

SALEM GENERATING STATION

UNITS 1 AND 2

DOCKET NOS. 50-272 AND 50-311

ENVIRONMENTAL QUALIFICATION REVIEW REPORT

VOLUME 1

(NON-PROPRIETARY VERSION)

December 1, 1980

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Rev. 1 - 12/1/80

Rev. 2 - 1/16/81

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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: REACTOR COOLANT Identification: REFER TO MASTER LIST PAGE 9 Component: RTD Manufacturer: ROSEMOUNT Model: [] _{A,C} Service: RC HOT/COLD LEG WIDE RANGE TEMPERATURE Function: POST-ACCIDENT MONITORING Accuracy: Spec. $\pm 5\%$ [] _{A,B,C} Location: PIPES - CONTAINMENT Flood Level E1: 83'-1" Above Flood Level: YES	Operating Time	LOCA/MSLB 14 DAYS	144 HR. TEST EQUIVALENT 17 DAYS	1	8,9,10	SEQUENTIAL TEST (RADIATION)	REFERENCE 12	NOTE A
	Temperature	271/350°F	[] _{A,B,C} (FIG 1A, 1B)	2,3	8,9,11	ACCIDENT ENVIRONMENT SIMULATION (NOTE B)		
	Pressure	43.2/42.8 PSIG	[] _{A,B,C} (FIG 1A, 1B)	4	8,9			
	Relative Humidity	100%	[] _{A,B,C}	—				
	Chemical Spray	BORIC ACID & NAOH PH > 8.5 > 22.5 HRS	BORIC ACID & NAOH 1.146 wt% B, 11 wt% O. 24 HRS	5	—			
	Radiation	$5 \times 10^7 R$	[] _{A,B,C}	6,7	8,9,7			
	Aging	—	REPLACEMENT AT EACH REFUELING	—	8,9,7, 12			
	Submergence	N/A	NONE	—			NONE	

References:

1. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
2. FSAR; FIGURE 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPP. 4)
NUREG 0517, 4/80; Pg. 3-10
4. FSAR; FIGS. 7.5-4, 14.3-25,
Pg. 14.3-56 & Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-4
6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSE&G/NRC LETTER - 5/22/80
8. WCAP 9157, 9/77 (EQ10.00)
9. PSE&G DOCUMENTATION EVALUATION EQ10
10. PSE&G CALCULATION - EQ10.02
11. PSE&G ANALYSIS - EQ10.03
12. NRC SER FOR SALEM (SUPP. 4)
NUREG 0517, 4/80; Pg. 3-15

Notes:

- A. REPLACEMENT AT EACH REFUELING PENDING REQUALIFICATION PER NRC REQUIREMENTS IN REF. 12.
- B. TEST WAS CONDUCTED FOR MODEL []_{A,C}, MODEL []_{A,C} IS SIMILAR AND ALL TEST DATA IS APPLICABLE.

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.			
System: REACTOR COOLANT IDENTIFICATION: P40039 & P40088 (UNIT 1) Component: PRESSURE TRANSMITTER Manufacturer: BARTON Model: I JAC Prod. Lot Z Service: RC SYSTEM PRESSURE Function: POST ACCIDENT MONITORING Accuracy: Spec. $\pm 10\%$ Demon. I JABC Location: PANEL CONTAINMENT	Operating Time	LOCABLE 120 DAYS	16 DAYS IN ADVERSE ENV. 2-120 DAYS POST-ACCIDENT	1, 2	SEQUENTIAL TEST NOTE B	NONE	—
	Temperature	271/296°F	I JABC FIG. 2, SA, XBC	3, 4 NOTE A			—
Pressure		43.2/42.8 PSIG	I JABC A, B, C	5			—
	Relative Humidity	100%	I JABC	—			—
Chemical Spray		0.2 WT. % NACH 1.2 WT. % BORIC ACID	0.17 WT. % NACH 1.14 WT. % BORIC ACID	6			—
	Radiation	5X10 ⁷ R	I JABC	7			—
Aging			REPLACEMENT BY JUNE 30, 1982	—	Analysis	—	REFER TO BASS # 2
Submergence		N/A	N/A	N/A	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURES 14.0, 14.4, 14.6
2. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
3. FSAR, FIGURE 7.5-5
4. WYLE REPORT NO. 44439-2, REV. A, FIGURE 8-4B
5. FSAR, FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 14.5.85
6. FSAR, PAGE 6.4-10
7. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
8. (a) LETTER REPORT NS-TMA-2184, 12/21/79 (b) 26.00
9. PSE&G DOCUMENTATION NOTE EVALUATION - EQ 26
- A. PEAK AMBIENT TEMPERATURE SEE BY DEVICE IS LESS THAN MSIB PROFILE DUE TO LOCATION WITHIN INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEISMIC, THEN SIMULATED ACCIDENT ENVIRONMENT

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: REACTOR COOLANT Identification: PA0039 & PA0088 (UNIT 2)	Operating Time	LOCA/MSLB 120 DAYS	15 DAYS IN ADVERSE ENV ~ 120 DAYS POST-ACCIDENT	1, 2	8, 9, 11	NONE	—
Component: PRESSURE TRANSMITTER	Temperature	271/296 F	[] A,B,C F.G.H. 5A, 5B	3, 4 NOTE A	—	—	—
Manufacturer: BARTON	Pressure	43.2/42.8 PSIA	[] A,B,C	5	—	—	—
Model: [] PART. LOT 1 Service:	Relative Humidity	100 %	[] A,B,C	—	—	—	—
RC SYSTEM PRESSURE Function: POST ACCIDENT MONITORING	Chemical Spray	0.2 WT. % NACH 1.2 WT. % BODIC ACID	0.17 WT. % NACH 1.4 WT. % 3.00% ACID	6	—	—	—
Accuracy: Spec. $\pm 10\%$ Demon. []	Radiation	5X10 ⁷	[] A,B,C	7	—	—	—
Location: PANEL CONTAINMENT	Aging	—	REPLACEMENT BY JUNE 30, 1982	—	10	NRC	REFER TO BASIS # 2
Flood Level El.: 83'-1" Above Flood Level: YES	Submergence	N/A	N/A	N/A	N/A	NONE	—

References:

1. SALFEM EMERGENCY OPERATING PROCEDURES: 14.0, 14.4, 14.6
 2. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
 3. FSAR; FIGURE 7.5-5
 4. WYLE REPORT NO. 44439-2, REV. A; FIGURE III-4B.
 5. FSAR; FIGURE 14.3-25, PAGE 6
 6. FSAR; PAGE 6.4-10
 7. PSEI & RADIATION CALCULATION PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
 8. (a) LETTER REPORT NS-TMA-1950 9/29/78 (6418.00)
 9. (b) LETTER REPORT NS-TMA-2120, 9/14/79 (6418.00)
 10. NRC SER FOR SALFEM (SUPP. # 1) NUREG 0517 W/TO PAGE 3-1
- Notes: 11. PSEI & DOCUMENTATION EVALUATION EXP-18
- A. PEAK AMBIENT TEMPERATURE SEEN BY DEVICE IS LESS THAN MSLB PROFILE DUE TO LOCATION WITHIN INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEMIN THEN SIMULATED ACCIDENT ENVIRONMENT

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: PRESSURIZER Identification: LA00R, LA00P73 LA00R (UNIT 1)	Operating Time	LOCA/MSIB 120 DAYS	16 DAYS IN ADVERSE ENVIR. ~ 120 DAYS POST-ACCIDENT	1, 2	8, 9	NONE	—
Component: DIFFERENTIAL PRESSURE TRANSMITTER	Temperature	271/29°F	[] A,B,C FIG. 2A, 6A, 6B, 6C	3, 4			—
Manufacturer: BARTON	Pressure	43.2/42.8 PSIG	[] A,B,C	5			—
Model: [] J.A.C. Prod. Lot # Service: PRESSURIZER LEVEL	Relative Humidity	100 %	[] A,B,C	—			—
Function: POST-ACCIDENT MONITORING	Chemical Spray	0.2 WT. % NAOH 1.2 WT. % BORIC ACID	0.17 WT. % NAOH 1.14 WT. % BORIC ACID	6			—
Accuracy: Spec. ± 20 % Demon. [] A,B,C	Radiation	5X10 ⁷ R	[] A,B,C	7			—
Location: INSTR. PANEL CONTAINMENT	Aging	—	REPLACEMENT BY JUNE 30, 1982	—	—	ANALYSIS	REFER TO BRO #2
Flood Level El: 83'-1" Above Flood Level: YES	Submergence	N/A	N/A	N/A	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURES, 3.14.4, 14.6
2. POST-ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
3. FSAR, FIGURE 7.5-5
4. WYLE REPORT NO. 44439-2, REV. A, FIGURE III-4B
5. FSAR, FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q.5.82 & Q.5.85
6. FSAR, PAGE 4.6-10
7. PSE&A RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
8. (U) LETTER REPORT NS-TMA-2184, 12/6/79 (EQ2.04)
9. PSE&A DOCUMENTATION EVALUATION - EQ-26

Notes:

- A. PEAK AMBIENT TEMPERATURE SEEN BY DEVICE IS LESS THAN MSIB PROFILE DUE TO LOCATION WITHIN INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEISMIC, THEN SIMULATED ACCIDENT ENVIRONMENT

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EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: SURVEILLANCE Identification: LADDER, LADDER, LADDER (UNIT 2) Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: BARTON Model: J A, C Prod. Lot: 1 Service: PRESSURIZER LEVEL Function: POST-ACCIDENT MONITORING Accuracy: Spec. $\pm 20\%$ Demon. J A, B, C Location: INSTR. PANEL CONTAINMENT	Operating Time	LOCA/MSLB 120 DAYS	15 DAYS IN ADVERSE ENV. ≈ 120 DAYS POST-ACCIDENT	1, 2	9, 9, 11	SEQUENTIAL TEST	NONE
	Temperature	271/298°F	[J A, B, C F. 4, 7, 8, 10, 20	3, 4 NOTE A			
	Pressure	473.2/42.8 PSIA	[J A, B, C	5			
	Relative Humidity	100%	[J A, B, C				
Accuracy: Spec. $\pm 20\%$ Demon. J A, B, C Location: INSTR. PANEL CONTAINMENT	Chemical Spray	0.2 WT. % NaOH 1.2 WT. % Boric Acid	0.17 WT. % NaOH 1.14 WT. % Boric Acid	6			
	Radiation	5x10 ⁷ R	[J A, B, C	7			
	Aging		REPLACEMENT BY JUNE 30, 1982		10	NRC	REFER TO BASIS #2
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; J 4.4, I 4.6
2. POST-ACCIDENT TIME REQUIRED FOR INSTRUMENTATION CONTROLS
3. FSAR; FIGURE 7.5-5
4. WYLE REPORT NO. 44439-2, REV. A; FIGURE III-4B
5. FSAR; FIGURE IV.3-25, PAGE 14.3-5B AND RESPONSE TO Q.5.02 & Q.5.05
6. FSAR; PAGE 6.4-10
7. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
8. (a) LETTER REPORT N5-TMA-1950, 9/20/78 (6010.00)
9. (b) LETTER REPORT N5-TMA-2120, 9/20/78 (6010.01)
10. NRC SER FOR SALEM (SUPP) NUREG 0517 4/80; PAGE 3-11
11. PSE&G DOCUMENTATION EVALUATION EQ 18

Notes:

- A. PEAK AMBIENT TEMPERATURE SEEN BY DEVICE IS LESS THAN MSLB PROFILE DUE TO LOCATION INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEMI-ANNUAL SIMULATED ACCIDENT ENVIRONMENT

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QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: PRESSURIZER Identification: Component: LIMIT SWITCH Manufacturer: NAMCO Model: EA-180 Service: POSITION INDICATOR FOR VALVES Function: POSITION INDICATION OF PORV's PA1, PR2 Accuracy: Spec. N/A Demon. Location: CONTAINMENT Flood Level E1: 83'-1" Above Flood Level: YES	Operating Time	LOCA/MSLB	30 DAY TEST EQUIVALENT ≥ 120 DAYS	1	7, 8, 9	SEQUENTIAL TEST	NONE	NOTE A
	Temperature	271°/350°F	340°F FIG. 12	2, 3	7, 8			
	Pressure	432/42.8 PSIG	70 PSIG FIG. 12	4				
	Relative Humidity	100%	100%	—				
	Chemical Spray	BORIC ACID NAOH PH > 8.5 ≥ 22.5 RES.	BORIC ACID NAOH PH 10 4 DAYS	5				
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	↓	↓	↓	↓
	Aging	—	1.5 YRS INITIAL GASKET REPLACEMENT THERE AFTER 40 YRS	—	7, 10, 11	TEST AND ANALYSIS	↓	REFER TO NOTE B FOR MAINTENANCE
	Submergence	N/A	NONE	N/A	7	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURE ; I4.4
2. FSAR; FIGURE 7.5-6 & RESPONSE TO Q5.82 AND Q5.85
3. NRC SER FOR SALEM (SUPP. 4), NUREG 0517 4/80; PAGE 3-10
4. FSAR; FIGURE 14.3-25, PAGE 14.3-56 & RESPONSE TO Q5.82 AND Q5.85
5. FSAR; PAGE 6.4-10
6. PSE & RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
7. ACHC CLEVELAND DEVELOPMENT CO. REPORT 9/78 "QUALIFICATION OF EA-180 SWITCH." (EQ13.06)
8. PSE & G DOCUMENTATION EVALUATION - EQ 13
9. PSE & G CALCULATION EQ 13.01
10. WHE REPORT 17448-17 (EQ13.06)
11. PSE & G AGING REVIEW EQ 13.07

Notes:

A. REFER TO BASIS 4

B. AFTER INITIAL REPLACEMENT OF TOP AND BOTTOM GASKETS AFTER 1.5 YEARS, PREVENTIVE MAINTENANCE WILL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION EA-189-90051. ANALYSIS INDICATES SPECIAL MAINTENANCE NOT REQUIRED AND PREVENTIVE IS UNDER REVIEW TO EXTEND TIME FRAMES.

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QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MAIN STEAM Identification: VARIOUS - UNIT 1 (REFER TO MASTER LIST) Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: BARTON Model: [] A,C PROD. LOT 2 Service: STM GEN NARROW RANGE WATER LEVEL Function: TRIP INPUT FOR PROTECTION SYSTEM AND POST ACCIDENT MONITORING Accuracy: ST/LT Spec. $\pm 10\% / \pm 20\%$ Demon. [] AC Location: INSTR. PANEL CONTAINMENT Flood Level El: 83'-1" Above Flood Level: YES	Operating Time	LOCA/MSLB 120 DAYS	16 DAYS IN ADVERSE ENVIR ~120 DAYS POST ACCIDENT	1, 2, 3	9, 10	SEQUENTIAL TEST NOTE B	NONE	—
	Temperature	271/296°F	[] ABC PG. 2, 9A, 9B, 9C	4, 5				—
	Pressure	43.2/42.8 PSIG	[] ABC	6				—
	Relative Humidity	100%	[] ABC	—				—
	Chemical Spray	0.2 WT. % NAOH 1.2 WT. % BORIC ACID	0.17 WT. % NAOH 1.14 WT. % BORIC ACID	7				—
	Radiation	5X10 ⁷ R	[] ABC	8	↓	↓		—
	Aging	—	REPLACEMENT BY JUNE 30, 1982	—	—	ANALYSIS	↓	REFER TO BASIS # 2
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. FSAR; PAGE 14.3-19, 14.5-24
2. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
3. SALEM EMERGENCY OPERATING PROCEDURE 14.2
4. FSAR; FIGURE 7.5-5
5. WYLE REPORT NO. 44439-2, REV. A; FIGURE III - 4B
6. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q.5.82 & Q.5.81
7. FSAR; PAGE 6, 4-10
8. PSE & RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
9. (W) LETTER REPORT NS-TMA-2184 12/21/79 (EQ 26.00)
10. PSE & DOCUMENTATION EVALUATION EQ 26

Notes:

- A. PEAK AMBIENT TEMPERATURE SEEN BY DEVICE IS LESS THAN MSLB PROFILE DUE TO LOCATION WITHIN INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEISMIC THEN SIMULATED ACCIDENT ENVIRONMENT.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MAIN STEAM Identification: VARIOUS - UNIT 2 (REFER TO MASTER LIST) Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: BARTON Model: [] A,C PROD. LOT: Service: STM GEN. NARROW RANGE WATER LEVEL Function: TRIP INPUT FOR PROTECTION SYSTEM AND POST ACCIDENT MONITORING Accuracy: ST/LT Spec. $\pm 10\% / \pm 20\%$ Demon. [] A,B,C Location: INSTA. PANEL CONTAINMENT Flood Level E1: 83'-1" Above Flood Level: YES	Operating Time	LOCA/MSLB 120 DAYS	15 DAYS IN ADVERSE ENVIRONMENT ~120 DAYS POST ACCIDENT	1,2,3	9,10,12	SEQUENTIAL TEST WITH SUPPLEMENTAL ADVERSE ENVIR. TESTING NOTE B	NONE	—
	Temperature	271/296°F	[] A,B,C FIG. 8, 28, 7A, 7B	4,5 NOTE A				—
	Pressure	43.2/42.8 PSIG	[] A,B,C	6				—
	Relative Humidity	100%	[] A,B,C					—
	Chemical Spray	0.2 WT % NaOH 1.2 WT % BORIC ACID	0.17 WT % NaOH 1.14 WT % BORIC ACID	7				—
	Radiation	5X10 ⁷ R	[] A,B,C	8	↓	↓		—
	Aging	—	REPLACEMENT BY JUNE 30, 1982	—	11	NRC	↓	REFER TO BASIS #2
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. FSAR; PAGE 14.3-19, 14.5-24
 2. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
 3. SALEM EMERGENCY OPERATING PROCEDURE; I4.2
 4. FSAR; FIGURE 7.5-5
 5. WYLE REPORT NO. 44439-2, REV. A; FIGURE III-4B
 6. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 & Q5.85
 7. FSAR; PAGE 6.4-10
 8. PSE & RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
 9. (1) LETTER REPORT NS-TMA-1950, 9/9/78 (EQ 18.00)
 10. (2) LETTER REPORT NS-TMA-2120, 9/19/79 (EQ 18.01)
 11. NRC SER. FOR SALEM (SUPP. 4) NUREG 0517 4/80; PAGE 3-11
 12. PSE & DOCUMENTATION EVALUATION EQ 18
- Notes:
- A. PEAK AMBIENT TEMPERATURE SEEN BY DEVICE IS LESS THAN MSLB PROFILE DUE TO LOCATION WITHIN INSTRUMENT PANEL (WYLE REPORT NO. 44439-2, REV. A)
- B. RADIATION EXPOSURE, SEISMIC THEN SIMULATED ACCIDENT ENVIRONMENT

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: AUXILIARY FEEDWATER Identification: FA1087, FA1091 & FA1097 Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: FISCHER-PORTER Model: [] A,C Service: #11, 12, 14 SG AUX. FW FLOW Function: POST ACCIDENT MONITORING Accuracy: Spec. Demon. Location: INBOARD & OUTBOARD PEN. AREA Flood Level E1: 83'-1" Above Flood Level: N/A	Operating Time	MSLB		1, 2	5 6	TEST	BASIS #12	INSUFFICIENT DOCUMENTATION
	Temperature	320°F	[] A,B,C	3	5			
			320°F		6			
	Pressure	5.8 PSIG	[] A,B,C	3	5			
			75.3 PSIG		6			
	Relative Humidity	100%	[] A,B,C	—	5			
			100%		6			
	Chemical Spray	N/A	[] A,B,C	—	5			
			N/A		6			
	Radiation	<10 ⁵ R	[] A,B,C	4	5			
			>10 ⁶ R		6			
	Aging	—	—	—	—	—	↓	↓
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURE ; I4.0
2. NUREG 0578 REQUIREMENTS; ITEM 2.1.7b
3. PSE & G CALCULATIONS PER HEBA, INFORMATION IN FSAR SECTION 14.5
4. PSE & G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
5. WCAP 7410-L VOL 1, 12/70
6. SUMMARY REPORT OF NUS CORP. EPR EQUIPMENT QUALIFICATION PROGRAM - RESPONSES TO NRC IE BULLETIN 79-01⁸

Notes:

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EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: AUXILIARY FEEDWATER Identification: FA1095 Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: FISCHER-PORTER Model: [] _{A,C} Service: #13 SG AUX. FW. FLOW Function: POST ACCIDENT MONITORING Accuracy: Spec. Demon. Location: INSTR. PANEL MECH. PEN. -7B Flood Level El: 83'-1" Above Flood Level: N/A	Operating Time	HEBA		1, 2	5	BASIS #12	INSUFFICIENT DOCUMENTATION
	Temperature	212°F	[] _{ABC}	3	5		
			320°F	NOTE A	6		
	Pressure	1 PSIG	[] _{ABC}	3	5		
	Relative Humidity	100%	[] _{ABC}		6		
	Chemical Spray	N/A	[] _{ABC}		5		
			N/A		6		
	Radiation	$< 5 \times 10^{-7} R$	[] _{ABC}	4	5		
	Aging				6		
	Submergence	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURE ; I 4.0
2. NUREG 0578 REQUIREMENTS; ITEM 2.1.7b
3. PSE & G CALCULATIONS PER HEBA INFORMATION IN FSAR SECTION 14.5
4. PSE & G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
5. WCAP 7410-L VOL 1, 12/70
6. SUMMARY REPORT OF NUS CORP. "EPR1 EQUIPMENT QUALIFICATION PROGRAM - RESPONSES TO NRC IE BULLETIN 79-01"

Notes:

- A. THE PEAK TEMPERATURE SHOULD BE LOWER BECAUSE OF THERMAL PROTECTION AFFORDED BY INSTRUMENT PANEL (RISE TIME)

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: SAFETY INJECTION Identification: (P) SAPH ¹ PHT-SIAPS1 (UNIT #2) (P) SAPH ² PSE-SIAPS1 (UNIT #1) Component: SAFETY INJECTION PUMP MOTOR Manufacturer: WESTINGHOUSE (BUFFALO) Model: Service: SUPPLEMENTAL COOLING TO RCS Function: DRIVING POWER TO SAFETY INJECTION PUMP Accuracy: Spec. N/A Demon. Location: AUX. BLDG. 84'	Operating Time	RECIRC. 120 DAYS	> 120 DAYS	1, 2	4, 5	TEST	NONE	—
	Temperature	N/A	N/A	N/A	N/A	N/A	N/A	—
	Pressure							—
	Relative Humidity							—
	Chemical Spray	↓	↓	↓	↓	↓	↓	—
	Radiation	< 5x10 ⁻² R NOTE B	1.4x10 ⁻² R	3	4, 5	TEST	NONE	—
	Aging	—	NOTED INSURANCE > 40 YEARS	—	4, 5, 7, 8	COMPONENT TEST ANALYSIS		REFER TO NOTE A FOR MAINTENANCE
	Submergence	N/A	NONE	N/A	NONE	N/A	↓	—

References:

1. SALEM OPERATING PROCEDURES; I 4.0, I 4.4, I 4.6
2. FSAR; CNP. 6
3. RESULTS OF PSE-86 CALCULATIONS IN RESPONSE TO TMI. EVALUATIONS (SHIELDING)
4. WESTINGHOUSE REPORT WCAP-8754 (EQM.00)
5. PSE-86 DOCUMENTATION EVALUATION-EQ16
6. WCAP 7410-L VOL. II (EQM.00)
7. WCAP-8754 REV. 1 (EQM.02)
8. 3666 SALEM, LUBRICATION MANUAL

Notes:

- A. PREVENTIVE MAINTENANCE PROGRAMS MOTOR BEARING OIL REPLACEMENT EVERY 12 MONTHS.
- B. RADIATION DOSE IS WORST CASE GENERAL DOSE IN AREA. ACTUAL DOSE FOR PUMP MOTOR SHOULD BE 1.53×10^{-2} R.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: RESIDUAL HEAT REMOVAL Identification: (W) SPIN ^{PS} -ACAPRN (UNIT #1) (W) SPIN ^{PNT} -ACAPRN (UNIT #2) Component: RHR PUMP MOTOR Manufacturer: WESTINGHOUSE (BUFFALO) Model: Service: POST LOCA DECAY HEAT REMOVAL Function: DRIVING POWER TO RHR PUMP Accuracy: N/A Spec. Demon. Location: AUX. BLDG. 45'	Operating Time	RECIRC.	>120 DAYS	1,2	4,5	TEST	NONE	—
	Temperature	N/A	N/A	N/A	N/A	N/A	N/A	—
	Pressure							—
	Relative Humidity							—
	Chemical Spray	↓	↓	↓	↓	↓	↓	—
	Radiation	<6x10 ⁶ R	1.4x10 ⁸ R	3	4,5	TEST	NONE	—
	Aging	—	MOTOR INSULATION >40 YEARS	—	4,5,7,8	COMPONENT TEST ANALYSIS		REFER TO NOTE A FOR MAINTENANCE
	Submergence	N/A	N/A	N/A	N/A	N/A	↓	—

References:

1. SALEM OPERATING PROCEDURES; I4.0, I4.4, I4.6
2. FSAR; CNP 9, CNP 6.
3. RESULTS OF PS. EFG CALCULATIONS IN RESPONSE TO TMI EVALUATIONS (SHIELDING)
4. WESTINGHOUSE REPORT WCAP-8754 (EQ 16.00)
5. PSEFG DOCUMENTATION EVALUATION EQ 16
6. WCAP 7410-L Vol. II (EQ 16.01)
7. WCAP-8754 Rev. 1 (EQ 16.02)
8. PSEFG SALEM LUBRICATION MANUAL.

Notes:

1. PREVENTATIVE MAINTENANCE REQUIRES MOTOR BEARING OR REPLACEMENT EVERY 6 MONTHS.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MAIN STEAM Identification: 540587, 581, 585, 583 (UNIT 2 ONLY) Component: SOLENOID VALVE Manufacturer: ASCO Model: NV202-302-1P Service: CONTROL FOR MAIN STEAM ISOLATION VALVES Function: CONTROL Accuracy: Spec. N/A Demon. Location: INBOARD/OUTBOARD PEN. AREAS	Operating Time	MSLB <5 SECS.		1			BASIS #8C	DOCUMENTATION INSUFFICIENT CONSIDERING ENVIR. QUAL. REQUIREMENTS
	Temperature	320°F.		2 NOTE A				OF 79-01B AND NUREG 0588
	Pressure	5.8 PSIG		2				
	Relative Humidity	100%		—				
	Chemical Spray	N/A		—				
	Radiation	<10 ⁵ R		3	4	ENGINEERING ANALYSIS		
	Aging	—		—				
Flood Level El: 83'-1" Above Flood Level: N/A	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. FSAR; TABLE 5, 4-1
2. PSE & G CALCULATIONS PER NRC INFORMATION FSAR SECTION 14.5
3. PSE & G RADIATION CALCULATIONS FOR ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
4. RADIATION EXPOSURE IS FOR 120 DAY ACCIDENT PLUS 40 YEARS AND WOULD BE MINIMAL FOR MATTER OF SECONDS FOLLOWING INCIDENT.

Notes:

- A. SOLENOIDS LOCATED IN INSTRUMENT PANELS WILL NOT EXPERIENCE SUCH A HIGH TEMPERATURE DUE TO THERMAL PROTECTION AFFORDED BY THE PANEL. DEMONSTRATED IN WYLE LABS. REPORT NO. WYV39-2, REVISION A AND IS APPLICABLE FOR SHORT TIME FRAMES OF PEAK TEMP.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MAIN STEAM Identification: SVD274, 275, 280, 281, 270, 271, 284, 285 Component: SOLENOID VALVE	Operating Time	MSLB < 5 SECS		1			BASIS # 88	DOCUMENTATION INSUFFICIENT CONSIDERING ENVIR. QUAL.
	Temperature	320°F		2				REQUIREMENTS OF 79-018 AND NUREG 0588
	Pressure	5.8 PSIG		2	NOTE A			
	Relative Humidity	100%		—				
Service: CONTROL FOR MAIN STEAM ISOLATION VALVES Function: CONTROL	Chemical Spray	N/A		—				
	Radiation	< 10 ⁵ R		3	4	ENGINEERING ANALYSIS		
	Aging	—		—				
Flood Level El: 83'-1" Above Flood Level: N/A	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. FSAR, TABLE 5.4-1
2. PSEG CALCULATIONS PER NEBA,
INFORMATION IN FSAR SECTION 4.5
3. PSEG RADIATION CALCULATIONS
PER ENVIRONMENTAL QUALIFICATION
REVIEW REQUIREMENTS
4. RADIATION EXPOSURE IS FOR 120 DAY
ACCIDENT PLUS 40 YRS. AND WOULD BE
MINIMAL FOR MATTER OF SECONDS
FOLLOWING INCIDENT.

Notes:

- A. SOLENOIDS LOCATED IN INSTRUMENT
PANELS WILL NOT EXPERIENCE SUCH A
HIGH TEMPERATURE DUE TO THERMAL
PROTECTION AFFORDED BY THE
PANEL. DEMONSTRATED IN WYLE
LABS REPORT NO. 44439-2, REV. A
AND IS APPLICABLE FOR SHORT TIME
FRAMES OF PEAK TEMP.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CONTAINMENT PARAMETERS Identification: PA 2344-46, 2548 Component: PRESSURE BELLOWS Manufacturer: BARTON Model: [] _{A,C} Service: CONTAINMENT PRESSURE Function: TRIP FUNCTION FOR PROTECTION SYSTEM Accuracy: Spec. N/A Demon. Location: CONTAINMENT Flood Level El: 83'-1" Above Flood Level: YES	Operating Time	LOCA/MSLB	15 DAYS IN ADVERSE ENVIR = 4 MONTHS POST-ACCIDENT	1	7, 8	TEST	BASIS #22	DEVICE EXHIBITED PRESSURE SPIKE UNDER TEST BUT NOT
	Temperature	271/350°F	[] A,B,C FIG. 28 A,B,C	3, 4				SAFETY PROBLEM
	Pressure	43.2/42.8 PSIG	[] A,B,C	5				
	Relative Humidity	100%	[] A,B,C	—	—			
	Chemical Spray	.2WT % NaOH 1.2 WT % BORIC ACID	1.14 WT % Boric Acid 0.17 WT % NaOH 24 hrs	6	7, 8, 9			
	Radiation	<500 RAD/S	N/A	2	7, 8	—	—	—
	Aging	—	—	—	—	—	—	—
	Submergence	N/A	NONE	N/A	7	—	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.D, 4.4, 4.6
2. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. FSAR; FIGURE 7.5-5 AND RESPONSE TO Q5.82 & Q5.85
4. NRC SER FOR SALEM (SUPP. 4) NUREG 0517, 4/80; PAGE 3-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 & Q5.85
6. FSAR; PAGE 6.4-10
7. WCAP 9157, 9/77 (EQ28.00)
8. PSE&G DOCUMENTATION EVALUATION EQ28
9. (U) LETTER 11/1/80 - ESA-EQ-198 (EQ28.05)

Notes:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: <i>VARIOUS</i> Identification: <i>VARIOUS</i> (<i>ADORE TO MASSIVE</i> <i>2781</i>) Component: <i>DIFFERENTIAL</i> <i>PRESSURE</i> <i>TRANSMITTER</i> Manufacturer: <i>FISHER-PORTER</i> Model: [<i>A,C</i> Service: Function: Accuracy: Spec. Diamon. Location: <i>VARIOUS</i>	Operating Time	<i>HEBA</i>		<i>1,2</i>	<i>5</i>	<i>TEST</i>	<i>NONE</i>	<i>NOTE B</i>
	Temperature	<i>285°F</i>	[<i>A,B,C</i> <i>320°F</i>	<i>3</i>	<i>5</i>			
	Pressure	<i>1 PSIG</i>	[<i>A,B,C</i> <i>75.3 PSIG</i>	<i>3</i>	<i>6</i>			
	Relative Humidity	<i>100%</i>	[<i>A,B,C</i> <i>100%</i>		<i>5</i>			
Chemical Spray		<i>N/A</i>	[<i>A,B,C</i> <i>N/A</i>		<i>6</i>			
	Radiation	<i>< 5x10⁻⁷</i>	[<i>A,B,C</i> <i>> 10⁻⁶R</i>	<i>4</i>	<i>5</i>			
	Aging		<i>REPLACEMENT BY</i> <i>JUNE 30, 1982</i>		<i>6</i>			
	Submergence	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>			
Flood Level El: <i>83'-1"</i> Above Flood Level: <i>N/A</i>								

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-A.0, A.0.1 & 0.6
2. NUREG 0578 REQUIREMENTS; ITEM 2.1.76
3. PSEFG CALCULATIONS PER NEBA, INFORMATION IN PSAR SECTION 14.5
4. PSEFG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
5. WCAP 7410-L VOL. 1, 12/70
6. SUMMARY REPORT OF NUS. CORP. "EPRI EQUIPMENT QUALIFICATION PROGRAM - RESPONSES TO NRC IE BULLETIN 79-01."

Notes:

- A. WORST CASE CONDITION
- B. REFER TO BASIS #27

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EQUIPMENT DESCRIPTION	ENVIRONMENT		Qualif.	DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.		Spec.	Qualif.			
System: VARIOUS Identification: VARIOUS (REFER TO MASTER LIST.) Component: DIFFERENTIAL PRESSURE TRANSMITTER Manufacturer: FISHER - PORTER	Operating Time	RECIRC.		1, 2 NOTE A	5	TEST	NONE	NOTE B
	Temperature	N/A	[A, B, C] 320°F	3	5			
	Pressure		[A, B, C] 75.3 PSIG	3	6			
	Relative Humidity		[A, B, C] 100%		5			
	Chemical Spray		[A, B, C] N/A		6			
	Radiation	< 5x10 ⁻⁹ R	[A, B, C] > 10 ⁻⁶ R	4 NOTE A	5			
	Aging		REPLACEMENT BY JUNE 30, 1982		6			
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; E-A, A-1 & 6
2. NUREG 0578 REQUIREMENTS; ITEM 2.1.76
3. AS. EFG CALCULATIONS FOR NEBA, INFORMATION IN FSAR SECTION 4.5
4. AS. EFG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
5. WCAP 7410-2 VOL. 1, 12/70
6. SUMMARY REPORT ON NUS CORP. "EPRI" EQUIPMENT QUALIFICATION PROGRAM - RESPONSES TO NRC IB BULLETIN 79-01

Notes:

- A. WORST CASE CONDITION
- B. REFER TO BASIS # 27

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: VARIOUS Identification: VARIOUS (REFER TO MASTER LIST) Component: SOLENOID VALVES	Operating Time	LOCA/MSLB AS NECESSARY	30 DAYS IN ADVERSE ENVIRONMENT	8	6, 9	NONE	NONE
	Temperature	271/350°F	348°F FIG. 10 350°F FIG. 11	1, 2 NOTE A	6, 7, 9		
	Pressure	413.2/42.8 PSIG	110 PSIG FIG. 10 541 PSIG FIG. 11	3 NOTE A			
	Relative Humidity	100%	100%				
Model: NP SERIES Service: PILOT VALVE FOR SAFETY-RELATED CONTROL VALVES Function: VALVE OPERATION	Chemical Spray	NaOH & BORIC ACID PH 7.5-10.5 22.5 MILES	NaOH & BORIC ACID PH 9.5-10.5 > 24 HRS.	4	6, 9		
	Radiation	5X10 ³ R	1.5X10 ⁸ R (TOTAL-2X10 ⁸ R)	5 NOTE A			
	Aging		40 YEARS FOR VALVE ASSEMBLY WITH POR AND ELASTIC SEALING EVERY 6, 4 YEARS				
Location: VARIOUS (REFER TO MASTER LIST)							
Flood Level El: 83'-1" Above Flood Level: C	Submergence	N/A	N/A	N/A	N/A	NONE NOTE C	CONVICT BY SALEM IN RESPONSE TO BULLETIN TR-01A QUALIFICATION TO SOLENOIDS ABOVE FLOOD LEVEL ONLY

References:

1. FSAR; Figure 7.5-5 AND RESPONSE TO Q5.82 & Q5.85
2. NRC SER FOR SALEM (SUM 4) NUREG 0517 4/80; Page 3-10
3. FSAR; Figure 14.3-25, Page 14.3-26 & RESPONSE TO Q5.82 & Q5.85
4. FSAR; 6.4-10
5. PSE & RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
6. AUTOMATIC SAFETY CO. TEST REPORT AQS 21678/TR 3/75
7. WIRE REMARK NO. 44439-13/23/79
8. SALEM ENERGY OPERATING PROCEDURES; IHO, IV, V, IV.C
9. PSE & DOCUMENTATION REVIEW - EQ 12

Notes:

- A. TEST REQUIREMENTS WERE TO MEET CASE ENVIRONMENTAL CONDITIONS AT SALEM UNIT 1'S LOCA/MSLB IN CONFORMANCE.
- B. THERMAL AGING, RADIATION AGING, WEAR AGING, SEISMIC, ACCIDENT RADIATION, THERMAL AGING, ACCIDENT RADIATION, THERMAL AGING, ACCIDENT RADIATION.
- C. SOLENOID VALVES SV0394, SV0397, SV0399, SV0404, SV0407, SV0412, SV0413, SV0518, SV0519, SV0520, SV0521 ARE SUBJECT TO SUBMERGENCE, REFER TO BASIS 28.

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EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.			
System: VARIOUS Identification: VARIOUS (REFER TO MASTER LIST.) Component: LIMIT SWITCH	Operating Time	LOC/MSLB 120 DAYS	30 DAY TEST EQUIVALENT >120 DAYS	1	7, 8, 9	SEQUENTIAL TEST	NONE
	Temperature	LOC/MSLB 27°/35°F	360°F FIGURE 12	2, 3	7, 8		
	Pressure	LOC/MSLB 432/42.8 PSIG	70 PSI	4			
	Relative Humidity	100 %	100 %				
Manufacturer: NAMCO Model: EA-180 Service: VALVE POSITION INDICATOR Function: OPERATOR INDICATION AND VALVE CONTROL	Chemical Spray	Repx-Acid NaOH PH > 8.5 722.5 Hrs.	Repx-Acid NaOH PH 10 4 DAYS	5			
	Radiation	5x10 ⁷ R	2x10 ⁸ R	6			
	Aging		1.5 YRS. INITIAL GROSS REPAIR-DOWN THREE AFTER 40 YRS		7, 10, 11	TEST AND ANALYSIS	REFER TO NOTE B FOR MAINTENANCE
	Submergence	N/A	NONE	N/A	7	N/A	NOTE A
Flood Level [1: B3'-1" N/A Above Flood Level: N/A							NOTE A

References:

1. POST-ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIGURE 7.5-5 AND RESERVE TO Q5.02 & Q5.05
3. NRC SER FOR SALEM (SUPRA)
4. NUREG 0517 4/60; PAGE 5-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESERVE TO Q5.02 & Q5.05
6. FSAR; PAGE 6.4-10
7. PSEdG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
8. ACME CLEVELAND DEVELOPMENT CO. REPORT 9/70 "QUALIFICATION OF EA-180 SWITCH" (EQ13.00)
9. PSEdG DOCUMENTATION EVALUATION - EQ 13
10. PSEdG CALCULATION EQ 13.01
11. NRC LETTER 1748-17 (EQ 13.00)
12. PSEdG REVIEW EQ 13.07

Notes:

- A. THE LIMIT SWITCHES FOR WL98, CUS-5, SV123 ARE SUBJECT TO SUBMERGENCE. SEE BASIS #29.
- B. AFTER INITIAL REPLACEMENT OF TOP AND BOTTOM GASKETS AFTER 1.5 YEARS, PREVENTIVE MAINTENANCE ARE BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION EA-180-90051. ANALYSIS INDICATES SPECIAL MAINTENANCE NOT REQUIRED AND FLEXIBILITY IS UNDER REVIEW TO EXTEND TIME FRAMES

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: <i>ELECTRICAL CABLEING</i> Identification: <i>N/A</i> Component: <i>TERMINAL BLOCK</i> Manufacturer: <i>BUCHANAN</i> Model: <i>2B112N</i> Service: <i>CONNECTION POINT WITHIN PSE#6 TERMINAL BOX/PANELS</i> Function: <i>PROVIDE ELECTRICAL TERMINATION AND/OR FUNCTION POINT</i> Accuracy: Spec. <i>N/A</i> Demon.: Location: <i>CONTAINMENT (NOTE A)</i> Flood Level El: <i>83'-1" Above Flood Level: N/A</i>	Operating Time	<i>LCCA/MSLB 120 DAYS</i>	<i>7240 Hr. TEST EQUIVALENT 292 DAYS</i>	<i>1</i>	<i>7,8</i>	<i>SEQUENTIAL TEST RADIATION THEN ACCIDENT</i>	<i>NONE</i>	
	Temperature	<i>271/350°F</i>	<i>290/350°F</i> <i>Figs. 17, 18A, 18B</i>	<i>2,3</i>		<i>ENVIRONMENT SIMULATION</i>		
	Pressure	<i>43.2/42.8 PSIG.</i>	<i>≥ 50 PSIG.</i> <i>Figs. 17, 18A, 18B</i>	<i>4</i>				
	Relative Humidity	<i>100%</i>	<i>100%</i>					
	Chemical Spray	<i>BORIC ACID & NaOH pH > 8.5 > 22.5 HRS.</i>	<i>BORIC ACID & NaOH pH 8.5-10 24 HRS.</i>	<i>5</i>				
	Radiation	<i>5X10⁷ R</i>	<i>2X10⁶ R</i>	<i>6</i>	<i>↓</i>	<i>↓</i>		
	Aging		<i>EXPECTED AGE INSUSITIVITY > 40 years</i>		<i>9,10</i>	<i>ANALYSIS</i>	<i>↓</i>	<i>NO SPECIAL MAINTENANCE</i>
	Submergence	<i>N/A</i>	<i>NONE</i>		<i>7</i>		<i>NONE</i>	<i>NOTE B</i>

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; Figs. 7.5-5 & Q5.85
3. NRC SER FOR SALEM (SUPP. 4) NUREG OS17 4/80; Pg. 3-10
4. FSAR; Figs. 7.5-4, 14.3-25, Pg. 14.3-56 & Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PSE#6 CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. COMAX TEST REPORT No. IPS-400 (4/79) (EQ M.00)
8. PSE#6 DOCUMENTATION EVALUATION - EQ 19
9. WYLE LABS REPORT No. 17448-1 (EQ M.01)
10. PSE#6 EVALUATION EQ M.02

Notes:

- A. BLOCKS / FUNCTION BOXES QUALIFIED TO WORST CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. BLOCKS ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: <i>ELECTRICAL CABLES</i> Identification: <i>N/A</i> Component: <i>CABLE SPICES/ THERMOFIT TUBING</i> Manufacturer: <i>RAYCHEM</i> Model: <i>WCSF-N</i> Service: <i>TERMINATION/FUNCTION OF ELECTRIC CABLES</i> Function: <i>ELECTRICAL INSULATION AND SEALING</i> Accuracy: Spec. <i>N/A</i> Demon. <i>N/A</i> Location: <i>CONTAINMENT (NOTE A)</i>	Operating Time	<i>LOCA/MSLB 120 DAYS</i>	<i>30 DAY TEST EQUIVALENT >602 DAYS</i>	<i>1</i>	<i>6,7,8</i>	<i>SEQUENTIAL TEST- PRE AGING (THERMAL & RADIATION),</i>	<i>NONE</i>	—
	Temperature	<i>271/350°F</i>	<i>357°F FIG. 19</i>	<i>2,9</i>	<i>6,7</i>	<i>ACCIDENT RADIATION, THEN ACCIDENT ENVIRONMENT SIMULATION</i>		—
	Pressure	<i>43.2/42.8 PSIG</i>	<i>> 70 PSIG FIG. 19</i>	<i>3</i>				—
	Relative Humidity	<i>100%</i>	<i>100%</i>	—				—
	Chemical Spray	<i>BORIC ACID & NaOH pH > 8.5 > 22.5 HRS</i>	<i>BORIC ACID & NaOH pH 9.5-11.0 > 9 DAYS</i>	<i>4</i>				—
	Radiation	<i>5X10⁷R</i>	<i>1.5X10⁸R</i>	<i>5</i>	—			—
	Aging	—	<i>> 40 years</i>	—	<i>6,10,11,12</i>			<i>NO SPECIAL MAINTENANCE</i>
	Submergence	<i>N/A</i>	<i>NONE</i>	—	<i>6</i>	—	<i>NONE</i>	<i>NOTE B</i>

References:

1. Post Accident Time For Required Instrumentation And Controls
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. FSAR; FIGS. 7.5-4, 14.3-25 & Q5.85
4. FSAR; Pg. 6.4-10 & TABLE 6.2-11
5. PSE & G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
6. FIRE REPORT No. F-C4033-3(1/75)
7. PSE & G DOCUMENTATION (6001.00) EVALUATION - EQ 01
8. PSE & G CALCULATION - EQ 01.03
9. NRC SER FOR SALEM (SUPP 4), NUREG 0517 4/80; Pg. 3-10
10. Wyle Report 17448-2 (EQ 01.06)
11. RAYCHEM REPORT EDR-2001 (EQ 01.04)
12. PSE & G AGING REVIEW EQ 01.07

Notes:

- A. SPICE QUALIFIED TO WORST CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. SPICES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL Identification: REFERENCE SPECIFIC SYSTEM Component: ELECTRICAL PENETRATIONS Manufact: T: Company: ORP Model: CANISER TYPE LVP, MVP Service: PROVIDE ELECTRICAL FEEDS THRU CONTAINMENT BOUNDARY Function:	Operating Time	LOCA/MXLB 120 DAYS	MVP-707HE TEST EQUIV. 21000 DAY LVP-216 NR TEST EQUIV. 2400 DAYS	9	7, 10, 11, 12, 13	SEQUENTIAL TEST	NONE	—
	Temperature	271°/350°F	MVP-342°F LVP-340°F NOTE B FIG. 20	1, 2 NOTE A	7, 10, 12, 14			—
	Pressure	43.2/42.8 PSIG	MVP-98 PSIG LVP-110 PSIG	3 NOTE A	7, 10, 12, 14			—
	Relative Humidity	100 %	100 %	—	6, 7			—
Accuracy: Spec. N/A Demon. Location: CONTAINMENT, Elec. Pen Flood Level El: 83'-1" Above Flood Level: Yes	Chemical Spray	NaOH & BORIC ACID PH > 8.5 722.5 HRS.	NaOH & BORIC ACID PH 8.5 - 9.5	4	6, 7, 10, 12			—
	Radiation	5 X 10 ⁷ R	MVP-1X10 ⁸ R LVP-2X10 ⁸ R	5	6, 7			—
	Aging	—	> 40 YRS.	—	7, 8, 15	TEST/ANALYSIS		—
	Submergence	N/A	N/A	N/A	N/A	N/A		—

REFERENCES:

1. FSAR, FIGURE 7.5-5 AND RESPONSE TO Q5.B2 AND Q5.B5
2. NRC SER FOR SALEM (SUPP 4), NUREG 0517, 4/80; PAGE 3-10
3. FSAR, FIGURE 7.5-25, PAGE 7.5-58 AND RESPONSE TO Q5.B2 AND Q5.B5
4. FSAR, PAGE 6.4-10
5. PSE+6 CALCULATIONS (RADIATION) PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
6. CANAX REPORT IPS-422 (EQ02.00)
7. PSE+6 DOCUMENTATION EVALUATION EQ-02
8. CANAX REPORT IPS-325 (EQ02.02)
9. POST ACCIDENT TIME REQUIRED FOR INSTRUMENTATION AND CONTROLS
10. CANAX REPORT IPS-414 (EQ02.03)
11. PSE+6 CALCULATION EQ 02.06
12. CANAX REPORT IPS-395 (EQ02.04)
13. PSE+6 CALCULATION EQ 02.07
14. PSE+6 FIGURE EQ 02.08
15. PSE+6 ASWB REVIEW EQ02.09

Notes:

- A. TEST REQUIREMENTS WERE TO WORST CASE ENVIRONMENTAL CONDITIONS AT SALEM WHICH IS LOCA/MXLB IN CONTAINMENT
- B. THERMAL ANALYSIS BY VEP-10 HAS SHOWN QUALIFICATION FOR TEMP 7350°. THIS INFO. WAS SUBMITTED AS APPENDIX 3C, AMBAID. 80 FOR AORIN AAWA FSAR. CANAX HAS CONFIRMED VIA LETTER OF 1/4/79 THAT SALEM PENETRATIONS ARE THE SAME AS NORTH ANNA'S AND THEREFORE SIMILARLY QUALIFIED FOR >350°F

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL * CABLES Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: AMERICAN INSULATED WIRE Model: Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE * Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A)	Operating Time	LOCA/MSLB 120 DAYS	93/100 DAYS EQUIVALENT 741 DAYS	1	7,8,9	SEQUENTIAL TEST	NONE	—
	Temperature	271/350°F	340°F FIG. 21A+B	2,3	7,9,10	(PREAGED, RADIATION, ACCIDENT)		TIME-TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	40/60 PSIG FIG. 21A+B	4	7,8,9			—
	Relative Humidity	100%	100%	—	7,9			—
	Chemical Spray	Boric Acid & NaOH PH > 8.5 > 22.5 MDS	PH 8-10.5 BORIC ACID & NaOH 100 DAYS	5	7,8			—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	7,8			—
	Aging	—	11 YEARS ADDITIONAL ANALYSIS PENDING	—	8,11,12	↓	↓	NO SPECIAL MAINTENANCE
Flood Level E1: 83'-1" Above Flood Level: N/A	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
 2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
 3. NRC SER FOR SALEM (SUPRA), NUREG DS17 4/80; Pg. 3-10
 4. FSAR; FIGS. 7.5-4, 14.3-25, Pg. 14.3-56 & Q5.82, Q5.85
 5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
 6. PSEG CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
 7. PSEG DOCUMENTATION EVALUATION - EQOY
 8. F.I.R.L. FINAL REPORT FC5115 (EQOY.20)
 9. F.I.R.L. FINAL REPORT FC4197-2 (EQOY.02)
 10. STONE & WEBSTER THERMAL ANALYSIS 1/25/79 (EQOY.04)
 11. WYLE REPORT PT448-7
 12. PSEG ALIVE ANALYSIS EQOY.05
- Notes:
- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
 - B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: ELECTRICAL CABLING Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER COMPONENT: ELECTRICAL CABLES	Operating Time	LOCA/MSLB 120 DAYS	100 DAYS EQUIVALENT 442 DAYS	1	7, 8	NONE	—
	Temperature	271/350°F	340°F FIG. 22	2, 3	7, 8, 9	(RADIATION, PREAGE, RADIATION, ACCIDENT)	TIME - TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	105 PSIG FIG. 22	4	7, 8		—
Manufacturer: SAMUEL MOORE	Relative Humidity	100%	100%	—			—
Model:	Chemical Spray	Boric Acid & NaOH PH > 8.5 > 22.5 MDS	Boric Acid & NaOH PH 9-11 30 DAYS	5			—
Service:	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6			—
Function:	Aging	—	40 YEARS	—	8, 10, 11		No SPECIAL MAINTENANCE
SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE & ACCURACY: Spec. N/A Demon. —	Submergence	N/A	NONE	—			NOTE B

References:

1. Post Accident Time For Required Instrumentation And Controls
2. FSAR; FIG. 7.5-5 & Q.5.82, Q.5.85
3. NRC SER FOR SALEM (SUPR. 4), NUREG DS17 4/80; Pg. 3-10
4. FSAR; FMS. 7.5-4, 4.3-25, Pg. 14.3-56 & Q.5.82, Q.5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PSEG CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSEG DOCUMENTATION EVALUATION - EQ 21
8. THERMAL TEST REPORT DATED 6/78 (EQ 21.00)
9. STAGE 4 NUCLEAR THERMAL ANALYSIS 1/24/79 (EQ 21.01)
10. PSEG ANNUAL REVIEW EQ 21.02
11. BYE REPORT 17448-9

Notes:

- A. CABLES QUALIFIED TO BORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PARKING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL * Identification: REFERENCE SPECIFIC SYSTEM COMPONENT MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: BOSTON INSULATED WIRE Model: Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE * Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A)	Operating Time	LOCA/MSLB 120 DAYS	100 DAYS EQUIVALENT 533 DAYS	1	7,8	SEQUENTIAL TEST	NONE	—
	Temperature	271/350°F	340°F FIG. 23	2,3	7,8,11	(PREAGED, RADIATION ACCIDENT)		TIME - TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIA	105 PSIG	4	7,8			—
	Relative Humidity	100%	100%	—				—
	Chemical Spray	Boric Acid & NaOH pH > 8.5 > 22.5 HRS	H ₃ BO ₃ PH 10.5 24 HRS.	5				—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	▼			—
	Aging	—	20 YEARS ADDITIONAL ANALYSIS PENDING	—	8,9,10	▼	▼	NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
 2. FSAR; FIG. 7.3-5 & Q5.82, Q5.85
 3. NRC SER FOR SALEM (SUPR 4), NUREG 0517 4/80; Pg. 3-10
 4. FSAR; FIG. 7.3-4, 14.3-25, Pg. 14.3-56 & Q5.82, Q5.85
 5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
 6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
 7. PSE&G DOCUMENTATION EVALUATION - EQ05
 8. BOSTON INSULATED WIRE REPORT # 8710 (EQ05.00)
 9. PSE&G AGENS REVIEW EQ05.04
 10. WYLE REPORT 17448-10
 11. STONE & WEBSTER THERMAL ANALYSIS Notes: 1/25/94 (EQ 05.02)
- Notes:
- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
 - B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL * CABLEING Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: BOSTON INSULATED WIRE Model: COAXIAL- TEFZEL ETFE INSUL. Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE * Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A) Flood Level E1: 83'-1" Above Flood Level: N/A	Operating Time	LOCA/MSLB 120 DAYS	159 DAYS	1	7,8	SEQUENTIAL TEST	NONE	—
	Temperature	271/350°F	340°F FIG. 23A	2,3	7,8,9	(PREAGED RADIATION ACCIDENT)		TIME-TEMP ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	105 PSIG FIG. 23A	4	7,8			—
	Relative Humidity	100%	100%	—				—
	Chemical Spray	Boric Acid & NaOH pH > 8.5 > 22.5 MPPS	NaOH PH 10.5 24 HRS.	5				—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	↓			—
	Aging	—	40 YEARS	—	8,10	↓	↓	NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. Post Accident Time For Required Instrumentation And Controls
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SEA FOR SALEM (SUPR 4), NUREG 0517 4/80; Pg. 3-10
4. FSAR; FIG. 7.5-4, 14.3-25, Pg. 14.3-56 & Q5.82, Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSE&G DOCUMENTATION EVALUATION - EQ24
8. B.I.W. REPORT #8913 (EQ24.00)
9. STONE & WEBSTER THERMAL ANALYSIS 1/24/79 (EQ24.01)
10. PSE&G Aging Review EQ24.03

Notes:

- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL CABLEING Identification: REFERENCE SPECIFIC SYSTEM COMPONENT Cable Mark Number Component:	Operating Time	LOCA/MSLB 120 DAYS	164 DAYS	1	7,8	SEQUENTIAL/ SIMULTANEOUS Test	NONE	—
	Temperature	271/350°F	340°F	2,3	7,8,9	(PREAGED, PREAGE/RADIATION ACCIDENT/RAD.)	TIME-TEMP ANALYSIS PERFORMED	—
ELECTRICAL CABLES Manufacturer: BOSTON INSULATED WIRE Model: COAXIAL XLPE INSULATION Service:	Pressure	43.2/42.8 PSIA	110 PSIG	4	7,8			—
	Relative Humidity	100%	100%	—				—
Function: SPECIFIC SYSTEM COMPONENT REFERENCED Above Accuracy: Spec. N/A Demon.	Chemical Spray	BOIC ACID & NaOH PH > 8.5 > 22.5 HRS	3000 PPM BOIC NaOH PH 10.5 24 HRS	5				—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6				—
Location: CONTAINMENT (NOTE A)	Aging	—	40 YEARS	—	8,10			AS SPECIM MAINTENANCE
	Submergence	N/A	NONE	—			NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPRA), NUREG DS17 4/80; Pg. 3-10
4. FSAR; FIG. 7.5-4, 7.5-25, Pg. 7.5-56 & Q5.82, Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PREAGE CALCULATIONS FOR RADIATION - ENVIRONMENTAL QUAL.
7. PSE&G DOCUMENTATION EVALUATION - EQ 27
8. B.I.W. REPORT # B712 (EQ7100)
9. STONE & WEBSTER THERMAL ANALYSIS 1/24/79 (EQ7702)
10. PSE&G ACUM REVIEW EQ7706

Notes:

- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL CABLES Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: TRIANGLE - PWC, INC. Model: Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A) Flood Level E1: 83'-1" Above Flood Level: N/A	Operating Time	LOCA/MSLB 120 DAYS	30 DAYS EQUIVALENT 293 DAYS	1	7,8	SEQUENTIAL TEST	NONE	
	Temperature	271/350°F	346°F FIG. 24	2,3	7,8,9	(PREAGED, RADIATION, ACCIDENT)		TIME-TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	70/113 PSIG FIG. 24	4				
	Relative Humidity	100%	100%	—				
	Chemical Spray	Boric Acid & NaOH PH > 8.5 > 22.5 HRS	Boric Acid & NaOH PH 9-11 30 DAYS	5				
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	↓			
	Aging	—	40 years	—	8,10,11	↓	↓	NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. Post Accident Time For Required Instrumentation And Controls
2. FSAR; FIG. 7.3-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPP. 4), NUREG 0517 4/80; Pg. 3-10
4. FSAR; FIG. 7.5-4, 14.3-25, Pg. 14.3-56 & Q5.82, Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSE&G DOCUMENTATION EVALUATION - EQ06
8. ISOMERIT TEST REPORT DATED 2/77 (EQ06.00)
9. STONE & WEBSTER THERMAL ANALYSIS 1/14/79 (EQ06.04)
10. RYLE REPORT 17488-A
11. PSE&G AGING REVIEW EQ06.05

Notes:

- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL * CABLES Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: ANACONDA Model: Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE * Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A) Flood Level El: 83'-1" Above Flood Level: N/A	Operating Time	LOCA/MSLB 120 DAYS	130 DAYS	1	7,8,9	SEQUENTIAL TEST	NONE	—
	Temperature	271/350°F	346°F FIG. 25	2,3	7,8,10	(PREAGED, RADIATION, ACCIDENT)		TIME - TEMP ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	113 PSIG FIG. 25	4	7,8			—
	Relative Humidity	100%	100%	—	7,9			—
	Chemical Spray	Boric Acid & NaOH PH > 8.5 > 22.5 MRS	Boric Acid & NaOH PH 10.5 30 DAYS	5	7,8			—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6	7,8			—
	Aging	—	40 YEARS	—	8,11,12,13			NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPRA), NUREG 0517 4/80; PL. 3-10
4. FSAR; FIG. 7.5-4, 14.3-25, PL. 14.3-56 & Q5.82, Q5.85
5. FSAR; PL. 6.4-10 & TABLE 6.2-11
6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSE&G DOCUMENTATION EVALUATION - EQ03
8. F.I.R.L. FINAL REPORT FC4350-3 (EQ03.00)
9. PSE&G DOCUMENT EQ03.02
10. STONE & WEBSTER THERMAL ANALYSIS 1/24/80 (EQ03.04)
11. PSE&G AGING REVIEW EQ03.05
12. WYLE REPORT 17448-13
- Notes: 13. ATTACHMENT TO FILE FC4350-3 (EQ03.03)
14. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
15. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL CABLES * Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component:	Operating Time	LOCA/MSLB 120 DAYS	130 DAYS EQUIVALENT 164 DAYS	1	7,8	SEQUENTIAL TEST	NONE	—
	Temperature	271/350°F	340°F	2,3	7,8,9	(PREAGED, RADIATION, ACCIDENT)		TIME-TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIG	113 PSIG	4	7,8			—
	Relative Humidity	100%	100%	—				—
Function: SPECIFIC SYSTEM COMPONENT REFERENCED ABOVE Accuracy: Spec. N/A Demon.	Chemical Spray	Boric Acid # NaOH PH > 8.5 > 22.5 MMS	3000 PPM BORIC ACID PH 7-11 30 DAYS	5				—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6				—
	Aging	—	40 YEARS	—	8,10			No SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—			NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPRA), NUREG 0517 4/80; A6.3-10
4. FSAR; FIG. 7.5-4, 7.5-25, 7.5-56 & Q5.82, Q5.85
5. FSAR; A6.4-10 & TABLE 6.2-11
6. PSEG CALCULATIONS FOR RADIATION - ENVIRONMENTAL QUAL.
7. PSEG DOCUMENTATION EVALUATION - EQO3
8. F.I.R.L. FINAL REPORT F-C3798 EQO8-00
9. STONE & WEBSTER THERMAL ANALYSIS 1/2/81 (EQO8-01)
10. PSEG AGING REVIEW EQO8-02

Notes:

- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

SALEM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: ELECTRICAL * CABLING Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES Manufacturer: ROCKBESTOS / SILKONE Model: Service: Function: SPECIFIC SYSTEM COMPONENT REFERENCE ABOVE * Accuracy: Spec. N/A Demon. Location: CONTAINMENT (NOTE A) Flood Level E1: 83'-1" Above Flood Level: N/A	Operating Time	LOCA/MSLB 120 DAYS	30 DAYS EQUIVALENT 164 DAYS	1	7,8	SEQUENTIAL TEST (PREAGED, RADIATION, ACCIDENT)	NONE	—
	Temperature	271/350°F	340°F FIG. 26A	2,3	7,8,9			TIME-TEMP. ANALYSIS PERFORMED
	Pressure	42.2/42.8 PSIG	104 PSIG FIG. 26A	4	7,8			—
	Relative Humidity	100%	100%	—				—
	Chemical Spray	Boric Acid & NaOH PH > 8.5 > 22.5 HRS	3000 PPM BORON PH 9-11 24 HRS	5				—
	Radiation	5 x 10 ³ R	2 x 10 ³ R	6	↓			—
	Aging	—	40 YEARS	—	8,10,11	↓	↓	NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—	—	—	NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPRA), NUREG 0517 4/80; Pg. 3-10
4. FSAR; FIG. 7.5-4, 14.3-25, Pg. 14.3-56 & Q5.82, Q5.85
5. FSAR; Pg. 6.4-10 & TABLE 6.2-11
6. PSE&G CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSE&G DOCUMENTATION EVALUATION - EQ07
8. ROCKBESTOS TEST REPORT DATED 3/2/78 (EQ07.00)
9. STONE & WEBSTER THERMAL ANALYSIS 4/14/79 (EQ07.01)
10. WYLE REPORT 17448-12
11. AEEG AGING REVIEW EQ07.02

Notes:

- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTION FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: ELECTRICAL CABLEING Identification: REFERENCE SPECIFIC SYSTEM COMPONENT CABLE MARK NUMBER Component: ELECTRICAL CABLES	Operating Time	LOGA/MSLB 120 DAYS	130 DAYS	1	7,8	NONE	—
	Temperature	271/350°F	345°F	2,3	7,8,9,10	PREAGED, RADIATION, ACCIDENT	TIME-TEMP. ANALYSIS PERFORMED
	Pressure	43.2/42.8 PSIA	112 PSIG	4	7,8		—
	Relative Humidity	100%	100%	—			—
Function: SPECIFIC SYSTEM COMPONENT REFERENCE ABOVE W Accuracy: Spec. N/A Demon.	Chemical Spray	BORE ACID & NAOH PH > 8.5 > 22.5 MMS	3000 PPM BORON NAOH PH 10.5 24 HRS	5			—
	Radiation	5 x 10 ⁷ R	2 x 10 ⁸ R	6			—
	Aging	—	40 YEARS	—	8,11,2		NO SPECIAL MAINTENANCE
	Submergence	N/A	NONE	—		NONE	NOTE B

References:

1. POST ACCIDENT TIME FOR REQUIRED INSTRUMENTATION AND CONTROLS
2. FSAR; FIG. 7.5-5 & Q5.82, Q5.85
3. NRC SER FOR SALEM (SUPRA), NUREG DS17 4/80; PG. 3-10
4. FSAR; FIG. 7.5-4, PG. 3-25, PG. 14.3-56 & Q5.82, Q5.85
5. FSAR; PG. 6.4-10 & TABLE 6.2-11
6. PSEEG CALCULATIONS FOR RADIATION - ENVIRON. QUAL.
7. PSEEG DOCUMENTATION EVALUATION - EQ09
8. ORNATE TEST REPORT 1174 (EQ09.00)
9. OKONITE ENGINEERING REPORT "141 (EQ09.01)
10. STORED WEATHER THERMAL ANALYSIS 11/1/79 (EQ09.03)
11. BYLE REPORT 1748-8
- NOTES: 12. ASB AGING REVIEW EQ09.04
- A. CABLES QUALIFIED TO WORSE CASE CONTAINMENT CONDITIONS
- B. SOME COMPONENTS MAY BECOME FLOODED AFTER PERFORMING SAFETY FUNCTIONS FOLLOWING IN-CONTAINMENT ACCIDENT. CABLES ASSOCIATED WITH SUCH COMPONENTS ARE NOT REQUIRED TO BE OPERABLE IN A SUBMERGED STATE.

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SALEM GENERATING STATION
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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
ENGINEERED System: SAFEGUARDS Identification: FAN COOLER MOTOR Component: FAN MOTOR Manufacturer: WESTINGHOUSE Model: SPW # PSE-RCADCF(LWIR1) SPW # PSE-RCADCF(LWIR2) Service: MOTOR POWER TO FAN Function: CONTAMINANT VENTILATION Accuracy: Spec. N/A Demon. Location: CONTAMINANT EA-130'	Operating Time	LOCA/MSLB 1 YEAR	1 YEAR Post LOCA	8	6, 9, 10, 11, 12	TEST	NONE
	Temperature	271°/350°F	[] A, B, C	1, 2 NOTE A	6, 7, 9	TEST/ ANALYSIS NOTE B	—
	Pressure	43.2/42.8 PSIG	[] A, B, C	3 NOTE A	6, 9	TEST	—
	Relative Humidity	100 %	[] A, B, C	—	—	—	—
Accuracy: Spec. N/A Demon. Location: CONTAMINANT EA-130'	Chemical Spray	0.2 WT% NaOH 1.2 WT% BORIC ACID	0.46 WT% NaOH 1.4 WT% BORIC ACID	4	—	—	—
	Radiation	5X10 ³ R	[] A, B, C	5	6, 9, 13	—	—
	Aging	—	MOTOR INSULATION LEADS > 40 YRS.	—	6, 9, 14, 15	TEST/ANALYSIS	REFER TO NOTE C FOR MAINTENANCE
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE
Flood Level El: 83'-1" Above Flood Level: YES							

References:

1. FSAR, FIGURE 7.5-5 AND RESPONSE TO Q5.82 AND Q5.85
2. NRC SER FOR SALEM (SUPP. 4), NUREG 0517, 4/80, PAGE 3-10
3. FSAR, FIGURE 10.3-25, PAGE NL3-58 AND RESPONSE TO Q5.83 AND Q5.85
4. FSAR, PAGE 6-4-10
5. PSE'S RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
6. WESTINGHOUSE WCAP-7829 (EQ15.06)
7. WESTINGHOUSE LETTER SE-SAII-868 (EQ15.01)
8. SALEM EMERGENCY OPERATING PROCEDURES, I 4.0, I 4.4, I 4.6
9. PSE'S DOCUMENTATION REVIEW EQ 15
10. WCAP-9003 (EQ15.02)
11. WCAP-7498-L (EQ15.03)
12. WCAP-7722 (EQ15.04)
13. WCAP-7343-L (EQ15.05)
14. WCAP-B754 (EQ15.06)
15. PSE'S SALEM LUBRICANT MANUAL

Notes:

- A. TEST REQUIREMENTS WERE TO WORST CASE ENVIRONMENTAL CONDITIONS AT SALEM WHICH IS LOCA/MSLB IN CONTAMINANT
- B. MOTOR WINDING TEMP CALCULATION TO BE 237°F (300 HP) & 219°F (100 HP) TEST MOTOR QUALIFIED TO NOT SPOT WINDING TEMP OF 251°F (REF #7)
- C. PERMANENT MAINTENANCE REQUIREMENTS MOTOR BEARING GREASE TO BE REPLACED EACH REFLUE. FURTHER ANALYSIS OF GASKETS PENDING.

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SALFAM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: ELECTRICAL CABLEING Identification: REFERENCE SPECIFIC SYSTEM Component: ELECTRICAL TERMINAL LUG CONNECTORS Manufacturer: BUENTY CORP. Model: NYLUG Service:	Operating Time	LOCA/MSLB 120 DAYS	10 DAYS IN ADVERSE ENV EQUIVALENT TO > 320 DAYS	—	6, 7	NONE	—
	Temperature	270°/350°F	290°/351°F	1, 2 NOTE A			—
	Pressure	43.2/42.8 PSIG	50/131 PSIG	3 NOTE A			—
	Relative Humidity	100%	100%	—			—
	Chemical Spray	.2wt% NaOH 1.2wt% BOEIC ACID	BOEIC ACID/NaOH	4			—
Function: CONNECTION OF ELECTRICAL CABLES AT EQUIPMENT TERMINAL BLOCKS Accuracy: Spec. Demon. Location: REFERENCE SPECIFIC SYSTEM	Radiation	5X10 ⁷ R	NOTE B	5			—
	Aging	—	—	—			—
	Submergence	N/A	N/A	N/A	N/A	NONE	—

References:

1. FSAR, FIGURE 9.5.5 AND RESPONSE TO Q5.82 & Q5.85
2. NEC SET FOR SALFAM (SUPP 4)
3. NUREG 0519 4/80, PAGE 9-10
4. FSAR, FIGURE 14.3-25, PAGE 143-56 & RESPONSE TO Q5.82 & Q5.85
5. FSAR, PAGE 6.4-10
6. CONVEY ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS
7. CONVEY TEST REPORT IFS-400 (EQ19.00)
8. AEGIS DOCUMENTATION REVIEW EQA

NOTES:

- A. TEST REQUIREMENTS WERE TO WORST CASE ENVIRONMENT CONDITIONS AT JALEM WHICH IS LOCA/MSLB IN CONFINEMENT
- B. TERM LUGS WERE NOT SUBJECTED TO IRRADIATION FEMORE TO TEST. LUGS ARE METAL & WOULD NOT BE ADVERSELY AFFECTED BY IRRADIATION
- C. TERM LUGS WERE USED IN CONNECTION WITH TERM. BLOCK TEST (REF. PAGE 64)

SALEM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CONTAINMENT SPRAY Identification: SPIN# PSE31ARCS(LWIR1) SPW# PNT31ARCS(LWIR2) Component: CONTAINMENT SPRAY PUMP MOTOR Manufacturer: WESTINGHOUSE (BUFFALO) Model: Service: CONTAINMENT COOLING Function: DRIVING POWER TO CONTAINMENT SPRAY PUMP Accuracy: Spec. N/A Demon. Location: AUX. BLDG. - 84	Operating Time	RECIRC.	>120 DAYS	1, 2	4, 5	TEST	NONE	—
	Temperature	N/A	N/A	N/A	N/A	N/A	N/A	—
	Pressure							—
	Relative Humidity							—
	Chemical Spray	↓	↓	↓	↓	↓	↓	—
	Radiation	<103R	1.4X10 ⁸ R	3	4, 5, 6	TEST	NONE	—
	Aging	—	MOTOR INSULATED >40 YEARS	—	4, 5, 7, 8	COMPONENT TEST ANALYSIS		REFER TO ABOVE A FOR MAINTENANCE
Flood Level El: 83'-1" Above Flood Level: N/A	Submergence	N/A	NONE	N/A	NONE	N/A	↓	—

References:

1. SALEM OPERATING PROCEDURES; I-4.0, 4.4, 4.6
2. FSAR; CHP. 6
3. RESULTS OF PSE46 CALCULATIONS IN RESPONSE TO TMI EVALUATIONS (SHIELDING)
4. WESTINGHOUSE REPORT WCAP-8754 (EQ16.00)
5. PSE46 DOCUMENTATION EVALUATION EQ 16
6. WCAP 7410-L Vol II (EQ16.01)
7. WCAP-8754 Rev. 1 (EQ16.02)
8. PSE46 SALEM LUBRICATION MANUAL

Notes:

- A. PREVENTATIVE MAINTENANCE REQUIRES MOTOR BEARING OIL REPLACEMENT

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SALEM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CONTAINMENT PARAMETERS Identification: VARIOUS (REFER TO MASTER LIST) Component: INCORE THERMOCOUPLES Manufacturer: WESTINGHOUSE Model: SPIN [®] 2000 (583 F014) Service: INCORE TEMPERATURE Function: Accuracy: Spec. N/A Demon. N/A Location: CONTAINMENT	Operating Time	LOCA/MSLB		1			NONE	NOTE A
	Temperature	271°/350°F		3,4				
	Pressure	432/42.8 PSIG		5				
	Relative Humidity	100%		---				
	Chemical Spray	.2 wt % NaOH 1.2 wt % BORIC ACID		6				
	Radiation	5 x 10 ⁷ R		2				
	Aging							
Flood Level El: 83'-1" Above Flood Level: N/A	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.0.4.4, 4.6
2. PSE & G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. FSAR; FIGURE 1.5-5 AND RESPONSE TO Q5.82 & Q5.85
4. NRC SER FOR SALEM (SUPP. 4), NUREG 0517, 4/80; PAGE 3-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 & Q5.85
6. FSAR; PAGE 6.4-10

Notes:

A. REFER TO BASIS 33

SALEM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

EQUIPMENT QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CONTAINMENT PARAMETERS Identification: TAG356 TO 4360Z Component: CONTAINMENT HUMIDITY DETECTORS Manufacturer: FOXBORO Model: 2711AG Service: CONTAINMENT HUMIDITY DETECTOR Function: Accuracy: Spec. N/A Demon. N/A Location: CONTAINMENT	Operating Time	LOCA/MSLB		1.			NONE	NOTE A
	Temperature	271°/350°F		3, 4				
	Pressure	43.2/42.8 PSIG		5				
	Relative Humidity	100%		—				
	Chemical Spray	.2 WT % NAOH 1.2 WT % BORIC ACID		6				
	Radiation	5 x 10 ⁻⁷ R		2				
	Aging							
Flood Level El: 83'-1" Above Flood Level: YES	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.0. 4.4. 4.6
2. PSE #6 RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. FSAR; FIGURE 7.5-5 AND RESPONSE TO Q5.82 & Q5.85
4. NRC SER FOR SALEM (SUPR 4), NUREG 0517, 4/80; PAGE 8-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 & Q5.85
6. FSAR; PAGE 6.4-10

Notes:

A. REF. TO BASIS #37

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SALEM GENERATING STATION
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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CONTAINMENT PARAMETERS (UNIT #1) Identification: RA-431A (UNIT #1) Component: RADIATION MONITOR Manufacturer: TRAPELO Model: TA-63A Service: CONTAINMENT RADIATION DETECTOR HIGH RANGE Function: Accuracy: Spec. N/A Demon. Location: CONTAINMENT Flood Level El: 83'-1" Above Flood Level: YES	Operating Time	LOCA/NSIB		1			BASIS #35	NO DOCUMENTATION AVAILABLE
	Temperature	271°/350°F		3, 4				
	Pressure	43.2/42.8 PSI		5				
	Relative Humidity	100%		—				
	Chemical Spray	.2 WT % NAOH 1.2 WT % BORIC ACID		6				
	Radiation	5 x 10 ³ R		2				
	Aging							
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURES I 4.0, 4.4, 4.6
2. PSE #6 RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. FSAR; FIGURE 7.5-3 AND RESPONSE TO Q5.82 & Q5.85
4. NRC SER FOR SALEM (SUPP. 4), NUREG 0517, 4/80; PAGE 3-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-56 AND RESPONSE TO Q5.82 & Q5.85
6. FSAR; PAGE 6.4-10

Notes:

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UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: <i>CONTAINMENT PARAMETERS (UNIT 2)</i> Identification:	Operating Time	<i>LOCA/MSLB</i>		<i>1</i>	<i>7</i>		<i>BASIS #34</i>	<i>INSUFFICIENT DOCUMENTATION</i>
Component: <i>RADIATION MONITOR</i>	Temperature	<i>271°/350° F</i>	<i>357° F FIG. 14</i>	<i>3, 4</i>				
Manufacturer: <i>VICTOREEN</i>	Pressure	<i>432/42.8 PSIG</i>	<i>133 PSIG</i>	<i>5</i>				
Model: <i>877</i>	Relative Humidity	<i>100%</i>	<i>100%</i>	<i>—</i>				
Service: <i>CONTAINMENT RADIATION MONITOR HIGH RANGE</i>	Chemical Spray	<i>.2WC% NaOH 1.2WC% BORIC ACID</i>	<i>YES</i>	<i>6</i>				
Function:	Radiation	<i>5x10⁷ R</i>	<i>2x10⁸ R</i>	<i>2</i>	<i>↓</i>			
Accuracy: Spec. <i>N/A</i> Demon.	Aging						<i>↓</i>	<i>↓</i>
Location: <i>CONTAINMENT</i>								
Flood Level E1: <i>83'-1"</i> Above Flood Level: <i>YES</i>	Submergence	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>NONE</i>	

References:

1. SALFV EMERGENCY OPERATING PROCEDURES, I-4.1 & 4.6
2. PSE & G RADIATION CALCULATIONS PER ENVIRONMENT QUALIFICATION REVIEW REQUIREMENTS
3. FSAR, FIGURE 7.5-5 AND RESPONSE TO Q5.82 & Q5.85
4. NRC SER FROM SALFV (SUPP. 4) NUREG 0517 4/80; PAGE 3-10
5. FSAR, FIGURE 14.3-25 PAGE 14.3-56 & RESPONSE TO Q5.82 & Q5.85
6. FSAR, PAGE 6.4-10
7. WYLE REPORT 441524 ENR. A

Notes:

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: MISCELLANEOUS (UNIT #2) Identification: 2-R21 Component: Manufacturer: VICTOREEN Model: M865T, M866I M862S, FU, CD M868B Service: CONT. RADIATION MONITOR HIGH RANGE Function: Accuracy: Spec. N/A Demon. N/A Location: ELEC. PEN-78 Flood Level El: 83'-1" Above Flood Level: N/A	Operating Time	RECIRC.		1		BASIS 34	INSUFFICIENT DOCUMENTATION
	Temperature	N/A	N/A	N/A	N/A	N/A	N/A
	Pressure						
	Relative Humidity						
	Chemical Spray						
	Radiation	<105R		2		BASIS 34	Insufficient Documentation
	Aging						
	Submergence	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.0, 4.4, 4.8
2. PSEG RADIATION CALCULATIONS - PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.

Notes:

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: MISCELLANEOUS Identification: VARIOUS (REFER TO MASTER LIST) Component: ROD POSITION DETECTOR	Operating Time	LOCA/ MSLB		1		NONE	NOTED
Manufacturer: WESTINGHOUSE	Temperature	271°/50°F		3, 4			
Model: KD-BBOS-12	Pressure	43.2/42.8 PSIS		5			
Service: ROD POSITION INDICATION	Relative Humidity	100 %		-			
Function:	Chemical Spray	0.2 WT % NaOH 1.2 WT % BOERIC ACID		6			
Accuracy: Spec. Demon.	Radiation	5x10 ⁷ R		2			
Location: CONT.	Aging						
Flood Level El: 83'-1" Above Flood Level: YES	Submergence	N/A	N/A	N/A	N/A	NONE	

REFERENCES:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.0, 4.4, 4.6
2. PSEG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. FSAR; FIGURE 7.5-5 AND RESPONSE TO Q.5.B2 (Q.5.B5)
4. NRC SER FOR SALEM (COMP. 4), NUREG 0517, 4/80; PAGE 3-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-36 & RESPONSE TO Q.5.B2 (Q.5.B5)
6. FSAR; PAGE 6.4-10

Notes:

A REFER TO BASIS #20

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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: Miscellaneous Identification: VARIOUS (REFER TO MASTER LIST) Component: EXCISE NEUTRON DETECTORS	Operating Time	LOCA / MSLB		1		NONE	NOTE A
	Temperature	271/350°F		3, 4			
	Pressure	43.2/42.8 PSIG		5			
	Relative Humidity	100 %		—			
	Chemical Spray	0.2 WT % A3 OH 1.2 WT % BACK ACID		6			
	Radiation	5X10 ⁷ RAD/S		2			
	Aging						
	Submergence	N/A	N/A	N/A	N/A	NONE	
Flood Level El: 83'-1" Above Flood Level: YES							

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.0, 4.1, 4.2
2. PSERG RADIATION CALCULATIONS PER ENVIRONMENT QUALIFICATION REVIEW REQUIREMENTS
3. FSAR; FIGURE 7.5-5 AND RESPONSE TO Q 5.82 & Q 5.85
4. NUREG 0517, 4/80; PAGE 3-10
5. FSAR; FIGURE 14.3-25, PAGE 14.3-26 AND RESPONSE TO Q 5.82 & Q 5.85
6. FSAR; PAGE 6.4-10

Notes:

A REFER TO BASIS #13
FOR PR ONLY. QUALIFICATION
NOT REQUIRED FOR
SR & IR

SALEM GENERATING STATION
UNITS 1 AND 2
EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MISCELLANEOUS Identification: Component: EXCORE NEUTRON DETECTOR PRE-AMP Manufacturer: WESTINGHOUSE Model: 940F231 Service: Function: SOURCE RANGE PRE-AMPLIFIER Accuracy: Spec. Demon. N/A Location: ELEC PEN-78 Flood Level El: 83'-1" Above Flood Level: N/A	Operating Time	RECIRC		1			NONE	NOTE A
	Temperature			—				
	Pressure			—				
	Relative Humidity			—				
	Chemical Spray			—				
	Radiation	<105R		2				
	Aging							
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	

References:

1. SALEM EMERGENCY OPERATING PROCEDURE; I-4.0 4.4, 4.6
2. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.

Notes:

A REFER TO BASIS 13

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: Miscellaneous Identification: NOZZLE SUPPORT FANS	Operating Time	ASLB		1			NOTE	NOTE A
Component: MOTORS	Temperature	350°F		3, 4				
Manufacturer: WESTINGS HOUSE	Pressure	42.8 Psig		5				
Model: TDFC	Relative Humidity	100 %		—				
Service: NOZZLE SUPPORT COOLING	Chemical Spray	0.2 NT% NaOH 1.2 NT% BORIC ACID		6				
Function: ACTIVE POWER TO FAN	Radiation	< 10 ⁶ R		2				
Accuracy: Spec. N/A Demon.	Aging							
Location: CONT.	Submergence							
Flood Level El: 83'-1" Above Flood Level: No							NOTE	NOTE A

References:

1. SALEM EMERGENCY OPERATING PROCEDURES; I-4.6
2. PSERG RADIATION CALCULATIONS PER ENVIRONMENT QUALIFICATION REVIEW REQUIREMENTS
3. FSAR; RESPONSE TO PSERG Q585
4. NRC SER FOR SALEM (SUM 4)
5. NUREG DS17, 4/80; PAGE 3-10
5. FSAR; PAGE 6.4-10

Notes:

A REFER TO BASIS #36

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UNITS 1 AND 2
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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: MISCELLANEOUS Identification: REACTOR SHIELD / ENT FANS	Operating Time	N/A		1		N/A	NOTE A
	Temperature	350° F		2, 3			
Component: MOTORS	Pressure	92.2 PSIG		2			
Manufacturer: WESTINGHOUSE	Relative Humidity	100%		—			
Model: TBAM	Chemical Spray	0.2 wt% NaOH 1.2 wt% Boric Acid		4			
Service: MOTIVE POWER FOR FAN	Radiation	< 105 R		5			
Function: PROVIDE COOLING TO REACTOR SHIELD + AREA BETWEEN SHIELD AND VESSEL	Aging						
Accuracy: Spec. N/A Demon.	Submergence	N/A	N/A	N/A	N/A	NONE	—
Location: CONTAINMENT							
Flood Level El: 83'-1"							
Above Flood Level: Yes							

References:

1. SALEM EMERGENCY OPERATING PROCEDURE; I-A.6
2. FSAR; RESPONSE TO Q5.82 (6/88)
3. NRC SER FOR SALEM (SUPP. NO. 4) NUREG 0517, 4/80, PAGES 3-10
4. FSAR; PAGE 6, 4-10
5. PSERG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS

Notes:

A REFER TO BASIS 36

SALEM GENERATING STATION
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QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: MISCELLANEOUS Identification: CONTROL ROD DRIVE VENT FANS Component: MOTORS Manufacturer: WESTINGHOUSE Model: 77C27257 Service: COOLING TO ROD DRIVE MECHANISMS Function: MOTIVE POWER FOR FAN Accuracy: Spec. N/A Demon. Location: CONTAINMENT	Operating Time	MSLB		1			NONE	NOTE A
	Temperature	350°F		2,3				
	Pressure	42.8 PSIG		2				
	Relative Humidity	100%		—				
	Chemical Spray	.8 wt% NaOH 1.2 wt% BORIC ACID		4				
	Radiation	<10 ⁵ R		5				
	Aging						↓	↓
Flood Level El: B3'-1" Above Flood Level: YES	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURE, I-4.6
2. FSAR, RESPONSE TO Q5.82
3. NRC SEE FOR SALEM (SUPP. 4), NUREG 0517 4/80 PAGE 3-10
4. FSAR, PAGE 6.4-10
5. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.

Notes:

- A. REFER TO BASIS 36

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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.			
System: CHARGING / LEWDOWN Identification: LIMIT SWITCHES FOR 25J178, 25J179 & 25J108 Component: LIMIT SWITCH	Operating Time	NEBA		2,3			BASIS #26	—
	Temperature	212°F		4				—
	Pressure	1PSIG		4				—
	Relative Humidity	100%		—				—
	Chemical Spray	N/A		—				—
	Radiation	<5X10 ⁻⁷		1				—
	Aging	—		—				—
	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. PSE&G RADIATION CALCULATIONS PER ENVIRONMENTAL REQUIREMENTS
2. FSAR CHAPTER 6
3. SALEM EMERGENCY OPERATING PROCEDURE I-40.4.4, 4.6
4. PSE&G CALCULATIONS PER NEBA, INFORMATION IN FSAR SECTION 14.5

Notes:

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UNITS 1 AND 2
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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: CONTAINMENT ISOLATION Identification: LIMIT SWITCH FOR IPRIT Component: LIMIT SWITCH	Operating Time	LOCA/MSLB		1		NONE	NOTE A
	Temperature	271°/350°F		2, 3			
	Pressure	43.2/42.0 PSIG		4			
Manufacturer: MICROSWITCH Model: LSQ 051 Service: POSITION INDICATION Function:	Relative Humidity	100 %		—			
	Chemical Spray	BORIC ACID NAOH PH > 8.5		5			
	Radiation	< 5X10 ⁻⁷		6			
Accuracy: Spec. N/A Demon. Location: CONTAINMENT	Aging	—					
	Submergence	—		—			
	Flood Level El: 83'-1" Above Flood Level: NO			—		NONE	NOTE A

References:

1. SALEM EMERGENCY OPERATING PROCEDURE, I 4.0
2. FSAR FIG. 7.5-5 & RESPONSE TO Q 5.85 AND Q 5.82
3. NRC SER FOR SALEM (SUPP 4) NUREG 0517 4/80; PAGE 3-10
4. FSAR, FIGURE 14.3-25 & RESPONSE TO Q 5.85 AND Q 5.82
5. FSAR; PAGE 6.4-10 & TABLE 6.2-11
6. PSE & RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS

Notes:

A. REFER TO BASIS 18B

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EQUIPMENT QUALIFICATION - ENVIRONMENTAL

QUALIFICATION DATA EVALUATION FORM

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec. *	Qualif.	Spec.	Qualif.			
System: CONTAINMENT ISOLATION Identification: LIMIT SWITCH FOR IPR1B Component: LIMIT SWITCH Manufacturer: MICROSWITCH Model: LS8051 Service: POSITION INDICATION Function: Accuracy: Spec. N/A Demon. Location: MECH. PEN. 7B	Operating Time	HEBA		1			BASIS #18A	NO DOCUMENTATION AVAILABLE
	Temperature	212°F		2				
	Pressure	1 PSIG		2				
	Relative Humidity	100%		—				
	Chemical Spray	N/A		—				
	Radiation	$< 5 \times 10^{-7}$		3				
	Aging	—					↓	↓
Flood Level E1: 83'-1" Above Flood Level: N/A	Submergence	N/A	N/A	N/A	N/A	N/A	NONE	—

References:

1. SALEM EMERGENCY OPERATING PROCEDURE; I 4.0
2. PSE & G CALCULATIONS PER NEBA; INFORMATION IN FSAR SECTION 14.5
3. PSE & G RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.

Notes:

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QUALIFICATION DATA EVALUATION FORM

EQUIPMENT DESCRIPTION	ENVIRONMENT		DOCUMENTATION		QUALIFICATION METHOD	OUTSTANDING ITEMS	REMARKS
	Parameter	Spec.	Qualif.	Spec.	Qualif.		
System: CONTAINMENT ISOLATION Identification: SV0505 (UNIT #2) Component: SOLENOID VALVE Manufacturer: ASCO Model: LB831426 Service: PILOT VALVE FOR CONTAINMENT ISOL. VALVE. Function: VALVE OPERATION Accuracy: Spec. N/A Demon. Location: MECH. PENET-7B	Operating Time	HEBA		4		BASIS 17	INSUFFICIENT DOCUMENTATION
	Temperature	212°F		1			
	Pressure	1 PSIG		1			
	Relative Humidity	—		—			
Radiation	Chemical Spray	—		—			
	Radiation	< 5x10 ⁻⁷ R		2	3	ENGINEERING ANALYSIS	
	Aging	—		—			
Submergence		N/A	N/A	N/A	N/A	NONE	—

References:

1. P.S. EFG CALCULATIONS PER NEBA, INFORMATION IN FSAR SECTION 1A.5
2. P.S. EFG RADIATION CALCULATIONS PER ENVIRONMENTAL QUALIFICATION REVIEW REQUIREMENTS.
3. RADIATION VALUE IS ACCUR. AND WOULD BE MINIMAL FOR SHORT TERM OPERATION.
4. FSAR: TABLE 5.4-1

Notes:

SALEM NUCLEAR GENERATING STATION
 UNITS 1 AND 2
 TABLE OF ENVIRONMENTAL QUALIFICATION FOR
 SAFETY-RELATED ELECTRICAL/CONTROLS EQUIPMENT
 REFERENCE FIGURES

FIGURE 28

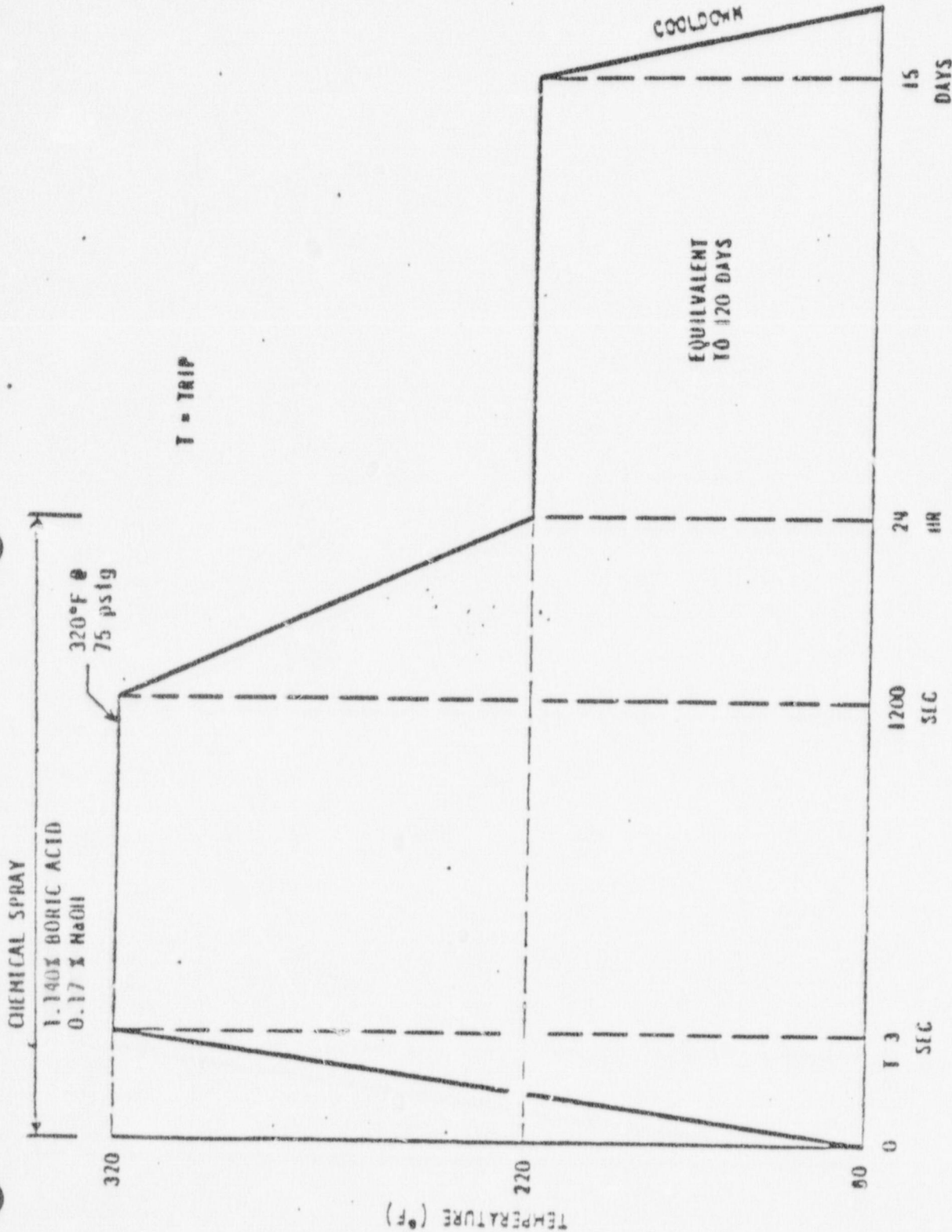


Figure 1-1 Sensor Environmental Qualification Program
 Temperature Profile - Transmitters

BARTON 763 AND 764 TRANSMITTERS (LOT 1)

TEST PROFILE

(EXCERPT FROM (W) LETTER NS-TMA-2120)

SALEM NUCLEAR GENERATING STATION
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TABLE OF ENVIRONMENTAL QUALIFICATION FOR
SAFETY-RELATED ELECTRICAL/CONTROLS EQUIPMENT
REFERENCE FIGURES

FIGURE 6C

BARTON [] TRANSMITTERS (LOT 2)
AC
TEST RESULTS FOR ACCIDENT SIMULATION
(EXCERPT FROM (U) LETTER NS-TMA-2184)

Each piece of equipment has its own service requirements which serve as the baseline for acceptance. Anomalies noted during the test are evaluated to determine that the test results used are not invalidated by the test anomalies.

Failure Criteria: Equipment which fails to perform the required functions because of exposure to harsh environments is considered to be unsuitable for use. Evaluation of all failures or anomalies is made to determine whether the failed condition is a direct result of the harsh environment or due to test method, installation or other phenomenon not associated with the harsh environments specified for Salem. The fact that a failure was encountered, or an anomaly noted, does not necessarily invalidate the test results unless it is attributable to the harsh accident environment.

The evaluation report addresses failures and anomalies in the test to determine equipment acceptance on this basis.

Margins: The comparison of the test parameters with respect to the required performance criteria considered margins to judge the acceptability of the test results. The margins specified in IEEE323-1974 served only as a guide. Many tests were conducted prior to or separate from the requirements of IEEE323-1974. The evaluation process addressed this factor to assure that the test results are conservative with respect to the required conditions. The required operating parameters should be enveloped by the test results. Tests conducted to more severe conditions based on temperature, times, pressures, radiation and installation as compared to Salem were considered to be conservative based on the fact that the Salem environmental profiles are also conservative. Deviations from specified requirements are addressed in the evaluation report as appropriate. Acceptability of the equipment is based on the functions to be performed and its complexity. Justifications are provided for devices performing short term safety functions for which a one hour operating duration is not met. Consideration was given to maximum time for safety function, equipment failure afterwards and post accident operations.

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AGING EVALUATION PROGRAM

In accordance with the requirements of NUREG-0588 (category II, item 4) and Bulletin 79-01B (item 7), PSE&G has established an aging evaluation program for electrical and controls equipment which are necessary for the mitigation of the effects of accidents and are located in a harsh environment. Wyle Laboratories, Inc. of Huntsville, Alabama has been retained to assist in this evaluation for Salem.

The aging evaluation program was limited to equipment for which adequate qualification documentation exists to demonstrate equipment operability in an accident environment. Those items which have inadequate documentation and/or are being replaced with qualified equipment by June 30, 1982 were not evaluated. The justification bases of section VII of the report provide adequate information on the interim measures taken to assure plant safety is maintained. The replacement equipment will include aging considerations as part of the qualification documentation.

The aging evaluation program attempted to determine an operating life of the equipment including any special maintenance requirements which would assure that the device would operate properly when exposed to a harsh accident environment. The operating life determination considers the normal conditions for the device such as, ambient temperatures, radiation exposure, cyclical operation, device operating temperatures, etc. In the course of this aging evaluation two concepts are considered, "qualified life" and "expected life".

"Qualified life" is determined directly from the qualification testing when the device has been preaged by an accelerated aging simulation prior to undergoing an accident environment simulation test. The normal equivalent operating life is determined from the accelerated aging using Arrhenius methods. This time span is considered the "qualified life".

Many qualification tests performed in accordance with IEEE 323-1971 requirements did not test preaged devices. For these cases, the aging evaluation resulted in an "expected life" based on an evaluation of material susceptibility to degradation. Such materials may require periodic replacement to assure that the device operates properly when exposed to a harsh accident environment. "Expected life" is determined from existing data on known component/material degradation from a variety of sources. It is the time a device can operate under normal conditions without suffering degradation which would prevent it from performing its function. This analysis also uses Arrhenius methods based on an acceptable level of degradation. Since "expected life" is not directly correlated to the accident environment test, it is used to demonstrate that a device will not degrade during normal conditions such that it could not operate in an accident environment. A bench mark "expected life" of 120 years is used to assure that a 40 year service life is reasonable. The "expected life" of a device is based on the least "expected life" of the components/materials used in the device.

The aging evaluation program was performed for Salem using the methods described. The results of the evaluations completed thus far are included in the revised Qualification Data Evaluation Forms of section V of the report.

As a result of the program, some special maintenance practices were identified concerning replacement of gaskets in limit switches and coils/elastomers in solenoid valves at specified intervals. This information is also included in the evaluation forms and will be factored into the Salem maintenance program.

In addition to the special maintenance items identified through the aging evaluation program, many devices presently have a preventative maintenance schedule for the replacement of lubricants which is also noted in the evaluation forms. Periodic testing of the equipment in accordance with Tech Spec surveillance requirements is also part of the maintenance effort to assure the proper working order of said devices.

Although the aging evaluation program was established specifically for the environmental qualification review effort, PSE&G will remain aware of continuing efforts in the industry by the Westinghouse PWR Owners Group, BWR Owners Group and EPRI activities in the area of equipment qualification. In addition as further information is received from manufacturer's, NRC Bulletins and Circulars, licensee event reports and new equipment qualification tests, it will be examined to determine effects on existing conclusions regarding installed equipment at Salem.

PSE&G considers this matter to be an on-going effort and not strictly for the NUREG-0588 and Bulletin 79-01B reviews.

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MASTER LIST
ELECTRICAL/CONTROLS EQUIPMENT LOCATED IN AN
ADVERSE ENVIRONMENT AND SPECIFIED TO FUNCTION
UNDER POSTULATED ACCIDENT CONDITIONS

SYSTEM CONTAINMENT PARAMETERS

SHEET 32 OF 66

IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX #12	ELECTRICAL CONNECTIONS ICT3-EQ ICT34-EQ ICT1-EQ ICT36-EQ ICT5-EQ ICT40-EQ ICT74P-EQ ICT63-EQ ICT32-EQ ICT61-EQ ICT57-EQ ICT26-EQ ICT58-EQ ICT27-EQ ICT75PEQ	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK(S) PSE&G DESIGN WITH BUCHANAN BLOCK(S) 2B/12N	CONTAINMENT	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG <5X10 ⁷ R	PAGE 64	NONE	

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SYSTEM CONTAINMENT PARAMETERS

SHEET 33 OF 66

IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX #12 (CONTD.)	ELECTRICAL CONNECTIONS / ICT59-EQ / ICT28-EQ / ICT24-EQ / ICT54-EQ / ICT19-EQ / ICT53-EQ / ICT22-EQ / ICT71P-EQ / ICT18-EQ / ICT51-EQ / ICT17-EQ / ICT20-EQ / ICT12-EQ / ICT50-EQ / ICT72P-EQ	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK(S) PSE & G DESIGN WITH BUCHANAN BLOCK(S) 2B112N	CONTAINMENT	LOCA/MSLB 271°/350°F 43.2/42.8PSIG <5x10 ⁷ R	PAGE 64	NONE	

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MASTER LIST
ELECTRICAL/CONTROLS EQUIPMENT LOCATED IN AN
ADVERSE ENVIRONMENT AND SPECIFIED TO FUNCTION
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SYSTEM CONTAINMENT PARAMETERS

SHEET 34 OF 66

IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX #12 (CONTD.)	ELECTRICAL CONNECTIONS ICT13-EQ ICT44-EQ ICT10-EQ ICT9-EQ ICT43-EQ ICT37-EQ ICT4-EQ / ICT73P-EQ	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK(S) PSE & G DESIGN WITH BUCHANAN BLOCK(S) 2B112N	CONTAINMENT	LOCA/MSL 3 271°/350°F 43.2/42.8 PSI/g <5x10 ⁷ R	PAGE 64	NONE	

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SYSTEM CONTAINMENT PARAMETERS

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX #11	ELECTRICAL CONNECTIONS	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK (S)	CONTAINMENT	LOCA / HSLB 271°/350°F #3.2/42.8 PSI 4.5 X 10 ⁷ R	PAGE 64	NONE	
	ICT 2-HQ ICT 38-HQ ICT 39-HQ ICT 35-HQ ICT 46-HQ ICT 5-HQ ICT 64-HQ ICT 31-HQ ICT 33-HQ ICT 62-HQ ICT 65-HQ ICT 29-HQ	PSE 6G DESIGN WITH BUCHANAN BLOCK (S) 28112N ICT 69P-HQ ICT 70P-HQ					

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ELECTRICAL/CONTROLS EQUIPMENT LOCATED IN AN
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UNDER POSTULATED ACCIDENT CONDITIONS

SYSTEM CONTAINMENT PARAMETERS

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX # 11 (CONT'D)	ELECTRICAL CONNECTIONS	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK(S)	CONTAINMENT	LOCA / MSLB 271°/350°F 43.2 / 42.8 PSI/G ≤ 5X10 ⁻⁴ R	PAGE 64	NONE	
	ICT 16-HQ						
	ICT 25-HQ						
	ICT 30-HQ						
	ICT 60-HQ						
	ICT 56-HQ						
	ICT 21-HQ						
	ICT 23-HQ						
	ICT 66P-HQ						
	ICT 55-HQ						
	ICT 14-HQ						
	ICT 11-HQ						
	ICT 15-HQ						
	ICT 49-HQ						
	ICT 52-HQ						
	ICT 67P-HQ						

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SALEM GENERATING STATION
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MASTER LIST
ELECTRICAL/CONTROLS EQUIPMENT LOCATED IN AN
ADVERSE ENVIRONMENT AND SPECIFIED TO FUNCTION
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SYSTEM CONTAINMENT PARAMETERS

SHEET 37 OF 66

IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
REF. JCT. BOX # 11 (CONT'D.)	ELECTRICAL CONNECTIONS ICT 41-HQ ICT 42-HQ ICT 6-HQ ICT 7-HQ ICT 42-HQ ICT 45-HQ ICT 48-HQ / ICT 68P-HQ	JUNCTION BOX WITH INTEGRAL TERMINAL BLOCK(S) PSE 44 DESIGN WITH BOEHMAN BLOCK(S) 2B112N	CONTAINMENT	LOCA/MSLB 271°/350°F 432/42.8 PSIG 4.5 X 10 ⁷ R	PAGE 64	NONE	

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SYSTEM CONTAINMENT PARAMETERS

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA / MSLS 871°/350°F 432/428 PSIG < 5X10 ⁻⁷ (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
1CT3-EQ	TA 4320						
1CT34-EQ	TA 4434						
1CT1-EQ	TA 4112						
1CT36-EQ	TA 4426						
1CT5-EQ	TA 4331						
1CT40-EQ	TA 4500						

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ADVERSE ENVIRONMENT AND SPECIFIED TO FUNCTION
UNDER POSTULATED ACCIDENT CONDITIONS

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SYSTEM CONTAINMENT PARAMETERS

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT 740-EQ AND 1CT 741-EQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GEOPIPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 871°/350°F 43.2/42.8 PSIG <5X10 ⁻⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WORST CASE ENVIRONMENT
	TA 4329						
	TA 4494						
	TA 4112						
	TA 4496						
	TA 4331						
	TA 4500						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA / MSLB 871°/350°F 43.2/42.8 PSIG < 5X10 ⁻⁷ (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
1CT 63-EQ	TA 4547						
1CT 32-EQ	TA 4492						
1CT 61-EQ	TA 4545						
1CT 57-EQ	TA 4541						
1CT 26-EQ	TA 4418						
1CT 58-EQ	TA 4542						
1CT 27-EQ	TA 4419						

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1CT 75P-EQ AND 1CT 75-EQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 871°/350°F 43.2/42.8 PSIG < 5X10 ⁻⁶ (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1.	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
	TA 4547						
	TA 4492						
	TA 4545						
	TA 4541						
	TA 4418						
	TA 4542						
	TA 4419						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA / MSLB 871°/300°F 432/428 PSIG ≤ 5X10 ⁻⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
ICT 2-NQ	TA 4328						
ICT 3B-NQ	TA 4428						
ICT 3D-NQ	TA 4429						
ICT 3E-NQ	TA 4425						
ICT 4G-NQ	TA 4506						
ICT 8-NQ	TA 4334						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT 632-HQ AND ICT 632-NQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTTAGES	LOCA / MSLB 271°/350°F 43.2/42.8 PSIG < 5X10 ⁻⁶ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
TA 4328							
TA 4498							
TA 4499							
TA 4495							
TA 4506							
TA 4334							

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GEOPIPINGS	CONTAINMENT & OTHERS	LOCO/MSLB 871°/300°F 43.2/42.8 PSIG < 5X10 ⁻⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	89515 #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
1CT64-NQ	TA 4548						
1CT31-NQ	TA 4491						
1CT33-NQ	TA 4493						
1CT62-NQ	TA 4546						
1CT65-NQ	TA 4549						
1CT29-NQ	TA 4489						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER, MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT70P-HQ AND 1CT70-HQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MELB 271°/350°F 432/428 PSIG < 5X10 ⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WORST CASE ENVIRONMENT
	TA 4548						
	TA 4491						
	TA 4493						
	TA 4546						
	TA 4549						
	TA 4489						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 2710/350°F 432/428 PSIG (5X10 ⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WREST CASE ENVIRONMENT
ICT 16-HQ	TA 4342						
ICT 25-HQ	TA 4417						
ICT 30-HQ	TA 4490						
ICT 60-HQ	TA 4544						
ICT 56-HQ	TA 4540						
ICT 21-HQ	TA 4347						
ICT 23-HQ	TA 4415						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT 66P-HQ AND ICT 66-HQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT F OTHERS	LOCA/MSLB 2711/350°F 432/428 PSIG (5X10 ⁷ P (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WORST CASE ENVIRONMENT
	TA 4342						
	TA 4417						
	TA 4490						
	TA 4544						
	TA 4540						
	TA 4347						
	TA 4415						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT55-HQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 271°/350°F 45.2/428 PSIG <5X10 ⁻⁴ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WORST CASE ENVIRONMENT
1CT14-HQ	TA 4539						
1CT11-HQ	TA 4340						
1CT15-HQ	TA 4337						
1CT49-HQ	TA 4341						
1CT52-HQ	TA 4509						
	TA 4536						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT67P-NQ AND 1CT67-NQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MASLB 2719/3509F 432/428 PSIG (5X107R (CONTAINMENT ONLY)	PAGE 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WORST CASE ENVIRONMENT
	TA 4539						
	TA 4340						
	TA 4337						
	TA 4341						
	TA 4509						
	TA 4536						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA / MSLB 271°/350°F 432/428 PSIG < 5X10 ⁻⁷ R (CONTAINMENT) ONLY	PAGES 67 THROUGH 73	BASIS #1	CABLES QUALIFIED TO WREST CASE ENVIRONMENT
ICT 41-NQ	TA 4501						
ICT 47-NQ	TA 4507						
ICT 6-NQ	TA 4432						
ICT 7-NQ	TA 4433						
ICT 42-NQ	TA 4502						
ICT 45-NQ	TA 4505						
ICT 48-NQ	TA 4508						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT68P-HQ AND ICT68-HQ ↓	SIGNAL WIRES FOR THERMOCOUPLES TA4501 TA4507 TA4432 TA4433 TA4502 TA4505 TA4508	CABLES FROM GENERIC GROUPINGS ↓	CONTAINMENT & OTHERS ↓	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG <5X10 ³ R (CONTAINMENT) ONLY ↓	PAGES 67 THROUGH 73 ↓	BASIS #1 ↓	CABLING QUALIFIED TO WORST CASE ENVIRONMENT ↓

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT59-EQ	SIGNAL WIRES FOR THERMOCOUPLES TA4543	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG 6.5X10 ⁷ R (CONTAINMENT) ONLY	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
ICT28-EQ	TA4488						
ICT24-EQ	TA4416						
ICT54-EQ	TA4538						
ICT19-EQ	TA4345						
ICT53-EQ	TA4537						
ICT22-EQ	TA4111						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT71P-EQ AND ICT71-EQ	SIGNAL WIRES FOR THERMOCOUPLES	CABLES FROM GENERIC GROUPINGS	CONTAINMENT # OTHERS	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG (5X10 ⁷ R (CONTAINMENT) ONLY	7 .73	BASIS #1	CABLEING QUALIFIED TO WORST CASE ENVIRONMENT
	TA4543						
	TA4488						
	TA4416						
	TA4538						
	TA4345						
	TA4537						
	TA4416						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT18-EQ	SIGNAL WIRES FOR THERMOCOUPLES TA4344	CABLES FROM GENERIC GROUPINGS	CONTAINMENT # OTHERS	LOCA/HSLB 271°/350°F 43.2/42.8 PSIG (5X10 ⁷ R (CONTAINMENT) ONLY	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
ICT51-EQ	TA4511						
ICT17-EQ	TA4343						
ICT20-EQ	TA4346						
ICT12-EQ	TA4358						
ICT50-EQ	TA4510						

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
ICT72P-EQ AND ICT72-EQ ↓	SIGNAL WIRES FOR THERMOCOUPLES TA4344 TA4511 TA4343 TA4346 TA4338 TA4510	CABLES FROM GENERIC GROUPINGS ↓	CONTAINMENT & OTHERS ↓	LOCA/MSLB 271°/350°F 43.2/47.8 PSIG <5X10 ⁷ R (CONTAINMENT ONLY) ↓	PAGES 67 THROUGH 73 ↓	BASIS #1 ↓	CABLES QUALIFIED TO WORST CASE ENVIRONMENT ↓

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURE MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT13-EQ	SIGNAL WIRES FOR THERMOCOUPLES TA4339	CABLES FROM GENERIC GROUPINGS	CONTAINMENT & OTHERS	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG (5X10 ⁷ R (CONTAINMENT ONLY)	PAGES 67 THROUGH 73	BASIS #1	CABLING QUALIFIED TO WORST CASE ENVIRONMENT
1CT44-EQ	TA4054	↓	↓	↓	↓	↓	↓
1CT10-EQ	TA4336	↓	↓	↓	↓	↓	↓
1CT9-EQ	TA4335	↓	↓	↓	↓	↓	↓
1CT43-EQ	TA4503	↓	↓	↓	↓	↓	↓
1CT37-EQ	TA4497	↓	↓	↓	↓	↓	↓
1CT4-EQ	TA4330	↓	↓	↓	↓	↓	↓

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IDENTIFICATION	SERVICE	TYPE, MANUFACTURER MODEL	LOCATION	ENVIRONMENT	QUALIFI- CATION	OUTSTANDING ITEMS	REMARKS
1CT73P-EQ AND 1CT73-EQ ↓	SIGNAL WIRES FOR THERMOCOUPLES TA 4339 TA 4504 TA 4336 TA 4335 TA 4503 TA 4497 TA 4330	CABLES FROM GENERIC GR...PINGS ↓	CONTAINMENT & OTHERS ↓	LOCA/MSLB 271°/350°F 43.2/42.8 PSIG <5 X 10 ⁷ R (CONTAINMENT ONLY) ↓	PAGES 67 THROUGH 73 ↓	BASIS #1 ↓	CABLING QUALIFIED TO WORST CASE ENVIRONMENT ↓

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