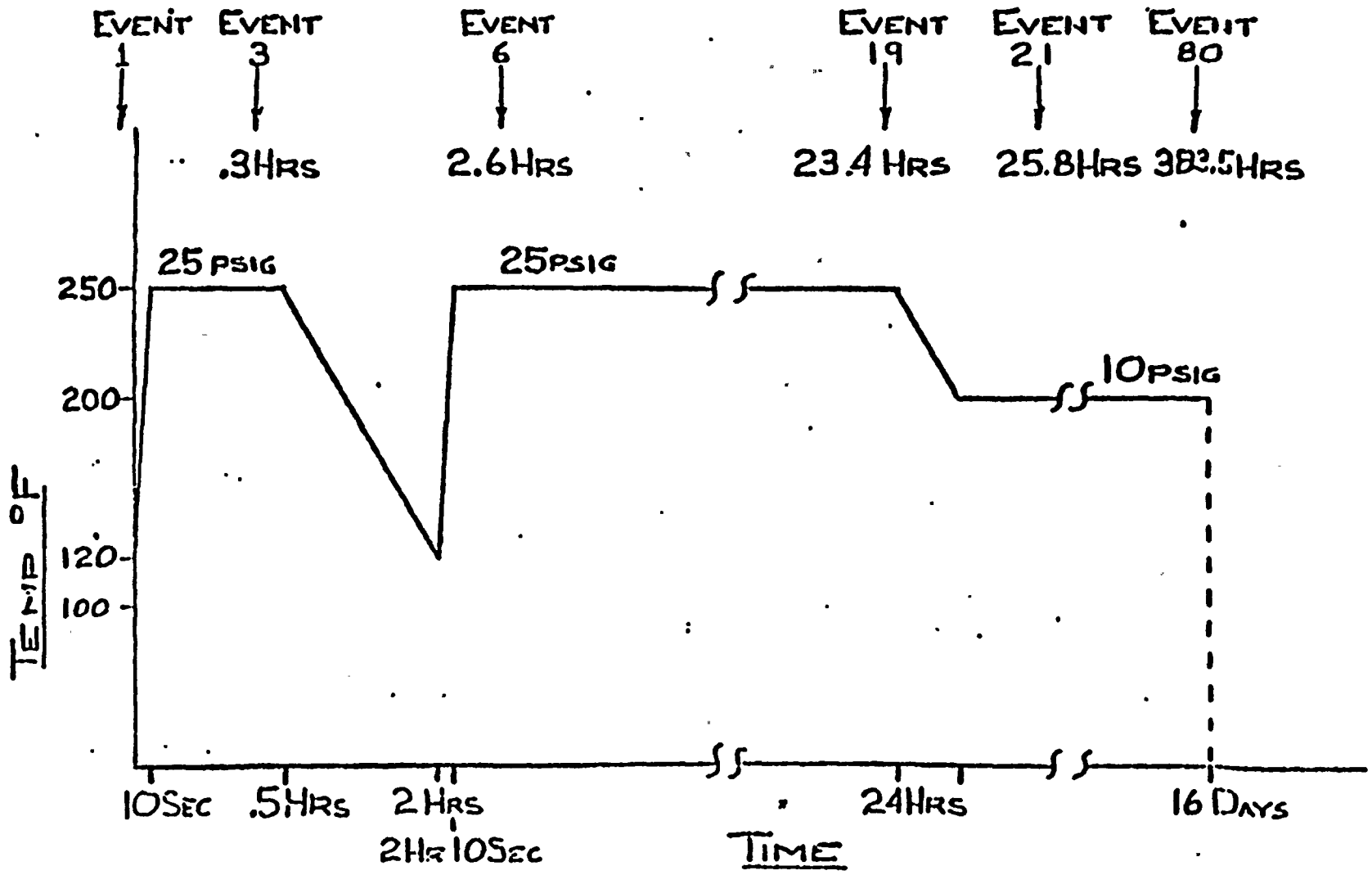


FIGURE 1

WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

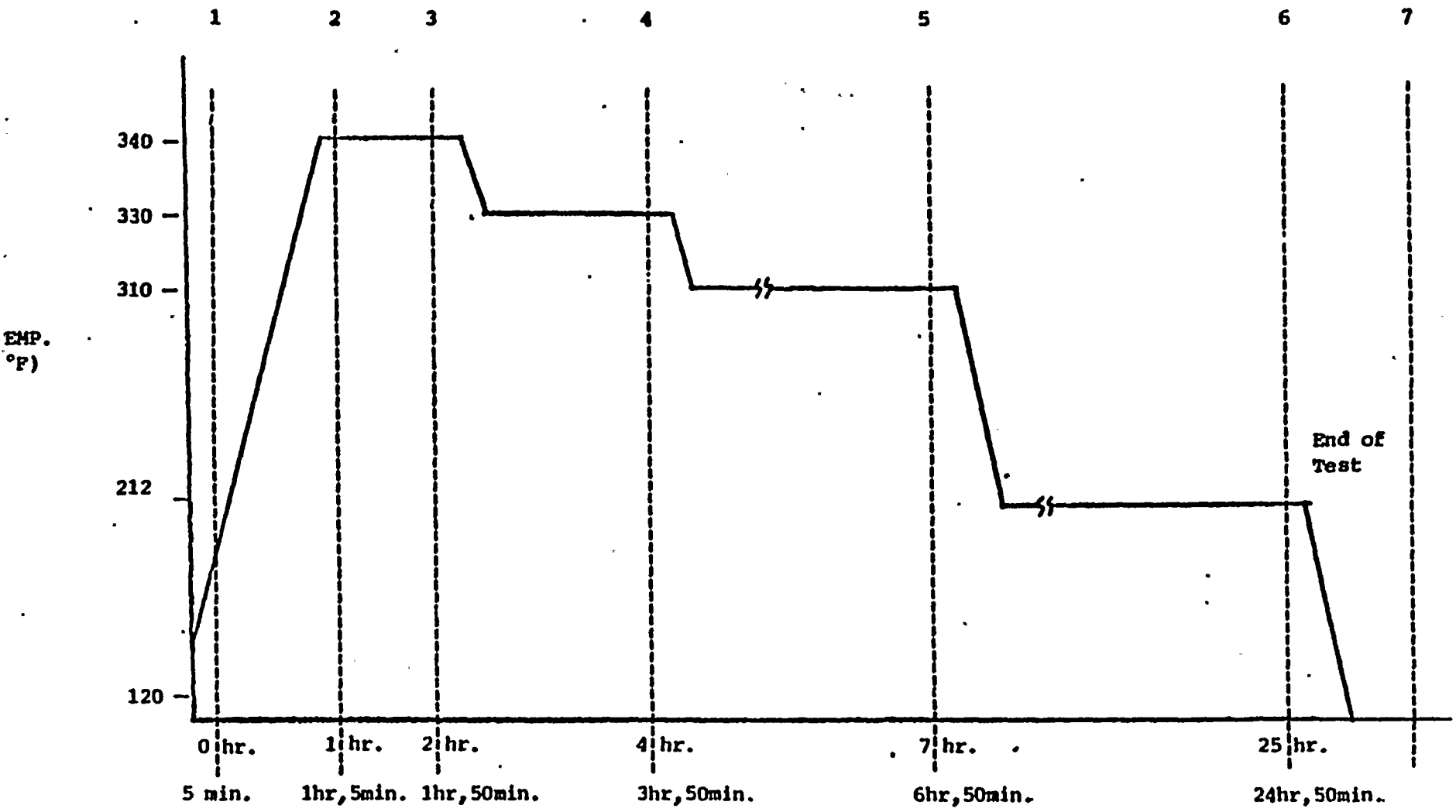
EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-8 MANUFACTURER Limitorque MODEL NUMBER SMB-2-80/DS224B COMPONENT Porter-Peerless Valve Motor Operator DC Motor/Class H Ins. FUNCTION/SERVICE Operate RHR Valves LOCATION: BLDG R ELEVATION 501 COLUMN M8/7.4	OPERATING TIME	6 months	Equivalent to > 6 months	5	3, 4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 maximum normal 104 maximum abnormal Accident Profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 maximum abnormal Accident Profile 4	100%	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.5×10^6	1×10^7	2	3	Sequential Test	None
	AGING	40 years	40+ years	1	3, 4	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makiani 6/24/83 Reviewed by: James Morris 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-501I 3. Limitorque Report B0009, 4/30/76 Section E 4. QID #221001 5. BRI C1E list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	1. Qualified

WP-1081


1
2
3
4
5
6
7
340
330
310
212
120
EMP.
°F)
End of
Test
0 hr.
1 hr.
2 hr.
4 hr.
7 hr.
25 hr.
5 min.
1hr,5min.
1hr,50min.
3hr,50min.
6hr,50min.
24hr,50min.

WPPSS QID# 221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2802-42A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-87A,B MANUFACTURER Limitorque MODEL NUMBER SMB-00-10/L56 COMPONENT Valve Motor Operator AC Motor/Class B Insulation FUNCTION/SERVICE Operate RHR Valve LOCATION: BLDG R ELEVATION 578 COLUMN J/9.3 M.8/8.6	OPERATING TIME	24 Hours	Equivalent to > 6 months	5	3,4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident profile 4	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident profile 4	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A.	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.2×10^6	2×10^7	2	3	Sequential Test	None
	AGING	40 years	40 years	1	3,4,6	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 07400-004-572L 3. Limitorque Report B0003 with Addendum A (BWR-054-C-04) 4. QID #221001 5. BRI C1E list, REV 8, 6/1/83 6. Limitorque Report B0058 dated 1/11/80 7. BRI Calculation #5.51.055	Qualified

WP-1061

TEMPERATURE PROFILE

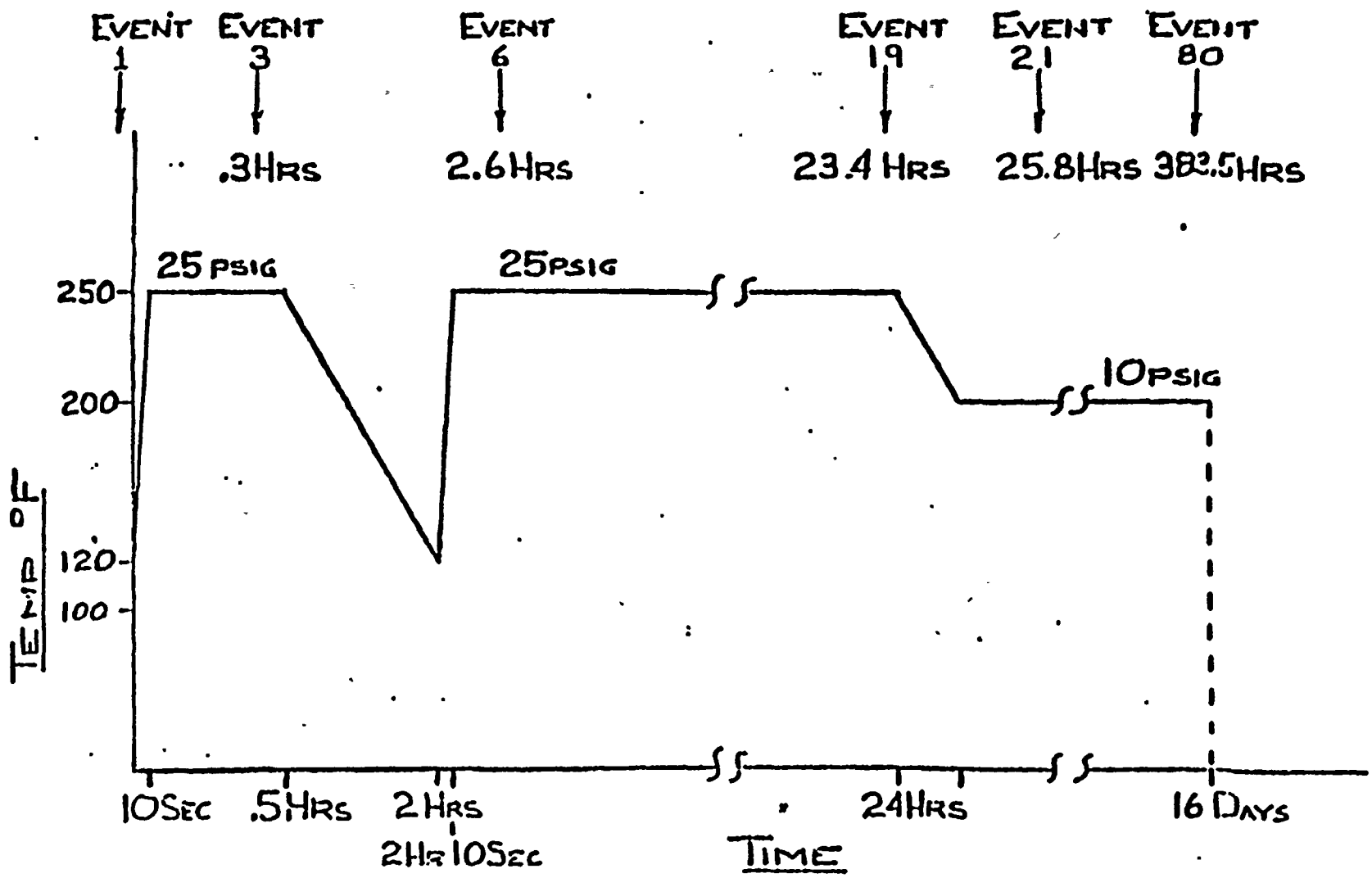


FIGURE 1

WPPSS

QID#221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-9 MANUFACTURER Limitorque MODEL NUMBER SMB-2601215R2 COMPONENT Reliance Motor Operator AC/RH Motor FUNCTION/SERVICE LOCATION: BLDG C ELEVATION 511 COLUMN 160°AZ R23	OPERATING TIME	6 months	Equivalent to > 6 months	2	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	135 Normal 150 abnormal Accident - Profile 1	See enclosed profile	1	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident - Profile 1	See enclosed profile	1	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100%	1	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Chemical Spray pH 10	1	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	4	Sequential Test	None
	AGING	40 years	40 years +	1	4,5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by Richard Mahin 6/24/83 Reviewed by: James Mearns 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI C1E list, REV 8, 6/1/83 3. Limitorque Report B0058 dated 1/11/80 4. Limitorque Report B600376A dated 5/13/76 5. QID #221001 6. BRI Calculation #5.51.055	Qualified

WP-1081

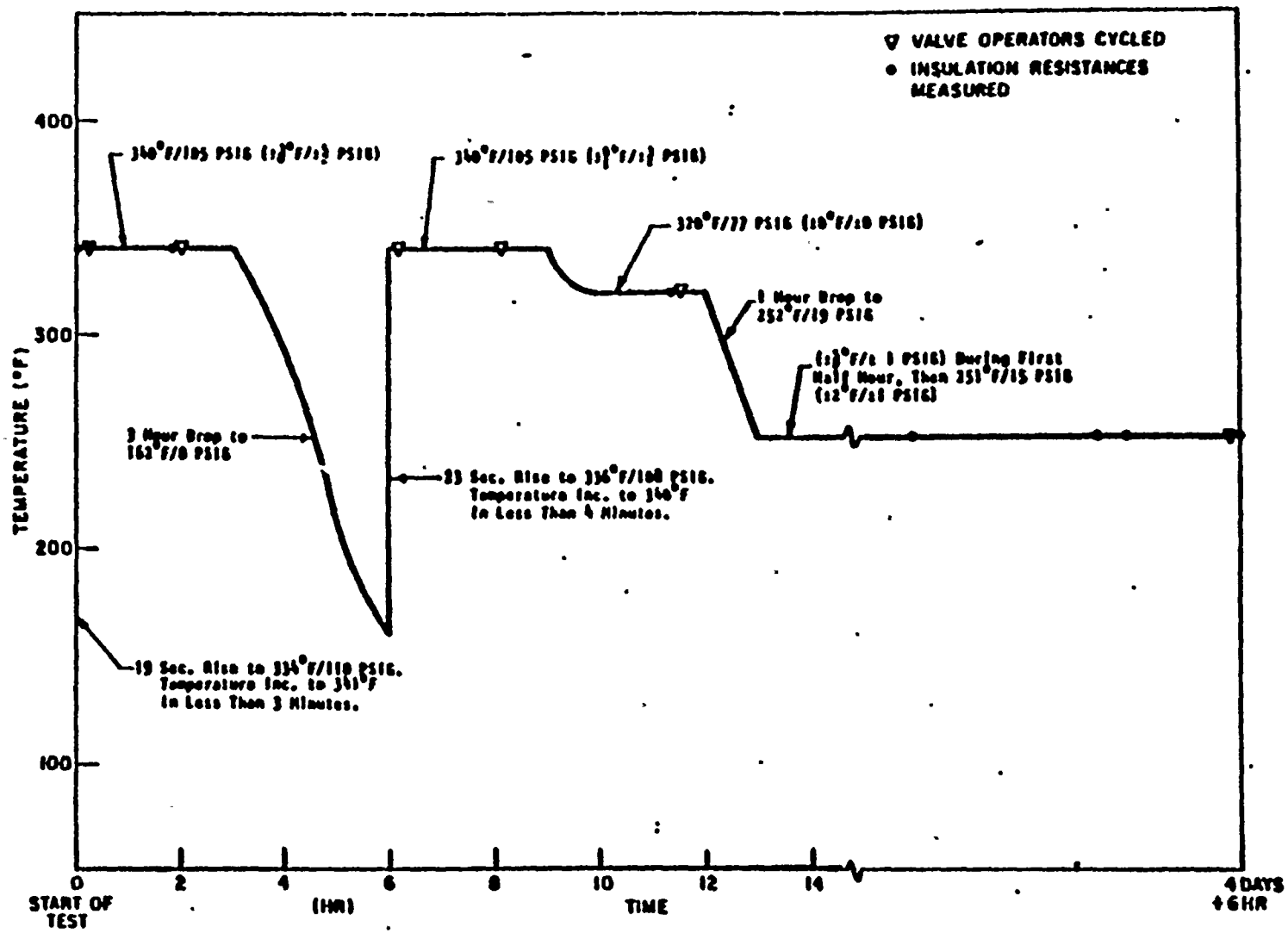


Figure 3. Actual Steam Exposure Profile

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WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02G11

MPL: G11-F093 and G11-F094
PPD: 21A1883

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-93 -94 MANUFACTURER Limitorque MODEL NUMBER SMB-0-40/T56 COMPONENT Valve Motor Operator (Reliance Class B) AC Motor FUNCTION/SERVICE Operate RHR/SSW Crosstie Valve LOCATION: BLDG R ELEVATION 552 COLUMN N/8.6, N/9	OPERATING TIME	6 months	Equivalent to > 6 months	4	2,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	See enclosed profile	1	2	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	1	N/A	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	Steam for 24 hours 100% for 15 days	1	2	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	3	2	Sequential Test	None
	AGING	40 years	40 years	1	2,5,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. Par. 3.11 2. Limitorque Test Report B0003, with Addendum A, prepared 5/8/76 3. EDS Study 0740-004-548J 4. BRI C1E list, REV 8, 6/1/83 5. Calculations in QID 221001 6. Limitorque Test Report B0058 dated 1/11/80 7. BRI Calculation #5.51.005	Qualified

WP-1081

TEMPERATURE PROFILE

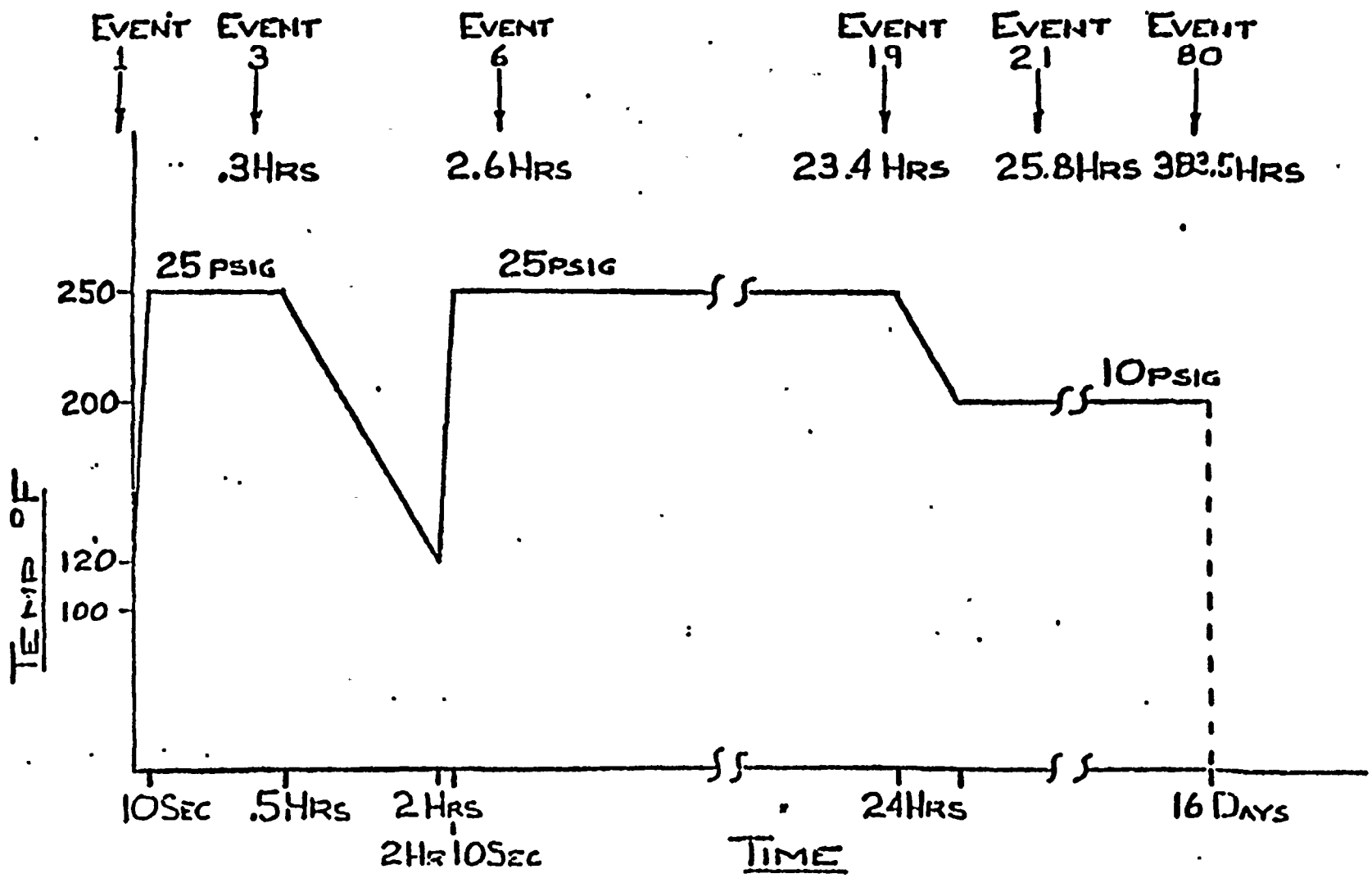

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-MO-99A RHR-MO-99B MANUFACTURER Limitorque MODEL NUMBER SMB-000-5/P48 COMPONENT Reliance Valve Motor Operator AC/Class RH Insulation FUNCTION/SERVICE Operate RHR Valves LOCATION: BLDG C ELEVATION 514, 510 COLUMN 95° 270°	OPERATING TIME	6 months	Equivalent to > 6 months	5	2, 3	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	135 normal 150 maximum abnormal Accident - profile 1	See enclosed profile	1	2	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident - Profile 1	See enclosed profile	1	2	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 maximum abnormal Accident Profile 2	100	1	2	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Chemical spray with pH 10	1	4	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	2	Sequential Test	None
	AGING	40 years	40+ years	1	2, 3	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makine 6/24/83 Reviewed by: Ali Nadim 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report 600376A, 5-13-76 3. QID #221001 4. Limitorque Report B0058 dated 1/11/80 5. BRI C1E list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	1. Qualified

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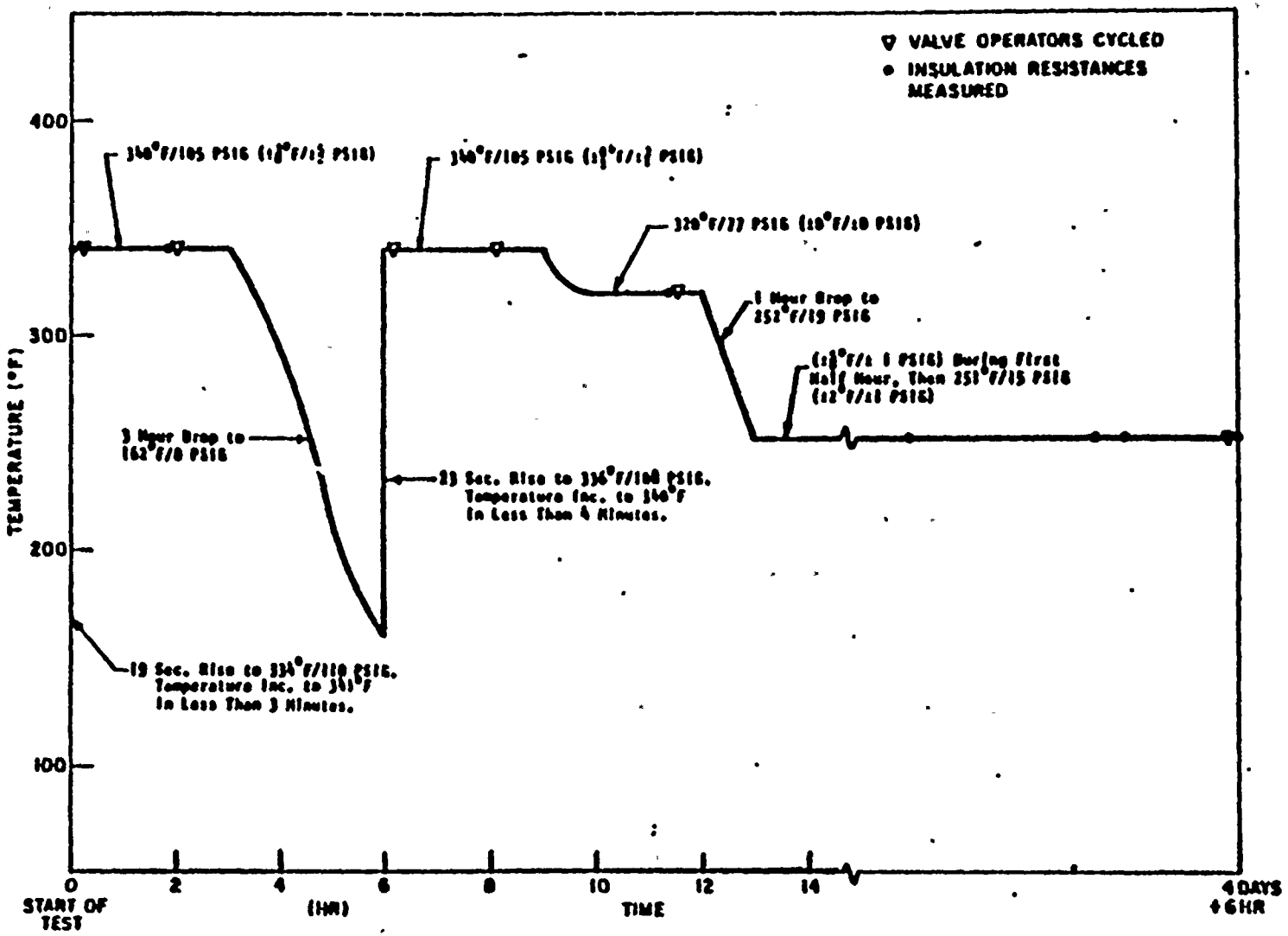

F-C3441

Figure 3. Actual Steam Exposure Profile

WPPSS QID #256016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E12

MPL: E12-N016A,B,C,E12-N019
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-PS-16 A-C PS-19 A-C MANUFACTURER Static-O-Ring MODEL NUMBER 5N-AA3-X10STT COMPONENT FUNCTION/SERVICE RHR: ADS Permissive (10-240 psig) Pump LOCATION: BLDG R ELEVATION See Note 2 COLUMN See Note 2	OPERATING TIME	24 hours	Equivalent to >6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4, 10	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 10	15.3	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 80 Accident	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	4.6×10^5	1.5×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	2%	0.76FSPE	7	4,5	Simultaneous Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: James Meyers 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, Rev.8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-501B
4. QID 256016
5. Viking Lab. Inc. Test Letter Report #30203-2 dated 11/20/73. Steam testing of Static-O-Ring Pressure Switch, P/N 12N-AA4-TTX10.
6. BRI Calc. #5.51.055
7. Supply System Calculation IN-02-83-01.

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

Tag #	Column	Elevation
~~RHR-PS-16A~~	~~J.6/3.6~~	~~503~~
RHR-PS-16B-C	H.8/9.3	503
RHR-PS-19A	J.7/3.7	503
RHR-PS-19B	H.8/9.3	503
RHR-PS-19C	H.8/9.3	505

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WPPSS QID324006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V -60A -60B -75A -75B MANUFACTURER Marotta MODEL NUMBER MV36RP-H3 COMPONENT Solenoid Valve FUNCTION/SERVICE RHR Sample line Isolation Valve LOCATION: BLDG R ELEVATION (See Note 2) COLUMN (" " ")	OPERATING TIME	4320 hours	Equivalent to >4320. hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	221°.F	2	4	Materials Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max Abnormal 68 Accident	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	5×10^6	3	4	Materials test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Materials test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 6)
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Vaziri 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev 8 , 6/1/83
2. FSAR Paragraph 3.11
3. EDS Calc. #0740-Q04-548J.N
4. QID 315023
5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83
6. BRI Calc. #5.51.055

NOTES

Qualified

1. These components are being tested to demonstrate their qualification to IEEE Stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

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OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2.

Tag Number	Elev.	Column
RHR-V-60A	560	J.8/8.5
-60B	560	H.4/8.4
-75A	561	J.8/8.5
-75B	561	H.4/8.5

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Nader 6/24/83

WPPSS QID #221002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-64

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Outside Air TAG NUMBER ROA-M-AD/19 MANUFACTURER Barber-Colman Co. MODEL NUMBER MA 418 COMPONENT FUNCTION/SERVICE Motor for ROA-AD-19 LOCATION: BLDG R ELEVATION 560 COLUMN L.9/8.2	OPERATING TIME	4320 hours		3			Note 1
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4		1			
	PRESSURE (PSIA)	14.7		1			
	RELATIVE HUMITY (%)	40 Normal 90 Max Abnormal Accident Profile 4		1			
	CHEMICAL SPRAY	N/A		1			
	RADIATION (RAD)	1.0×10^5		2			
	AGING	40 years		1			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: James Mizarra 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR paragraph 3.11 2. EDS Study 0740-004-548K 3. BRI CIE list Rev. 8, dated 6/1/83 4. BRI Calculation #5,51.055	1. This component is on Table B of the JIO and it does not require qualification prior to fuel load.

WP-1081

QID #200014

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Outside Air (HVAC) TAG NUMBER ROA-POS-V/1 -V/2 MANUFACTURER Namco Controls MODEL NUMBER 70050100 COMPONENT Position Switch FUNCTION/SERVICE Position Switch for Isolation Valves LOCATION: BLDG R ELEVATION 578 COLUMN N.7/5.7 /5.0	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4		2			
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES . X NO (Ref. 4)

Prepared by: Behzad Makini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS study 0740-004-572F 4. BRI Calc. #5.51.055	1. Equipment justification #17 in Appendix D is provided for ROA-POS-V/1. ROA-POS-V/2 is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS QID # 283011E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Outside Air TAG NUMBER ROA-RLY-CR1A CR200 MANUFACTURER ASEA MODEL NUMBER RXMK1 COMPONENT Relay FUNCTION/SERVICE Control isolation valve ROA-V-1, control isolation valve ROA-V-2 LOCATION: BLDG R ELEVATION 556, 528 COLUMN N.O/6.0 N.O/8.3	OPERATING TIME	4320 hours	> 4320 hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90° normal 104° abnormal Accident Profile 4	194	2	4	Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A			N/A	None
	RADIATION (RAD)	8.3×10^5	10^6	3	4	Engineering Analysis	None
	AGING	40 years	> 40 years	2	4	Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref 5)

Prepared by: Behzad Makani 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR paragraph 3.11 3. EDS report 0740-004-522II 4. QID 283015E	Qualified

WP-1081

WPPSS QID #315002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2803-216

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Outside Air TAG NUMBER ROA-SPV-(See Note 2)	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4, 11, 31	Envelopes Profile 4 with >8°C Margin	2	4	Simultaneous Test, Engineering Analysis	None
MANUFACTURER Automatic Switch (ASCO)	PRESSURE (PSIA)	14.7 Normal Accident Profile 11, 31	Profile 31	2	6	Engineering Analysis	None
MODEL NUMBER HBX8320A1	RELATIVE HUMITY (%)	40 max. normal 90 max. abnormal 100% Accident	100	2	6	Engineering Analysis	None
COMPONENT Solenoid Pilot Valve	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Operate HVAC Dampers	RADIATION (RAD)	1.0×10^6	1×10^6	3	3, 5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
LOCATION: BLDG R ELEVATION COLUMN See Note 2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mokini 6/24/83 Reviewed by: Ali Nader 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 CIE Equipment List dated 12/82 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-572F (worst case) 4. Calculation QID #315004-1 5. Calculation QID #315004-2 6. Calculation QID #315004-3 7. BRI Calc. #5.51.055	1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified

WP-1081

WPPSS QID #315002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-216
MPL:
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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. TAG NUMBER -10 544 M.5/3.9 -11 543 M.8/8.1 -12 486 M.7/8.1 -13 593 M.4/5.7 -14 600 M.4/8.1 -15 563 M.8/4.4 -17 563 M.8/4.4

WP-1082

Prepared by: Behzad Mahini 6/24/83 Reviewed by: [illegible] 6/24/83

WPPSS QID #315004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Outside Air TAG NUMBER ROA-SPV-100 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJHT831654 COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE Solenoid Pilot for ROA-V-1 LOCATION: BLDG R ELEVATION 553 COLUMN M.8/5.7	OPERATING TIME	6 months	> 6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Profile 4	Envelopes Profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal Profile 4	< 90%	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^4	6×10^5	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Nader 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-548G 4. Calculation QID315004-1 5. Calculation QID315004-2 6. Calculation QID315004-3 7. BRI Calculation #5.51.055	1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life. Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #315004

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Outside Air TAG NUMBER ROA-SPV-200	OPERATING TIME	6 months	> 6 months	1	4	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Profile 4	Envelopes Profile 4 with > 8C margin	2	4	Simultaneous Test Engineering Analysis	None
MANUFACTURER Automatic Switch (ASCO)	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
MODEL NUMBER WJHT8316E35F COMPONENT Solenoid Pilot Valve	RELATIVE HUMITY (%)	40 max normal 90 max abnormal Profile 4	< 90%	2	6	Engineering Analysis	None
FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	6×10^5	3	5	Engineering Analysis	Note 1 Note 3
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 2
LOCATION: BLDG R ELEVATION 529 COLUMN N/8.2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83

Reviewed by: Ali Nadeni 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0
3. EDS Study 0740-004-522H
4. Calculation QID315004-1
5. Calculation QID315004-2
6. Calculation QID315004-3
7. BRI Calculation #5.51.055

NOTES

1. A pin-point radiation analysis is being performed.
2. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life.
3. These components are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

QID# 256016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C72

MPL: C72-N002A,B,C,D
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Protection System TAG NUMBER RPS-PS-2A-D MANUFACTURER Static-O-Ring MODEL NUMBER 12N-AA5-X10TT 12N-AA4-X10TT COMPONENT Pressure Switch FUNCTION/SERVICE Drywell High Pressure LOCATION: BLDG R ELEVATION See Note 2 COLUMN See Note 2	OPERATING TIME	6 Months	Equivalent to >6 Months	1	4,5	Engineering Analysis and Simultaneous Test	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	15.3	2	4,5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.2×10^3	1.5×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 yrs.	2	4	Engineering Analysis	None Note 1
	ACCURACY	.05 psig	.05 psig	6	5	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6-24-83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev.8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-522H
4. QID 256016
5. Viking Lab. Inc. Test Letter Report #30203-2 dated 11/20/73. Steam testing of Static-O-Ring Pressure Switch, P/N 12N-AA4-TTX10.
6. Supply System Calculation IH-02-83-01
7. BRI Calc. #5.51.055

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.
2.

Component	Column	Elevation
RPS-PS-2A	J.5/7.1	525
RPS-PS-2B	M.8/6.6	525
RPS-PS-2C	N.8/5.8	524
RPS-PS-2D	H.4/4.2	529

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WPPSS QID #213012

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-(See Note 1) MANUFACTURER Westinghouse MODEL NUMBER See Note 1 COMPONENT Motors FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION COLUMN See Note 1	OPERATING TIME	6 months	Equivalent to>6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profiles 4, 8	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal Accident Profiles 8	Accident Profiles 8	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	1×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behrad Mahini 6-24-83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-441J
4. QID #213017
5. BRI Calc. #5.51.055

NOTES

Qualified

1.

Tag Number	Model	Function/Service	Elevation	Column
RRA-M-1	SBFC	Motor for RRA-FN-1	441	H.7/4.3
RRA-M-2	SBFC	Motor for RRA-FN-2	445	L.0/8.3
RRA-M-3	SBFC	Motor for RRA-FN-3	442	L.8/8.3

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WPPSS QID #213015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

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PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-(See Note 1) MANUFACTURER Westinghouse MODEL NUMBER (See Note 1) COMPONENT Motors FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	6 months	Equivalent to>6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	2×10^8.	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-548E,F 4. QID #213017 5. BRI Calc. #5.51.055	Qualified

WP-1081

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

Note 1

EPN	Model	Function	Elev.	Col.
RRA-M-12	TBAN	Motor for RRA-FN-12	490	H.7/8.0
RRA-M-13	TBAN	Motor for RRA-FN-13	585	M3/6.1
RRA-M-14	TBAN	Motor for RRA-FN-14	585	M7/8.0
RRA-M-15	TBAN	Motor for RRA-FN-15	560	M5/4.5
RRA-M-17	TBAN	Motor for RRA-FN-17	560	M5/4.7

Prepared by: Bekard Mehini 6/24/83 Reviewed by: Ali Sadri 6/24/83

WPPSS QID #213025

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-4 MANUFACTURER Westinghouse MODEL NUMBER TBFC COMPONENT Motors FUNCTION/SERVICE Motor for RRA-FN-4 LOCATION: BLDG R ELEVATION 444 COLUMN M.5/4.1	OPERATING TIME	6 months	Equivalent to>6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profiles 4	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6 Maximum	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by Behzad Malini 6-24-83 Reviewed by: Ali Nadeem 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-441C 4. QID #213017 5. BRI Calc. #5.51.055	Qualified

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WPPSS QID #213013

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-35A

MPL:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-5	OPERATING TIME	4320 Hours	Equivalent to >4320 hours	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident profile 4	410	2	4	Simultaneous Test and Engineering Analysis	None
MANUFACTURER Westinghouse	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
MODEL NUMBER SBFC COMPONENT Motor	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident profile 4	100	2	4	Sequential test	None
FUNCTION/SERVICE Motor for RRA-FN-5	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^6	2×10^8	3	4	Sequential test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
LOCATION: BLDG R ELEVATION 441 COLUMN K.7/3.9	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Matini 6-24-83 Reviewed by: Ali Nasseri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report #0740-004-441B 4. QID #213017 5. BRI Calc. #5.51.055	Qualified

WP-1081

WPPSS QID #213021

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-6 MANUFACTURER Westinghouse MODEL NUMBER TBFC COMPONENT Motors FUNCTION/SERVICE Motor for RRA-FN-6 LOCATION: BLDG R ELEVATION 442 COLUMN H.8/7.7	OPERATING TIME	6 months	Equivalent to >6 months	1	4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profiles 4,6,7	410	2	4	Simultaneous Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7 Normal Accident Profiles 6,7	Accident Profiles 6,7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahsri 6-24-83 Reviewed by: Ali Nadri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-441 I 4. QID #213017 5. BRI Calc. #5.51.055	Qualified

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WPPSS QID # 213023

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

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DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation Air TAG NUMBER RRA-M-FN/10 -FN/11	OPERATING TIME	6 months	Equivalent to>6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal 106 Accident	Operation in 106 ambient environment	2	4	Simultaneous Tests	None
MANUFACTURER WESTINGHOUSE	PRESSURE (PSIA)	14.7	14.7	2	4	Simultaneous Tests	None
MODEL NUMBER SBFC COMPONENT	RELATIVE HUMITY (%)	40 Normal 90 Abnormal	90	2	4	Sequential Test	None
Fan Motor	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Fan Motors for PRA-FC-10,11	RADIATION (RAD)	2.3 X 104	2.0 X 10^6	3	4	Separate Test	None
	AGING	40 years	Equivalent to>40 years	2	4,5	Simultaneous Test and Engineering Analysis	None Note 1
LOCATION: BLDG R ELEVATION 542 COLUMN N.3/3.8 H.5/8.0	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahin 6.24-83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E equipment list for WNP-2, Rev. 8 dated 6/1/83
2. WNP-2 FSAR paragraph 3.11
3. EDS Calc. #0740-004-548D,N
4. Westinghouse letter report from J. J. Courtin dated 4/3/81
5. QID 213023
6. BRI Calc. #5.51.055

NOTES

Qualified

1. Qualification for 40 years will be achieved provided bearing lubricant is changed every 20 months and manufacturer's recommended maintenance is performed (Ref. 5).

WP-1881

WPPSS QID #213011, 213020

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67
MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-M-19, 20	OPERATING TIME	6 months	See Note 1	1			
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4		2			
MANUFACTURER Westinghouse	PRESSURE (PSIA)	14.7		2			
MODEL NUMBER COMPONENT Motors	RELATIVE HUMITY (%)	40 Normal 90 Abnormal Accident Profile 4		2			
FUNCTION/SERVICE Motor for RRA-FC-19, 20	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^5		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 445 COLUMN L.0/8.3 M.0/8.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 4)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-548L 4. BRI Calc #5.51.055	1. Vendor is being contacted to obtain qualification data. These components are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS QID #285002-E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

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PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-RMS- S1	OPERATING TIME	6 months		3			Note 1
	TEMPERATURE (F)	90 Max Normal 104 Max Abnormal Accident Profile 4,8		1			
MANUFACTURER Square D	PRESSURE (PSIA)	15.1		1			
MODEL NUMBER KYC-1 COMPONENT Remote Manual Switch	RELATIVE HUMITY (%)	40 Max Normal 90 Max Abnormal Accident Profile 4,8		1			
FUNCTION/SERVICE Local Control Switches	CHEMICAL SPRAY	N/A		1		N/A	None
	RADIATION (RAD)	3.1×10^6		2			
	AGING	40 years		1			
LOCATION: BLDG R ELEVATION 147 COLUMN J.3/4.2	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Sadri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR paragraph 3.11 2. EDS Report 0740-004-441J 3. BRI CIE list Rev. 8, dated 6/1/83 4. EDS Calculation QID 285002-E	1. The component is not qualified for the HELB Profile 8. Relocation of the component to an isolated environment is recommended. (Ref. 4) The equipment is on Table B of JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS QID #285002-E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

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REVISION 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air TAG NUMBER RRA-RMS- S2, S3, S4, S5, S6 MANUFACTURER Square D MODEL NUMBER KYC-1 COMPONENT Remote Manual Switch FUNCTION/SERVICE Local Control Switches LOCATION: BLDG R ELEVATION 447 COLUMN H.7/8.4, M.9/8.6 M.9/4.1, J.7/4.0, J.2/8.1	OPERATING TIME	6 months	6 months	3	4	Materials Testing and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	128	1	4	Materials Testing and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	Atmospheric	1	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal Accident Profile 4	90	1	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	4×10^6	2	4	Materials Testing and Engineering Analysis	None
	AGING	40 years	11 years	1	4	Materials Testing and Engineering Analysis	None Note 2
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Nadri 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Report 0740-004-441C, 444G, 444F, 444I
3. BRI CIE list Rev. 8, dated 6/1/83
4. EDS Calculation QID 285002-E
5. BRI Calculation #5.51.055

NOTES

Qualified

1. These components are Use Code 2 and are, therefore, not required to perform an active safety function following an accident. The components will not spuriously function. See Ref. 4.
2. Preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

QID#221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Circulation TAG NUMBER RRC-MO-16A, 16B MANUFACTURER Limitorque MODEL NUMBER SMC-04 COMPONENT Motor Operator AC/Class B Insulation FUNCTION/SERVICE 2 HP m.o. for valves RRC-V-16A, 16B LOCATION: BLDG R ELEVATION 505 COLUMN J.2/7.3	OPERATING TIME	24 Hours	Equivalent to>6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4	See enclosed profile	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident profile 4	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4	2×10^7	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Separate Effect, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 6)

Prepared by: Behzad Makimi 6/24/83 Reviewed by: Ali Nadir 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-501K 4. Limitique Report, B0003, 5/76, B0058 5. QID#221001 6. BRI Calculation #5.51.055	Qualified

WP-1081

QID#256016

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July, 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation Cooling TAG NUMBER RRC-PS-18A	OPERATING TIME	4320 hours	> 6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Normal 104 Abnormal Accident Profile 4,9	212	2	5	Simultaneous Test	None
MANUFACTURER Static-O-Ring MODEL NUMBER 5N-AA3-X103TT	PRESSURE (PSIA)	14.7 Normal Accident Profile 9	15.3	2	4,5	Simultaneous Test and Engineering Analysis	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	2	5	Simultaneous Test	None
COMPONENT Pressure Switch FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
Pressure Switch non.ind. H22-P006	RADIATION (RAD)	5.0×10^5	1.5×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
LOCATION: BLDG R ELEVATION 475' COLUMN L.6/4.0	ACCURACY	4%	0.38 FSPE	6	5	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Makoui 6/24/83

Reviewed by: Ali Vaidi 6/24/83

DOCUMENTATION REFERENCES

1. Burns and Roe 1E Electrical Equipment List Rev.6
2. FSAR paragraph 3.11
3. EDS Report 0740-004-471B
4. QID 256016 E
5. Viking Lab, Inc. Test Letter Report 30203-2 11/20/73
6. Supply System Calculation IN-02-83-01

NOTES

Qualified

1. A preventative maintenance surveillance program is being developed to extend the qualified life.

WP-1081

QID #256002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B35

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation Cooling TAG NUMBER RRC-PS-18B MANUFACTURER Barksdale MODEL NUMBER B1T-M12SS-GE COMPONENT Pressure Switch FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 475 COLUMN M.6/8.1	OPERATING TIME	6 months	Equivalent to >6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4	212	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.95	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal accident profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	2×10^6	3	4	Engineering Analysis	None
	AGING	40 years	16 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	4.0%	2.8% Full Scale	7	5	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Richard Martin 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-471D
4. QID #256002
5. Barksdale Environmental Test. Delaval Turbines Inc. Test Procedure 9993 Report dated August 13, 1975.
6. BRI Calc. #5.51.055
7. SS Calculation IN-02-83-01

NOTES

Qualified

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

WPPSS QID# 361015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation TAG NUMBER RRC-V-19 MANUFACTURER Target Rock MODEL NUMBER 82M-001 COMPONENT Solenoid Operated Valve FUNCTION/SERVICE • 1.0" Solenoid Sample Valve LOCATION: BLDG Containment ELEVATION 509 COLUMN 319DAZR35	OPERATING TIME	4320 hours		1			Note 1
	TEMPERATURE (F)	135 Ave. Normal 150 Max. Abnormal Accident Profile 1		2			
	PRESSURE (PSIA)	14.7 Max. Normal 1 .7 Max. Abnormal Accident Profile 1		2			
	RELATIVE HUMITY (%)	55 Max. Normal 90 Max. Abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized Water		2			
	RADIATION (RAD)	7×10^7		2			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV: (Ref. 4)
ABOVE FLOOD LEVEL?
YES X NO

Prepared by: Behzad Nakhai 6/24/83 Reviewed by: Ali Nasseri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev. 8, dated 6/1/83 2. FSAR paragraph 3.11	1. This component is on Table B of the JIO and does not require qualification prior to fuel load.

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WPPSS QID #361003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation Cooling TAG NUMBER RRC-V- 20 MANUFACTURER Marotta MODEL NUMBER MV36RP-H3 COMPONENT Solenoid Valve FUNCTION/SERVICE RRC Sample Line Isolation Valve LOCATION: Bldg Reactor ELEVATION 506 COLUMN J.0/6.9	OPERATING TIME	24 Hours	Equivalent to >4320 Hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	221° F	2	4	Materials Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4	5×10^6	3	4	Materials Test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Materials Test and Engineering Analysis	None
	ACCURACY	N/ A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Rev. 8 , 6/1/83 2. FSAR Par. 3.11 3. EDS Study 0740-004-501K 4. QID 315023 5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83 6. BRI Calc. #5.51.055	Qualified 1. These components are being tested to demonstrate their qualification to IEEE Stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

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WPPSS QID #156003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E31

MPL: E31-N036, E31-N015, E31-N041
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Water Cleanup TAG NUMBER RWCU-FT-15 RWCU-FT-36 RWCU-FT-41 MANUFACTURER G.E. MODEL NUMBER 59-555111BLAA4WCJ -555111BMAA4WBP, 555111BMAA4WBN COMPONENT Flow Transmitter FUNCTION/SERVICE 36: FE 35 Pressure Boundary 37: Pressure Boundary Exr. 41: Flow Transmitter LOCATION: BLDG R ELEVATION 522, 524 COLUMN N.8/5.0	OPERATING TIME	24 Hours	Equilvalent to 24 Hours	1	4, 6	Separate Test and Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4, 23	212	2	6	Separate Test	None
	PRESSURE (PSIA)	14.7 Normal 14.7 Abnormal Accident Profile 4, 23	15.0	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 100 accident	100	2	7	Separate Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	880	1000	3	4	Engineering Analysis	None Note 1
	AGING	40 years	5 years	2	4	Materials Test and Engineering Analysis	None
	ACCURACY	± 5 FSPE	± 5 FSPE	8	4, 6	Separate Test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behrad Mahini 6/24/83 Reviewed by: Ali Nadeni 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-522C
4. QID 156003
5. BRI Calculation #5.51.055
6. GE Test Report #430, dated 12/6/71
7. GE Test Report #327, dated 3/23/67
8. Supply System Calculation # IN-02-83-01

NOTES

Qualified

1. A preventive maintenance program is being developed to extend the qualified life.

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WPPSS

QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP 2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor water clean-up TAG NUMBER RWCU-MO-1 MANUFACTURER Limitorque MODEL NUMBER SMB-0-25/R56 COMPONENT Motor Operator - Reliance RH insulation AC Motor FUNCTION/SERVICE Operates Containment Isolation valve LOCATION: BLDG C ELEVATION 540 COLUMN 150 Degrees	OPERATING TIME	24 hours	Equivalent to > 6 months	4	3	Simultaneous Test	None
	TEMPERATURE (F)	135 max. normal 150 max. abnormal accident: see profile 1	See enclosed profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal accident: see profile 1	See enclosed profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized water	Chemical spray pH 10	1	3	Simultaneous Test	None
	RADIATION (RAD)	7.0×10^7	2.04×10^8	1	3	Sequential Test	None
	AGING	40 years	40 years	1	2, 3, 5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 dated 1/11/80 3. Limitorque Report 600367A dated 5/13/76 4. BRI CIE list, REV 8, 6/1/83 5. QID #221001 6. BRI Calculation #5.51.055	Qualified

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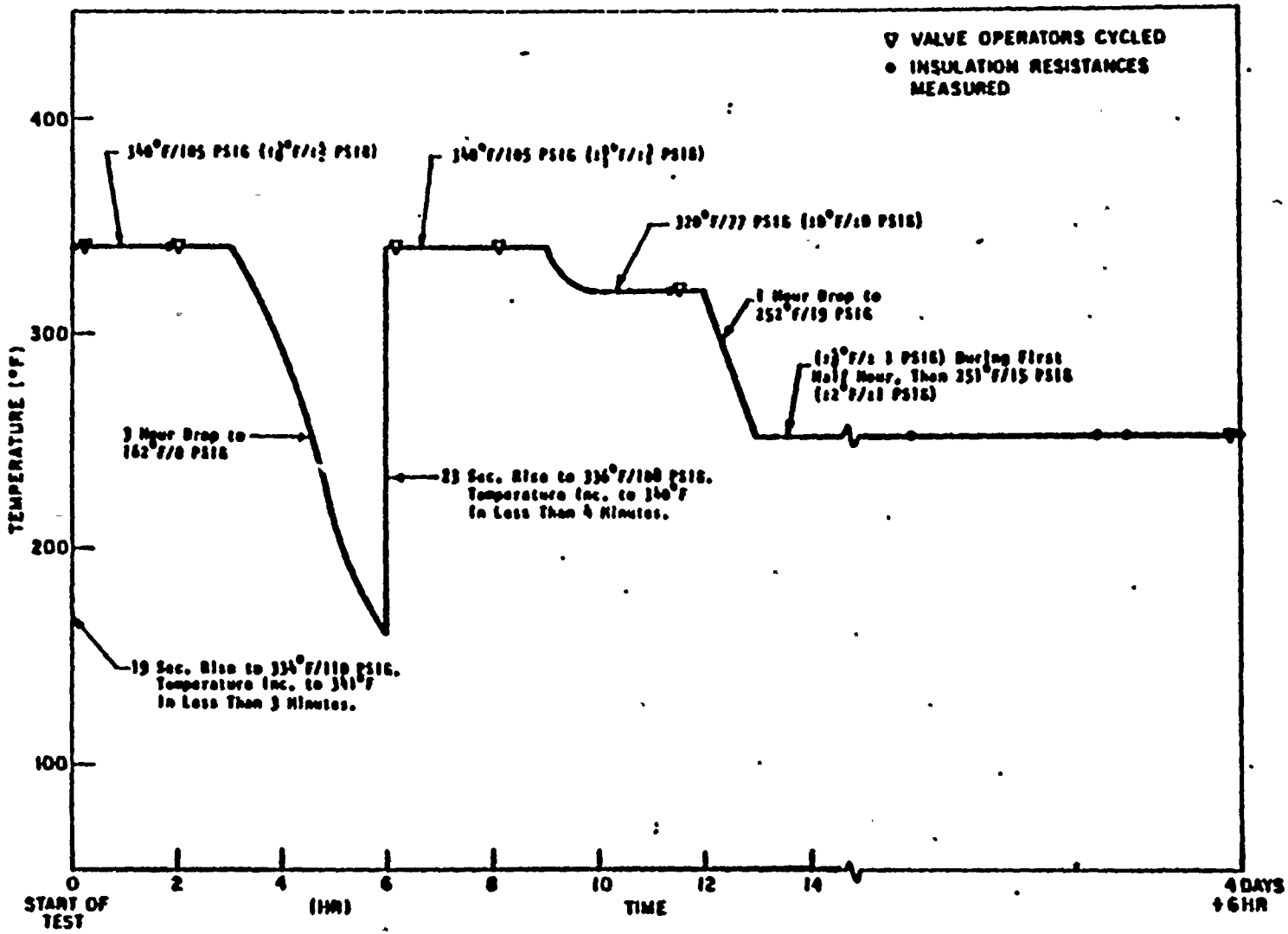

Figure 3. Actual Steam Exposure Profile

F-C3447

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #221001

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Water Clean Up TAG NUMBER RWCU-MO-4 MANUFACTURER Limitorque MODEL NUMBER SMB-0-25/DK56H COMPONENT Porter Peerless Valve Motor Operator DC Motor /Class H FUNCTION/SERVICE Operate RWCU Valve 4 LOCATION: BLDG R ELEVATION 540 COLUMN M.4/5.1	OPERATING TIME	24 hours	Equivalent to > 6 months	5	3,4	Simultaneous Testing, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident: See profile 4,17, 20	See enclosed profile	1	3	Simultaneous Testing	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 17,20	See Enclosed Profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal 100 accident	100%	1	3	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	8.4×10^5	1×10^7	2	3	Sequential Testing	None
	AGING	40 years	40 years	1	3,4	Sequential Testing, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 074-004-522F 3. Limitorque Report B0009, 4/30/76 4. Applicability calculations in QID #221001 5. Bri CIE list, REV 8, 6/1/83 6. BRI Calculation #5.51.055	Qualified.

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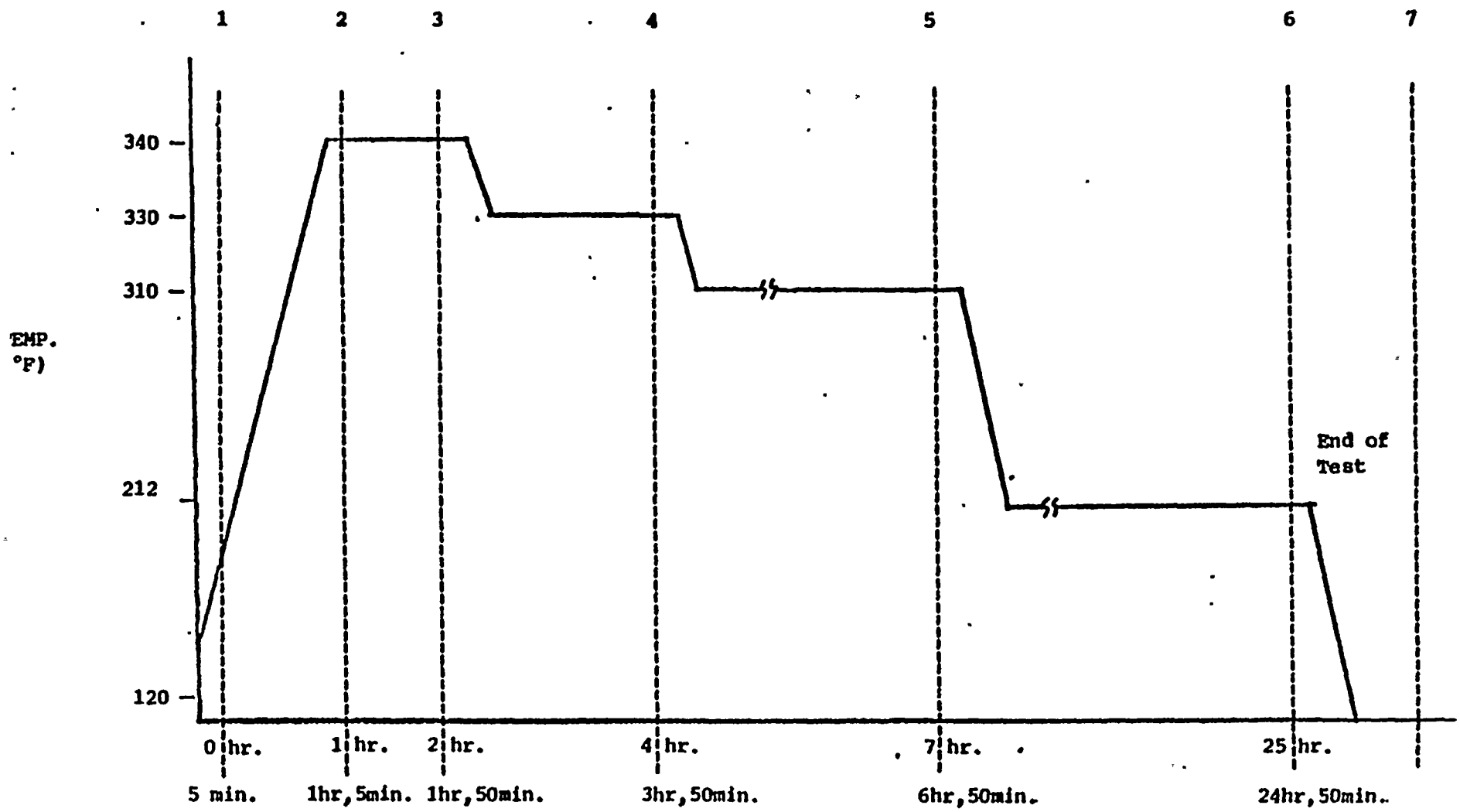
1
2
3
4
5
6
7
340
330
310
EMP.
°F)
212
120
End of
Test
0 hr.
1 hr.
2 hr.
4 hr.
7 hr.
25 hr.
5 min.
1hr,5min.
1hr,50min.
3hr,50min.
6hr,50min.
24hr,50min.

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Water Clean Up TAG NUMBER RWCU-MO-40 MANUFACTURER Limitorque MODEL NUMBER SMB-0-25/R56 COMPONENT Motor Operator Reliance, RH Insulation/AC Motor FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 510 COLUMN J8/4.3	OPERATING TIME	24 hours	Equivalent to > 6 months	4	2,3	Sequential Test	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,14	See enclosed profile	1	2,3	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 14	See enclosed profile	1	2,3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max normal 90 max abnormal 100 accident	100	1	2,3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	2.6×10^6	2.04×10^8	5	2,3	Sequential Test	None
	AGING	40 years	40 years	1	2,3,6	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Nandi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Limitorque Report B0058 3. Limitorque Report 600376A 4. BRI C1E list, REV 8, 6/1/83 5. EDS Study 0740-004-510S 6. QID #221001 7. BRI Calculation #5.51.055	Qualified

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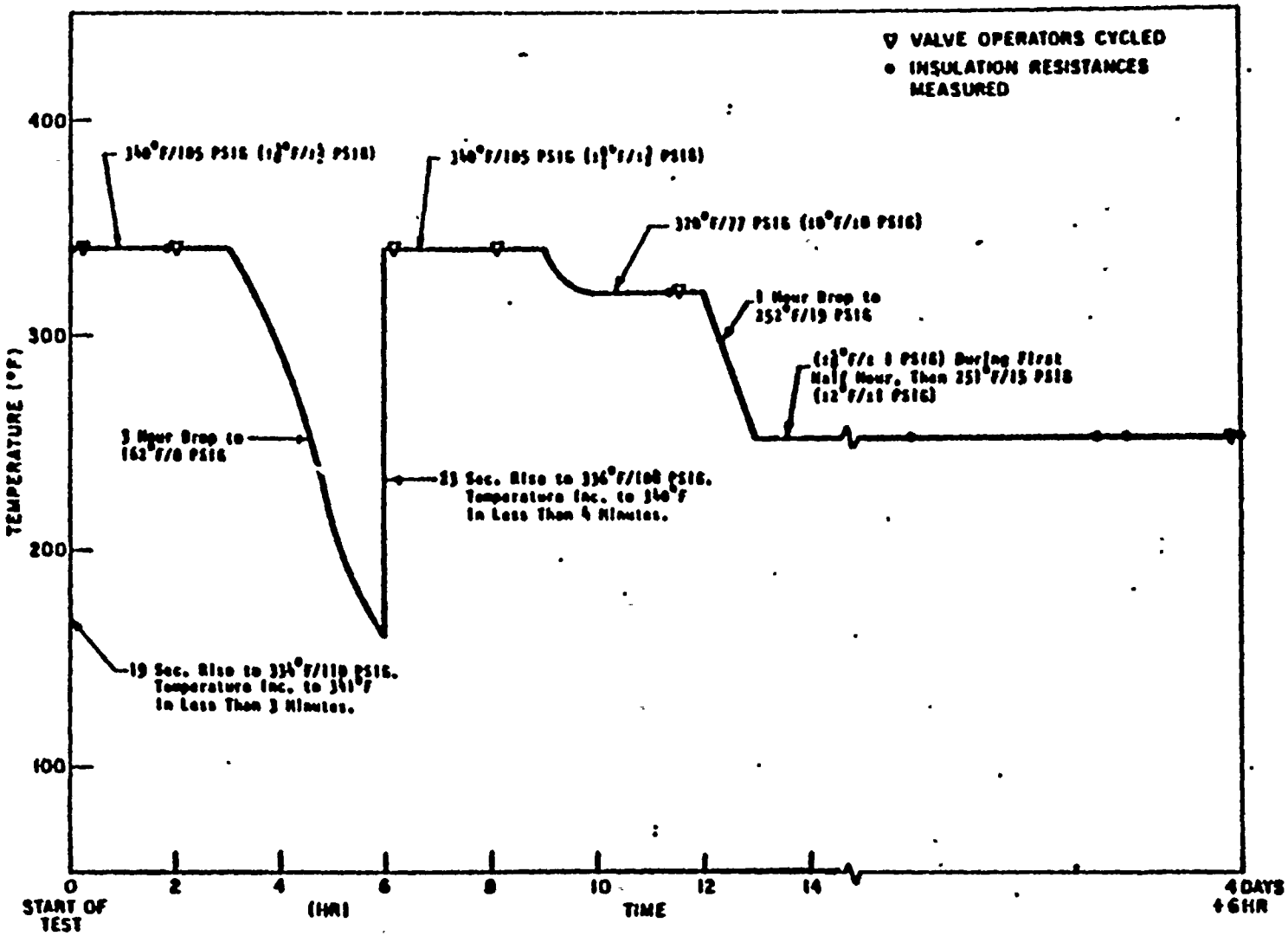

F-C3441

Figure 3. Actual Steam Exposure Profile

WPPSS QID #109008

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-18

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-EHC-1A1, 1A2 -1B1, 1B2 MANUFACTURER Chromalox MODEL NUMBER 27-47499 COMPONENT Heater FUNCTION/SERVICE Limit Relative Humidity LOCATION: BLDG R ELEVATION 576 COLUMN H7/5.6, J.3/5.6	OPERATING TIME	6 months	Equivalent To >6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	248 (de-energized) heater test	2	4	Sequential Test	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: Ali Nasir 6/24/83.

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572N 4. ANCO Test Report A-000021, Plant specific environment study. 5. QID File 109008 6. BRI Calculation #5.51.055	Qualified.

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WPPSS QID #110004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-EHO-1A1 -1A2 -1B1 -1B2	OPERATING TIME	6 months	Equivalent to > 6 months	5	3,4	Simultaneous Test and Engineering Analysis	Note 1
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	150	1	3	Simultaneous Test	Note 1
MANUFACTURER ITT-General Controls	PRESSURE (PSIA)	14.7	N/R	1	N/A	N/A	None
MODEL NUMBER NH91G2073E1F-2N20 -2E2-001 (1A1) COMPONENT Electro-Hydraulic Operator	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	100	1	3	Simultaneous Test	Note 1
FUNCTION/SERVICE	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
Operate inlet vanes for SGT Fans	RADIATION (RAD)	3.0×10^5	3.9×10^7	2	3	Sequential Test	Note 1
	AGING	40 years	10.6 years	1	3,4	Sequential Test Engineering Analysis	Note 1
LOCATION: BLDG R ELEVATION 575 COLUMN H.3/7.8 (1A1) J.2/7.8 (1B1) J4/7.8 (1B2) H6/7.8 (1A2)	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared By: Behzad Makini 6/24/83 Reviewed By: Ali Sadeni 6/24/83

DOCUMENTATION REFERENCES

1. FSAR Par. 3.11
2. EDS Study #0740-004-572N 3
3. MCC Powers #377-80.010 with Appendices A through D
4. Calculation QID 110001
5. BRI Class 1E Equipment List, Rev. 8, 6/1/83
6. BRI Calculation #5.51.055

NOTES

1. The vendor is currently retesting these components. The test results will be evaluated prior to fuel load to resolve discrepancies in the original test program.

WP-1081

WPPSS QID # 154005E

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-FS-2A2 -2B1 MANUFACTURER ITT Barton MODEL NUMBER 289A COMPONENT Flow Switch FUNCTION/SERVICE SGT-PN-1A-2 and -1B-1 discharge-local alarm LOCATION: BLDG R ELEVATION 572 COLUMN H.9/7.8 J.2/8.0	OPERATING TIME	4320 hours	Equivalent to>6 months	1	4,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	212	2	6	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	14.95	2	6	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	3.0×10^6	3	4,5	Separate Test and Engineering Analysis	None
	AGING	40 years	12 years	2	4	Engineering Analysis	None Note 1
	ACCURACY	2.0%	1.5 FSPE	2	6	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Makiri 6/24/83 Reviewed by: Ali Nasseri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8 dated 6/1/83 2. WNP-2 FSAR paragraph 3.11 3. EDS report 0740-004-572N4 4. QID file #086001 5. Qualification test report for Barton 288A switch, report #R3-288A-1 6. Test report for Barton pressure switch 289A, GE report 05991, Rev. 1, 12/7/73 7. BRI Calc. #5.51.055	Qualified 1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

WP-1081

QID #156010

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-FT-1A1, 1A2, 1B1, 1B2 MANUFACTURER Tavis MODEL NUMBER P8C(S) COMPONENT FUNCTION/SERVICE Transmit Fan Flow Signal for Associated SGT Fans LOCATION: BLDG R ELEVATION 585 COLUMN H8/7.1	OPERATING TIME	6 Months	Equivalent to >6 months	1	5,6	Sequential test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident profile 4	221	2	6	Sequential Test	None
	PRESSURE (PSIA)	14.7	14.7	2	6	Sequential Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Max. Abnormal Accident profile 4	90	2	6	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	9.7×10^5	1.4×10^6	3	6	Sequential Test	None
	AGING	40 Years	14 Years	2	5,6	Sequential Test, Engineering Analysis	None See Note 1
	ACCURACY	± 5 FSPE	± 5 FSPE	4	5,6	Sequential test and Engineering Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: [illegible] 6/24/83

Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE List, Rev. 8, 6/1/83
2. FSAR Para. 3.11
3. EDS Calc. 0740-004-572N2
4. Supply System Calc. No. IN-02-83-01
5. QID 156005-E
6. Acton Test Report No. 15030-5A, Rev. 3, dated 12/8/81.
7. BRI Calc. No. 5.51.055

NOTES

1. A preventive maintenance/surveillance program is being developed to extend the qualified life.

Qualified

WP-1081

WPPSS QID #213017

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

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PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-M-FN-1A1,2 -1B1,2 MANUFACTURER Westinghouse MODEL NUMBER TBDP COMPONENT Fan Motor FUNCTION/SERVICE Motor for SGT-FN-1A1 -1A2 -1B1 -1B2 LOCATION: BLDG R ELEVATION 576 COLUMN H.5/7.6 H 9/7.6 J2/7.6 J.5/7.6	OPERATING TIME	6 months	Equivalent to >6 months	1	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident profile 4	150	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident profile 4	100	2	4	Sequential Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	3.03×10^5	9.4×10^6	3	5	Sequential Test	None
	AGING	40 years	40 years	2	5	Simultaneous Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behnad Mahini 6/24/83 Reviewed by: Ali Nasseri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572N 4. W Report MM-9112, Class 1E medium A.C. masters dated Nov. 18, 1980, Rev. 4 5. QID #213017 6. BRI Calc. #5.51.055	Qualified.

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QID #217001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-18

MPL:
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-ME-6A1,A2,A3 -7A1,A2,A3 -6B1,B2,B3 -7B1,B2,B3 MANUFACTURER Hygrometrix MODEL NUMBER XHS/7AP COMPONENT Xeristat Moisture Control System FUNCTION/SERVICE Heater control to limit relative hum. LOCATION: BLDG R ELEVATION 572 COLUMN Note 1	OPERATING TIME	6 months	Equivalent to >6 months	1	4,5	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	250	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident profile 4	90	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	5.0×10^7	3	4	Sequential Test	None
	AGING	40 years	+ 40 years	2	4,5	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	7	4	Sequential Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nasseri 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Par. 3.11
3. EDS Report 0740-004-572N
4. Work Release Order No. 002, Contract No. C-0608, from WPPSS to ANCO Engineers, Document No. A-000021
5. QID File #217001
6. BRI Calc. #5.51.055
7. SS Calc. file #IN-02-83-01

NOTES

Qualified

1. Tag No. — Location

Tag No.	Location
SGT-ME -6A1,A2,A3 -7A1,A2,A3	H.8/5.5
SGT-ME -6B1,B2,B3 -7B1,B2,B3	J.4/5.5

WP-1001

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-MO-See Note 1 MANUFACTURER Limitorque MODEL NUMBER SMB-00-10/P56 COMPONENT Reliance Motor Operator AC Motor Class B Ins. FUNCTION/SERVICE Various Valve Operators LOCATION: BLDG R ELEVATION COLUMN See Notes Below	OPERATING TIME	6 months	Equivalent to>6 months	1	3,5	Sequential Test Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4	See enclosed profile	2	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed profile	2	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal Accident Profile 4	100	2	3	Simultaneous	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	2×10^7	6	3	Sequential Test	None
	AGING	40 years	40 years	2	3,5,4	Sequential Test	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Bahzad Makini 6/24/83 Reviewed by: Al Arden 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list Rev. 8, dated 6/1/83
2. FSAR Par. 3.11
3. Limitorque Test Report B003 with Addendum A dated 5/8/76
4. Limitorque Test Report B0058, 1/11/80
5. QID #221001
6. EDS Report 0740-004-572N
7. BRI Calculation #5.51.055

NOTES

Qualified

Tag Number	Location	Tag Number	Location	Tag Number	Location
SGT-MO-1A	H.8/5.2,582	SGT-MO-4A1	H.4/7.0,588	SGT-MO-5A1	H.4/7.0
-1B	J.4/5.2,584	-4A2	J.0/7.0,588	-5A2	H.9/7.0
-3A1	H.7/7.7,578	-4B1	J.0/7.0,587	-5B1	J.1/7.0
-3A2	H.8/7.7,578	-4B2	J.3/7.0,587	-5B2	J.6/7.0
-3B1	J.3/7.7,578				
-3B2	J.6/7.7,578				

WP-1001

TEMPERATURE PROFILE

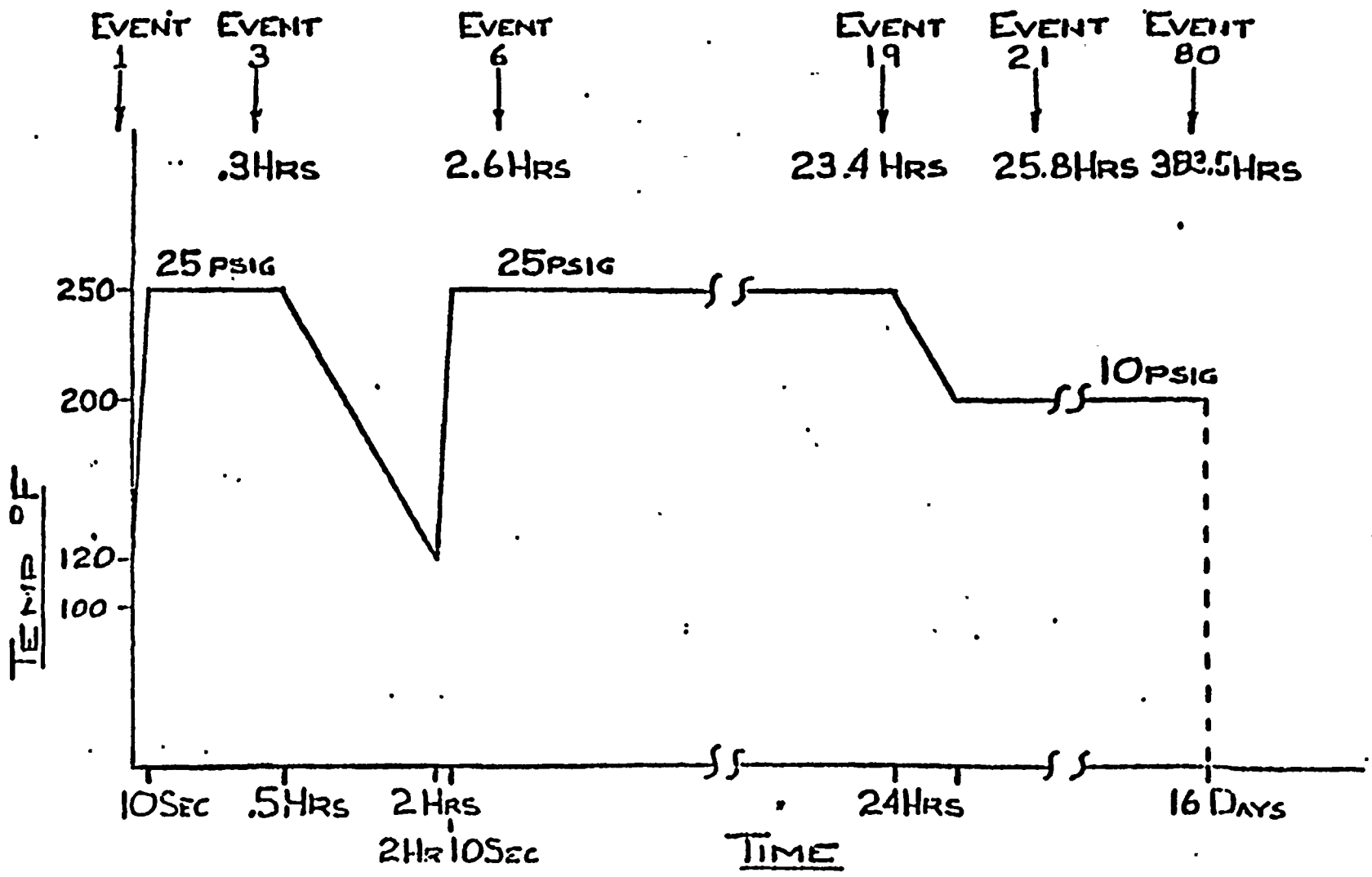

FIGURE 1

WPPSS QID #200015

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-POS-V/2A 2B MANUFACTURER Namco MODEL NUMBER 74080100 COMPONENT Limit Switches FUNCTION/SERVICE V-2A,B Position Indicator LOCATION: BLDG R ELEVATION 583 COLUMN J.3/5.5, J.4/5.2	OPERATING TIME	6 months	Equivalent to or > 6 months	1	4,5	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Profile 4 Accident	See enclosed LOCA test.	2	4,5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	See enclosed LOCA test	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Profile 4 Accident	See enclosed LOCA test	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	N/A
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Sequential Test	None
	AGING	40 years	40 years	2	4,5	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nasiri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8 dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572N 4. Qualification of NAMCO Controls Limit Switch Model EA-740 to IEEE Stds. 344 (1975), 323 (1974) and 382 (1972), Rev. 1, dtd 2/22/79; Rev. 0, dtd 2/20/78 5. QID #200015 6. BRI Calc. #5.51.055	Qualified.

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WPPSS QID #315007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-18

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-SPV-F1, F2, F3, F4, F5, F6 MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER 8211 D2MO COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE ½" S. O. Deluge Valve Assy SGT-DV-1B LOCATION: BLDG R ELEVATION See Note 2 COLUMN See Note 2	OPERATING TIME	6 months	>6 months	1	4	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Profile 4	Envelopes Profile 4 with >8C margin	2	4	Simultaneous Test, Engineering Analysis	None
	PRESSURE (PSIA)	14.7	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 max. normal 90 max. normal Profile 4	(<90%)	2	6	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	6.8×10^4	4.4×10^6	3	5	Engineering Analysis	None
	AGING	40 years	7 years	2	4	Operating Experience Maintenance	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 7)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-572N1 4. Calculation QID315004-1 5. Calculation QID315004-2 6. Calculation QID315004-3 7. BRI Calculation #5.51.055	Qualified 1. The solenoid valves will be rebuilt on a schedule based on the 7-year qualified life and coils will be changed to HT prior to plant operation.

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WPPSS QID #315007

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-18

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2.

EPN	ELEV.	COLUMN
SGT-SPV-F1	579	H.4/3.8
-F2	579	H.4/3.9
-F3	576	H.4/3.9
-F4	576	H.4/3.8
-F5	576	H.6/3.8
-F6	579	H.6/3.8

WP-1083

By: Behzad Makiné 6/24/83

ck'd: Ali Nadiri 6/24/83

WPPSS

QID #315006

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-SPV-2A, 2B MANUFACTURER Automatic Switch (ASCO) MODEL NUMBER WJNP 8316 64E COMPONENT Solenoid Pilot Valve FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 576, 577 COLUMN H.9/5.2 J.1/5.2	OPERATING TIME	6 months	Equivalent to >6 months	1	5,6	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	346	2	5	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	124.7	2	5	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 max normal 90 abnormal Accident Profile 4	100	2	5	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	6.8×10^4	2×10^8	2	5	Sequential Test	None
	AGING	40 years	40 years	2	5,6	Sequential test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83

Reviewed by: Ali Sadeni 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, Rev.8, dated 6/1/83 2. FSAR Para 3.11 and WPPSS Calculation NE-02-82-14-0 3. EDS Study 0740-004-572N1 4. BRI Calculation #5,51,055 5. ASCO Test Report No.AQS21678/TR, Rev.A, July 1979 6. QID 315004-E	Qualified

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WPPSS QID #355003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-TS-(see note 1) MANUFACTURER Fenwal MODEL NUMBER 18000-0 COMPONENT Temperature switch FUNCTION/SERVICE Control of heater LOCATION: BLDG R ELEVATION 572' COLUMN H4/5.9 H.8/6 J.5/6 J.2/6	OPERATING TIME	6 months	Equivalent to>6 months	1	4	Simultaneous Test Engineering Analysis	None
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4	248	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4	65	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	2×10^8	3	4	Simultaneous Test	None
	AGING	40 years	40 years	2	4	Sequential Test Engineering Analysis	None
	ACCURACY	N/A	N/A	6	N/A	N/A	N/A

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list for WNP-2, Rev. 8 dated 6/1/83 2. FSAR Par. 3.11 3. EDS Report 0740-004-572N 4. Work Release Order No. 002, Contract No. C-0608, from WPPSS to ANCO Engineers, Document No. A-000021 5. BRI Calc. #5.51.055 6. SS Calc. IN-02-83-01	Qualified See next page for note 1

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	1. TAG NUMBERS SGT-TS-EH1A110 -EH1A11 -EH1A111 -EH1A112 -EH1A113 -EH1A114 -EH1A115 -EH1A116 -EH1A117 -EH1A118 -EH1A12 -EH1A13 -EH1A14 -EH1A15 -EH1A16 -EH1A17 -EH1A18 -EH1A19 -EH1A21 -EH1A210 -EH1A211 -EH1A212 -EH1A213 -EH1A214 -EH1A215 -EH1A216 -EH1A217 -EH1A218 -EH1A22 -EH1A23 -EH1A24 -EH1A25 -EH1A26 -EH1A27 -EH1A28 -EH1A29 -EH1B110 -EH1B11 -EH1B111 -EH1B112 SGT-TS-EH1B113 -EH1B114 -EH1B115 -EH1B116 -EH1B117 -EH1B118 -EH1B12 -EH1B13 -EH1B14 -EH1B15 -EH1B16 -EH1B17 -EH1B18 -EH1B19 -EH1B21 -EH1B210 -EH1B211 -EH1B212 -EH1B213 -EH1B214 -EH1B215 -EH1B217 -EH1B218 -EH1B22 -EH1B23 -EH1B24 -EH1B25 -EH1B26 -EH1B27 -EH1B28 -EH1B29

Prepared by: Behnad Makini 6/24/83 Reviewed by: Ali Naderi 6/24/83

QID #361003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02 C41

MPL: C41-F004
PPD: 21A9370

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Liquid Control TAG NUMBER SLC-V-4A -4B MANUFACTURER Conax MODEL NUMBER 1832159 COMPONENT Valve and Trigger Assembly FUNCTION/SERVICE SLC Inlet Valve LOCATION: BLDG R ELEVATION 554 COLUMN M.2/3.7	OPERATING TIME	6 months	Equivalent to > 6 months	4	2,5	Simultaneous Testing Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4	185 maximum	1	2	Simultaneous Testing	None
	PRESSURE (PSIA)	Normal 14.7	14.7	1	N/A	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal Accident Profile 4	100%	1	2	Simultaneous Testing	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1.1×10^4	2.2×10^4	3	2	Sequential Testing	None
	AGING	40 years	2 years	1	5	Engineering Analysis	None Note 1
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 6)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. Conax TR-39, 12/22/76 3. EDS Study 0740-004-548C 4. BRI CIE list, REV 8, 6/1/83 5. Calculations in QID No. 361003 6. BRI Calculation #5.51.055	Qualified. 1. The qualified life was calculated based on a conservative activation energy of 0.5 ev. Materials data is being obtained to determine a realistic life.

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WPPSS QID #339002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-218

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Suppression Pool Temperature Monitoring TAG NUMBER SPTM-TE-(Note 2) MANUFACTURER Hy-Cal Engineering MODEL NUMBER TC-113X-T-A-24-3 COMPONENT Thermocouple FUNCTION/SERVICE Suppression Pool Temp., Operator info. LOCATION: BLDG C ELEVATION 446 COLUMN Suppression Pool	OPERATING TIME	6 months	Equivalent to >6 months	1	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	135 normal 150 abnormal Accident Profile 1	Profile 1	2	4	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident Profile 1	Profile 1	2	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2	100	2	4	Simultaneous Test	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Simultaneous Test and Engineering Analysis	None
	RADIATION (RAD)	9.0×10^7	1×10^8	2	4	Sequential Test	None
	AGING	40 years	40 years	2	3	Engineering Analysis	None
	ACCURACY	2%	0.75%	5	3	Simultaneous Test	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO X (Ref. 3)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nadir 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list Rev. 8, dated 6/1/83 2. FSAR Par. 3.11 3. QID 339002 4. Qualification testing by Wyle Labs. 3 TE-1F Thermocouples for Fischbach /Lord. 12/31/79 Report No. 58486 5. Supply System Calc. IN-02-83-01	Qualified

WP-1081

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. TAG NUMBERS SPTM-TE-1A -1B -10 -11 -12 -13 -14 -15 -16 -2A -2B -3A -3B -4A -4B -5A -5B -6A -6B -7A -7B -8A -8B -9

Prepared by: Bckyrd Mathini 6/24/83 Reviewed by: Ali Nadim 6/24/83

WPPSS QID #049009

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C51

MPL:
PPD:

PAGE NO: 4
REVISION:
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Source Range Monitor TAG NUMBER SRM-CONN-01 02 03 04 MANUFACTURER General Electric Co. MODEL NUMBER 11485388G004 COMPONENT Connector FUNCTION/SERVICE Connectors for SRM-DET LOCATION: BLDG C ELEVATION Beneath RPV COLUMN	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	135 normal 150 abnormal Accident profile 1		2			
	PRESSURE (PSIA)	14.7 normal 16.7 abnormal Accident profile 1		2			
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident profile 2		2			
	CHEMICAL SPRAY	Demineralized water		2			
	RADIATION (RAD)	7.0×10^7		2			
	AGING	40 Years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared By: _____

Reviewed By: _____

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Rev. 8 2. FSAR Paragraph 3.11 3. BRI Calc. #5.51.055	1. Qualification data is being obtained from General Electric. Qualification will be completed prior to fuel load.

WP-1081

QID # 067003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Source Range Monitor TAG NUMBER SRM-DET-1A, B, C, D MANUFACTURER General Electric MODEL NUMBER 807E162TC COMPONENT Radiation Monitor FUNCTION/SERVICE LOCATION: BLDG C ELEVATION COLUMN In RPV	OPERATING TIME	6 months	Note 1	1			
	TEMPERATURE (F)	135 max. normal 150 abnormal Accident - see profile 1		2			
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Accident - see profile 1		2			
	RELATIVE HUMITY (%)	55 normal 90 abnormal Accident Profile 2		2			
	CHEMICAL SPRAY	Demineralized water		2			
	RADIATION (RAD)	7.0×10^7		2			
	AGING	40 years		2			
	ACCURACY	8%		4			

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 3)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list Rev. 8, dated 6/1/83. 3. BRI Calc. #5.51.055 4. SS Calculation IH-02-83-01	1. Discussions are being held with General Electric to obtain qualification data. Requalification activities will be implemented, if required. Equipment justification #18 in Appendix D is provided for SRM-DET-1D. SRM-DET-1A, 1B, and 1C are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS QID #106002

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C51

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Source Range Monitor TAG NUMBER SRM-EAMP-1A,B,C,D	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	90 max. normal 104 max. abnormal accident profile 4		2			
MANUFACTURER G.E. MODEL NUMBER 112C2276G001	PRESSURE (PSIA)	14.7		2			
COMPONENT Voltage Amplifier	RELATIVE HUMITY (%)	40 normal 90 max. abnormal Accident Profile 4		2			
FUNCTION/SERVICE Amps for SRM-DET	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	4.7×10^5		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 501 COLUMN L.6/3.5 L.5/3.5 H.4/7.7 H.8/8.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared By: Behzad Mahini 6/24/83 Reviewed By: Ali Nouri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI Class 1E Equipment List, Rev. 8 dated 6/1/83 2. FSAR Paragraph 3.11 3. EDS Report 0740-004-501K, B 4. BRI Calculation #5.51.055	1. Qualification data is being obtained from General Electric. Qualification will be completed prior to fuel load.

WP-1081

WPPSS QID 221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW-MO-187A SW-MO-187B SW-MO-188A SW-MO-188B	OPERATING TIME	6 months	Note 1	1	1		
	TEMPERATURE (F)	90 normal 104 abnormal Accident profile 4		2			
MANUFACTURER	PRESSURE (PSIA)	Normal 14.7		2			
MODEL NUMBER SMB -00 COMPONENT	RELATIVE HUMITY (%)	40 normal 90 normal Accident Profile 4		2			
FUNCTION/SERVICE MO Service Water	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	
	RADIATION (RAD)	1.5×10^5		3			
	AGING	40 years		2			
LOCATION: BLDG R548 ELEVATION COLUMN	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Makim 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Study 0740-004-548L 4. BRI Calc. #5.51.055	1. The components were shipped with the wrong motors. Qualified motors are being obtained from the vendor. Equipment justification #19 in Appendix D is provided for SW-MO-187A and 188 A. SW-MO-187B and 188B are on Table B of the JIO and do not require qualification prior to fuel load.

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WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215
MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW-MO-24A -24B -24C -44 -54 MANUFACTURER Limitorque MODEL NUMBER SMC-04-5/42 COMPONENT Reliance Motor Operator AC Motor/Class B Insulation FUNCTION/SERVICE Operate SW Valves LOCATION: BLDG R ELEVATION 448,450,450,450 COLUMN K6/8,L8/8.3,H7/4.4,M8/3.9 K.6/3.8	OPERATING TIME	6 months	Equivalent to > 6 months	3	4,5	Simultaneous Test, Engineering Analysis	None
	TEMPERATURE (F)	90 max normal 104 max abnormal Accident Profile 4,8	See enclosed profile	1	4	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 8	See enclosed profile	1	4	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 normal 90 max abnormal 100 max accident	Steam for 24 hours 100% for 15 days	1	4	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	2×10^7	2	4	Sequential Test	None
	AGING	40 year	40 years +	1	4,5	Sequential Test, Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 6)

Prepared by: Behzad Makini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-441J (worst case) 3. BRI CIE list, REV 8, 6/1/83 4. Limitorque Reports B0003, 5/76; B0058, 1/11/80 5. QID #221001 6. BRI Calculation #5.51.055	Qualified.

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TEMPERATURE PROFILE

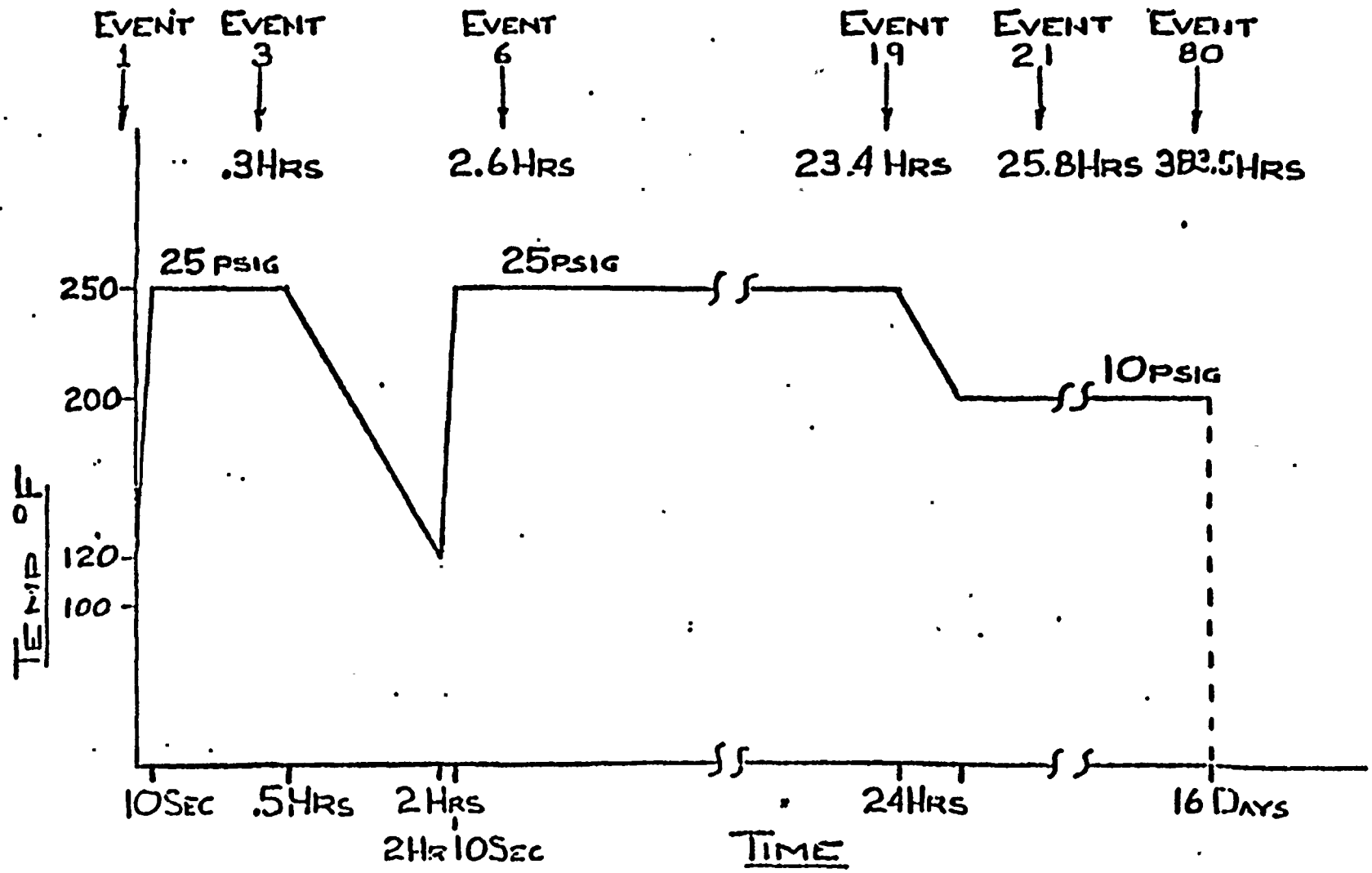

FIGURE 1

WPPSS QID #221001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Service Water TAG NUMBER SW-MO-75A -75B MANUFACTURER Limitorque MODEL NUMBER SMB-00 COMPONENT Motor Operator Class H/AC FUNCTION/SERVICE Motor Operator for SW-V-75A -75B LOCATION: BLDG R ELEVATION 522 COLUMN J/9.4, M6/9.4	OPERATING TIME	6 months	Equivalent to >6 months	3	4,6	Simultaneous Test and Engineering Analysis	None Note 1
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profile 4,11	See Enclosed Profile	1	6	Simultaneous Test	None
	PRESSURE (PSIA)	Normal 14.7 Accident Profile 11	See Enclosed Profile	1	6	Simultaneous Test	None
	RELATIVE HUMITY (%)	40-70 normal 90 abnormal 80 accident	100	1	6	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	None
	RADIATION (RAD)	1×10^6	2×10^7	2	6	Sequential Test	None
	AGING	40 years	40 years	1	4,6,7	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Sadri 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. EDS Study 0740-004-522H (worst case) 3. BRI CIE list Rev. 8, dated 6/1/83 4. QID #221001 5. BRI Calculation #5.51.055 6. Limitorque Report B0009, 4/30/76 7. Limitorque Report B00058 dated 1/11/80	Qualified

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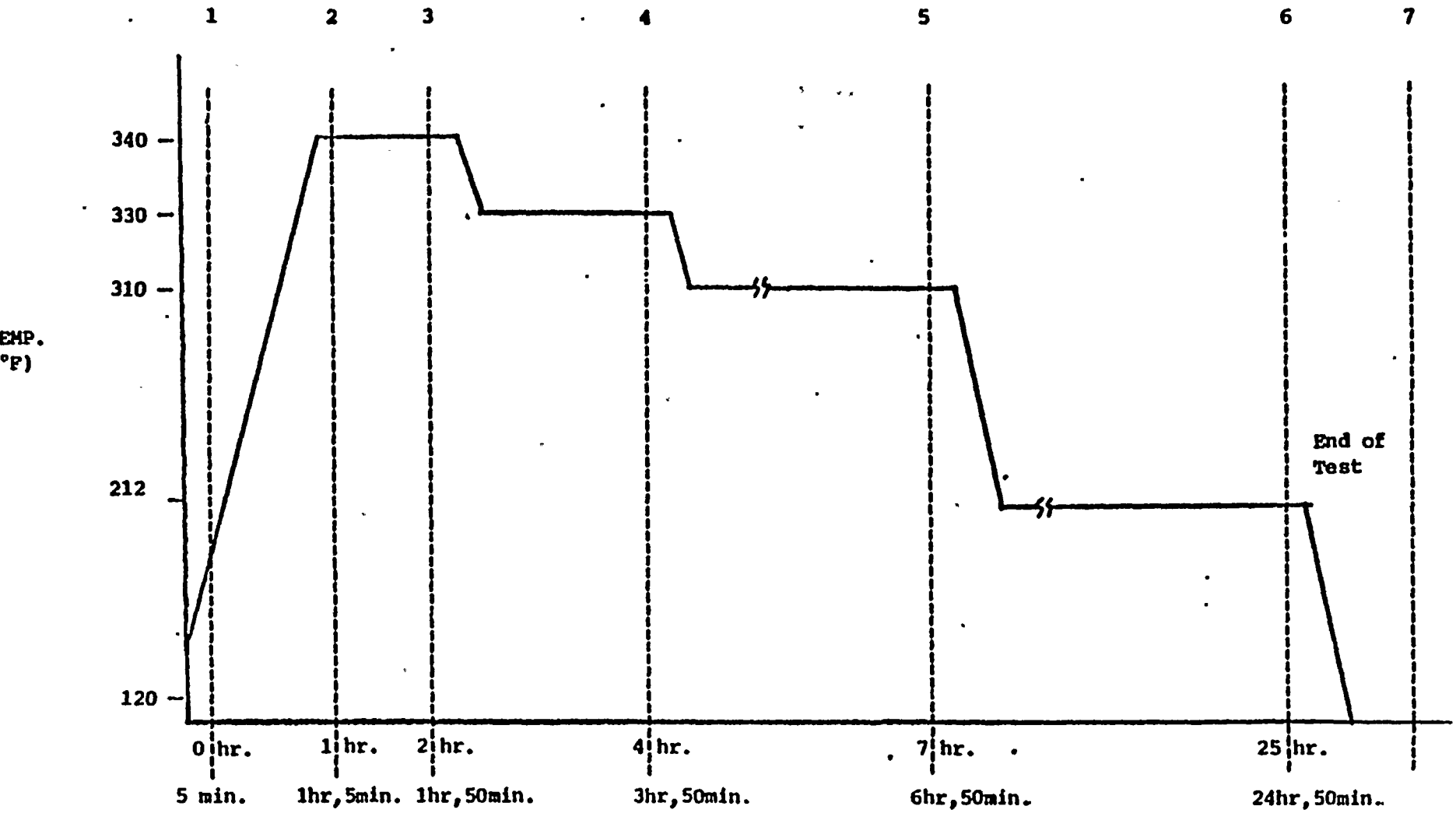
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340
330
310
212
120
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Test
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1 hr.
1hr,5min.
2 hr.
1hr,50min.
4 hr.
3hr,50min.
7 hr.
6hr,50min.
25 hr.
24hr,50min.

WPPSS QID #256001

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW-PS-1014 -1015	OPERATING TIME	4320 hours		2			Note 1
	TEMPERATURE (F)	90 normal 104 abnormal 106 accident		1			
MANUFACTURER Asco MODEL NUMBER SC11AR/TG10A44R	PRESSURE (PSIA)	14.7	N/A	1	N/A	N/A	
COMPONENT Switch	RELATIVE HUMITY (%)	40 normal 90 abnormal 90 accident		1			
FUNCTION/SERVICE Supply to H_2 - O_2 analyzer	CHEMICAL SPRAY	N/A	N/A	1	N/A	N/A	
	RADIATION (RAD)	1×10^6		3			
	AGING	40 years					
LOCATION: BLDG R ELEVATION 554 COLUMN M.7/4.5 M.6/4.9	ACCURACY	N/A	N/A	N/A	N/A	N/A	

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 4)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nadim 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR Par. 3.11 2. BRI CIE list, REV 8, 6/1/83 3. EDS Study 0740-004-548E 4. BRI Calc. #5.51.055	1. The vendor is currently testing this component. Equipment justification #20 in Appendix D is provided for SW-PS-1014. SW-PS-1015 is on Table B of the JIO and does not require qualification prior to fuel load.

WP-1081

WPPSS

QID324004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW- V-201, 206, 211, 213 MANUFACTURER Marotta MODEL NUMBER HV229HS-L2 COMPONENT Solenoid Valve FUNCTION/SERVICE	OPERATING TIME	4320 hours		1			Note 1
	TEMPERATURE (F)	90 Normal 104 Abnormal		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal		2			
	CHEMICAL SPRAY	N/A					
	RADIATION (RAD)	1×10^6		2			
	AGING			2			
LOCATION: BLDG R ELEVATION 548 COLUMN H.6/4.3 H.6/5.0 N.0/4.3 H.6/4.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: [illegible] 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Paragraph 3.11 3. EDS Study 0740-004-548 E, F 4. Wyle Laboratories Report 26367-03 5. BRI Calc. #5.51.055	1. The qualified life of these valves will be changed pending the outcome of a qualification program currently being negotiated with manufacturer. Equipment justification #21 in Appendix D is provided for SW-V-201 and 213. SW-V-206 amd 211 are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

WPPSS

QID324004

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW- V-204, 209, 210, 212 MANUFACTURER Marotta MODEL NUMBER MV229MQ-L2 COMPONENT Solenoid Valve FUNCTION/SERVICE	OPERATING TIME	4320 hours		1			Note 1
	TEMPERATURE (F)	90 normal 104 abnormal		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 normal 90 abnormal		2			
	CHEMICAL SPRAY	N/A		2			
	RADIATION (RAD)	1.0×10^6		3			
	AGING	40 years		2			
LOCATION: BLDG R ELEVATION 548 COLUMN M.6/4.3 M.6/5.0 M.6/5.0 M.6/4.3	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahvai 6/24/83 Reviewed by: Ali Naderi 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. BRI CIE list, REV 8, 6/1/83 2. FSAR Para 3.11 3. EDS Study 0740-004-548E, F 4. Wyle Laboratories Report 26367-03 5. BRI Calc. #5.51.055	1. The qualification status of these valves will be changed as a result of the outcome of a Qualification Program currently being neggtiated with manufacturer. Equipment justification #20 in Appendix D is provided for SW-V-204 and 212. SW-V-209 and 210 are on Table B of the JIO and do not require qualification prior to fuel load.

WP-1081

QID 361003

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO:
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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW-V-34 MANUFACTURER Marotta MODEL NUMBER MV252-1 COMPONENT Solenoid Valve FUNCTION/SERVICE Operate SW-V-34, RCIC Pump Room Return LOCATION: BLDG R ELEVATION 452 COLUMN H.7/8.0	OPERATING TIME	24 Hours	Equivalent to >4320 Hours	1	4	Engineering Analysis	None
	TEMPERATURE (F)	90 normal 104 abnormal Accident Profiles 4,	221° F	2	4	Materials Test and Engineering Analysis	None
	PRESSURE (PSIA)	14.7	14.7	2	4	Engineering Analysis	None
	RELATIVE HUMITY (%)	40 normal 90 abnormal 68 accident	90	2	4	Engineering Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	5×10^6	3	4	Materials test and Engineering Analysis	None
	AGING	40 years	40 years	2	4	Materials Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	Mpme

FLOOD LEVEL ELEV: (Ref. 6)
ABOVE FLOOD LEVEL?
YES x NO (Ref. 4)

Prepared by: Behzad Malini 6/24/83 Reviewed by: Ali Nadeni 6/24/83

DOCUMENTATION REFERENCES

1. BRI Class 1E Equipment List, Rev. 8 dated 6/1/83
2. FSAR Paragraph 3.11
3. EDS Calc. #0740-004-441I
4. QID 315023
5. Performance Specification for Marotta Solenoid Valves, Wyle Report #26411, dated 4/27/83
6. BRI Calc. #5.51.055

NOTES

Qualified

1. These components are being tested to demonstrate their qualification to IEEE Stds 323-1974 and 344-1975. Qualification objectives are identified in [5]. Interim qualification is addressed in QID 315023 [4].

WP-1081

WPPSS QID #361014

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-220

MPL:
PPD:

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DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Service Water TAG NUMBER SW-V-840 -842 -844 -846 MANUFACTURER Valcor MODEL NUMBER V526-5683 COMPONENT Solenoid Valve FUNCTION/SERVICE SW System Boundary LOCATION: BLDG R ELEVATION 479 COLUMN L.9/9.2	OPERATING TIME	4320 hours	Equivalent to >4320 hours	2	3,4	Simultaneous Test and Engineering Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Accident Profile 4,9	See Enclosed Profile	1	3	Simultaneous Test	None
	PRESSURE (PSIA)	14.7 Normal Accident Profile 4	See Enclosed Profile	1	3	Simultaneous Test	None
	RELATIVE HUMITY (%)	40 Normal 90 Abnormal 100 Accident	100	1	3	Simultaneous Test	None
	CHEMICAL SPRAY	N/A	N/A	N/A	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	2×10^8	6	3	Simultaneous Test	None
	AGING	40 years	40 years	1	3,4	Sequential Test and Engineering Analysis	None
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES X NO (Ref. 5)

Prepared by: Behzad Mahini 6/24/83 Reviewed by: Ali Nadim 6/24/83

DOCUMENTATION REFERENCES	NOTES
1. FSAR paragraph 3.11 2. BRI CIE list Rev. 8, dated 6/1/83 3. Report QR52600-5940-2, Qualification Test Report on SNUPPS Solenoid Valves, 7/11/79, with Attachments I through XII. 4. QID #361014 5. BRI Calc. #5.51.055 6. EDS Study 0740-004-471D	Qualified

WP-1081

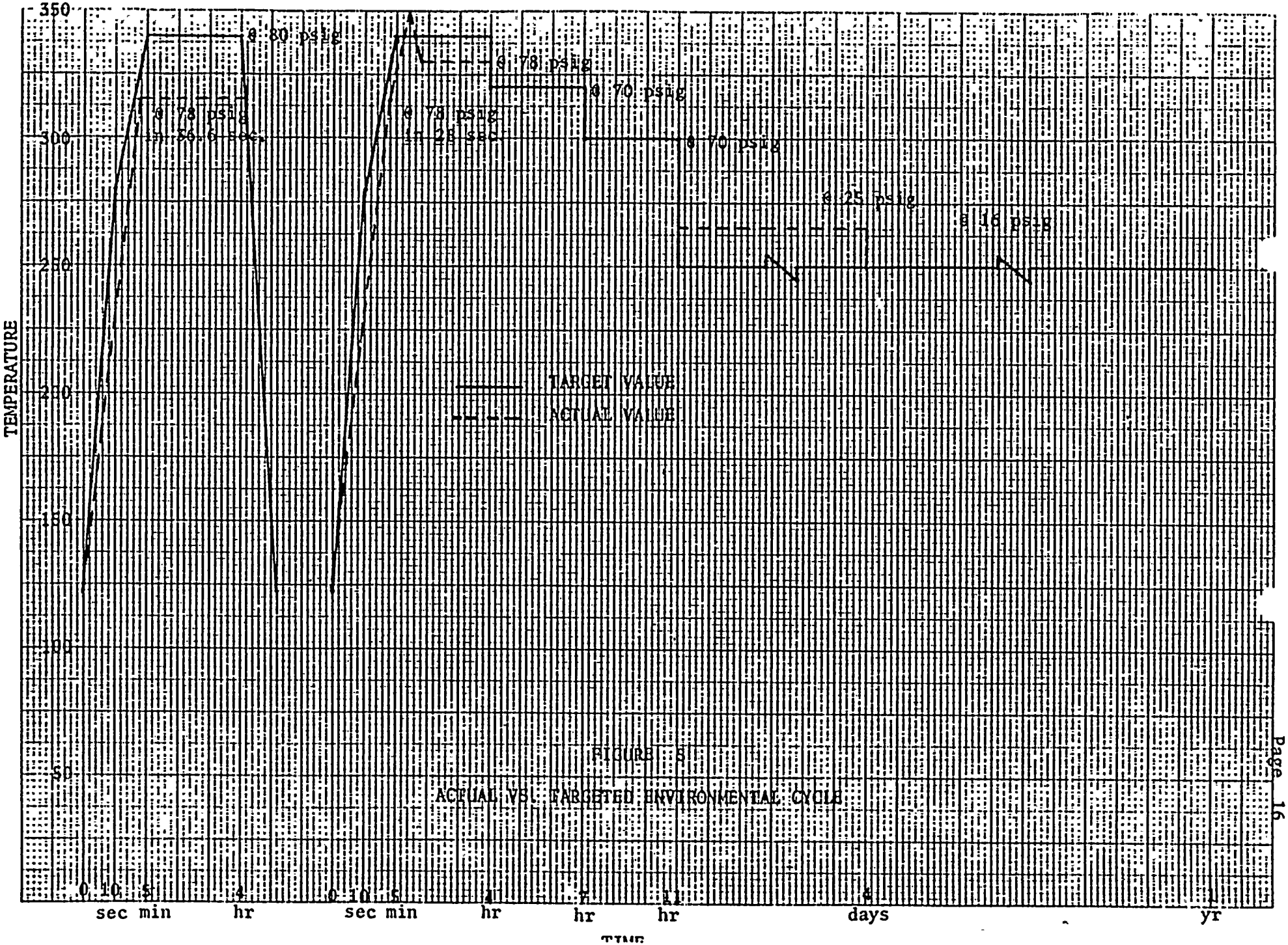

FIGURE 8

ACTUAL VS. TARGETED ENVIRONMENTAL CYCLE

WPPSS QID #324008

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C51

MPL:
PPD:

PAGE NO:
REVISION: 4
DATE: July 1983

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Traversing Incore Probe TAG NUMBER TIP-V-1,2,3,4,5 -SV-1,2,3,4,5,6 MANUFACTURER G.E. MODEL NUMBER P136B1302G002 COMPONENT Valve FUNCTION/SERVICE Explosive valve for isolation shear valve LOCATION: BLDG R ELEVATION 501 COLUMN J.0/4.5	OPERATING TIME	6 months		1			Note 1
	TEMPERATURE (F)	90 max. normal 104 max. abnormal Accident Profile 4		2			
	PRESSURE (PSIA)	14.7		2			
	RELATIVE HUMITY (%)	40 normal 90 max. abnormal accident profile 4		2			
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6		3			
	AGING	40 years		2			
	ACCURACY	N/A	N/A	N/A	N/A	N/A	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES x NO (Ref. 4)

Prepared By: Behzad Mahini 6/24/83 Reviewed By: Ali Sadri 6/24/83

DOCUMENTATION REFERENCES

1. BRI CIE list, REV 8, 6/1/83
2. FSAR Paragraph 3.11
3. EDS Report 0740-004-501P
4. BRI Calc. #5.51.055

NOTES

1. Qualification options are being explored with General Electric. Equipment justification #22 in Appendix D is provided for TIP - V - 1,2,3,4, and 5. TIP-SV are on Table B of the JIO and do not require qualification prior to fuel load.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. Tag Numbers

0219	1431	2247	3059	4211	5039
0223	1435	2251	3403	4215	5043
0227	1439	2255	3407	4219	5047
0231	1443	2259	3411	4223	5051
0235	1447	2603	3415	4227	5415
0239	1451	2607	3419	4231	5419
0243	1455	2611	3423	4235	5423
0615	1803	2615	3427	4239	5427
0619	1807	2619	3431	4243	5431
0623	1811	2623	3435	4247	5435
0627	1815	2627	3439	4251	5439
0631	1819	2631	3443	4255	5443
0635	1823	2635	3447	4259	5447
0639	1827	2639	3451	4607	5819
0643	1831	2643	3455	4611	5823
0647	1835	2647	3459	4615	5827
1011	1839	2651	3803	4619	5831
1015	1843	2655	3807	4623	5835
1019	1847	2659	3811	4627	5839
1023	1851	3003	3815	4631	5843
1027	1855	3007	3819	4635	
1031	1859	3011	3823	4639	
1035	2203	3015	3827	4643	
1039	2207	3019	3831	4647	
1043	2211	3023	3835	4651	
1047	2215	3027	3839	4655	
1051	2219	3031	3843	5011	
1407	2223	3035	3847	5015	
1411	2227	3039	3851	5019	
1415	2231	3043	3855	5023	
1419	2235	3047	3859	5027	
1423	2239	3051	4203	5031	
1427	2243	3055	4207	5035	

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #145011
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

Pkg. 1
PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air (HVAC) TAG NUMBER RRA-FN-6 (RCIC Pump Rm. #3) MANUFACTURER H. K. Porter, Inc. Peerless Electric Div. MODEL NUMBER 135 COMPONENT Fan FUNCTION/SERVICE RRA-FC-6 LOCATION: BLDG R ELEVATION 441 COLUMN H.6/7.7	OPERATING TIME	24 Hours	24 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 6, 7A	Profile 4, 6, 7A	2	5	Analysis	None
	PRESSURE (PSIA)	14.7 Normal Profile 7	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 7	Profile 4, 7	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^6	4.1×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-441I. 4. QID 145012 (Engineering Analysis Sheet, EAS-67-145012-1 thru 4). 5. QID 145011 (Subcomponent Data Sheet, SDS-67-145011-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 1

QID #145018
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Bldg. Return Air (HVAC) TAG NUMBER RRA-FN-4 (HPCS Pump Rm. #6) MANUFACTURER H. K. Porter, INc. Peerless Electric Div. MODEL NUMBER 245 COMPONENT Fan FUNCTION/SERVICE RRA-FC-4 LOCATION: BLDG R ELEVATION 444 COLUMN M.5/4.1	OPERATING TIME	24 Hours	24 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6	4.1×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STEVE LWEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-441C. 4. QID 145012 (Engineering Analysis Sheet, EAS-67-145012-1 thru 4). 5. QID 145018 (Subcomponent Data Sheet, SDS-67-145018-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #145012
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-67

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

Pkg. 1

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air (HVAC) TAG NUMBER RRA-FN-1, 2, 3, 5, 10, 11 MANUFACTURER H. K. Porter Inc. Peerless Electric Div. MODEL NUMBER 150 COMPONENT Fan FUNCTION/SERVICE Emergency Cooling System Fan Coil Units LOCATION: BLDG R ELEVATION COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8A	Profile 4, 8A	2	5	Analysis	None
	PRESSURE (PSIA)	14.7 Normal Profile 8	N/A	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8	Profile 4, 8	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.1×10^6	4.1×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Study 0740-004-441J.
4. QID 145012 (Engineering Analysis Sheet, EAS-67-145012-1 through 4)
5. QID 145012 (Subcomponent Data Sheet, SDS-67-145018-1).

NOTES

Qualified.

1.

Tag Number	Elev.	Location
RRA-FN-1	443	H.7/4.3 (RHR #4)
RRA-FN-2	441	K.2/8.2 (RHR #2)
RRA-FN-3	441	L.8/8.0 (RHR #1)
RRA-FN-5	441	K.7/3.8 (LPCS #5)
RRA-FN-10	522	N.3/3.8 (MCC Div. II)
RRA-FN-11	522	H.5/8.0 (MCC Div. I)

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #145009

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

Pkg. 2
PAGE NO: 1 of 1
REVISION: 1
DATE: 4/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-FN-1 MANUFACTURER Buffalo Forge Co. MODEL NUMBER 2RE COMPONENT Fan FUNCTION/SERVICE MS Line Depress Fan LOCATION: BLDG R ELEVATION 473 COLUMN H.3/6.3	OPERATING TIME	4320 Hours	4320 Hours	1	4,6	Design Spec Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 9	Profile 4, 9	2	4,6	Design Spec Analysis	None
	PRESSURE (PSIA)	14.7 Normal Profile 9	16.7 psia Profile 9	2	4	Design Spec	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 9	100% RH Profile 4, 9	2	4	Design Spec	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.7×10^5	1.0×10^6	3	5,6	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER / [illegible] (Rev. 1)

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J (Letter BRWP-RO-83-85). 4. QID 145009 (Burns and Roe Design Spec. 2808-28). 5. QID 145009 (SWEC Subcomponent Data Sheet, SDS-28-145009-1). 6. Calculation 145009-1.	Qualified

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 145009
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD:

Pkg. 2
PAGE NO: 1 of 1
REVISION: 1
DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam Leakage Control TAG NUMBER MSLC-FN-2 MANUFACTURER Buffalo Forge Co. MODEL NUMBER 2RE COMPONENT Fan FUNCTION/SERVICE MS LC Depress Fan LOCATION: BLDG R ELEVATION 511 COLUMN H.3/7.0	OPERATING TIME	4320 Hours	4320 Hours	1	4,5	Design Specifications	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 10	Profile 4, 10	2	4,6	Design Specifications	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 10	100% RH Profile 4, 10	2	4	Design Specifications	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.9×10^4	1.0×10^6	3	5,6	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stove & Webster / M. P. Marion (Rev. 1)

Reviewed By: Dennis A. Armstrong 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Study 0740-004-501K 4. QID 145009 (Burns & Roe Design Specification 2808-28). 5. QID 145009 (SWEC Subcomponent Data Sheet, SDS-28-145009-1). 6. Calculation 145009-1.	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #145014
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD:

Pkg. 2
PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-AO-1A1, 1A2, 1B1, 1B2 MANUFACTURER Buffalo Forge MODEL NUMBER COMPONENT Air Damper FUNCTION/SERVICE Exhaust, SGT-FU-1A1, 1A2, 1B1, 1B2 LOCATION: BLDG R ELEVATION 576 COLUMN H.6/7.7 J.1/7.7	OPERATING TIME	4320 Hours	Note 1	1			None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Note 1	2			None
	PRESSURE (PSIA)	14.7 Normal	Note 1	2			None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Note 1	2			None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3.0×10^5	Note 1	3			None
	AGING	40 Years	Note 1	2			None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report 01.0740-1152.	Qualified. 1. See qualification for SGT-FN-1A1, 1A2, 1B1, 1B2 (QID 145014).

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 2

QID 145013
OWNER: WPPSS
FACILITY: WNP-2
SPEC: See Note 1

MPL:
PPD:

PAGE NO: 1 of 2
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Building Return Air (HVAC) TAG NUMBER RRA-FN (See Note 1)	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specifications	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
MANUFACTURER Buffalo Forge	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER COMPONENT Fan	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
FUNCTION/SERVICE RRA-Fan Coolers	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^5	1×10^9	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specifications	None
LOCATION: BLDG R ELEVATION COLUMN See Note 1							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Study 0740-009-548L. 4. QID 145013 (Burns & Roe Design Spec. 2808-216 and 2808-28). 5. QID 145013 (SWEC Subcomponent Data Sheet, SDS-216-145013-1).	Qualified. See Page 2.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 145013
OWNER: WPPSS
FACILITY: WNP-2
SPEC: See Note 1

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

Pkg. 2

REVISION: 0
DATE: 01/14/83

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1. Location

Tag No.	Elevation	Location	Contract
RRA-FN-12	471	H5/8	2808-216
RRA-FN-13	572	M3/6	2808-216
RRA-FN-14	572	M7/8	2808-216
RRA-FN-15	548	M5/4.5	2808-216
RRA-FN-17	548	M5/4.7	2808-216
RRA-FN-19	548		2808-28
RRA-FN-20	548		2808-28

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 2

QID #145014
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-28

MPL:
PPD:

PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-FN-1A1, -1A2, -1B1, -1B2 (See Note 1) MANUFACTURER Buffalo Forge Co. MODEL NUMBER 45AW COMPONENT Fan FUNCTION/SERVICE Exhaust LOCATION: BLDG R ELEVATION 576 COLUMN H.6/7.7 J.1/7.7	OPERATING TIME	4320 Hours	4320 Hours	1	6	Analysis	Note 2
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4/5	Design Spec. and Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	3×10^5	8.7×10^4	3	5	Analysis	Note 2
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: W. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report 01.0740-1152. 4. QID 145014 (Burns and Roe Design Spec. 2808-28). 5. QID 145014 (SWEC Subcomponent Data Sheet, SDS-28-145014-1). 6. QID 145014 (SWEC Engineering Analysis Sheet, EAS-28-145014-1).	1. Includes Variable Inlet Vane (VIV) dampers - SGT-AD-1A1, -1A2, -1B1, and -1B2. 2. Inlet vane bearings will be inspected, and those with nylon bearing cases will be replaced with metal caged bearings. (Ref: Letter GE-02-MSR-83-001).

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #145021
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

PKG. 3

PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-FN-1A, -1B MANUFACTURER Air Products EQ Co. MODEL NUMBER 01.14 3006 COMPONENT Fan FUNCTION/SERVICE Air Blower LOCATION: BLDG R ELEVATION 572 COLUMN M.5/6.6, 7.4	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY. (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	1.8×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. L. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572F. 4. QID 145021 (Burns and Roe Design Spec. 2808-71). 5. QID 145021 (SWEC Subcomponent Data Sheet, SDS-71-145021-1).	Qualified.

WP-1681

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 145002
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-22A

MPL:
PPD:

Pkg. 4
PAGE NO: 1 of 2
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Return Air TAG NUMBER See Note 2 MANUFACTURER Joy Mfg. Co. MODEL NUMBER 42¼-17½-860 COMPONENT Fan FUNCTION/SERVICE Recirc. Fan LOCATION: BLDG C ELEVATION COLUMN	OPERATING TIME	4,320 Hours	4,320 Hours	1	3	Analysis	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	3	Analysis	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	3	Analysis	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Analysis	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	3	Analysis	None
	RADIATION (RAD)	7.0×10^7	1×10^9	2	3	Analysis	None
	AGING	40 Years	40 Years	2	3	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. L. [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11. 3. QID 145002 (SWEC Subcomponent Data Sheet SDS-22A-145002-1).	Qualified. See Page 2

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2.

Tag Number	Elevation	Location
CRA-FN-3A	534	50° AZ R17
" " 3B	"	140° AZ R17
" " 3C	"	60° AZ R17
" " 5A	572	180° AZ R17
" " 5B	"	20° AZ R17
" " 5C	"	270° AZ R17
" " 5D	"	90° AZ R17

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #145001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-22A

MPL:
PPD:

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Return Air TAG NUMBER CRA-FN-4A, -4B MANUFACTURER Joy Mfg. Co. MODEL NUMBER 21-1/4-14-1750 COMPONENT Fan FUNCTION/SERVICE Mixing Fan LOCATION: BLDG C ELEVATION 572 COLUMN 330° AZ R17 206° AZ R17	OPERATING TIME	4320 Hours	4320 Hours	1	3	Analysis	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	3	Analysis	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	3	Analysis	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Analysis	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	3	Analysis	None
	RADIATION (RAD)	7.0×10^7	1×10^9	2	3	Analysis	None
	AGING	40 Years	40 Years	2	3	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 145001 (SWEC Subcomponent Data Sheet, SDS-22A-145001-1).	Qualified.

WP-1081

WPPSS

QID #361944
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 5

PAGE NO: 1 of 1
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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-V-2A, 2B	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4	120 Profile 4	2	4	Design Specification	None
MANUFACTURER ITT Grinnell	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER NH-91C2070F3L2 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	90 Profile 4	2	4	Design Specification	None
FUNCTION/SERVICE CAC Return	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	8.8×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 572 COLUMN M.6/6.4, 7.5							

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572F. 4. QID 361944 (APCI Specification 4-1371-1200-10A Dated 12/20/74 5. QID 361944 (SWEC Subcomponent Data Sheet SDS-71-361944-1)	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361943
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

Pkg. 5

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-V-1A, 1B	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4	120 Profile 4	2	4	Design Specification	None
MANUFACTURER ITT Grinnell	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER NH-95C2670F3L2 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal	90	2	4	Design Specification	None
FUNCTION/SERVICE CAC-AW-1A, 1B (EHO)	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	8.8×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 572, 573 COLUMN M.6/7.5, 6.4							

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572F. 4. QID 361943 APCI Specification 4-1371-1200-09A Dated 12/19/74 5. QID 361943 (SWEC Subcomponent Data Sheet SDS-71-361943-1)	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361945
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-V-3A, 3B MANUFACTURER ITT Grinnell MODEL NUMBER NH-95C1670F3L3 COMPONENT Valve FUNCTION/SERVICE CAC-HS-1A, 1B Drain LOCATION: BLDG R ELEVATION 572, 573 COLUMN H.6/6.4, 7.5	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4	120 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	90 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	8.8×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572F. 4. QID 361945 (APCI Specification 4-1371-1200-11A Dated 1/7/75) 5. QID 361945 (SWEC Subcomponent Data Sheet SDS-71-361945-1)	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361402

Pkg. 6

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-V-10, 11	OPERATING TIME	4,320 Hours	4,320 Hours	1	5	Analysis	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11	150 Profile 4, 11	2	4	Analysis	None
MANUFACTURER Hammel Dahl Company MODEL NUMBER V-502L-2, V-502L-1	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11	100 Profile 4, 11	2	4	Analysis	None
FUNCTION/SERVICE Scram Discharge Volume Vent (V-10) and Drain (V-11)	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.3×10^4	3.8×10^5	3	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None
LOCATION: BLDG R ELEVATION 543, 523 COLUMN J.1/5.1, J.1/4.9							

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Study 0740-004-522P. 4. QID 361402 (SWEC Subcomponent Data Sheet SDS-02C12-361402-1). 5. QID 361402 (SWEC Engineering Analysis Sheet EAS-02C12-361402-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361402/018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

Pkg. 7

REVISION: 1
DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge TAG NUMBER (CEP-EO-3B, 4B) CEP-V-3B, 4B MANUFACTURER ITT Hammel Dahl MODEL NUMBER 502L-119 COMPONENT Valve and A.O. FUNCTION/SERVICE Bypass LOCATION: BLDG R ELEVATION 495 COLUMN H.7/5.6	OPERATING TIME	4320 Hours	4320 Hours	1	6	Analysis	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design 150°F Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	90% Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^5	1.5×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	6	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster / M. S. Johnson (Rev. 1)

Reviewed By: Dennis Armstrong 6/15/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. (Letter BRWP-RO-83-85) 4. QID 361402 (Burns and Roe Spec. 2808-68). 5. QID 361402 (SWEC Engineering Analysis Sheet, EAS-68-361402-1). 6. QID 361402 (SWEC Subcomponent Data Sheet, SDS-68-361402-3).	Qualified

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361402/018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge TAG NUMBER (CEP-AO-1B, 2B) CEP-V-1B, 2B MANUFACTURER ITT Hammel Dahl MODEL NUMBER 502L-119 COMPONENT Valve and A.O. FUNCTION/SERVICE Bypass LOCATION: BLDG R ELEVATION 558 COLUMN J.4/5.3	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (°F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design 150°F Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	90% Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	1.5×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER/M.A.Abramson (Rev.1) Reviewed By: Dennis A. Armstrong 6/28/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-548Q. (Letter BRWP-RO-83-85.) 4. QID 361402 (Burns and Roe Design Spec. 2808-68). 5. QID 361402 (SWEC Subcomponent Data Sheet, SDS-68-361402-1)	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361401
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B35

MPL:
PPD:

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Recirculation TAG NUMBER RRC- V-60A, 60B MANUFACTURER ITT Hammel Dahl MODEL NUMBER V999L-20I COMPONENT Valve FUNCTION/SERVICE RRC Return to RPV LOCATION: BLDG C ELEVATION 506 COLUMN 115 DAz R24 293 DAz R24	OPERATING TIME	4,320 Hours	4,320 Hours	1	3	Design Specification	None
	TEMPERATURE (°F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design 575° F Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	65 psig Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100% Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11. 3. QID 361401 (G.E. Specification 21A9352, Rev. 4). 4. QID 361401 (SWEC Subcomponent Data Sheet SDS-02B35-361401-1). 5. QID 361401 (SWEC Engineering Analysis Sheet EAS-02B35-361401-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 8

QID 361964
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

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DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-V-28A, 28B, 28C, 28D MANUFACTURER Rockwell Mfg. Co. MODEL NUMBER 1612 JMMNTY COMPONENT Valve FUNCTION/SERVICE MSIV (Outboard) LOCATION: BLDG R ELEVATION 506 COLUMN H.8/5.8, 6.4	OPERATING TIME	4,320 Hours	4,320 Hours	1	5	Design Specification	None
	TEMPERATURE (F)	125 Max. Normal 140 Max. Abnormal Profile 3.4	Profile 3 & 4	2	5	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	50 Max. Normal 98 Max. Abnormal Profile 3.4	100% Profiles 3 & 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.4×10^8	1×10^{10}	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER / [illegible] (Rev. 1)

Reviewed by: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361964 (SWEC Subcomponent Data Sheet SDS-02B22-361964-2). 5. QID 361964 (General Electric Specification 21A9257, Rev. 4).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361964
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-V-22A, 22B, 22C, 22D	OPERATING TIME	4,320 Hours	4,320 Hours	1	5	Design Specification	None
	TEMPERATURE (°F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design = 575 Profile 1	2	5	Design Specification	None
MANUFACTURER Rockwell Mfg. Co.	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	16.7 Profile 1	2	5	Design Specification	None
MODEL NUMBER 1612 JMMNTY COMPONENT Valve	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100% Profile 2	2	5	Design Specification	None
FUNCTION/SERVICE MSIV (Inboard)	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	6	Analysis	None
	RADIATION (RAD)	1.4×10^8	1×10^{10}	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Design Specification	None
LOCATION: BLDG C ELEVATION S06 COLUMN A2 5,15,315, 355, R32							

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE RUEISTER

Reviewed By: M. L. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11. 3. EDS Report No. 01-0740-1152. 4. QUID 361964 (SWEC Subcomponent Data Sheet, SDS-02B22-361964-1). 5. QID 361964 (General Electric Specification 21A9257, Rev. 4). 6. QID 36196A (SWEC Engineering Analysis Sheet EAS-02B22-361964-1)	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID #018002
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-AO-28A, 28B, 28C, 28D MANUFACTURER Sheffer MODEL NUMBER SA-A022 COMPONENT Air Operator FUNCTION/SERVICE MS-V-28A, 28B, 28C, 28D LOCATION: BLDG R ELEVATION 515 COLUMN H.3/6.0	OPERATING TIME	24 Hours	24 Hours	1,2	5	Design Specification	None
	TEMPERATURE (°F)	125 Max. Normal 140 Max. Abnormal Profile 3, 4	150 Profile 3, 4	2	5	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	50 Max. Normal 98 Max. Abnormal Profile 3, 4	100% Profile 3, 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.2×10^6	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster/W.R.Abrian (Rev.1)

Reviewed By: Dennis Armstrong 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-5010. 4. QID 018002 (SWEC Subcomponent Data Sheet, SDS-02B22-018002-7). 5. QID 018002 (General Electric Specification 21A9257, Rev. 4).	Qualified. 1. Operator nonmetallics do not meet the radiation parameter. However, the operator design ensures the valve moves to its fail safe position in the event of a loss of air or failure of a nonmetallic subcomponent. Therefore, it is not necessary to qualify the operator's nonmetallics. (Section 3.8. of Procedure).

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #018002
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER HS-AO-22A, 22B, 22C, 22D MANUFACTURER Sheffer MODEL NUMBER SA-AO22 COMPONENT Air Operator FUNCTION/SERVICE HS-V-22A, 22B 22C, 22D LOCATION: BLDG ℄ ELEVATION 510 COLUMN Az 10,17,344,350 R30	OPERATING TIME	24 Hours	24 Hours	1,2	5	Design Specification	None
	TEMPERATURE (°F)	135 Normal 150 Abnormal Profile 1	150 Profile 1	2	5	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	16.7 Profile 1	2	5	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100% Profile 2	2	3	Analysis	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	7.0×10^7	Note 1	2	3	Analysis	None
	AGING	40 Years	40 Years	2	3	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 018002 (SWEC Subcomponent Data Sheet, SDS-02B22-018002-1). 4. QID 018002 (SWEC Engineering Analysis Sheet, EAS-02B22-018002-1). 5. QID 018002 (General Electric Specification 21A9257, Rev. 4).	Qualified. 1. Operator nonmetallics do not meet the required radiation parameter. However, the operator design ensures the valve moves to its fail safe position in the event of a loss of air or failure of a nonmetallic subcomponent. Therefore, it is not necessary to qualify the operator's nonmetallics. (Section 3.8 of Procedure).

WP-1081

WPPSS

QID 361047
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 10

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-16 MANUFACTURER Anchor Valve MODEL NUMBER 2621-3 COMPONENT Valve FUNCTION/SERVICE Supp. Pool Suction LOCATION: BLDG R ELEVATION 449 COLUMN L.3/3.5	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 212 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	1×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE RWEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361047 (Design Spec. 41B.00). 5. QID 361047 (Subcomponent Data Sheet, SDS-41B-361047-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361045
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-2 MANUFACTURER Anchor Valve MODEL NUMBER 2620-3 COMPONENT Valve FUNCTION/SERVICE HPCS-P-1 SCT Suction LOCATION: BLDG R ELEVATION 430 COLUMN M.7/3.8	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 212 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	1×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361045 (Design Spec. 41B.00). 5. QID 361045 (Subcomponent Data Sheet SDS-41B-361045-1).	Qualified.

WP-1001

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361021
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

Pkg. 10

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-23 MANUFACTURER Anchor Valve MODEL NUMBER 2654-3 COMPONENT Valve FUNCTION/SERVICE RHR to Rx Head Spray LOCATION: BLDG R ELEVATION 550 COLUMN M.2/5.1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 575 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.7×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361021 (Design Spec. 41B.00). 5. QID 361021 (Subcomponent Data Sheet, SDS-41B-361021-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID #361027
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-21 -24A, B -48A, B MANUFACTURER Anchor Valve MODEL NUMBER 2648-3 COMPONENT Valve FUNCTION/SERVICE Loop C Return to Supp. Pool LOCATION: BLDG R ELEVATION COLUMN]See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8A	Process Fluid Design Temp. 358 Profile 4, 8A	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 8A	Process Fluid Design Press. 500 Profile 8A	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8A	100 Profile 4, 8A	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361027 (Burns & Roe Design Specification 2808-41B).
5. QID 361027 (SWEC Subcomponent Data Sheet, SDS-41B-361027-1).

NOTES

Qualified.

1.

Tag No.	Elevation	Column
RHR-V-21	446	H.4/5.8
RHR-V-24A	474	K/8.1
RHR-V-24B	474	H/8.3
RHR-V-48A	552	J/8.7
RHR-V-48B	553	M.9/8.9

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361020
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-40 MANUFACTURER Anchor Valve MODEL NUMBER 2645-3 COMPONENT Valve FUNCTION/SERVICE Loop B to Floor Drain Tank LOCATION: BLDG R ELEVATION 552 COLUMN M.7/8.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 358 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Normal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.3×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361020 (Design Spec. 41B.00). 5. QID 361020 (Subcomponent Data Sheet, SDS-41B-361020-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 10

QID #361024
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-53A -53B MANUFACTURER Anchor-Darling Valve MODEL NUMBER 2658-3 COMPONENT Valve FUNCTION/SERVICE Shutdown Cool Loop A, B LOCATION: BLDG R ELEVATION 516, 512 COLUMN K.3/4.1, L/7.9	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 13, 14	Process Fluid Design 575 Profile 4, 13, 14	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 14	Process Fluid Design 1550 Profile 14	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 13, 14	100 Profile 4, 13, 14	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STEVE R WEBSTER

Reviewed By: M. R. Alvarez

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361024 (Design Spec. 41B.00). 5. QID 361024 (Subcomponent Data Sheet, SDS-41B-361024-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361040
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-105 MANUFACTURER Anchor Valve MODEL NUMBER 2623-3 COMPONENT Valve FUNCTION/SERVICE Check FPC Syst. Return to RHR LOCATION: BLDG R ELEVATION 434 COLUMN M.3/8.2	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8B	Process Fluid Design Temp. 358 Profile 4, 8B	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 8B	Process Fluid Design Press. 220 Profile 8B	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8B	100 Profile 4, 8B	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	1×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STEVE ROWEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361040 (Design Spec. 41B.00) 5. QID 361040 (Subcomponent Data Sheet, SDS-41B-361040-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 10

QID #361004
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41B

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor water Cleanup TAG NUMBER RWCU-V-102 MANUFACTURER Anchor Darling Valve MODEL NUMBER 4513-47 COMPONENT Valve FUNCTION/SERVICE From Recirc. Pump LOCATION: BLDG C ELEVATION 502 COLUMN 59DAzR20	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 575 Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Press. 1250 Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	3	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE L WEBSTER

Reviewed By: M. S. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361004 (Design Spec. 41B.00, Engineering Analysis Sheet EAS-41B-361004-1). 4. QID 361004 (Subcomponent data sheet SDS-41B-361004-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361070
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

Pkg. 11

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-1 MANUFACTURER Anchor Darling Valve MODEL NUMBER 5310-2-1 COMPONENT Valve FUNCTION/SERVICE Cond. Water into HPCS LOCATION: BLDG R ELEVATION 435 COLUMN M.0/3.9	OPERATING TIME	24 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	500 Profile	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. P. Nunnin

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361070 (G.E. Design Spec. 21A8657). 5. QID 361070 (SWEC Subcomponent Data Sheet E22-361070-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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QID 361065
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-4 MANUFACTURER Anchor Darling Valve MODEL NUMBER 94-13401 COMPONENT Valve FUNCTION/SERVICE Containment Isolation LOCATION: BLDG R ELEVATION 538 COLUMN M.3/7.3	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11	500 Profile 4, 11	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11	100 Profile 4, 11	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. P. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361065 (G.E. Design Spec. 21A8657). 5. QID 361065 (SWEC Subcomponent Data Sheet E22-361065-1).	Qualified.

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WPPSS

QID 361006
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-10, -11	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	700 Profile 4	2	4	Design Specification	None
MANUFACTURER Anchor Darling Valve MODEL NUMBER 1927-3	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
COMPONENT Valve FUNCTION/SERVICE HPCS Return to CST	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 448 COLUMN L.9/3.7							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER Reviewed by: M. L. Morrison

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361006 (General Electric Design Spec. 21A8657). 5. QID 361006 (SWEC Subcomponent Data Sheet 02-E22-3610064).	

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID 361060
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-12 MANUFACTURER Anchor Darling Valve MODEL NUMBER 94-13306 COMPONENT Valve FUNCTION/SERVICE HPCS-P-1 Minimum Flow LOCATION: BLDG R ELEVATION 430 COLUMN M.0/3.7	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	500 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.0×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. S. Mannion

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361060 (G.E. Design Spec. 21A8657). 5. QID 361060 (SWEC Subcomponent Data Sheet E22-361060-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361075
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-15	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	500 Profile 4	2	4	Design Specification	None
MANUFACTURER Anchor Darling Valve MODEL NUMBER 94-13272	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
FUNCTION/SERVICE Suppression Pool Outlet to HPCS	CHEMICAL SPRAY	N/A.	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 449 COLUMN L.3/3.9							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. P. [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361075 (G.E. Design Spec. 21A8657). 5. QID 361075 (SWEC Subcomponent Data Sheet E22-361075).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID 361007
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-V-23 MANUFACTURER Anchor Darling Valve MODEL NUMBER 1928-3 COMPONENT Valve FUNCTION/SERVICE HPCS Test Line LOCATION: BLDG R ELEVATION 450 COLUMN L.5/3.7	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	700 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: M. P. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361007 (GE Design Spec. 21A8657). 5. QID 351007 (SWEC Subcomponent Data Sheet E22-361007-1).	Qualified.

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WPPSS

QID #361701
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-V-19 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-1 COMPONENT Valve FUNCTION/SERVICE Drain Block LOCATION: BLDG R ELEVATION 504 COLUMN H.3/6.0	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	125 Max. Normal 140 Max. Abnormal Profile 3, 4	Process Fluid Design Temp. 575 Profile 3, 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	50 Max. Normal 98 Max. Abnormal Profile 3, 4	100 Profile 3, 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE RUBESTER/M.R.Schwien (Rev. 1)

Reviewed By: Dennis C. Armstrong 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Spec. 2808-41A). 5. QID 361701 (SWEC Subcomponent Data Sheet, SDS-41A-361701-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID #361708
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

REVISION: 1
DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER CAC-V RHR-V }See Note 1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-7 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION COLUMN See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 340 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.4×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER / M. Sabiniano (Kent) Reviewed By: Dennis Abrahamson 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns and Roe Design Spec. 2808-41A). 5. QID 361708 (SWEC Subcomponent Data Sheet, SDS-41A-361708-1).	Qualified. 1. See Page 2 of 2.

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DOCUMENTATION REFERENCES (Cont'd)

NOTES (Cont'd)

1.

System	Tag No.	El.	Column	Function
Containment Atmosphere Control	CAC-V-2	560	L.2/7.1	CAC Line to X-96
" "	-4	491	M.9/8.7	CAC Line to X-102
" "	-6	574	L.7/5.5	CAC Line from X-99
" "	-8	492	M.7/4.7	CAC Line from X-105
" "	-11	558	M.4/6.4	CAC Line to X-98
" "	-13	495	N.4/6.0	CAC Line to X-103
" "	-15	564	J.6/6.8	CAC Line from X-97
" "	-17	496	J.0/7.4	CAC Line from X-104
Residual Heat Removal	RHR-V-11A	474	K.2/8.1	RHR Hx A Drain
" " "	-11B	474	L.8/8.1	RHR Hx A Drain
" " "	-49	552	M.7/8.4	Loop B to Floor Drain Tank
" " "	-26A	475	K.5/8.2	HxA Outlet
" " "	-26B	473	L.2/8.1	HxB Outlet

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361732
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal Reactor Feedwater TAG NUMBER RHR-V-8 RFW-V-65A, 65B MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3313-N-33 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	125 Max. Normal 140 Max. Abnormal Profile 4, 3	Process Fluid Design Temp. 575 Profile 4, 3	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	50 Max. Normal 98 Max.Abnormal Profile 4, 3	100 Profile 4, 3	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stoveq Wiester/M.P. Martin (Rev. 1)

Reviewed By: Dennis C. Christiansen 6/25/83

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns & Roe Design Specification 2808-41A).
5. QID 361732 (SWEC Subcomponent Data Sheet SDS-41A-361732-1).

Qualified

NOTES

1. Location:

Tag No.	Elevation	Column	Function
RHR-V-8	504	M.9/7.3	Shutdown Cooling Supply
RFW-V-65A	501	H.4/5.7	RFW Inlet to RPV
RFW-V-65B	512	H.3/6	RFW Inlet to RPV

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361702
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER See Note 1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-1 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG C ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 575 Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Pressure 1350 psig Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. A. [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11.
3. QID 361701 (Burns and Roe Design Spec. 2808-41A).
4. QID 361702 (SWEC Subcomponent Data Sheet, SDS-41A-361702-1).
5. QID-361702 (SWEC Engineering Analysis Sheet EAS-41A-361702-1)

NOTES

Qualified.

1.

System	Tag No.	El.	Column	Function
Main Steam	MS-V-16	502	Az-360-R36	From Primary Cont.
Reactor Water Cleanup	RWCU-V-100	500	Az-69D-R18	From Recirc. Pump
" " "	RWCU-V-101	514	Az-22D-R18	From RPO Drain
" " "	RWCU-V-106	501	Az-30D	Water From Recirc.

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WPPSS

QID #361704

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER RWCU-V- RCIC-V- } See Note 1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-4 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 450 Profile 1	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Pressure 1350 psig Profile 1	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11.
3. EDS Study 0740-004-548H.
4. QID 361701 (Burns and Roe Design Spec. 2808-41A).
5. QID 361704 (SWEC Subcomponent Data Sheet, SDS-41A-361704-1).

NOTES

Qualified.

1.

System	Tag No.	El.	Column	Function
Reactor Water Cleanup	RWCU-V-4	538	M.7/5.0	Containment Iso.
Reactor Water Cleanup	RWCU-V-40	515	K.0/4.3	Return to RFW Line
Reactor Core Isolation Cooling	RCIC-V-13	548	H.3/5.5	Pump Disch. Cont. Isol.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361711
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-27A -27B MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-10 COMPONENT Valve FUNCTION/SERVICE Loop A & B to Supp. Pool Spray LOCATION: BLDG R ELEVATION 495 COLUMN R.3/4.1, H.1/7.7	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 9	Process Fluid Design Temp. 358 Profile 4, 9	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 9	Process Fluid Design Pressure 500 psig Profile 9	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 9	100 Profile 4, 9	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152 4. QID 361701 (Burns and Roe Design Spec. 2808-41A). 5. QID 361711 (SWEC Subcomponent Data Sheet, SDS-41A-361711-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361712
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-V-40 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-11 COMPONENT Valve FUNCTION/SERVICE RCC Ret. from Primary LOCATION: BLDG C ELEVATION 514 COLUMN 78 DAz R33	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	340 Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Pressure 150 psig Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361701 (Burns and Roe Design Spec. 2808-41A). 4. QID 361712 (SWEC Subcomponent Data Sheet, SDS-41A-361712-1). 5. QID 361712 (SWEC Engineering Analysis Sheet EAS-41A-361712-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361714
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-63 MANUFACTURER Velan Valve MODEL NUMBER P2-3311-N-14 COMPONENT Valve FUNCTION/SERVICE HS to RHR Hx RCIC Turb. LOCATION: BLDG C ELEVATION 551 COLUMN 130 DAz R19	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 575 Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Press. 1337 psig Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361701 (Burns and Roe Design Spec. 2808-41A). 4. QID 361714 (SWEC Subcomponent Data Sheet, SDS-41A-361714-1). 5. QID 361714 (SWEC Engineering Analysis Sheet EAS-41A-361714-1)	Qualified.

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WPPSS

QID #361702
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-8 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-2 COMPONENT Valve FUNCTION/SERVICE Turbine Steam Supply Containment Isolation LOCATION: BLDG R ELEVATION 512 COLUMN J.1/5.0	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 13	Process Fluid Design Temp. 575 Profile 4, 13	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 4, 13	Process Fluid Design Press. 1850 psig Profile 13	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 13	100 Profile 4, 13	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.4×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Spec. 2808-41A). 5. QID 361702 (SWEC Subcomponent Data Sheet, SDS-41A-361702-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361704
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Water Cleanup TAG NUMBER RWCU-V-1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-4 COMPONENT Valve FUNCTION/SERVICE Inboard Isol. LOCATION: BLDG C ELEVATION 540 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 450 Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Pressure 1350 psig Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361701 (Burns & Roe Specification 2808-41A). 4. QID 361704 (SWEC Subcomponent Data Sheet, SDS-41A-361704-1). 5. QID 361704 (SWEC Engineering Analysis Sheet EAS-41A-361704-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361710
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER FPC-V- RCIC-V- See Note 1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-9 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION COLUMN See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 6, 7A	212 Profile 4, 6, 7A	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 7	Process Fluid Design Press. 125 psig Profile 7	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 7 A	100 Profile 4, 7 A	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE R WEBSTER

Reviewed By: M. L. Robinson

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns and Roe Design Spec. 2808-41A).
5. QID 361710 (SWEC Subcomponent Data Sheet, SDS-41A-361710-1).

NOTES

Qualified.

1.

System	Tag No.	El.	Column	Function
Fuel Pool Cooling	FPC-V-153	448	J.9/8.0	Suppression Pool Suction and Return
Fuel Pool Cooling	-154	441	K/8.3	" " " "
Fuel Pool Cooling	-156	466	K.2/8.2	" " " "
Reactor Core Isolation Cooling	RCIC-V-31	452	H.8/7	Suppression Pool Isolation

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361715
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-V-5 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-15 COMPONENT VALVE FUNCTION/SERVICE Reactor Vessel Injection Line LOCATION: BLDG R ELEVATION 525 COLUMN M.0/4.5	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11, 24B	Process Fluid Design Temp. 575 Profile 4, 11, 24B	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 24	Process Fluid Design Press. 1250 psig Profile 24	2	4	Design Specification	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11, 24	100 Profile 4, 11, 24	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Spec. 2808-41A). 5. QID 361715 (SWEC Subcomponent Data Sheet, SDS-41A-361715-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

PKG. 12

QID 361726
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-42A, 42B, 42C	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 16, 21	Process Fluid Design Temp. 575 Profile 4, 16	2	4	Design Specification	None
MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-36	PRESSURE (PSIA)	14.7 Normal Profile 16, 21	Process Fluid Design Press. 1,250 psig Profile 21	2	4	Design Specifications	None
COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 16, 21	100 Profile 4, 16	2	4	Design Specifications	None
FUNCTION/SERVICE Outboard Return to RPV	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION COLUMN See Note 1							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns & Roe Design Specification 2808-41A).
5. QID 361726 (SWEC Subcomponent Data Sheet SDS-41A-361726-1).

NOTES

Qualified

1. Location:

Tag No.	Elevation	Column
RHR-V-42A	527	J.0/5.8
RHR-V-42B	525	N.0/5.6
RHR-V-42C	527	J.0/6.0

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WPPSS

QID 361732

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-9	OPERATING TIME	4,320 Hours	4,320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid Design Temp. 575 Profile 1	2	3	Design Specification	None
MANUFACTURER Velan Valve corp.	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Process Fluid Design Press. 1,250 psig Profile 1	2	3	Design Specification	None
MODEL NUMBER P2-3313-N-33 COMPONENT Valve	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100 Profile 2	2	3	Design Specification	None
FUNCTION/SERVICE Shutdown Cooling Supply	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None
LOCATION: BLDG C ELEVATION 509 COLUMN 120 DAz R27	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361701 (Burns & Roe Design Specification 2808-41A). 4. QID 361732 (SWEC Subcomponent Data Sheet SDS-41A-361732-1). 5. QID 361732 (SWEC Engineering Analysis Sheet EAS-41A-361732-1).	Qualified.

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WPPSS

QID 361736

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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DATE: 1/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER See Note 1	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8A	Process Fluid Design Temp. 212 Profile 4, 8A	2	4	Design Specification	None
MANUFACTURER Velan Valve Corp.	PRESSURE (PSIA)	14.7 Normal Profile 8	Process Fluid Design Press. 100 psig Profile 8	2	4	Design Specification	None
MODEL NUMBER P2-3313-N-40 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8	100 Profile 4, 8	2	4	Design Specification	None
FUNCTION/SERVICE See Note 1	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION COLUMN See Note 1	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR, Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Specification 2808-41A). 5. QID 361736 (SWEC Subcomponent Data Sheet, SDS-41A-361736-1).	See Page 2.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

Qualified.

1. Location:

System	Tag No.	Elevation	Column	Function
Residual Heat Removal	RHR-V-3A	544	J.9/8.5	Hx A Outlet Isolation
" " "	RHR-V-3B	557	M.1/8.4	Hx B Outlet Isolation
" " "	RHR-V-4A	447	L.0/8.8	Suppr. Pool Loop A Supply
" " "	RHR-V-4B	522	L.2/8.3	Suppr. Pool Loop B Supply
" " "	RHR-V-4C	449	J.0/4.2	Suppr. Pool Loop C Supply
" " "	RHR-V-6A	435	K.3/8.2	RHR Pump A Inlet Block
" " "	RHR-V-6B	434	L.0/8.3	RHR Pump B Inlet
" " "	RHR-V-47A	575	J.7/8.7	RHR Hx Inlet Isolation
" " "	RHR-V-47B	576	M.3/8.4	RHR Hx Inlet Isolation
Low Pressure Core Spray	LPCS-V-1	450	K.0/4.7	Suppression Pool Isolation

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361714
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-64 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-14 COMPONENT Valve FUNCTION/SERVICE RHR Steam Condensing Mode Steam Supply Cont. Isol. Valve LOCATION: BLDG R ELEVATION 548 COLUMN M.1/4.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 575 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 normal	N/A	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns and Roe Design Spec. 2808-41A). 5. QID 361714 (SWEC Subcomponent Data Sheet, SDS-41A-361714-2).	Qualified.

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WPPSS

QID #361718
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Equipment & Floor Drains Radioactive TAG NUMBER EDR-V-19, 20 FDR-V-3, 4 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-21 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION COLUMN See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 212 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Johnson

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Study 0740-004-441C.
4. QID 361701 (Burns & Roe Design Spec. 2808-41A).
5. QID 361718 (SWEC Subcomponent Data Sheet, SDS-41A-361718-1).

NOTES

Qualified.

1.

Tag No.	Elev.	Column	Function
EDR-V-19	467	M.5/4.7	Dry Well Sump
-20	467	M.5/4.7	Dry Well Sump
FDR-V-3	467	M.0/4.1	Cont. Drain to Sump
-4	467	M.0/4.1	Cont. Drain to Sump

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361745
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER See Note 1 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-NP-62 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 9, 32	Process Fluid Design Temp. 250 Profile 4, 9	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 9	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 9, 32	100 Profile 4, 9	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NI-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns and Roe Design Specification 2808-41A). 5. QID 361745 (SWEC Subcompartment Data Sheet SDS-41A-361745-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361745
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1. Location:

System	Tag No.	El.	Column	Function
Fuel Pool Cooling	FPC-V-172	471	K.9/9	PMP Disch. to Demineralizer
" " "	-173	471	L.9/9/4	PMP Disch. to Demineralizer
" " "	-184	471	K.9/9	Demineralizer Effluent Isol. Valve
" " "	-175	548	K/9	PMP Disch. Demineralizer Bypass
" " "	-181A	548	L.5/9	FPC-P-1A Suction
" " "	-181B	548	L.5/9	FPC-P-1B Suction
Closed Cooling Water	RCC-V-129	556	L.0/9	HXS Inlet
" " "	-130	548	L.0/9	HXS Inlet
" " "	-131	556	L.0/9	HXS Outlet
Standby Service Water	SW-V-187A	548	K.8/8.6	SW into FPC HX1A
" " "	-187B	548	L.1/8.6	SW into FPC HX1B
" " "	-188A	548	K.8/8.8	SW Out FPC HX1A
" " "	-188B	548	L.1/8.8	SW Out FPC HX1B

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361712
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER RCIC-V-68 RCC-V-5, 21 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-N-11 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 150 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns and Roe Design Spec. 2808-41A).
5. QID 361712 (SWEC Subcomponent Data Sheet, SDS-41A-361712-1).

NOTES

Qualified.

1.

System	Tag No.	El.	Column	Function
Reactor Core Isolation Cooling	RCIC-V-68	474	J.1/7.5	Turbine Exh. to Supp. Pool
Closed Cooling Water	RCC-V-5	514	K.3/4.1	Primary Cont. Outlet
Closed Cooling Water	RCC-V-21	514	K.3/4.1	Primary Cont. Inlet

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361725
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-16A, -16B, -17A, -17B MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3313-N-35 COMPONENT Valve FUNCTION/SERVICE Drywell Spray Header LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 212 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns & Roe Design Spec. 2808-41A).
5. QID 361725 (SWEC Subcomponent Data Sheet, SDS-41A-361725-1).

NOTES

Qualified.

1.

Tag No.	Elev.	Column
RHR-V-16A	550	L.0/4.5
-17A	550	L.1/4.5
-16B	513	K.1/7.9
-17B	508	K.0/8.3

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361731
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-115, -116 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3313-N-31 COMPONENT Valve FUNCTION/SERVICE From SW LOCATION: BLDG R ELEVATION 553 COLUMN N.0/9.0, 9.1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 150°F Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. A. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Spec. 2808-41A). 5. QID 361731 (SWEC Subcomponent Data Sheet, SDS-41A-361731-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361735
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-68A, 68B MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3313-N-39 COMPONENT Valve FUNCTION/SERVICE RHR Hx SW Isol. LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 150 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361701 (Burns & Roe Design Spec. 2808-41A).
5. QID 361735 (SWEC Subcomponent Data Sheet, SDS-41A-361735-1).

NOTES

Qualified.

1.

Tag No.	Elev.	Column
RHR-V-68A	551	M.7/9.3
RHR-V-68B	553	M.9/9.3

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361744
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-41A

MPL:
PPD:

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DATE: 1/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Closed Cooling Water TAG NUMBER RCC-V-104 MANUFACTURER Velan Valve Corp. MODEL NUMBER P2-3311-NF-61 COMPONENT Valve FUNCTION/SERVICE HT Exch. Disch. to Cont. Isol. Valve LOCATION: BLDG R ELEVATION 514 COLUMN K.0/4.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Process Fluid Design Temp. 150 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. L. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361701 (Burns & Roe Design Spec. 2808-41A). 5. QID 361744 (SWEC Subcomponent Data Sheet, 41A-361744-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 018007
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-50-41A

MPL:
PPD:

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Equipment Drains Radioactive TAG NUMBER EDR-AO-19,20 FDR-AO-3,4 MANUFACTURER Kieley & Mueller Co. MODEL NUMBER 60CSR10SP176 COMPONENT Air Operator FUNCTION/SERVICE Operator for EDR-V-19,20 FDR-V-3,4 LOCATION: BLDG R ELEVATION 467 COLUMN M.5/4.7 M.0/4.1	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	150 Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100 Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.4×10^6	5×10^7	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared by: STONE & WEBSTER

Reviewed by: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Study 0740-004-441C. 4. QID 361701 (Burns and Roe Design Spec. 2808-41A). 5. QID 018007 (SWEC Subcomponent Data Sheet SDS-41A-018007).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 14

QID #361901
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-213

MPL:
PPD:

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Vacuum Breaker TAG NUMBER CVB-V- (See Note 1) MANUFACTURER Anderson Greenwood MODEL NUMBER CVII-24 COMPONENT Valve FUNCTION/SERVICE Vacuum Relief to Drywell LOCATION: BLDG C ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	9.0×10^7	1.0×10^8	2	5	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. A. Adams

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361901 (Burns and Roe Design Spec. 2808-213). 4. QID 361901 (SWEC Engineering Analysis Sheet, EAS-213-361901-1A). 5. QID 361901 (SWEC Subcomponent Data Sheet, SDS-213-361901-1A).	Qualified. 1. See Page 2 of 2.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag Number	Elev.	Location
CVB-V-1A	492	60 DAz R35
-1B	"	60 DAz R35
-1C	"	27 DAz R35
-1D	"	27 DAz R35
-1E	"	90 DAz R35
-1F	"	90 DAz R35
-1G		153 DAz R35
-1H	"	153 DAz R35
-1J	"	175 DAz R35
-1K	"	175 DAz R35
-1L	"	196 DAz R35
-1M	"	196 DAz R35
-1N	"	260 DAz R35
-1P	"	260 DAz R35
-1Q	"	344 DAz R35
-1R	"	344 DAz R35
-1S	"	281 DAz R35
-1T	"	281 DAz R35

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361901
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-213

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-7, 10 CSP-AO-7, 10 MANUFACTURER Anderson Greenwood MODEL NUMBER CVIL-24 COMPONENT Valve FUNCTION/SERVICE Containment Isolation Vacuum Relief LOCATION: BLDG R ELEVATION 475, 491 COLUMN N.5/7.7, 151 DEG. AZ.	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	Maximum Limiting Exposure: 5.0×10^5	1.0×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. L. Adamson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471B. 4. QID 361901 (Burns and Roe Design Spec. 2808-213). 5. QID 361901 (SWEC Subcomponent Data Sheet, SDS-213-361901-1B).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361901
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-213

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-8 CSP-AO-8 MANUFACTURER Anderson Greenwood MODEL NUMBER CVIL-24 COMPONENT Valve FUNCTION/SERVICE Containment Isolation Vacuum Relief LOCATION: BLDG R ELEVATION 484 COLUMN Az 0	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	1.0×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE L. WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. 4. QID 361901 (Burns and Roe Design Spec. 2808-213). 5. QID 361901 (SWEC Subcomponent Data Sheet, SDS-213-361901-1C).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #018008
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-AO- (See Note 1) MANUFACTURER Crosby Valve & Gage Co. MODEL NUMBER HB-65-BP COMPONENT Air Operator FUNCTION/SERVICE Operate MS-RV- LOCATION: BLDG C ELEVATION COLUMN (See Note 1)	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	5	Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	5	Test	None
	RELATIVE HUMITY (%)	55 Normal 90 Abnormal Profile 2	Saturated Steam	2	5	Test	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	3.1×10^7	Note 2	6	4,6	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None
	ACCURACY						

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE & WEBSTER/M.S. Adams (Rev. 1)

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES

1. B&R WNP-2 SRM Equipment List Dwg. E553-2 Rev. 4 dated 1/26/83.
2. FSAR Paragraph 3.11.
3. QID 018008 (GE Design Specification 21A9247).
4. QID 018008 (SWEC Subcomponent Data Sheet, SDS-2B22-018008-2).
5. QID 018008 (GE Qualification Summary Report, QSR-165-A-01).
6. BRWP-RO-83-096, dated 3/28/83.

NOTES

Qualified
1. See Page 2 of 2.
2. Maintenance replacement of Viton seals is required every five years of plant life.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag No.	Elev.	Location
MS-AO-13V	547	Az 315 R18
-13S	"	Az 60 R18
-13R	"	Az 75 R22
-13M	"	Az 268 R22
-13P	"	Az 305 R18
-13U	"	Az 80 R22
-13N	"	Az 279 R22

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #018008
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-AO- (See Note 1) MANUFACTURER Crosby Valve & Gage Co. MODEL NUMBER HB-65-BP COMPONENT Air Operator FUNCTION/SERVICE Operate MS-RV- LOCATION: BLDG C ELEVATION COLUMN (See Note 1)	OPERATING TIME	24 Hours	4 Days	1	5	Test	None
	TEMPERATURE (°F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	5	Test	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	5	Test	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Saturated Steam	2	5	Test	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	3.1×10^7	5.0×10^7	6	4	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: [illegible] Reviewed By: [illegible] 6/23/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 3. QID 018008 (GE Design Specification 21A9247). 4. QID 018008 (SWEC Subcomponent Data Sheet, SDS-2B22-018008-1). 5. QID 018008 (GE Qualification Summary Report, QSR-165-A-01). 6. Burns and Roe Letter, BRWP-RO-83-096, 3/28/83.	Qualified. 1. See Page 2 of 2.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 15

OWNER: WPPSS
FACILITY: WNP-2
SPEC:
MPL:
PPD:

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DATE: 6/20/83

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag No.	Elev.	Location
MS-AO-13A	547	Az 35 R18
-13B	"	Az 45 R18
-13J	"	Az 24 R18
-13E	"	Az 45 R22
-13L	"	Az 313 R22
-13K	"	Az 333 R18
-13F	"	Az 60 R22
-13D	"	Az 305 R22
-13C	"	Az 321 R18
-13H	"	Az 67 R22
-13G	"	Az 293 R22

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 15

QID #297009
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B22

MPL:
PPD:

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Main Steam TAG NUMBER MS-RV- (See Note 1) MANUFACTURER Crosby Valve & Gage Co. MODEL NUMBER 6R10 HB-65-BP COMPONENT Relief Valve FUNCTION/SERVICE MS Safety Relief LOCATION: BLDG C ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Process Fluid 575	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	7.0×10^7	1.0×10^8	2	5	Analysis	None
	AGING	40 Years	40 Years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Adkins

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 297009 (GE Design Spec. 21A9247). 4. QID 297009 (SWEC Engineering Analysis Sheet, EAS-2B22-297009-1). 5. QID 297009 (SWEC Subcomponent Data Sheet, SDS-2B22-297009-1).	Qualified. 1. See Page 2.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 15

OWNER: WPPSS
FACILITY: WNP-2 MPL:
SPEC: 2808-02B22 PPD:

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag No.	Elev.	Location
MS-RV-3C	547	Az 293 R22
-3D	"	Az 315 R18
-4A	"	Az 60 R18
-4B	"	Az 75 R22
-4C	"	Az 288 R22
-4D	"	Az 305 R18
-5B	"	Az 86 R22
-5C	"	Az 279 R22
-1A	"	Az 24 R18
-1B	"	Az 45 R22
-1C	"	Az 313 R22
-1D	"	Az 333 R18
-2A	"	Az 35 R18
-2B	"	Az 60 R22
-2C	"	Az 305 R22
-2D	"	Az 321 R18
-3A	"	Az 45 R18
-3B	"	Az 67 R22

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID 361931
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-87A, 87B MANUFACTURER Fisher Controls Co. MODEL NUMBER SMB-00-10-EWP COMPONENT Globe Valve, 8" FUNCTION/SERVICE RCIC Steam Condensing LOCATION: BLDG R ELEVATION 574, 575 COLUMN H.8/8.7, M.8/9.0	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.2×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: M. S. Robinson

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 6/10/83. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572L. 4. QID 361931 (Burns & Roe Design Specification 3808-42). 5. QID 361931 (SWEC Subcomponent Data Sheet, SDS-42A-361931-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #133001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER (See Note 1)	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
MANUFACTURER Fisher Controls	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER AH-91-ES COMPONENT Flow Control Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
FUNCTION/SERVICE (EHO) Flow Control	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	Maximum Limiting Exposure 1.7×10^6	1.0×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None
LOCATION: BLDG R ELEVATION COLUMN } See Note 1							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 07400-004-471E. 4. QID 133001 (Burns & Roe Design Specification 2808-42). 5. QID 133001 (SWEC Subcomponent Data Sheet, SDS-42A-133001-1).	Qualified Continued on next page.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag No.	Elevation	Column
CAC-FCV-1A	575	H.2/5.2
1B	564	J.6/6.7
2A	560	H.1/7.7
2B	558	H.5/6.6
3A	495	H.8/4.7
3B	496	J.0/7.4
4A	495	N.4/6.0
4B	495	N.4/6.0

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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QID #361931
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-52A -52B MANUFACTURER Fisher Controls MODEL NUMBER SMB-00-10-EWP COMPONENT Valve FUNCTION/SERVICE RCIC Steam to RHR Hx LOCATION: BLDG R ELEVATION 574, 575 COLUMN H.8/8.7, N.0/9.2	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stoyle R Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152 4. QID 361931 (Burns & Roe Design Specification 2808-42) 5. QID 361931 (SWEC Subcomponent Data Sheet, SDS-42A-361931-1)	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #133002

OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal Low Pressure Core Spray	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
TAG NUMBER RHR-FCV-64A, B, C LPCS-FCV-11	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Maximum Limiting Profile 4, 8A	Profile 4, 8A	2	4	Design Specification	None
MANUFACTURER Fisher Controls	PRESSURE (PSIA)	Maximum Limiting Profile 8A	N/R	2	N/A	N/A	None
MODEL NUMBER SMB-000-5-ES	RELATIVE	40 Max. Normal 90 Max. Abnormal Maximum Limiting Profile 4, 8A	Profile 4, 8A	2	5	Analysis	None
COMPONENT Flow Control Valve	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
FUNCTION/SERVICE Minimum flow to respective pumps	RADIATION (RAD)	Maximum Limiting Exposure 6.0×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None
LOCATION: BLDG R ELEVATION COLUMN)See Note 1							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 133002 (Burns and Roe Design Specification 2808-42).
5. QID 133002 (SWEC Subcomponent Data Sheet SDS-42A-133002-1).

NOTES

Qualified

1.

Tag No.	Elevation	Column
RHR-FCV-64A	443	K.0/9.1
-64B	443	H.0/9.1
-64C	443	J.0/4.9
LPCS-FCV-11	423	K.1/3.5

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #236004
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-42A

MPL:
PPD:

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PAGE NO: 1 of 1
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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-PCV-51A -51B MANUFACTURER Fisher Controls MODEL NUMBER 667-EWP COMPONENT Pressure Control Valve FUNCTION/SERVICE PIC Sonic Flow Specialty LOCATION: BLDG R ELEVATION 578, 575 COLUMN J/9.3, M.8/9.3	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	5	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^7	5.0×10^7	3	5	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 193001 (Burns and Roe Design Spec. 2808-42). 5. QID 236004 (SWEC Subcomponent Data Sheet, SDS-42A-236004-1).	Qualified.

WP-1001

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 18

QID #133005
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

PAGE NO: 1 of 1
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-FCV-6A, 6B -5A, 5B MANUFACTURER Crane Co. MODEL NUMBER 49, 50, 47, 48 COMPONENT Flow Control Valve FUNCTION/SERVICE Recirc. Flow LOCATION: BLDG R ELEVATION 572,573 COLUMN M.5/6.6, M.5/7.4 M.6/6.4, M.6/7.5	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	N/A
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	1.5×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572 F. 4. QID 133005 (Air Products and Chemicals Design Specification 4-1371-1200-13A&14A). 5. QID 133005 (SWEC Subcomponent Data Sheet, SDS-71-133005-1).	Qualified

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 18

QID #335002
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-71

MPL:
PPD:

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Atmosphere Control TAG NUMBER CAC-TCV-4A, 4B MANUFACTURER Crane Co. MODEL NUMBER 46 COMPONENT Temperature Control Valve FUNCTION/SERVICE SW Inlet LOCATION: BLDG R ELEVATION 572, 573 COLUMN M.6/6.4, 7.5	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	1.5×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572 F. 4. QID 335002 (Air Products and Chemicals Design Specification 4-1371-1200-12A). 5. QID 335002 (SWEC Subcomponent Data Sheet SDS-71-335002-1).	Qualified

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

Pkg. 19

PAGE NO:
REVISION: 1
DATE: 4/19/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-A0-9 MANUFACTURER Miller Fluid Power MODEL NUMBER A83B COMPONENT Air Operator FUNCTION/SERVICE Operator for CSP-V-9 LOCATION: BLDG R ELEVATION 490 COLUMN M.9/5.1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/A	2	N/A	N/A	None
	RELATIVE HUMITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.6×10^5	2×10^5	3	4,5	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: [illegible]

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471B (Letter BRWP-RO-83-85). 4. QID 018001 (SWEC Subcomponent Data Sheet, SDS-68-018001-1C). 5. Calculation QID 018001-1.	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

Pkg. 19

PAGE NO: 1 of 1
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DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-AO-6 MANUFACTURER Miller Fluid Power MODEL NUMBER A83B COMPONENT Air Operator FUNCTION/SERVICE Operator for CSP-V-6 LOCATION: BLDG R ELEVATION 480 COLUMN N.5/7.7	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/A	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	9.4×10^4	2×10^5	3	4,5	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER / [illegible] (Rev 1)

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J (Letter BRWP-RO-83-85). 4. QID 018001 (SWEC Subcomponent Data Sheet, SDS-68-018001-1C). 5. Calculation QID 018001-1.	Qualified

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-A0-5 MANUFACTURER Miller Fluid Power MODEL NUMBER A 83B COMPONENT Air Operator FUNCTION/SERVICE Operator for CSP-V-5 LOCATION: BLDG R ELEVATION 475 COLUMN M.7/8.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	8.77×10^4	3	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471D. 4. QID 018001 (SWEC Subcomponent Data Sheet, SDS-68-018001-1B).	Qualified.

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WPPSS

QID #018003
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-AO-7 MANUFACTURER Milwaukee Cylinder MODEL NUMBER B-4544 COMPONENT Air Operator FUNCTION/SERVICE Operator for CSP-V-7 LOCATION: BLDG R ELEVATION 475 COLUMN N.5/7.7	OPERATING TIME	4320 Hours	Note 1	1			None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Note 1	2			None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal	Note 1	2			None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	Note 1	3			None
	AGING	40 Years	Note 1	2			None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471D.	Qualified. 1. Air operator is qualified as a subcomponent of CSP-V-7 (QID 361901).

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #018003
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-AO-8	OPERATING TIME	4320 Hours	Note 1	1			None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Note 1	2			None
MANUFACTURER Milwaukee Cylinder	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER B-4544 COMPONENT Operator	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Note 1	2			None
FUNCTION/SERVICE CSP-V-8	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	Note 1	3			None
	AGING	40 Years	Note 1	2			None
LOCATION: BLDG R ELEVATION 484 COLUMN 0 DEG Az							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: S Tove Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J.	Qualified. 1. Air operator is qualified as a subcomponent of CSP-V-8 (QID 361901).

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-A0-10 MANUFACTURER Milwaukee Cylinder MODEL NUMBER B-4544 COMPONENT Air Operator FUNCTION/SERVICE Operator for CSP-V-10 LOCATION: BLDG R ELEVATION 490 COLUMN M.9/5.1	OPERATING TIME	4320 Hours	Note 1	1			None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Note 1	2			None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Note 1	2			None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	Note 1	3			None
	AGING	40 Years	Note 1	2			None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471B.	Qualified. 1. Air operator is qualified as a subcomponent of CSP-V-10 (QID 361901).

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #018001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 2 TAG NUMBER See Note 2 MANUFACTURER Miller Fluid Power MODEL NUMBER A83B COMPONENT Air Operator FUNCTION/SERVICE See Note 2 LOCATION: BLDG R ELEVATION See Note 2 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	Maximum Limiting Exposure: 4.4×10^7	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. 4. QID 018001 (SWEC Subcomponent Data Sheet, SDS-68-018001-1A).	Qualified. 1. Subcomponents susceptible to radiation damage are not required for the actuator to perform its safety function. 2. See Page 2 of 2.

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DOCUMENTATION REFERENCES (Cont'd)

NOTES (Cont'd)

2.

System	EPN No.	Elev.	Column	Function
Containment Supply Purge	CSP-AO-1	508	N.0/7.7	Valve Operator
" " "	-2	508	N.0/7.7	" "
" " "	-3	478	M.6/7.6	" "
" " "	-4	478	M.6/7.6	" "
Containment Exhaust Purge	CEP-AO-1A	558	J.4/5.3	" "
" " "	-2A	560	J.4/5.3	" "
" " "	-3A	495	H.5/5.4	" "
" " "	-4A	498	H.5/5.7	" "
Reactor Bldg. Exhaust Air (HVAC)	REA-AO-1	597	H.2/6.2	" "
Reactor Bldg. Exhaus Air (HVAC)	-2	597	H.4/6.2	" "
Reactor Bldg. Outside Air (HVAC)	ROA-AO-1	572	D.0/4.0	" "
Reactor Bldg. Outside Air (HVAC)	-2	572	D.0/4.0	" "

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #018009
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-AO-2A, -2B MANUFACTURER Miller Fluid Power MODEL NUMBER A 50B COMPONENT Air Operator FUNCTION/SERVICE SGT-V-2A, -2B LOCATION: BLDG R ELEVATION 580 COLUMN H.6/5.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Analysis	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report 010740-1157
4. QID 018009 (SWEC Subcomponent Data Sheet, SDS-68-018009-1).

NOTES

Qualified.

1. Subcomponents susceptible to radiation damage are not required for the actuator to perform its safety function.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 233006
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-35A

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High, Low Pressure Core Spray; Residual Heat Removal TAG NUMBER HPCS-P-3 LPCS-P-2 RHR-P-3 MANUFACTURER Crane-Deming Pump MODEL NUMBER 3065-1055 COMPONENT Pump FUNCTION/SERVICE Water legs for HPCS, LPCS and RHR Systems LOCATION: BLDG R ELEVATION 423 COLUMN L.6/3.5, J.7/3.6 H.3/4.7	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8B	Profile 4, 8B	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 15.1 Max. Profile 8	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8	90%	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	2.3×10^7	3	5	Engineering Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 233006 (Burns & Roe Design Spec. 2808-35A). 5. QID 233006 (SWEC Subcomponent Data Sheet SDS-35A-233006-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #233011
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E21

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Low Pressure Core Spray TAG NUMBER LPCS-P-1 MANUFACTURER Ingersoll Rand MODEL NUMBER 29APKD-5 COMPONENT Pump FUNCTION/SERVICE Low Pressure Core Spray LOCATION: BLDG R ELEVATION 426 COLUMN K.0/4.0	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	100% Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	1.0×10^8	3	5	Engineering Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone Livesley

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 233011 (Burns and Roe Design Spec. 2808-2). 5. QID 233011 (SWEC Subcomponent Data Sheet, SDS-2-233011-1A).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #233011
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E12

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-P-2A, B, C MANUFACTURER Ingersoll Rand MODEL NUMBER 29APKD-3 COMPONENT Pumps FUNCTION/SERVICE Loop Hx Supply LOCATION: BLDG R ELEVATION COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8B	Profile 4, 8b	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 8B	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 8B	100%	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	1.0×10^8	3	5	Engineering Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE & WEBSTER

Reviewed By: M. L. Alvin

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 233011 (Burns and Roe Design Spec. 2808-2). 5. QID 233011 (SWEC Subcomponent Data Sheet, SDS-2-233011-1A).	Qualified.

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WPPSS

QID #233008
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02E22

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM High Pressure Core Spray TAG NUMBER HPCS-P-1 MANUFACTURER Ingersoll Rand MODEL NUMBER 12X20KD-8 COMPONENT Pump FUNCTION/SERVICE High Pressure Core Spray LOCATION: BLDG R ELEVATION 423 COLUMN M.3/3.6	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal	100%	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^7	1.0×10^8	3	5	Engineering Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 233008 (Burns and Roe Design Spec. 2808-2). 5. QID 233008 (SWEC Subcomponent Data Sheet, SDS-2-223008-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361258
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER MS-V- HSLC-V- } See Note 1 MANUFACTURER Borg-Warner Co. MODEL NUMBER P 76890-1 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	135 Max. Normal 140 Max. Abnormal Profile 3, 4	Profile 3, 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	50 Max. Normal 98 Max. Abnormal Profile 3, 4	Profiles 3, 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/R	2	N/A	N/A	None
	RADIATION (RAD)	4.0×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster/M. Pahlman (Rev 1)

Reviewed By: Dennis A. [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361258 (Bovee & Crail Spec. 2808-215-Division 15-Section 15F). 5. QID 361258 (SWEC Subcomponent Data Sheet SDS-215-361258-1).	Qualified. See Note 1 attached.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361258
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

EPN #	Elev.	Column	Loc.	Function
HS-V-67A	506	H.8/5.8, 6.4	R	Drain Valve
-67B	"	" "	"	" "
-67C	"	" "	"	" "
-67D	"	" "	"	" "
HSLC-V-2A	501	H.1, H.6/5.3, 6.4	R	Bypass Valve
-2B	"	"	"	" "
-2C	"	"	"	" "
-2D	"	"	"	" "
-3A	"	"	"	" "
-3B	"	"	"	" "
-3C	"	"	"	" "
-3D	"	"	"	" "
-4	"	"	"	" "
-5	"	"	"	" "
-9	"	"	"	" "
-10	"	"	"	" "

WPPSS

QID #361254
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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REVISION: 1
DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V- (See Note 1) MANUFACTURER Borg-Warner Co. MODEL NUMBER P 304FAB3-001-2 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 32	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 32	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster / U.S. Adams (Rev. 1)

Reviewed By: Dennis A. Armstrong 6/25/83

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361254 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F).
5. QID 361254 (SWEC Subcomponent Data Sheet SDS-215-361254-1).

NOTES

Qualified.

1.

Tag No.	Elev.	Column	Loc.	Function
RHR-V-73A	572	J.8/9	R	RHR HX Shell Vent
RHR-V-73B	572	J.8/9	R	RHR HX Shell Vent
RHR-V-134A	548	K.1/9.0	R	CAC Tie to RHR
RHR-V-134B	548	L.5/9.2	R	CAC Tie to RHR
RHR-V-74A	572	J.9/9.2	R	Hx A Vent
RHR-V-74B	572	J.9/9.2	R	Hx B Vent

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361242
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM See Note 1 TAG NUMBER See Note 1 MANUFACTURER Borg-Warner Co. MODEL NUMBER 79020-001 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG ELEVATION COLUMN See Note 1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 8A	Profiles 4, 8A	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 9	Profiles 4, 9	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	4.4×10^7	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. 4. QID 361242 (Bovee and Crail Spec. 3808-215-Division 15-Section 15F). 5. QID 361242 (SWEC Subcomponent Data Sheet, SDS-215-361242-1).	Qualified. See Note 1 attached.

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DOCUMENTATION REFERENCES (Cont'd)

NOTES (Cont'd)

1.

EPN #	Elev.	Column	Loc.	Function
MSLC-V-1A	471	H.5/5.5	R	Vent Bypass
-1B	471	H.5/5.5	R	Vent Bypass
-1C	471	H.5/5.5	R	Vent Bypass
-1D	471	H.5/5.5	R	Vent Bypass
SW-V-24A	446	L.7/8.3	R	RHR Pump Motor
-24B	447	L.7/8.3	R	RHR Pump Motor
-24C	446	H.7/4.3	R	RHR Pump Motor
-44	446	K.9/3.8	R	LPCS Pump Rm. Isol.
-54	450	H.8/3.0	R	SW RTN HPCS Cooling Coil
RRC-V-16A	501	M.4/4.4	R	Pump Surge Inlet
-16B	501	J.0/7.3	R	RRC Pump Seal Purge Inlet

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361225
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Service Water TAG NUMBER SW-V-75A SW-V-75B	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
MANUFACTURER Borg-Warner Co.	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER P 76630-2 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
FUNCTION/SERVICE To Fuel Pool	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	1×10^{10}	3	5	Analysis	None
LOCATION: BLDG R ELEVATION 530 COLUMN N.0/9.4 - H.1/9.4	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-522H. 4. QID 361225 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F). 5. QID 361225 (SWEC Subcomponent Data Sheet, SDS-215-361225-1).	Qualified.

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WPPSS

QID #361243
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-69, 110, 113 MANUFACTURER Borg-Warner Co. MODEL NUMBER P79360 COMPONENT Valve FUNCTION/SERVICE See Note 1 LOCATION: BLDG R ELEVATION See Note 1 COLUMN	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 6, 7A	Profiles 4, 6, 7A	2	4	Design Specification	None
	PRESSURE (PSIA)	N/A	N/A	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 6, 7A	Profiles 4, 6, 7A	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Report No. 01-0740-1152.
4. QID 361243 (Bovee and Crail Spec. 2808-215 Division 15 Section 15F).
5. QID 361243 (SWEC Subcomponent Data Sheet, SDS-215-361243-1).

NOTES

Qualified.

1.

EPN #	Elev.	Column	Loc.	Function
RCIC-V-69	465	345 D Az	R	Vlv to Supp
RCIC-V-110	475	J.6/7.4	R	Vac Brkr
RCIC-V-113	475	J.6/7.4	R	Cont Isol.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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QID #361253
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-124A, -124B, -125A, -125B MANUFACTURER Borg-Warner Co. MODEL NUMBER P304EAB3-001 COMPONENT Valve FUNCTION/SERVICE RHR Drip Pot Drain to Pool and LOCATION: BLDG R ELEVATION 472 COLUMN K.8/8.1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.2×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stoyle Webster

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471F. 4. QID 361253 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F). 5. QID 361253 (SWEC Subcomponent Data Sheet SDS-215-361253-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361248
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-76 MANUFACTURER Borg-Warner Co. MODEL NUMBER 106DAA3-001 COMPONENT Valve FUNCTION/SERVICE RCIC-V-63 Bypass LOCATION: BLDG C ELEVATION 556 COLUMN 120DAz	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	5	Analysis	None
	AGING	40 years	40 years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361248 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F). 4. QID 361248 (SWEC Engineering Analysis Sheet, EAS-215-361248-1). 5. QID 361248 (SWEC Subcomponent Data Sheet SDS-215-361248-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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QID #361258
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Residual Heat Removal TAG NUMBER RHR-V-123A, -123B MANUFACTURER Borg-Warner Co. MODEL NUMBER P 76890-2 COMPONENT Valve FUNCTION/SERVICE RHR-V-50 Bypass LOCATION: BLDG C ELEVATION 513, 509 COLUMN 93 DAz R31 270 DAz R27	OPERATING TIME	4320 Hours	4320 Hours	1	3	Design Specification	None
	TEMPERATURE (F)	135 Normal 150 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	5	Analysis	None
	RADIATION (RAD)	7.0×10^7	9.1×10^8	2	4	Analysis	None
	AGING	40 years	40 years	2	3	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOUT & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11. 3. QID 361258 (Bovee & Crail Spec. 2808-215-Division 15-Section 15F). 4. QID 361258 (SWEC Subcomponent Data Sheet SDS-215-361258-1). 5. QID 361258 (SWEC Engineering Analysis Sheet EAS-215-361258-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361244
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-V-30A -30B MANUFACTURER Borg-Warner Co. MODEL NUMBER 82110 COMPONENT Valve FUNCTION/SERVICE N_2 Outer Isolation LOCATION: BLDG R ELEVATION 540 COLUMN H.5/7.6, J.5/4.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	8.3×10^5	1×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: W. S. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-522H. 4. QID 361244 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F). 5. QID 361244 (SWEC Subcomponent Data Sheet, SDS-215-361244-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361252
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Instrument Air TAG NUMBER CIA-V-20 MANUFACTURER Borg-Warner Co. MODEL NUMBER P304CAB3-001 COMPONENT Valve FUNCTION/SERVICE Outer Isolation LOCATION: BLDG R ELEVATION 540 COLUMN J.5/7.1	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 11	Profile 4, 11	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	2.0×10^4	1×10^{10}	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-522K. 4. QID 361252 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F) 5. QID 361252 (SWEC, Subcomponent Data Sheet, SDS-215-361252-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 25

QID #361231
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-215

MPL:
PPD:

PAGE NO: 1 of 1
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DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Core Isolation Cooling TAG NUMBER RCIC-V-19 MANUFACTURER Borg-Warner Co. MODEL NUMBER P 78560 COMPONENT Valve FUNCTION/SERVICE LOCATION: BLDG R ELEVATION 467 COLUMN J.4/7.7	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4, 6, 7A	Profiles 4, 6, 7A	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal Profile 7A	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4, 6, 7A	Profiles 4, 6, 7A	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.6×10^6	9.1×10^8	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: Stone & Webster

Reviewed By: M. S. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Report No. 01-0740-1152. 4. QID 361231 (Bovee and Crail Spec. 2808-215-Division 15-Section 15F). 5. QID 361231 (SWEC Subcomponent Data Sheet, SDS-215-361231-2).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361106
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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DATE: 6/20/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge TAG NUMBER CEP-V-3A, -4A MANUFACTURER BIF MODEL NUMBER BIF Dwg. A-206764 COMPONENT Valve FUNCTION/SERVICE Supp. Chamber Exhaust LOCATION: BLDG R ELEVATION 495 COLUMN H.5/5.4	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	Note 1
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^5	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER / [illegible] (Rev.1)

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. (Letter BRWP-RO-83-85) 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361106 (SWEC Subcomponent Data Sheet, SDS-68-361106-2).	Qualified

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #361106
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-6 MANUFACTURER BIF MODEL NUMBER BIF Dwg. A-206765 COMPONENT Valve FUNCTION/SERVICE Containment Isolation LOCATION: BLDG R ELEVATION 480 COLUMN N.5/7.7	OPERATING TIME	4320 Hours	4320 Hours	2	5	Analysis	Note 1
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.3×10^5	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOUF & WEBSTER / [illegible] (Rev. 1)

Reviewed By: [illegible] 6/25/83

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471J. (Letter BRWP-RO-83-85). 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361106 (SWEC Subcomponent Data Sheet, SDS-68-361106-3).	Qualified

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WPPSS

QID #361104
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Exhaust Purge TAG NUMBER CEP-V-1A, -2A MANUFACTURER BIF MODEL NUMBER BIF Dwg. A-206763 COMPONENT Valve FUNCTION/SERVICE Drywell Exhaust LOCATION: BLDG R ELEVATION 558 COLUMN J.4/5.4	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Adamson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-548Q. 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361104 (SWEC Subcomponent Data Sheet, SDS-68-361104-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361104
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-1, -2 MANUFACTURER BIF MODEL NUMBER BIF Dwg. A 206763 COMPONENT Valve FUNCTION/SERVICE Containment Isolation LOCATION: BLDG R ELEVATION 508 COLUMN H.5/7.6	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.5×10^6	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. P. Adams

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-501I. 4. QID #361103 (Burns and Roe Design Spec. 2808-68). 5. QID #361104 (SWEC Subcomponent Data Sheet, SDS-68-361104-2).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361106
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-3,4,5	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
MANUFACTURER BIF	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/ A	None
MODEL NUMBER BIF DWG. A-206764 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
FUNCTION/SERVICE Containment Isolation	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	7.1×10^4	1.0×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 475-478 COLUMN M.6, M.7/7.6, 8.3							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-471D. 4. QID No. 361103 (Burns & Roe Design Spec. 2808-68). 5. QID 361106 (SWEC, Subcomponent Data Sheet SDS-68-361106-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361106
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Containment Supply Purge TAG NUMBER CSP-V-9	OPERATING TIME	4,320 Hours	4,320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
MANUFACTURER BIF	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
MODEL NUMBER BIF Dwg. A-206764 COMPONENT Valve	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
FUNCTION/SERVICE Suppression Chamber Relief	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	5.0×10^5	1×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None
LOCATION: BLDG R ELEVATION 490 COLUMN M.9/5.1							

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Adrian

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List, dated 10/5/82. 2. FSAR Paragraph 3.11 and WPPSS Calculation NE-02-82-14-0. 3. EDS Study 0740-004-471B. 4. QID 361103 (Burns & Roe Design Spec. 2808-68). 5. QID 361106 (SWEC Subcomponent Data Sheet SDS-68-361106-1).	Qualified.

WP-1081

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361102
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Bldg. Exhaust Air (HVAC) TAG NUMBER REA-V-1, -2 MANUFACTURER BIF MODEL NUMBER BIF DWG A-206766 COMPONENT Valve FUNCTION/SERVICE R Bld Isol. Valve LOCATION: BLDG R ELEVATION 597 COLUMN H.2/6.2	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	2×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STEVE R WEBSTER

Reviewed By: M. R. Johnson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572N4. 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361102 (SWEC Subcomponent Data Sheet, SDS-68-361102-1).	Qualified.

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WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361101
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Reactor Bldg. Outside Air (HVAC) TAG NUMBER ROA-V-1, -2 MANUFACTURER BIF MODEL NUMBER BIF DWG A-206766 COMPONENT Valve FUNCTION/SERVICE R Bldg. Iso. Valve LOCATION: BLDG R ELEVATION 578 COLUMN N.7/5.0, 5.7	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^6	2×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE R WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572F. 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361101 (SWEC Subcomponent Data Sheet, SDS-68-361101-1).	Qualified.

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WPPSS

QID #361103
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-V- (See Note 1) MANUFACTURER BIF MODEL NUMBER BIF DWG A-206767 COMPONENT Valve FUNCTION/SERVICE SGT Tie SGT-FN LOCATION: BLDG R ELEVATION COLUMN (See Note 1)	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	90 Max. Normal 104 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.1×10^6	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572N4. 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361103 (SWEC Subcomponent Data Sheet, SDS-68-361103-1).	Qualified. 1. See Page 2 of 2.

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[illegible]

[illegible]

[illegible]

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID 361103
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-68

MPL:
PPD:

EQUIPMENT QUALIFICATION REPORT

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

1.

Tag Number	Elev.	Coord.
SGT-V-1A	583	H.8/5.3
-1B	583	J.3/5.3
-3A1	576	H.8/7.7
-3A2	576	J.0/7.7
-3B1	576	J.3/6.8
-3B2	576	J.3/7.4
-4A1	587	H.8/7.1
-4A2	587	J.0/7.0
-4B1	585	J.2/5.1
-4B2	585	J.6/7.1
-5A1	587	H.6/7.0
-5A2	587	J/7.1
-5B1	587	J.2/7
-5B2	585	J.6/7

INCORPORATED BY REFERENCE

1. [illegible] 5[illegible] (Equipment area data) 10/[illegible]/82.
2. [illegible] Paragraph 3.11 and press criteria dated 82-[illegible]-8
3. [illegible] (74-[illegible]-[illegible]).
4. [illegible] (Layout and Use Design Spec. [illegible]).
5. [illegible] (SWEC subcomponent Data Sheet, [illegible]).

NOTE:

Deferred

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 29

QID #361110
OWNER: WPPSS
FACILITY: WNP-2
SPEC:

MPL:
PPD:

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Standby Gas Treatment TAG NUMBER SGT-V-2A, -2B MANUFACTURER BIF MODEL NUMBER BIF DWG. A-206761 COMPONENT Valve FUNCTION/SERVICE SGT-FU-1A & B LOCATION: BLDG R ELEVATION 580 COLUMN H.7/5.3, J.3/5.3	OPERATING TIME	4320 Hours	4320 Hours	1	4	Design Specification	None
	TEMPERATURE (F)	Profile 4	Profile 4	2	4	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal	N/A	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Max. Normal 90 Max. Abnormal Profile 4	Profile 4	2	4	Design Specification	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A.	None
	RADIATION (RAD)	1.1×10^6	8.7×10^6	3	5	Analysis	None
	AGING	40 Years	40 Years	2	4	Design Specification	None

FLOOD LEVEL ELEV:
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. R. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-572N4. 4. QID 361103 (Burns and Roe Design Spec. 2808-68). 5. QID 361110 (SWEC Subcomponent Data Sheet, SDS-68-361110-1).	Qualified.

WP-1881

MANUFACTURER
Robo Sales Centrifu

MODEL/TYPE
[illegible]-A1, B2

COMPONENT
Valve

FUNCTION DESCRIPTION
[illegible] Exhaust

LOCATION BLDG. [illegible]
[illegible] 52
COLUMN [illegible]

FLOOR-LEVEL ELEV N/A
ABOVE FLOOR-LEVEL
Yes No

[illegible]	[illegible]	2	N/A	N/A	[illegible]	[illegible]
RELATIVE IMPORTANCE (1)	[illegible]	[illegible]	4	Analysis	[illegible]	[illegible]
[illegible] SPRAY	N/A	N/A	N/A	N/A	[illegible]	.0e
REGULATION (NRC)	[illegible]	[illegible]	4	[illegible]	[illegible]	None
AGING	40 Years	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Recommend By: [illegible] Approved By: [illegible]

DOCUMENTATION REFERENCES

1. [illegible]-2 [illegible] Equipment List dated 10/05/[illegible].
2. FSAR Graph 3.11 and [illegible] calculation [illegible] 82-14-0.
3. EBS Study [illegible]-[illegible].
4. [illegible] 2[illegible] SWEC Engineering Analysis Sheet, [illegible]-[illegible]-1).
5. [illegible] [illegible] SWEC Subcomponent Data Sheet, [illegible]-[illegible]-1).

NOTES

1. Accident response time for the CRD scram Valves is less than five seconds post transient. Active five seconds the rod are inserted and permanently latched in position. Any degradation of the pressure trip of the mechanical mechanisms of the valves due to rotation that might occur in less than five seconds post transient would not impact on the safety-related function. [illegible] [illegible].
2. See Page 2 of 2.

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #361961-
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

EQUIPMENT QUALIFICATION REPORT

Pkg. 31

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-V-126, 127 (See Note 2) MANUFACTURER Robertshaw Controls MODEL NUMBER 83470-A1, B2 COMPONENT Valve FUNCTION/SERVICE Scram Inlet and Exhaust LOCATION: BLDG R ELEVATION 522 COLUMN L.5/8.4, K.2/8.4	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (°F)	90 Normal 104 Abnormal Profile 4, 11	104 Profile 4, 11	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Normal 90 Abnormal Profile 4, 11	90 Profile 4, 11	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^5	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: M. S. Robinson

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-522J. 4. QID 361961 SWEC Engineering Analysis Sheet, EAS-02C12-361961-1). 5. QID 361961 SWEC Subcomponent Data Sheet, SDS-02C12-361961-1).	Qualified. 1. Accident response time for the CRD Scram Valves is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the nonmetallic subcomponents of the valves due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the units. 2. See Page 2 of 2.

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[illegible]

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)

2. Tag Numbers

3031	3843	5011
3035	3847	5015
3039	3851	5019
3043	3855	5023
3047	3859	5027
3051	4203	5031
3055	4207	5035
3059	4211	5039
3403	4215	5043
3407	4219	5047
3411	4223	5051
3415	4227	5415
3419	4231	5419
3423	4235	5423
3427	4239	5427
3431	4243	5431
3435	4247	5435
3439	4251	5439
3443	4255	5443
3447	4259	5447
3451	4607	5819
3455	4611	5823
3459	4615	5827
3803	4619	5831
3807	4623	5835
3811	4627	5839
3815	4631	5843
3819	4635	
3823	4639	
3827	4643	
3831	4647	
3835	4651	
3839	4655	

[illegible]							
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	N/A	N/A	NONE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	NONE
[illegible]	N/A	N/A	[illegible]	[illegible]	N/A	N/A	NONE
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

FLOOD LEVEL ELEV. N/A
ABOVE FLOOD LEVEL
YES NO

P Opened By: [illegible] Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WBP-2 Unit Equipment List dated 10/05/[illegible].
2. FSAR Flowgraph 7.11 and WPPSS calculation RE-02-82-14-0
3. EQS Study 0740-004-5229.
4. QID 321961 (SWEC Engineering Analysis Sheet, EAS 02012-321961-1).
5. QID 321963 (SWEC Subcomponent Data Sheet, SDS 02012-321963-1).

NOTES

Qualified.

1. Accident response time for the CHO Screen Valves is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the nonmetallic subcomponents of the valves due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the valves.
2. See Page 2 of 2.

WPPSS

QID #361961
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

Pkg. 31

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-V-126, 127 (See Note 2) MANUFACTURER Robertshaw Controls MODEL NUMBER 83470-A1, B2 COMPONENT Valve FUNCTION/SERVICE Scram Inlet & Exhaust LOCATION: BLDG R ELEVATION 522 COLUMN L.5/3.7, K.2/3.7	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (°F)	90 Normal 104 Abnormal Profile 4, 11, 24A	104 Profile 4, 11, 24A	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal 15.0 Max. Accident	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Normal 90 Abnormal Profile 4, 11, 24A	90 Profile 4, 11, 24A	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	6.4×10^5	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STOVE R WEISTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES	NOTES
1. WNP-2 SRM Equipment List dated 10/05/82. 2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0. 3. EDS Study 0740-004-522B. 4. QID 361961 (SWEC Engineering Analysis Sheet, EAS-02C12-361961-1). 5. QID 361961 (SWEC Subcomponent Data Sheet, SDS-02C12-361961-1).	Qualified. 1. Accident response time for the CRD Scram Valves is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the nonmetallic subcomponents of the valves due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the valves. 2. See Page 2 of 2.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Tag Numbers

0219	1431	2247
0223	1435	2251
0227	1439	2255
0231	1443	2259
0235	1447	2603
0239	1451	2607
0243	1455	2611
0615	1803	2615
0619	1807	2619
0623	1811	2623
0627	1815	2627
0631	1819	2631
0635	1823	2635
0639	1827	2639
0643	1831	2643
0647	1835	2647
1011	1839	2651
1015	1843	2655
1019	1847	2659
1023	1851	3003
1027	1855	3007
1031	1859	3011
1035	2203	3015
1039	2207	3019
1043	2211	3023
1047	2215	3027
1051	2219	
1407	2223	
1411	2227	
1415	2231	
1419	2235	
1423	2239	
1427	2243	

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #167001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

EQUIPMENT QUALIFICATION REPORT

Pkg. 31

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-HCU-(See Note 2) MANUFACTURER General Electric MODEL NUMBER 761E500G1 COMPONENT Hydraulic Control Unit FUNCTION/SERVICE CRD Hydraulic Control LOCATION: BLDG R ELEVATION 522 COLUMN L.5/3.7, K.2/3.7	OPERATING TIME	1.17 Hours	1.17 Hours	2	5	Analysis	None
	TEMPERATURE (°F)	90 Normal 104 Abnormal Profile 4, 11, 24A	104 Profile 4, 11, 24A	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal 15.0 Max Accident	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Normal 90 Abnormal Profile 4, 11, 24A	90 Profile 4, 11, 24A	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	6.4×10^5	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Study 0740-004-522B.
4. QID 167001 (SWEC Engineering Analysis Sheet, EAS-02C12-167001-1).
5. QID 167001 (SWEC Subcomponent Data Sheet, SDS-02C12-167001-1).

NOTES

Qualified.

1. Accident response time for the CRD Hydraulic Control Units is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the non metallic subcomponents of the units due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the units.
2. See Page 2 of 2.

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[illegible]

DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Tag Numbers

0219	1431	2247
0223	1435	2251
0227	1439	2255
0231	1443	2259
0235	1447	2603
0239	1451	2607
0243	1455	2611
0615	1803	2615
0619	1807	2619
0623	1811	2623
0627	1815	2627
0631	1819	2631
0635	1823	2635
0639	1827	2639
0643	1831	2643
0647	1835	2647
1011	1839	2651
1015	1843	2655
1019	1847	2659
1023	1851	3003
1027	1855	3007
1031	1859	3011
1035	2203	3015
1039	2207	3019
1043	2211	3023
1047	2215	3027
1051	2219	
1407	2223	
1411	2227	
1415	2231	
1419	2235	
1423	2239	
1427	2243	

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] General Electric	[illegible]	14.7 Hours	N/A	4	N/A	Analysis	None
MODEL NUMBER 7013H0001 COMPONENT Hydraulic Control Unit	RELATIVE RELIABILITY (%)	10 Normal 90 Abnormal Profile 4, 11	Profile 4, 11	2	4	Analysis	None
SUBCOMPONENTS CRD Hydraulic Control	[illegible] SPEC	N/A	N/A	2	N/A	N/A	None
	[illegible] TIME	1 to 4 hr	Note 1	4	4	Analysis	None
	AGING	40 Years	40 Years	2	4	Analysis	None
LOCATION Area F ELEVATION 522' COLUMN 1.5/8-A, K.2/8-4							

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

PREPARED BY: [illegible] REVIEWED BY: [illegible]

DOCUMENTATION REFERENCES

1. NMP-2 SAM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and NP955 calculation NE-CC-82-14-6.
3. EDC Study 0240-094-5226.
4. Dir 16968 (SNEC Engineering Analysis Sheet, IA-0CC12-16100H-1).
5. Dir 16968 (SNEC Subcomponent Data Sheet, SDC-0CC12-16700 1).

NOTES

Qualified.

1. Accident response time for the CRD Hydraulic Control Unit, is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the non metallic subcomponents of the unit due to radiation that might occur in less than five seconds post transient would not impact on the attenuated operation of the units.
2. See Page 2 of 2

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

QID #167001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02C12

EQUIPMENT QUALIFICATION REPORT

Pkg. 31

REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-HCU- (See Note 2) MANUFACTURER General Electric MODEL NUMBER 761E500G1 COMPONENT Hydraulic Control Unit FUNCTION/SERVICE CRD Hydraulic Control LOCATION: BLDG R ELEVATION 522 COLUMN L.5/8.4, K.2/8.4	OPERATING TIME	1.17 Hours	1.17 Hours	2	5	Analysis	None
	TEMPERATURE (°F)	90 Normal 104 Abnormal Profile 4, 11	104 Profile 4, 11	2	4	Analysis	None
	PRESSURE (PSIA)	14.7 Normal	N/R	2	N/A	N/A	None
	RELATIVE HUMIDITY (%)	40 Normal 90 Abnormal Profile 4, 11	90 Profile 4, 11	2	4	Analysis	None
	CHEMICAL SPRAY	N/A	N/A	2	N/A	N/A	None
	RADIATION (RAD)	1.0×10^5	Note 1	3	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. EDS Study 0740-004-522J.
4. QID 167001 (SWEC Engineering Analysis Sheet, EAS-02C12-167001-1).
5. QID 167001 (SWEC Subcomponent Data Sheet, SDS-02C12-167001 1).

NOTES

Qualified.

1. Accident response time for the CRD Hydraulic Control Units is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the non metallic subcomponents of the units due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the units.
2. See Page 2 of 2.

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DOCUMENTATION REFERENCES (Cont'd)	NOTES (Cont'd)
	2. Tag Numbers 3031 3843 5011 3035 3847 5015 3039 3851 5019 3043 3855 5023 3047 3859 5027 3051 4203 5031 3055 4207 5035 3059 4211 5039 3403 4215 5043 3407 4219 5047 3411 4223 5051 3415 4227 5415 3419 4231 5419 3423 4235 5423 3427 4239 5427 3431 4243 5431 3435 4247 5435 3439 4251 5439 3443 4255 5443 3447 4259 5447 3451 4607 5819 3455 4611 5823 3459 4615 5827 3803 4619 5831 3807 4623 5835 3811 4627 5839 3815 4631 5843 3819 4635 3823 4639 3827 4643 3831 4647 3835 4651 3839 4655

WPPSS

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

EQUIPMENT QUALIFICATION REPORT

QID #092001
OWNER: WPPSS
FACILITY: WNP-2
SPEC: 2808-02B13

MPL:
PPD:

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PAGE NO: 1 of 2
REVISION: 0
DATE: 01/14/83

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENT REF.		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	FSAR	QUALIFICATION	FSAR	QUAL.		
SYSTEM Control Rod Drive TAG NUMBER CRD-DRVE- (See Note 2) MANUFACTURER GE MODEL NUMBER 7RDB144C COMPONENT Drive FUNCTION/SERVICE Control Rod Drive Assy LOCATION: BLDG C ELEVATION 501 COLUMN Under Vessel	OPERATING TIME	4320 Hours	4320 Hours	1	5	Analysis	None
	TEMPERATURE (°F)	135 Normal 150 Abnormal Profile 1	575° Profile 1	2	3	Design Specification	None
	PRESSURE (PSIA)	14.7 Normal 16.7 Abnormal Profile 1	1250 Profile 1	2	3	Design Specification	None
	RELATIVE HUMIDITY (%)	55 Normal 90 Abnormal Profile 2	100% Profile 2	2	3	Design Specification	None
	CHEMICAL SPRAY	Demineralized Water	Demineralized Water	2	4	Analysis	None
	RADIATION (RAD)	7.0×10^7	Note 1	2	4	Analysis	None
	AGING	40 Years	40 Years	2	5	Analysis	None

FLOOD LEVEL ELEV: N/A
ABOVE FLOOD LEVEL?
YES NO

Prepared By: STONE & WEBSTER

Reviewed By: [illegible]

DOCUMENTATION REFERENCES

1. WNP-2 SRM Equipment List dated 10/05/82.
2. FSAR Paragraph 3.11 and WPPSS calculation NE-02-82-14-0.
3. QID 092001 (General Electric Specification 21A8781, Rev. 2).
4. QID 092001 (SWEC Engineering Analysis Sheet, EAS-02B13-092001-1).
5. QID 092001 (SWEC Subcomponent Data Sheet, SDS-02B13-092001-1).

NOTES

Qualified.

1. Accident response time for the Control Rod Drive Assemblies is less than five seconds post transient. After five seconds the rods are inserted and permanently latched in position. Any degradation of the properties of the non metallic subcomponents of the assemblies due to radiation that might occur in less than five seconds post transient would not impact on the safety-related functions of the assemblies.
2. See Page 2 of 2.

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APPENDIX

[illegible] EVALUATION

[illegible] RESULTS