NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

October 31, 1980

Mr. James G. Keppler
Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 & 50-306
Final Response to IE Bulletin No. 79-01B S66 RPT

References:

1. NRC Office of Inspection and Enforcement; "Environmental Qualification of Class IE Equipment", Bulletin 79-01B, January 14, 1980.
2. NSP letter to Mr. J. Keppler, NRC Region III - March 13, 1980.
3. NSP letter to Mr. J. Keppler, NRC Region III - May 12, 1980.
4. NSP letter to Mr. J. Keppler, NRC Region III - May 21, 1980.
5. NSP letter to Mr. J. Keppler, NRC Region III - July 8, 1980.
6. NRC Office of Inspection and Enforcement; IE Supplement No. 2 to Bulletin 79-01B - September 30, 1980
7. NRC letter (D. Eisenhut) to NSP (L. Mayer), September 19, 1980.

Revised System Component Evaluation Worksheets

Attached Appendix A is being submitted in its entirety to provide a complete and current "Master List". Data sheets which have been revised are noted as "Rev. 4 - 10/24/80".

Appendix B includes supporting reference documentation for Appendix A data sheets combined with documentation received pursuant to our continuing investigation on qualifying Class IE equipment. Many of the Appendix A data sheets have been corrected for typographical and editorial errors. Specific major changes are noted herein:

Item 1 - Motor Operated Valves

Limitorque valve operators at Prairie Island are provided with Class B and Class H insulation dependent upon their application. Class B insulation operators were retested by the Franklin Institute Research Laboratories in a steam environment and test results demonstrated that Class B insulation withstood the steam environment for at least 69 hours. These results are

Item 1 (Continued)

reported in F-C3271, "Qualification Test of Limitorque Valve Actuators in a Steam Environment", dated February 1972. Prairie Island operating requirements for valve operators having Class B insulation vary from five (5) minutes to 24 hours. We believe that valve operators inside containment with Class B insulation will function as required to mitigate the consequences of an accident when exposed to accident conditions.

Item 2 - Solenoid Valves

Numerous solenoid valves have been replaced on Unit 1 systems during the recent outage. The replaced solenoid valves are nuclear grade and comply with the requirements of Bulletin 79-01B. Unit 2 replacements will be made during future outages.

Item 3 - Limit Switches

Several NAMCO EA-170 limit switches were installed on annulus (outside containment) valve position applications during the recent outage. Nuclear grade limit switches (NAMCO EA-180) were previously purchased and replaced several not environmentally qualified switches in containment. Additional switches were not installed during the recent outage because test results received in late August on the EA-180 limit switches indicated that, to assure a hermetic seal, conax type fittings were required where the wiring enters the switch. Orders were placed for the fittings, with delivery scheduled at year's end. Unit 2 switches and fittings will be replaced or modified during the February outage. Existing EA-180 switches inside containment will also be modified. Unit 1 switches will also be replaced or modified during the forthcoming refueling outage.

Item 4 - Instrumentation

Per TMI Lessons Learned supplements, a new containment sump level measuring system has been purchased and will replace the existing system. Main steam flow transmitters have been purchased and will replace the existing transmitters. NSP stands by its discussion and conclusions regarding signal converters used to control steam generator power operated relief valves. The two signal converters are located on separate floor levels (735' and 755' level). We note this fact since it was reported by the NRC inspector as their being on the same floor. The relief valves can be manually operated, independent of the signal converters and steam environment is expected to last less than one (1) hour. Operation of the valves is not required to begin for at least four (4) hours following an accident.

Item 5 - Terminations

Okonite splices employed at Prairie Island utilize Okonite T-95 tape which is environmentally qualified. The T-95 tape is covered with Scotch 27 tape which serves as a protective jacket. Credit is not taken for the Scotch tape with respect to environmental qualification of the splices.

ACTION ITEMS

Item 1 - Replacements and Modifications

As noted above, replacement of solenoid valves, limit switches and other instruments is being accomplished as material is received and scheduled for installation during the next outage. Present schedules call for Unit 2 to be shutdown in February 1981. Unit 1 replacements and modifications which were not completed during this last outage, will be completed when material is received and operations permit or during the next scheduled outage; in any event, all modifications for both units will be completed by June 1982.

Item 2 - Testing

A. Terminal Blocks

Terminal block testing is being scheduled jointly with Wisconsin Public Service Corporation. A vendor has been selected and purchasing will proceed when QA approval of the vendor is completed. It is planned to commence testing within three (3) months after the Purchase Order is issued and a total test schedule of 33 weeks is expected. Completion is expected in late 1981.

B. Thermocouple Cabling System

Thermocouple cabling system testing will be completed in early 1981.

C. DC Panels

Tests on the replacement DC panels are complete. The test results are in process of being reviewed and evaluated.

Item 3 - Aging Tests

A component aging evaluation was performed on numerous components. The results of this evaluation recommended aging qualification methods and replacement period for several components. Some components were judged exempt from aging due to the material of construction and an evaluation that their service life would be 40 years.

These are:

A. D. G. O'Brien Electrical Penetrations

The insulating material, ethylene propylene and chloro-sulphinated polyethylene, is the material of construction in these units which may be degraded under long term service conditions or as a result of exposure to accident conditions. The evaluation concluded that both insulating materials can and will withstand the temperature and radiation environments under both the normal service or accident conditions. Therefore, no further testing will be performed on the penetrations. NSP will continue to test and observe the penetrations under normal operating conditions. Operational experience will determine if replacement is necessary.

B. Electric-Machinery Motors

The aging evaluation results concluded that under the service conditions and application of this motor, containment spray pump, that aging effects would be negligible on the insulation material and no further aging testing is required. NSP agrees with this conclusion.

C. Bussmann Fuseholders

The aging evaluation results support our original conclusions that the material of construction and service conditions are such that no appreciable degradation would result in the event these fuseholders are exposed to accident conditions. NSP does not plan to perform any further analysis or testing on this equipment.

D. DC Panels

The replacement DC panels have undergone all tests except aging tests. NSP intends to perform an analysis on the materials of construction to determine the aging properties due to this exposure in a limited temperature environment.

E. Foxboro Transmitters

Utility Transmitter Qualification Program is planning to test Foxboro NE series transmitters. NSP plans to take the results of these tests and perform an analysis to conciliate aging properties with the presently installed E series transmitters.

F. Barton Transmitters

Based upon the results of the component aging evaluation study, NSP plans to perform an analysis on the Model 332 and 386 transmitters to establish aging qualification.

Conclusions

Based upon the evaluation of our Class IE equipment and the results of on-site inspections made by NRC inspectors, we believe we have complied with the requirements of Bulletin 79-01B. We have taken appropriate and positive steps to assure compliance. We believe that with the completion of the action items noted above, there will exist no outstanding items which would preclude the continued safe operation of Prairie Island Units 1 and 2. We will keep Region III fully apprised of our progress of work to be done and inform them immediately of any problems which may arise in reference to the requirements of the bulletin.

We have taken steps to maintain a central location for all qualification documentation, including existing documentation and documentation for Class IE environmentally qualified equipment purchased in the future. This file will contain summary test reports as well. The file will be maintained current, auditable, and available throughout the life of the plant and will be integrated into the formal Records Management System.

Yours truly,

L. O. Mayer for

D. E. Gilberts
Senior Vice President
Power Supply

cc: Mr. G. Charnoff
Mr. C. D. Feierabend, NRC Resident Inspector
NRC Office of Inspection and Enforcement
Washington, D. C. 20555

Enclosures

DEG:nk

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

Docket No. 50-282 and 50-306

LETTER DATED OCTOBER 31, 1980
RESPONDING TO NRC REQUEST
FOR INFORMATION IN IE BULLETIN 79-01B

Northern States Power Company, a Minnesota corporation, by this letter dated October 31, 1980 hereby submits information in response to NRC request for information concerning IE Bulletin 79-01B.

This request contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By L. O. Mayer
L O Mayer
Manager of Nuclear Support Services

On this 31st day of October, 1980, before me a notary public in and for said County, personally appeared L O Mayer, Manager of Nuclear Support Services, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof and that to the best of his knowledge, information and belief, the statements made in it are true and that it is not interposed for delay.

Jeanne M Hacker

JEANNE M. HACKER
NOTARY PUBLIC - MINNESOTA
HENNEPIN COUNTY
My Commission Expires May 8, 1988

DOCKET NO. 50-263 MONTICELLO

FINAL RESPONSE TO IEBulletin 79-01B

LTR DTD 10/31/80.....8011190019)

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APPENDIX A

MASTER LIST

Rev. 1
5/7/80

SYSTEM: Auxiliary Feedwater (AF)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32242	Valve Operator		X
MV-32243	Valve Operator		X
MV-32248	Valve Operator		X
MV-32249	Valve Operator		X

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Aux FW (AF) PLANT ID NO.: See Note 1 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-00 FUNCTION: Feed Water to Stm Gen ACCURACY: SPEC. NR DEMON: NR SERVICE: 11,12,21,22 S/G LOCATION: Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	Locked Open Not Required	69 hrs	2	4	Type Test	None
	TEMP. Deg. F	210°F	325°F	1	3	Type Test	None
	PRESSURE (PSIA)	15.2psia	74.7psia	1	3	Type Test	None
	RELATIVE HUMIDITY (%)	100%	100%	1	4	Type Test	None
	CHEMICAL SPRAY	Not Required					None
	RADIATION	Not Required					None
	AGING		40 yrs		3	Type Test	None
	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I Para I.11.1
2) Tech Spec's Section 3.4 para A.7
3) Westinghouse WCAP's 7410-L, Dec. 1970, & 7744 Aug. 1971
4) FIRL-Report F- C3271 Dated Feb. 1972

NOTES:

1) Includes Items: MV-32242, MV-32243
MV-32248, MV-32249

A.1.1

MASTER LIST

Rev. 1
5/7/80

SYSTEM: CHEMICAL VOLUME CONTROL (VC)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32166	VALVE OPERATOR		X
MV-32199	" "	X	
MV-32194	" "		X
MV-32210	" "	X	
CV-31325	LIMIT SWITCH	X	
CV-31326	" "	X	
CV-31327	" "	X	
CV-31347	" "	X	
CV-31348	" "	X	
CV-31349	" "	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CHEM VOL CNTL PLANT ID NO.: (VC) SEE NOTE 2 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: CNTMT ISOL RCP SEAL WTR RETURN ACCURACY: SPEC. NR DEMON: NR SERVICE: CVCS LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	5 MINUTES	69 HOURS SEE NOTE 2	SEE NOTE 1	3	TYPE TEST	NONE
	TEMP. Deg. F	184°F	325°F	1	2	TYPE TEST	NONE
	PRESSURE (PSIA)	15.3 psia	74.7 psia	1	2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	3	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	NOT REQUIRED					NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para. I.11.1
2) Westinghouse WCAP's 7410-L of December, 1970 and 7744 of August, 1971.
3) FIRL Report F - C3271 - Dated Feb. 1972

NOTES:

1) 5 min. op time based on function to close on SI signal.

2) Includes items: MV-32166 & MV-32194

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SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CHEM VOL CNTL PLANT ID NO.: MV-32199 & MV-32210 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: CNTMT ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: EXCESS LETDOWN LINE UNIT 1&2 LOCATION: CONTAINMENT	OPERATING TIME	5 MINUTES	6 Days	SEE NOTE 1	6	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	6	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	6	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Figure 5.2-7
2) FSAR Chap. 6.4.3
3) FSAR Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report Limitorque Valve Actuators for PWR Service Project # 600456, December 9, 1975.
5) FSAR Table 5.4-4.
6) WCAP 7410-L of December 1970 and WCAP 7744 of August 1971

NOTES:

1) Conservative estimate based on receiving containment isol signal and valve stroke time.

A.2.2

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CHET VOL CNTL PLANT ID NO.: SEE NOTE 1 COMPONENT: LIMIT SWITCH MANUFACTURER: NAMCO MODEL NUMBER: EA180 FUNCTION: LETDOWN ISOL VALVES OPEN POSITION INDICATION ACCURACY: SPEC. NR DEMON: NR SERVICE: LETDOWN SYSTEM LOCATION: 1 & 2 CONTAINMENT FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	OPERATING TIME	2 HOURS	30 DAYS	6	4	TYPE TEST	NONE
	TEMP. Deg. F	268°F	280°F in 10 sec 340°F in 5 min	1	4	TYPE TEST	SEE NOTE 2
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	4	TYPE TEST	SEE NOTE 2
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	SEE NOTE 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	4	TYPE TEST	SEE NOTE 2
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
	SUB-MERGENCE		NOT REQUIRED		7	TYPE TEST	

*DOCUMENTATION REFERENCES:

1) FSAR Figure 5.2-7
2) FSAR Section 6.4.3
3) FSAR Page 7.5-12
4) ACME Cleveland Development Co, Test Plan 8-31-77.
5) FSAR Table 5.4-4
6) Engineering Evaluation
7) NSP Letter to NRC Dated May 12, 1980

NOTES:

1) Switches for valves: CV-31325, -31326, -31327, -31347, -31348, -31349.
2) Will install Conax fittings to hermetically seal switch during next outages. PO# MO-05427

A.2.3

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CHEM VOL CNTL PLANT ID NO.: SEE NOTE 1 COMPONENT: LIMIT SWITCH MANUFACTURER: NAMCO MODEL NUMBER: D2400X FUNCTION: Letdown Isol. Valves Closed Position Indication ACCURACY: SPEC. NR DEMON: NR SERVICE: LETDOWN LOCATION: CONTAINMENT FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	OPERATING TIME	2 HOURS		5			SEE NOTE 2
	TEMP. Deg. F	268°F		1			SEE NOTE 2
	PRESSURE (PSIA)	60.7 psia		1			SEE NOTE 2
	RELATIVE HUMIDITY (%)	100%		4			SEE NOTE 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			SEE NOTE 2
	RADIATION	3.6×10^7 RAD		3			SEE NOTE 2
	AGING						SEE NOTE 2
	SUB-MERGENCE		Not Required		6		

*DOCUMENTATION REFERENCES:

1) FSAR Figure 5.2-7
2) FSAR Section 6.4.3
3) FSAR Page 7.5-12
4) FSAR Table 5.4-4
5) Engineering Evaluation
6) NSP Letter to NRC - Dated May 12, 1980

NOTES:

1) Switches for Valves: CV-31325, CV-31326, CV-31327, CV-31347, CV-31348, CV-31349.
2) Not Environmentally qualified.
Will be replaced during next outages.
Req. #'s: G655318 & G680001
Replaced with environmentally qualified switches which will need Conax fittings to seal hermetically.

A.2.4

MASTER LIST

Rev. 1
5/7/80

SYSTEM: Cooling Water (CL)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32132	Valve Operator	X	
MV-32135	Valve Operator	X	
MV-32138	Valve Operator	X	
MV-32141	Valve Operator	X	
MV-32147	Valve Operator	X	
MV-32150	Valve Operator	X	
MV-32153	Valve Operator	X	
MV-32156	Valve Operator	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50.282 & 50.306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cooling Water PLANT ID NO.: See Note 1 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-000 FUNCTION: Fan Coil Unit Clg Wtr Return ACCURACY: SPEC. NR DEMON: NR SERVICE: See Note 2 LOCATION: Containment	OPERATING TIME	5 min	69 Hours	See Note 3	6	Type Test	NONE
	TEMP. Deg. F	268°F	325°F	1	4	Type Test	NONE
	PRESSURE (PSIA)	60.7 psia	74.7 psia	1	4	Type Test	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	6	Type Test	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	$H_3BO_3/Na_3S_2O_3$/ NaOH pH 7.85	2	4	Type Test	NONE
	RADIATION	3.6×10^7 Rad	2.04×10^8 Rad	3	4	Type Test	NONE
	AGING		40 years		4	Type Test	NONE
FLOOD LEVEL ELEV: EL. 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not required					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig. 5.2-7
2) FSAR Chap 6 Para 6.4.3
3) FSAR P Chap 7 Page 7.5-12
4) WCAP 7410-L Dated Dec. 1970 and WCAP 7744 Dated August 1971
5) FSAR Chap 5 Table 5.4-4
6) FIRL F-C3271 Dated Feb. 1972

NOTES:
1) Includes Items: MV-32132, MV-32135, MV-32138, MV-32141, MV-32147, MV-32150, MV-32153, MV-32156.
2) Fan Coil Units - 11, 12, 13, 14, 21, 22, 23, 24
3) Conservative estimate based on receiving SI signal & valve stroke time.

SYSTEM: Containment Air Handling (ZC)

COMPONENTS -

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
11 & 21	Motor (FCU)	X	
12 & 22	Motor (FCU)	X	
13 & 23	Motor (FCU)	X	
14 & 24	Motor (FCU)	X	
11 & 21	Motor (DRF)	X	
12 & 22	Motor (DRF)	X	
13 & 23	Motor (DRF)	X	
14 & 24	Motor (DRF)	X	
SV-33371	Solenoid Valve	X	
SV-33372	Solenoid Valve	X	
SV-33373	Solenoid Valve	X	
SV-33374	Solenoid Valve	X	
SV-33375	Solenoid Valve	X	
SV-33376	Solenoid Valve	X	
SV-33377	Solenoid Valve	X	
SV-33378	Solenoid Valve	X	
CD-34072	Limit Switches	X	
CD-34074	Limit Switches	X	
CD-34076	Limit Switches	X	
CD-34078	Limit Switches	X	
SV-33389	Solenoid Valve	X	
SV-33390	Solenoid Valve	X	

SYSTEM: Containment Air Handling (ZC)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SV-33391	Solenoid Valve	X	
SV-33392	Solenoid Valve	X	
SV-33393	Solenoid Valve	X	
SV-33394	Solenoid Valve	X	
SV-33395	Solenoid Valve	X	
SV-33396	Solenoid Valve	X	
CD-34080	Limit Switches	X	
CD-34082	Limit Switches	X	
CD-34084	Limit Switches	X	
CD-34086	Limit Switches	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cnt Air Handling PLANT ID NO.: (ZC) 11, 12, 13, 14 & 21, 22, 23, 24	OPERATING TIME	2 months	See Note 1	2	5	Type Test	NONE
COMPONENT: Motor	TEMP. Deg. F	268°F	324°F	1	5	Type Test	NONE
MANUFACTURER: Westinghouse	PRESSURE (PSIA)	60.7 psia	94.7 psia	1	5	Type Test	NONE
MODEL NUMBER: L1054-1760/875	RELATIVE HUMIDITY (%)	100%	100%	6	5	Type Test	NONE
FUNCTION: Cnt Heat Removal	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/NaOH pH 9.5 to 10	3	5	Type Test	NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rad	2×10^8 Rad	4	5	Type Test	NONE
SERVICE: Fan Coil Units LOCATION: Containment	AGING		40 yrs		5	Type Test	NONE
FLOOD LEVEL ELEV: El. 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Fig. 5.2-7
2) FSAR Table 7.5-2
3) FSAR Sect. 6.4.3
4) FSAR Pg. 7.5-12
5) WCAP 7329 April 1972
6) FSAR Table 5.4-4

NOTES: 1) 20 Months - Limited by bearing qualification

A.4.1

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM: Cnt Air Handling PLANT ID NO.: (ZC) See Note 1 COMPONENT: Dome Recirc Fan MANUFACTURER: Joy MODEL NUMBER: 600277-69 FUNCTION: Post Loca H_2 Control ACCURACY: SPEC. NR DEMON: NR SERVICE: Cnt Bldg 1 & 2 LOCATION: Containment FLOOD LEVEL ELEV: El 706' ABOVE FLOOD LEVEL: Yes	OPERATING TIME	2 MONTHS	1 yr	6	4	Type Test	NONE
	TEMP. Deg. F	268°F	300°F	1	4	Type Test	NONE
	PRESSURE (PSIA)	60.7 psia	89.7 psia	1	4	Type Test	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	Caustic Spray	2	4	Type Test	NONE
	RADIATION	3.6×10^7 Rad	5×10^7 Rad	3	4	Type Test	NONE
	AGING		See Note 2		4	Type Test	NONE
	SUB-MERGENCE	Not Req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Fig. 5.2-7
2) FSAR Sect 6.4.3
3) FSAR Page 7.5-12
4) Joy Manufacturing Report #X-411 October 23, 1972
5) FSAR Table 5.4-4
6) Engineering evaluation

NOTES:
1) Dome Recirc Fans 11, 12, 13, 14 21, 22, 23 & 24.
2) Design life of 40 yrs, except for bearings. Standard arrangements provide for a B-10 Bearing Design life of 22,000 hrs. In special cases, a B-10 life of 100,000 hrs is possible.

A-4.2

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cont Air Hndlg PLANT ID NO.: (ZC) See Note 1 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-8321A1E FUNCTION: Gap & Vent Dampers Dome ACCURACY: SPEC. NR DEMON: NR SERVICE: Fan coil units #11,12,13,14 LOCATION: Containment	OPERATING TIME	5 MIN.	30 Days	5	6		NONE
	TEMP. Deg. F	268°F	300°F	1	6		NONE
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	6		NONE
	RELATIVE HUMIDITY (%)	100%	100%	4	6		NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3NaOH/$Na_2S_2O_3$ pH 10.5	2	6		NONE
	RADIATION	3.6×10^7 Rads	1.5×10^8 Rads	3	6		NONE
	AGING		4.4 Yrs		6		NONE
FLOOD LEVEL ELEV: EL706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					

NOTES: 1) Includes items: SV 33371, SV 33372, SV 33373, SV 33374, SV 33375, SV 33376, SV 33377, SV 33378

*DOCUMENTATION REFERENCES:

1) FSAR Chp.5 Figure 5.2-7
2) FSAR Sect. 6.4.3
3) FSARChp. 7 g 7.5-12
4) FSARChp. 5 Table 5.4-4
5) Engineering evaluation
6) ASCO Test Report No. AQS-21678/TR-hw-A

A.4.3

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cntnmt Air Hndl (ZC) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: Namco MODEL NUMBER: EA-180 FUNCTION: Damper position indication (Dome) ACCURACY: SPEC. NR DEMON: NR SERVICE: See Note 2 LOCATION: Containment	OPERATING TIME	5 MIN.	30 days	6	4	Type Test	NONE
	TEMP. Deg. F	268°F	280° in 10 sec. (F) 340° in 5 min.	1	4	Type Test	SEE NOTE 3
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	4	Type Test	SEE NOTE 3
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	SEE NOTE 3
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_3O_3$ pH 10.5	2	4	Type Test	SEE NOTE 3
	RADIATION	3.6×10^7 Rads	2.04×10^8 Rads	3	4	Type Test	NONE
	AGING		40 years		4	Type Test	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Fig. 5.2-7
2) FSAR Sect. 6.4.3
3) FSAR Pg. 7.5-12
4) ACME - Cleveland Dev. Co. Test Plan 8-31-77
5) FSAR TABLE 5.4-4
6) Engineering evaluation - Dome switch needed to operate Gap Damper.

NOTES: 1) Switches for Valves: CD34072, CD34074 CD34076, CD34078, CD34080, CD34082 CD34084, CD34086 Closed switch
2) Fan Coil Units #11, 12, 13, 14 #21, 22, 23, 24
3) Will install Conax fittings for hermetically sealed switch during next outages PO# MQ-05427

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cnt Air Handling PLANT ID NO.: (ZC) See Note 1 COMPONENT: Solenoid Valve MANUFACTURER: Asco MODEL NUMBER: RHT 8321A1 FUNCTION: Vent Damper ACCURACY: SPEC. NR DEMON:NR SERVICE: Fan Coil Units Unit 2 21, 22, 23, 24 LOCATION: Containment	OPERATING TIME	5 MIN.		5			See Note 2
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2
	RADIATION	3.6×10^7 Rads		3			See Note 2
	AGING						See Note 2
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Fig 5.2-7
2) FSAR Sect. 6.4.3
3) FSAR Pg. 7.5-12
4) FSAR Table 5.4-4
5) Engineering evaluation

NOTES:

1) Valves include: SV33389, SV33390, SV33391, SV33392, SV33393, SV33394, SV33395, SV33396.
2) Not environmentally qualified. Will be replaced during next outages. PO#MQ-05214

A.4.5

MASTER LIST

Rev. 1
5/7/80

SYSTEM: Containment Hydrogen Control (HC)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32271	Valve Operator	X	
MV-32273	Valve Operator	X	
MV-32274	Valve Operator		X
MV-32276	Valve Operator		X
MV-32290	Valve Operator	X	
MV-32292	Valve Operator	X	
MV-32293	Valve Operator		X
MV-32295	Valve Operator		X
SV-33990	Solenoid Valve		X
SV-33991	Solenoid Valve		X
SV-33992	Solenoid Valve		X
SV-33993	Solenoid Valve		X

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50.282 & 50.306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cnt Hydrogen Control PLANT ID NO.: See Note 1 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-000 FUNCTION: Sampling & Venting ACCURACY: SPEC. NR DEMON: NR SERVICE: Cnt Bldg 1 & 2 LOCATION: Containment FLOOD LEVEL ELEV: El. 706' ABOVE FLOOD LEVEL: Yes	OPERATING TIME	24 HOURS	6 Days	6	7	Type Test	NONE
	TEMP. Deg. F	268° F	325°F	1	7	Type Test	NONE
	PRESSURE (PSIA)	60.7 psia	104.7psia	1	7	Type Test	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	2	Type Test	NONE
	CHEMICAL SPRAY	H_3BO_3/NAOH pH 9.0 - 9.5	$H_3BO_3/Na_2S_2O_3$ / NaOH pH 10.5	3	2	Type Test	NONE
	RADIATION	3.6×10^7 Rad	2.04×10^8	4	2	Type Test	NONE
	AGING		40 years		2	Type Test	NONE
	SUB-MERGENCE	Not Req'd					NONE

A.5.1

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5. Fig. 5.2-7
2) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project Number 600456, December 9, 1975.
3) FSAR Chap 6 Section 6.4.3
4) FSAR Chap 7 Page 7.5-12
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L-Section 1970

NOTES: 1) Items include: MV-32271, MV-32273, MV-32290, MV-32292,

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev.4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cnt Hydrogen PLANT ID NO.: Control See Note 1 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-000 FUNCTION: Sampling & Venting ACCURACY: SPEC. NR DEMON: NR SERVICE: Annulus 1 & 2 LOCATION: Annulus FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	24 HOURS	6 days	1	2	TYPE TEST	NONE
	TEMP. Deg. F	161°F	325°F	1	2	TYPE TEST	NONE
	PRESSURE (PSIA)	14.6 psia	104.7 psia	1	2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED					NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	2.7×10^6 RAD	2.04×10^8	1	2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) Engineering Evaluation based on expected containment LOCA environment.

2) WCAP 7410 - L dated December 1970

NOTES:

1) Items include: MV-32293, MV-32295
MV-32274, MR-32276

A.5.2

SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

REV. 4
10-24-80

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cntmt H_2 Control PLANT ID NO.: SV-33990, SV-33991 COMPONENT: Solenoid Valves MANUFACTURER: ASCO MODEL NUMBER: NP-8320A194E FUNCTION: Air Supply/Vent ACCURACY: SPEC. NR DEMON: NR SERVICE: Post-loca LOCATION: Annulues Unt 1 FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	24 hours	30 days	1	2		NONE
	TEMP. Deg. F	161°F	300°F	1	2		NONE
	PRESSURE (PSIA)	14.61 psia	84.7 psia	1	2		
	RELATIVE HUMIDITY (%)	not required	100%		2		NONE
	CHEMICAL SPRAY	not required	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5		2		NONE
	RADIATION	2.7×10^7 RADS	1.5×10^8 RAD	1	2		NONE
	AGING		4.4 yrs		2		NONE
	SUB-MERGENCE	not required					NONE

*DOCUMENTATION REFERENCES:

1) Engineering evaluation base on containment LOCA Environment

2) ASCO Test Report No. AQS-21678/ TR-REV. A

NOTES:

A.5.3.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 and 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cntmt H_2 Cont. PLANT ID NO.: SV 33992-SV 33993 See Note 1 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: RHB-8320-A7 FUNCTION: Air Supply Vent ACCURACY: SPEC. NR DEMON: NR SERVICE: POST-LOCA LOCATION: Annulus unit2 FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	24 HOURS		1			See Note 1
	TEMP. Deg. F	161°F		1			See Note 1
	PRESSURE (PSIA)	14.6 psia		1			See Note 1
	RELATIVE HUMIDITY (%)	NOT REQUIRED					NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	2.7×10^7 RAD		1			See Note 1
	AGING						None
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) Engineering evaluation based on containment LOCA environment.

NOTES:

1) Not environmentally qualified
Will be replaced at next outage
PO #MQ-05214 -With NP-8320A194E

A.5.4

SYSTEM: Containment Purge (ZP)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SV-33440	Solenoid Valve		X
SV-33441	Solenoid Valve		X
SV-33515	Solenoid Valve		X
SV-33516	Solenoid Valve		X
CV-31310	Limit Switch		X
CV-31311	Limit Switch	X	
CV-31312	Limit Switch		X
CV-31313	Limit Switch	X	
CV-31569	Limit Switch		X
CV-31570	Limit Switch	X	
CV-31621	Limit Switch		X
CV-31622	Limit Switch		X
CV-31624	Limit Switch		X
CV-31625	Limit Switch		X
CV-31314	Limit Switch		X
CV-31315	Limit Switch	X	
CV-31316	Limit Switch		X
CV-31317	Limit Switch	X	
CV-31574	Limit Switch		X
CV-31575	Limit Switch	X	
CV-31627	Limit Switch		X
CV-31628	Limit Switch		X

SYSTEM: Containment Purge (ZP) (con't)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
CV-31630	Limit Switch		x
CV-31631	Limit Switch		x
CV-31636	Limit Switch	X	
CV-31635	Limit Switch		x
CV-31633	Limit Switch		x
CV-31634	Limit Switch	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNT Purge (ZP) PLANT ID NO.: SV-33440 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: 8321A1 FUNCTION: CNT Vacuum Breaker ACCURACY: SPEC. NR DEMON: NR SERVICE: CNT Unit 1 LOCATION: Annulus	OPERATING TIME	5 MIN.		1			See Note 1
	TEMP. Deg. F	161°F		2			See Note 1
	PRESSURE (PSIA)	14.6 psia		3			See Note 1
	RELATIVE HUMIDITY (%)	NOT REQUIRED					NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	2.7×10^7 Rads		1			See Note 1
	AGING						See Note 1
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL:	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) Engineering evaluation based on containment LOCA environment.

2) FSAR-Fig G. 3-4

3.) FSAR-Fig G. 3-5

NOTES:

1.) Not environmentally qualified. Being replaced next outage with model used in Unit 2.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4

10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNT Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP 831654E FUNCTION: CNT Vacuum Breaker ACCURACY: SPEC. NR DEMON: NR SERVICE: CNT Unit 2 LOCATION: Annulus	OPERATING TIME	5 MIN.	30 days		2	Type Test	None
	TEMP. Deg. F	161°F	300°F	1	2	Type Test	None
	PRESSURE (PSIA)	14.6 psia	84.7psia	1	2	Type Test	None
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		2	Type Test	None
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5		2	Type Test	None
	RADIATION	2.7×10^7 Rads	1.5×10^8 Rads	1	2	Type Test	None
	AGING		4.4 yrs		2	Type Test	None
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) Engineering evaluation based on containment LOCA environment.

2) ASCO Test Report No. AQS-21678/TR -REV. A

NOTES:

1) Valves Include: SV-33515 & SV-33516

A.6.2

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNT Purge (ZP) PLANT ID NO.:	OPERATING TIME	2 HOURS		5			See Note 2
COMPONENT: Limit Switch	TEMP. Deg. F	268°F		1			See Note 2
MANUFACTURER: NAMCO	PRESSURE (PSIA)	60.7psia		1			See Note 2
MODEL NUMBER: D2400X	RELATIVE HUMIDITY (%)	100%		4			See Note 2
FUNCTION: Closed Indication	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rads		3			See Note 2
SERVICE: Purge Exh 1&2 Purge Supply 1&2 LOCATION: CNT	AGING						See Note 2
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE						None

*DOCUMENTATION REFERENCES:

1) FSAR chap 5 Figure 5.2-7
2) FSAR chap 6 Sect 6.4.3
3) FSAR chap 7 Page 7.5-12
4) FSAR chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Switches for Valves: CV-31311, CV-31315
CV-31634, CV-31636
(Closed Indication Switch)
2) Not Environmentally Qualified

Will be replaced during next outages.
Req. #'s: G-655318 & G680001

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM:CNT Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: EA 180 FUNCTION: Open Indication ACCURACY: SPEC. NR DEMON: NR SERVICE: Purge Exh 1&2 Purge Supply 1&2 LOCATION: CNTMT	OPERATING TIME	2 HOURS	30 days	6	4	Type Test	None
	TEMP. Deg. F	268°F	280°F in 10 sec and 340°F in 5 min	1	4	Type Test	See note 2
	PRESSURE (PSIA)	60.7psia	84.7psia	1	4	Type Test	See note 2
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	See note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	4	Type Test	See note 2
	RADIATION	3.6×10^7 Rads	2.04×10^8 Rads	3	4	Type Test	None
	AGING		40 yrs		4	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) ACME - Cleveland Development Co. Test Plan 8-31-77
5) FSAR chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES:

1) Includes Items: CV-31311, CV-31315
CV-31634, CV-31636
(Open Indication Switch)

2) Will install Conax fittings to hermetically seal switch during next outages.

PO#MQ-05427

A.6.4

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev.4
10-24-80

UNIT: Prairie Island Unit 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cntmt Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: EA-170 FUNCTION: Position Indicator ACCURACY: SPEC. NR DEMON: NR SERVICE: Unit 1 Cnt Purge LOCATION: Annulus 1 FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	2 HOURS	200 hr	1	4		NONE
	TEMP. Deg. F	161° F	200° F	2	4		NONE
	PRESSURE (PSIA)	14.6 psia		3			NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		4		NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	2.7×10^7 RADS	2.07×10^8 RADS	1	4		NONE
	AGING		200hrs @ 200°F 100,000 cycles		4		NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) Engineering Evaluation
2) FSAR Fig. G.3-4
3) FSAR Fig. G.3-5
4) ACME-Cleveland Development Co. -Qualification of NAMCO Controls Limit Switch-Model EA-170, REV. 1 dated 7/24/78

NOTES:

1) Limit switches for valves: CV-31310, CV-31312 CV-31569, CV-31621, CV-31622, CV-31633.

A.6.5

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island Unit 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cntmt Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: NANCO MODEL NUMBER: D 2400 X FUNCTION: Position Indicated ACCURACY: SPEC. NR DEMON: NR SERVICE: CNTMT Purge Unit 1 & 2 LOCATION: Containment FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	OPERATING TIME	2 HOURS		1			See Note 2
	TEMP. Deg. F	268°F		2			See Note 2
	PRESSURE (PSIA)	60.7 psia		2			See Note 2
	RELATIVE HUMIDITY (%)	100%		5			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		3			See Note 2
	RADIATION	3.6×10^7 RADS		4			See Note 2
	AGING						See Note 2
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) Engineering Evaluation
2) FSAR Chap. 5 Fig. 5.2-7
3) FSAR Chap. 6. Sec.6.4.3
4) FSAR Chap 7. page 7.5-12
5) FSAR 5. Table 5.4-4

NOTES:

1) Limit switches for valves: CV-31313
CV-31317
CV-31570
CV-31575

2) Not environmentally qualified.
Will replace next outage.
Req. #'s: G655318 & G680001

A.9.6

REV. 4

10-24-80

SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM: Cntmt Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: Honeywell (Micro Switch) MODEL NUMBER: BZ-2RW899-A2 FUNCTION: Position Indicator ACCURACY: SPEC. DEMON: SERVICE: U-1&2 CNT Purge LOCATION: Annulus 1&2	OPERATING TIME	2 hours	Continuous	1	5	Type Test	NONE
	TEMP. Deg. F	161°F	180°F	2	5	Type Test	NONE
	PRESSURE (PSIA)	14.6 psia	5.92 psia	3	6	Type Test	See Note 2
	RELATIVE HUMIDITY (%)	Not Required					NONE
	CHEMICAL SPRAY	Not Required					NONE
	RADIATION	2.7×10^7 RADS	1.3×10^8 RAD	1	4	Type Test	NONE
	AGING		5 years 25 million oper.		4,5	Type Test	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1.) Engineering Evaluation
2.) FSAR Fig. C. 3-4
3.) FSAR Fig. C.3-5
4.) Nuclear Radiation and Switch Applications October 7, 1974.
5) Honeywell Catalog 50, p. E-2
6) Engineering Test Laboratory, Technical Bulletin No. 6, Issue No. 2, Application of Switches in Space Vehicles.

NOTES:

1.) CV-31625, CV-31630, & CV-31631, CV-31624
2.) Switches will operate satisfactorily up to an altitude of 25,000 ft., which is approximately 5.92 psia, a partial vacuum compared to standard mean sea level pressure.

10-24-80

SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNTM purge (ZP) PLANT ID NO.: SV-33441 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-8321A1E FUNCTION: CNTM Vacuum Breaker ACCURACY: SPEC. NR DEMON: NR SERVICE: CNTM Unit 1 LOCATION: Annulus	OPERATING TIME	5 min	30 days	1	2		NONE
	TEMP. Deg. F	161°F	300°F	1	2		NONE
	PRESSURE (PSIA)	14.6 psia	84.7 psia	1	2		NONE
	RELATIVE HUMIDITY (%)	not required	100%		2		NONE
	CHEMICAL SPRAY	not required	H_3BO_3 /NaOH/$Na_2S_2O_3$ pH-10.5		2		NONE
	RADIATION	2.7×10^7 RADS	1.5×10^8 RADS	1	2		NONE
	AGING		4.4 yrs		2		NONE
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL:	SUB-MERGENCE	Not required					

*DOCUMENTATION REFERENCES:

NOTES:

1) Engineering Evaluation based on containment LOCA environment

2) ASCO Text Report No, AQS-21678/TR - REV. A.

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REV. 4
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SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island Unit 1 and 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNTM Purge (ZP) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: D-2400-x FUNCTION: Position Indication ACCURACY: SPEC. NR DEMON: NR SERVICE: Unit 2 LOCATION: Annulus 2	OPERATING TIME	2 Hours		1			See Note 2
	TEMP. Deg. F	161°F		2			See Note 2
	PRESSURE (PSIA)	14.6 psia		3			See Note 2
	RELATIVE HUMIDITY (%)	Not required					NONE
	CHEMICAL SPRAY	Not required					NONE
	RADIATION	2.7×10^7 Rads		1			See Note 2
	AGING						NONE
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL:	SUB-MERGENCE	Not required					NONE

*DOCUMENTATION REFERENCES:

1.) Engineering Evaluation
2.) FSAR Fig. G.3-4
3.) FSAR Fig. G.3-5

NOTES:

1.) Limit Switches valves:
CV-31314, CV-31316, CV-31574, CV-31627
CV-31628, CV-31635

2.) Replacing switches with Model EA-170 during next outages.

SYSTEM: CONTAINMENT SPRAY (CS)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
11	MOTOR		X
12	"		X
21	"		X
22	"		X
MV-32096	VALVE OPERATOR		X
MV-32097	" "		X
MV-32103	" "		X
MV-32105	" "		X
MV-32108	" "		X
MV-32109	" "		X
MV-32114	" "		X
MV-32116	" "		X

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM: CNTMT SPRAY (CS) PLANT ID NO.: SEE NOTE 1 COMPONENT: MOTOR	OPERATING TIME	NOT REQUIRED					NONE
	TEMP. Deg. F	NOT REQUIRED					NONE
MANUFACTURER: ELEC MACHINERY MFG CO	PRESSURE (PSIA)	NOT REQUIRED					NONE
MODEL NUMBER: NONE	RELATIVE HUMIDITY (%)	NOT REQUIRED					NONE
FUNCTION: MOTOR FOR CNTMT SPRAY PUMP	CHEMICAL SPRAY	NOT REQUIRED					NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^5 RAD	10^8 RAD	1	3,4	ENGR EVAL	NONE
SERVICE: SEE NOTE 1 LOCATION: AUX BLDG	AGING		40 YEARS		2, 4	ENGR EVAL	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7, Page 7.5-12
2) Evaluation Based on Numerous Tests performed on various insulation material.
3) Letter March 25, 1980, Mr. B. Bondow - E-M to Mr. J. Sorenson - NSP.
4) NSC Letter to NSP-dated 9/29/80-Component Aging Evaluation.

NOTES:

1) Containment Spray Pump Motors #11,12,21 & 22.

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNTMT SPRAY (CS) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-0 FUNCTION: SUCTION FROM RHR ACCURACY: SPEC. NR DEMON: NR SERVICE: CNTMT SPRAY PMP #11,12,21 & 22 LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED	69 Hours		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2		NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psia		2		NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3		NONE
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3 NAOH PH 7.85		2		NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7, Page 7.5-12
2) Westinghouse WCAP's 7410-L of December, 1970 and 7744 of August, 1971.
3) FIRL Report F-C32 71 dated February 1972.

NOTES:

1) Valves Include: MV-32096, MV-32097, MV-32108 & MV-32109.

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: CNTMT SPRAY (CS) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-O FUNCTION: SPRAY ISOL ACCURACY: SPEC. NR DEMON: NR DISCH VALVE SERVICE: #11,12,21 & 22 CS PUMPS LOCATION: AUX BLDG	OPERATING TIME	NOT REQUIRED	69 Hours		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2		NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psia		2		NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3		NONE
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3/NaOH pH 7.85		2		NONE
	RADIATION	3.6 X 10^5 RAD	2 X 10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7, Page 7.5-12
2) Westinghouse WCAP's 7410-L of December, 1970 and 7744 of August, 1971.
3) FIRL Report F-C 3271 dated Febraury 1972.

NOTES:

1) Valves Included: MV-32103, MV-32105, MV-32114 & MV-32116.

SYSTEM: INSTRUMENTATION & PROTECTION (ACCUM. 11 & 12)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
21164	PRESSURE TRANSMITTER	X	
21165	" "	X	
21166	" "	X	
21167	" "	X	
21168	" "	X	
21169	" "	X	
21170	" "	X	
21171	" "	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: INSTRUMENTATION AND PROTECTION PLANT ID NO: SEE NOTE 1 COMPONENT: PRESSURE TRANSMITTER MANUFACTURER: FOXBORO MODEL NUMBER: E11G1-SAD1 FUNCTION: ACCUM PRESS ACCURACY: SPEC. 25% DEMON: SERVICE: ACCUM #11, 12, 21 & 22 LOCATION: CONTAINMENT FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	OPERATING TIME	5 MIN	24 HOURS	4	6		NONE
	TEMP. Deg. F	268°F	318°F	1	6		NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	6		NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	6		NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH pH 9.25-10.0	2	6		NONE
	RADIATION	3.6×10^7 RAD	7.6×10^7 RAD	3	6		NONE
	AGING	NOT REQUIRED					NONE
	SUB-MERGENCE						NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap. 5, Figure 5.2-7
2) FSAR Chap. 6, Section 6.4.3
3) FSAR Chap. 7, Page 7.5-12
4) FSAR Chap. 7, Table 7.5.2
5) FSAR Chap. 5, Table 5.4-4
6) WCAP - 8541

NOTES:

1) Includes items: PT-21164, 21165, 21166, 21167 21168, 21169, 21170 & 21171.
2) Analysis to be performed based upon UTQP test Results.

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SYSTEM: INSTRUMENTATION & PROTECTION (CONTAINMENT SUMP)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
16796	LEVEL TRANSMITTER	X	
16811	" "	X	
16909	" "	X	
16910	" "	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: INSTRUMENTATION AND PROTECTION PLANT ID NO: SEE NOTE 1 COMPONENT: LEVEL TRANS MANUFACTURER: MAGNETROL MODEL NUMBER: A-153-FEP/VPXY-TD FUNCTION: CNTMT SUMP LEVEL IND. ACCURACY: SPEC. NR DEMON: NR SERVICE: CNTMT SUMP "B" UNITS 1 & 2 LOCATION: CONTAINMENT	OPERATING TIME	3 HOURS	4 HOURS	4	5	TYPE TEST	See Note 2
	TEMP. Deg. F	268°F	275°	1	5	TYPE TEST	See Note 2
	PRESSURE (PSIA)	60.7 psia	45.7 & 114.7	1	5	TYPE TEST	See Note 2
	RELATIVE HUMIDITY (%)	100%	100%	6	5	TYPE TEST	See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			SEE NOTE 2
	RADIATION	3.6×10^7 RAD		3			SEE NOTE 2
	AGING						SEE NOTE 2
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	SUB-MERGENCE		4 HOURS		5		

*DOCUMENTATION REFERENCES:

1) FSAR Chap. 5, Figure 5.2-7
2) FSAR Chap. 6, Section 6.4.3
3) FSAR Chap. 7, Page 7.5-12
4) FSAR Chap. 7, Table 7.5-2
5) Magnetrol Test Report 9306, April 26, 1972. Performed by Acton Environmental Testing Corp.
6) FSAR Chap. 5, Table 5.4-4.

NOTES:

1) Includes: 16796, 16811, 16909, 16910
2) Being replaced with new system. REQ # G-655264

A.9.1

SYSTEM: INSTRUMENTATION & PROTECTION (FEEDWATER)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
23021	FLOW TRANSMITTER		X
23022	" "		X
23023	" "		X
23024	" "		X
23025	" "		X
23026	" "		X
23027	" "		X
23028	" "		X
MV-32023	VALVE OPERATOR		X
MV-32024	" "		X
MV-32028	" "		X
MV-32029	" "		X

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: INSTRUMENTATION & PROTECTION PLANT ID NO: SEE NOTE 1 COMPONENT: FLOW TRANSMITTER MANUFACTURER: FOXBORO MODEL NUMBER: E13DH (NCA) FUNCTION: STM GEN FW INLT (LOOP A & B) ACCURACY: SPEC. DEMON: SERVICE: FEEDWATER LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	30 MIN	24 HOURS	3	2	Type Test	NONE
	TEMP. Deg. F	210°F	300°F	1	2	Type Test	NONE
	PRESSURE (PSIA)	15.2 psia	74.7 psia	1	2	Type Test	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	2	Type Test	NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	NOT REQUIRED					NONE
	AGING	NOT REQUIRED					See Note 2
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para. I.11.1
2) WCAP 8541 of July, 1975.
3) Engineering Evaluation

NOTES:

1) Includes: 23021, 23022, 23024, 23025, 23026, 23027 & 23028.
2) Analysis to be performed based upon UTOP test results

A.10.1

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: FEEDWATER (FW) PLANT ID NO.: SEE NOTE 1 COMPONENT: OPERATOR VALVE MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-3 FUNCTION: FW & CNTMT ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: #11,12,21 & 22 STM GENERATOR LOCATION: AUX BLDG	OPERATING TIME	5 MIN	69 HOURS	SEE NOTE 2	3	TYPE TEST	NONE
	TEMP. Deg. F	210°F	325°F	1	2	TYPE TEST	NONE
	PRESSURE (PSIA)	15.2 psia	74.7 psia	1	2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	3	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3/NaOH pH 7.85		2	TYPE TEST	NONE
	RADIATION	NOT REQUIRED	2×10^8 RAD		2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para. 1.11.1
2) Westinghouse WCAP's 7410-L of December, 1970 & 7744 of August, 1971.
3) FIRL Report F-C3271 dated February, 1972

NOTES:

1) Valves Include: MV-32023, MV-32024, MV-32028, MV-32029
2) Based on function to close on SI signal.

SYSTEM: INSTRUMENTATION & PROTECTION (R.C.)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
NONE	ACCELEROMETER	X	
NONE	CHARGE AMP	X	
15331	RTD (wide)	X	
15332	RTD (wide)	X	
15333	RTD (wide)	X	
15334	RTD (wide)	X	
15314	RTD (wide)	X	
15315	RTD (wide)	X	
15322	RTD (wide)	X	
15323	RTD (wide)	X	
21101	Reactor Pressure (wide)	X	
21102	Reactor Pressure (wide)	X	
21152	Reactor Pressure (wide)	X	
21159	Reactor Pressure (wide)	X	
15456	Incore Thermocouple Ref Junction Box	X	
15457	Incore Thermocouple Ref Junction Box	X	
15458	Incore Thermocouple Ref Junction Box	X	
15459	Incore Thermocouple Ref Junction Box	X	
15610	Incore Thermocouple Ref Junction Box	X	
15611	Incore Thermocouple Ref Junction Box	X	
15612	Incore Thermocouple Ref Junction Box	X	
15613	Incore Thermocouple Ref Junction Box	X	

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SYSTEM: INSTRUMENTATION & PROTECTION (R.C.)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
21146	Pressurizer Pressure		
21147	Pressurizer Pressure		
21148	Pressurizer Pressure		
21150	Pressurizer Pressure		
21154	Pressurizer Pressure		
21155	Pressurizer Pressure		
21156	Pressurizer Pressure		
21157	Pressurizer Pressure		
24041	Pressurizer Level		
24042	Pressurizer Level		
24043	Pressurizer Level		
24046	Pressurizer Level		
24047	Pressurizer Level		
24048	Pressurizer Level		

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: REACTOR COOLANT PLANT ID NO.: NONE COMPONENT: ACCELEROMETER MANUFACTURER: ENDEVCO MODEL NUMBER: 2273 AM20 FUNCTION: RLF VALVE MONITORING ACCURACY: SPEC. NR DEMON: NR SERVICE: PRESSURE RELIEF UNIT 1 & 2 LOCATION: CONTAINMENT	OPERATING TIME	SEE NOTE 2		4			See Note 1
	TEMP. Deg. F	268°F		1			See Note 1
	PRESSURE (PSIA)	60.7 psia		1			See Note 1
	RELATIVE HUMIDITY (%)	100%		3			See Note 1
	CHEMICAL SPRAY	Not Required					None
	RADIATION	3.6×10^7 RAD		2			See Note 1
	AGING						See Note 1
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 5 Figure 5.2-7
2) FSAR Chapter 7 Page 7.5-12
3) Letter NSP to B&W - Dated 11/30/79
4) Engineering Evaluation

NOTES:

1) Babcock & Wilcox in charge of qualification program. Test presently scheduled to be completed by end of second quarter, 1981.
2) Valve monitoring system to be qualified for post accident conditions up to 30 days.

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: REACTOR COOLANT PLANT ID NO.: NONE COMPONENT: CHARGE AMP MANUFACTURER: UNHOLZ-DICKEY MODEL NUMBER: 22CA-2TR FUNCTION: RLF VALVE MONITORING ACCURACY: SPEC. NR DEMON: NR SERVICE: PRESSURE RELIEF UNIT's 1 & 2 LOCATION: CONTAINMENT	OPERATING TIME	See Note 2		4			See Note 1
	TEMP. Deg. F	268°F		1			See Note 1
	PRESSURE (PSIA)	60.7 psia		1			See Note 1
	RELATIVE HUMIDITY (%)	100%		3			See Note 1
	CHEMICAL SPRAY	Not Required					None
	RADIATION	3.6×10^7 RAD		2			See Note 1
	AGING						See Note 1
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 5 Figure 5.2-7
2) FSAR Chapter 7 Page 7.5-12
3) FSAR Chapter 5 Table 5.4-4
4) Engineering Evaluation

NOTES:

1) Babcock & Wilcox in charge of qualification program. Testing presently scheduled to be completed by end of second quarter, 1981.
2) Valve monitoring system to be qualified for post accident conditions up to 30 days.

A.11.2

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Instrumentation PLANT ID NO.: & Prot See Note 1 COMPONENT: RTD MANUFACTURER: w/SSTMN MODEL NUMBER: 11901B FUNCTION: RCS Temp Wide ACCURACY: SPEC. 5% DEMON: 2-3% SERVICE: RCS 1 & 2 LOCATION: Containment	OPERATING TIME	3 DAYS	2 weeks	6	4	Type Test	NONE
	TEMP. Deg. F	268°F	320°F	1	4	"	NONE
	PRESSURE (PSIA)	60.7 psia	80.7 psia	1	4	"	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	1.146% H_3BO_3 by wt 17% NaOH	2	4	"	NONE
	RADIATION	3.6×10^7 Rads	5×10^7 Rad	3	4	"	NONE
	AGING		12 years		4	"	NONE
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) WCAP 9157, Sept 1977
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES: 1) Includes: 15331, 15332, 15334, 15315, 15322, 15323, 15333

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Instrumentation PLANT ID NO.: & Prot 15314 COMPONENT: RTD MANUFACTURER: Rosemount MODEL NUMBER: 176 K S FUNCTION: RCS Temp wide ACCURACY: SPEC. 5% DEMON: 2-3% SERVICE: RCS 1 & 2 LOCATION: Containment FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	OPERATING TIME	3 DAYS	2 weeks	6	4	Type Test	None
	TEMP. Deg. F	268°F	320°F	1	4	"	"
	PRESSURE (PSIA)	60.7 psia	80.7 psia	1	4	"	"
	RELATIVE HUMIDITY (%)	100%	100%	5	4	"	"
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	1.146% H_3BO_3 by wt 17% NaOH	2	4	"	"
	RADIATION	3.6×10^7 Rad	5×10^7 Rad	3	4	"	"
	AGING		12 years		4	"	"
	SUB-MERGENCE	Not required					"

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) WCAP 9157, Sept 1977
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Reac Clnt Sys PLANT ID NO.: (RCS) See Note 1 COMPONENT: Press xmtr MANUFACTURER: Foxboro MODEL NUMBER: E11GH FUNCTION: RCS Wide Range ACCURACY: SPEC. 25% DEMON: SERVICE: Unit 1&2 RCS LOCATION: Containment	OPERATING TIME	30 DAYS		5			See Note 2
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5		2			See Note 2
	RADIATION	3.6×10^7 Rads		3			See Note 2
	AGING						See Note 2
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 pg 7.5-12
4) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES: 1) Includes 21101, 21102, 21152 & 21159
2) Xmtrs not environmentally qualified. Qualified Rosemount xmtrs presently on order - PO #MQ05003 - will be installed during next outage.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Reactor Coolant PLANT ID NO.: See Note 1 COMPONENT: Incore Thermocouple Ref Junc Box MANUFACTURER: ETI MODEL NUMBER: K81 FUNCTION: Temperature Indication ACCURACY: SPEC. DEMON: SERVICE: Subclg Meter LOCATION: Cont 1 & 2	OPERATING TIME						See Note 2, 3
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	3.6×10^7 Rad		2			See Note 2
	RADIATION	H_3BO_3/NaOH pH 9.0-9.5		3			See Note 2
	AGING						See Note 2
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) FSAR Chap 5 Table 5.4-4

NOTES:
1) Inst Number 15456, 15457, 15458, 15459, 15610, 15611, 15612, 15613
2) Being relocated outside containment per Combustion Engineering proposal 206687. PO #MQ=05224 will be relocated during next outage.
3) Specification to be derived from Owner's Group Accident Analysis Report. Completion anticipated early, 1981.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 1
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: React Clnt Sys PLANT ID NO.: (RCS) See Note 1 COMPONENT: Press Trans MANUFACTURER: Foxboro MODEL NUMBER: E11GM-SAE 1 (MCA) FUNCTION: Pzr Press ACCURACY: SPEC. DEMON: SERVICE: Pzr LOCATION: Containment	OPERATING TIME	2 hours	24 hours	5	4	Type Test	None
	TEMP. Deg. F	268°F	300°F	1	4	"	"
	PRESSURE (PSIA)	70.6 psia	74.7 psia	1	4	"	"
	RELATIVE HUMIDITY (%)	100%	100%	6	4	"	"
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/NaOH pH 9.25-10.0	2	4	"	"
	RADIATION	3.6×10^7 Rads	2×10^8 Rads	3	4	"	"
	AGING	Not required					See Note 2
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) WCAP 8541 "Seismic & Environmental Testing of Foxboro Transmitters", July 1975
5) FSAR Chap 7 Page 7.5-7
6) FSAR Chap 5 Table 5.4-4

NOTES: 1) Includes: 21146, 21147, 21148, 21150, 21154, 21155, 21156, 21157

2) Analysis to be performed based upon UTQP test results.

A 11 7

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2
DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Reac Clnt Sys PLANT ID NO.: (RCS) See Note 1 COMPONENT: Level Trans. MANUFACTURER: Barton MODEL NUMBER: P386-351 FUNCTION: Pzr Liquid Level ACCURACY: SPEC. 25% DEMON: 13.5% SERVICE: Pzr 1 & 2 LOCATION: Containment FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	OPERATING TIME	2 hours	24 hours	5	4	Type Test	None
	TEMP. Deg. F	268°F	288°F	1	4	"	"
	PRESSURE (PSIA)	70.6 psia	74.7 psia	1	4	"	"
	RELATIVE HUMIDITY (%)	100%	100%	6	4	"	"
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/NaOH pH 9.25	2	4	"	None
	RADIATION	3.6×10^7 Rads	2×10^8 Rads	3	4	"	"
	AGING	Not required					See Note 2
	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) WCAP 7410L - December, 1970
5) FSAR - Chap 7 Page 7.5-7
6) FSAR Chap 5 Figure 5.4-4

NOTES:
1) Include: 24041, 24042, 24043, 24046, 24047, 24048
2) NSP will perform an analysis to establish aging qualifications.

SYSTEM: Main & Aux Steam & Steam Dump (MS)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SC 35084	Signal Converter		X
SC 35085	" "		X
SC 35028	" "		X
SC 35029	" "		X
SV 33201	Solenoid Valve		X
SV 33202	Solenoid Valve		X
SV 33255	Solenoid Valve		X
SV 33256	" "		X
SV 33261	" "		X
SV 33265	" "		X
SV 33266	" "		X
MV 32016	Valve Operator		X
MV 32017	" "		X
MV 32019	" "		X
MV 32020	" "		X
CV 31098	Limit Switche		X
CV 31099	" "		X
CV 31084	" "		X
CV 31089	" "		X
CV 31116	" "		X
CV 31117	" "		X
CV 31102	" "		X

MASTER LIST

Rev. 4
10/24/80

SYSTEM: Main & Aux Steam & Steam Dump (MS)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
CV 31107	Limit Switch		X
SV 33260	Solenoid Valve		X

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 &2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main & Aux Stm/ PLANT ID NO.: Stm Dump SC35084, SC35029 (MS)	OPERATING TIME				2		NONE
COMPONENT: Signal Converter	TEMP. Deg. F	210°F		1	2		NONE
MANUFACTURER: Fisher Controls	PRESSURE (PSIA)	15.2 psia		1	2		NONE
MODEL NUMBER: 546	RELATIVE HUMIDITY (%)	100%		1	2		NONE
FUNCTION: S/G Rlf	CHEMICAL SPRAY	Not required					NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	Not required					NONE
SERVICE: #11 Stm Gen LOCATION: Aux Bldg	AGING	Not required					NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para 1.11.1
2) NSP Letter to NRC - Dated March, 1980

NOTES:

A-12.1

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main Aux Stm/Stm Dump (MS) PLANT ID NO.: SC 35085, SC 35028 COMPONENT: Signal Converter MANUFACTURER: FSR MODEL NUMBER: 546 FUNCTION: S/G Rlf ACCURACY: SPEC. NR DEMON: NR SERVICE: #12 Stm Gen LOCATION: Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME				2		NONE
	TEMP. Deg. F	180°F		1	2		NONE
	PRESSURE (PSIA)	15.45 psia		1	2		NONE
	RELATIVE HUMIDITY (%)	100%		1	2		NONE
	CHEMICAL SPRAY	Not required					NONE
	RADIATION	Not required					NONE
	AGING	Not required					NONE
	SUB-MERGENCE	Not required	Not required				None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1
2) NSP Letter to NRC Dated March 13, 1980

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2
DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main & Aux Stm/ PLANT ID NO.: Stm Dump (MS) See Note 1) COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-8316E35E FUNCTION: MSIV's ACCURACY: SPEC. NR DEMON: NR SERVICE: #11 & #12 Stm Gen LOCATION: Aux Bldg	OPERATING TIME	1 HOUR	30 Days	2	3		None
	TEMP. Deg. F	210°F	300°F	1	3		None
	PRESSURE (PSIA)	15.2 psia	84.7 psia	1	3		None
	RELATIVE HUMIDITY (%)	100%	100%	1	3		None
	CHEMICAL SPRAY	Not required	H_3BO_3/ $Na_2S_2O_3$/ NaOH pH 10.5		3		None
	RADIATION	Not required	1.5×10^8 Rads		3		None
	AGING	Not required	4.4 Yrs.		3		None
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I, para. I.11.1
2) Engineering Evaluation
3) ASCO Test Report No. AQS-21673/TR-Rev. A

NOTES:

1) Items include: SV-33201, SV-33202, SV-33255, SV-33256

A.12.3

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 &2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main & Aux Stm/ Stm Dump (MS) PLANT ID NO.: See Note 2 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: 8211 D4 FUNCTION: MSIV's & Cnt Isol ACCURACY: SPEC. NR DEMON: NR SERVICE: #21, #22 StmGen LOCATION: Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	1 Hour		2			See Note 1
	TEMP. Deg. F	210°F		1			See Note 1
	PRESSURE (PSIA)	15.2 psia		1			See Note 1
	RELATIVE HUMIDITY (%)	100%		1			See Note 1
	CHEMICAL SPRAY	Not required					None
	RADIATION	Not required					None
	AGING	Not required					None
	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I, para. I.11.1
2) Engineering Evaluation

NOTES:

1) Not environmentally qualified.
Will replace next outage.
PO #MQ-05214
2) Items Include: SV-33260, SV-33261,
SV-33265, SV-33266

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main & Aux Stm/ PLANT ID NO.: Stm Dump See Note 1 (MS)	OPERATING TIME	1 HOUR	69 hours	3	4	Type Test	None
COMPONENT: Valve Operator	TEMP. Deg. F	210°F	325°F	1	2	"	"
MANUFACTURER: Limitorque	PRESSURE (PSIA)	15.2 psia	7 4.7 psia	1	2	"	"
MODEL NUMBER: SMB-00	RELATIVE HUMIDITY (%)	100%	100%	1	4	"	"
FUNCTION: Stm Supl to Stm Drvn Aux Feed Pump	CHEMICAL SPRAY	Not required	$NaOH/H_3BO_3$ pH 7.85		2	"	"
ACCURACY: SPEC. NR DEMON: NR	RADIATION	Not required	2×10^8 Rad		2	"	"
SERVICE: 11 & 12 Stm LOCATION: Aux Feed Pmp Aux Bldg	AGING		40 years		2	"	"
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not required					"

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1
2) Westinghouse WCAP's 7410-L of Dec 1970 & 7744 of Aug 1971
3) Engineering Evaluation
4) FIRL Report F-C3271 - Dated February 1972

NOTES:
1) Valves include: MV 32016, MV 32017, MV 32019, MV 32020

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC	QUALIF.		
SYSTEM: Main & Aux Stm/ PLANT ID NO.: Stm Dump (MS) See Note 1	OPERATING TIME	1 HOUR		2			NONE
COMPONENT: Limit Switch	TEMP. Deg. F	210°F	194°F	1	3, 4		NONE
MANUFACTURER: NAMCO	PRESSURE (PSIA)	15.2 psia	14.7psia	1	3 , 4		NONE
MODEL NUMBER: D2400X	RELATIVE HUMIDITY (%)	100%	Watertight	1	3 , 4		NONE
FUNCTION: Open & closed indication	CHEMICAL SPRAY	Not required					NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	Not required					NONE
SERVICE: MSIV"s & PO reliefs LOCATION: Aux Bldg	AGING						NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1
2) Engineering Evaluation
3) Letter from Robert H. Kantner-NAMCO to James Hoffman-NSP 3/13/78
4) NSP Letter to NRC Dated July 8, 1980

NOTES: 1) Switches for Valves:
a) MSIV's: CV 31098, CV 31099, CV 31116, CV 31117
b) S/G PO reliefs: CV 31084, CV 31102

A.12.6

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Main & Aux Stm/ Stm Dump (MS) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: D2400X FUNCTION: Open & closed indication ACCURACY: SPEC. NR DEMON: NR SERVICE: 12 & 22 S/G PO reliefs LOCATION: Aux Bldg	OPERATING TIME	1 HOUR		2			NONE
	TEMP. Deg. F	180°F	194°F	1	3, 4		NONE
	PRESSURE (PSIA)	15.45 psia	14.7psia	1	3, 4		NONE
	RELATIVE HUMIDITY (%)	100%	Watertight	1	3, 4		NONE
	CHEMICAL SPRAY	Not required					NONE
	RADIATION	Not required					NONE
	AGING						NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1
2) Engineering Evaluation
3) Letter from Robert Kantner-NAMCO to James Hoffman NSP 3/13/78
4) NRC Letter to NSP Dated July 8, 1980

NOTES:

1) Limit switches for valves: CV 31089, CV 31107

SYSTEM: Main Steam/Steam Generator (Instrumentation & Protection)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
23013	Flow Transmitter	X	
23014	" "	X	
23015	" "	X	
23016	" "	X	
23017	" "	X	
23018	" "	X	
23019	" "	X	
23020	" "	X	
21200	Pressure Transmitter		X
21201	" "		X
21202	" "		X
21203	" "		X
21204	" "		X
21205	" "		X
21206	" "		X
21207	" "		X
21208	" "		X
21209	" "		X
21210	" "		X
21211	" "		X
24080	Level Transmitter	X	
24081	" "	X	

MASTER LIST

Rev. 4
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SYSTEM: Main Steam
Instrumentation & Protection

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
24082	Level Transmitter	X	
24083	" "	X	
24084	" "	X	
24085	" "	X	
24086	" "	X	
24087	" "	X	
24088	" "	X	
24089	" "	X	
24090	" "	X	
24091	" "	X	
24092	" "	X	
24093	" "	X	
24094	" "	X	
24095	" "	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Instr Prot PLANT ID NO.: See Note 1 COMPONENT: Stm Flow Trans MANUFACTURER: Barton MODEL NUMBER: 384 FUNCTION: Steam Flow ACCURACY: SPEC. DEMON: SERVICE: Main Stm LOCATION: Containment FLOOD LEVEL ELEV: EL706 ABOVE FLOOD LEVEL: yes	OPERATING TIME	30 MIN.		5			See Note 2
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2
	RADIATION	3.6×10^7 Rads		3			See Note 2
	AGING	Not required					
	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig. 5.2-7
2) FSAR Chap 6 Sect. 6.4.3
3) FSAR Chap 7 Pg. 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES: 1) Include: 23013, 23014, 23015, 23016, 23017, 23018, 23019, 23020

2) Will be replaced during next outages. PO #MQ-05003

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM: Instr. Prot PLANT ID NO.: See Note 1 COMPONENT: Stm Press Trans MANUFACTURER: Foxboro MODEL NUMBER: EIIGM (MCA) FUNCTION: Stm Press Indicator ACCURACY: SPEC. DEMON: 8% SERVICE: Main Steam LOCATION: 11,12,21,22 Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	1 HOUR	24 hours	3	2		None
	TEMP. Deg. F	170°F	300°F	1	2		None
	PRESSURE (PSIA)	15.2 psia	74.7 psia	1	2		None
	RELATIVE HUMIDITY (%)	100%	100%	1	2		None
	CHEMICAL SPRAY	Not required					None
	RADIATION	Not required					None
	AGING	Not required					See Note 2
	SUB-MERGENCE						None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 7 Pg 7.5-12
2) WCAP 8541 of July 1975
3) Engineering Evaluation

NOTES:

1) Include: 21200, 21201, 21202, 21203, 21204, 21205, 21206, 21207, 21208, 21209, 21210, 21211
2) Analysis to be performed based upon UTQP test results.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Instr Prot PLANT ID NO.: See Note 1 COMPONENT: Stm Level Trans MANUFACTURER: Foxboro MODEL NUMBER: E13DH-SAM 1 FUNCTION: Stm Gen Level Indication ACCURACY: SPEC. 25% DEMON: SERVICE: Stm Gen LOCATION: Containment	OPERATING TIME	30 DAYS		5			NONE
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5		2			See Note 2
	RADIATION	3.6×10^7 Rad		3			See Note 2
	AGING						See Note 2
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap. 5 Fig. 5.2-7
2) FSAR Chap. 6 Sect. 6.4.3
3) FSAR Chap. 7 Pg.7.5 -12
4) FSAR Chap. 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Includes: 24080, 24081, 24082, 24083, 24084, 24085, 24086, 24087, 24088, 24089, 24090, 24091, 24092, 24093, 24094, 24095
2) Not environmentally qualified safety grade wide range indication (1 per Stm Gen) to be installed during next outages.

SYSTEM: Reactor Coolant (RC)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SV-33761	Solenoid Valve		
SV-33762	Solenoid Valve		
SV-33763	Solenoid Valve		
SV-33764	Solenoid Valve		
MV-32195	Valve Operator		
MV-32196	Valve Operator		
MV-32197	Valve Operator		
MV-32198	Valve Operator		
CV-31231	Limit Switch		
CV-31232	Limit Switch		
CV-31233	Limit Switch		
CV-31234	Limit Switch		

SYSTEM COMPONENT EVALUATION WORKSHEET

REV. 4
10-24-80

UNIT: Prairie Island 1 & 2
DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Reactor Coolant PLANT ID NO.: See Note 1 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-00 FUNCTION: Press Relief Isol Valve ACCURACY: SPEC. NR DEMON: NR SERVICE: Pzr 1 & 2 LOCATION: Containment	OPERATING TIME	24 HOURS	69 hours	6	7	Type Test	None
	TEMP. Deg. F	268°F	325°F	1	4	"	"
	PRESSURE (PSIA)	60.7 psia	74.7psia	1	4	"	"
	RELATIVE HUMIDITY (%)	100%	100%	5	7	"	"
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	4	"	"
	RADIATION	3.6×10^7 Rad	2.04×10^8 Rad	3	4	"	"
	AGING		40 years		4	"	"
FLOOD LEVEL ELEV: EL706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					"

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 page 7.5-12
4) WCAP 7401-L-December 1970;
WCAP 7744-August 1971
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation
7) FIRL Report F-C3271 dated February 1972.

NOTES:
1) Valves Include: MV 32195, MV 32196, MV 32197, MV 32198

A 14.1

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: React Clnt (RC) PLANT ID NO.: SV-33763 & SV-33764 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: 831654 FUNCTION: Pzr Relief Valve ACCURACY: SPEC. NR DEMON: NR SERVICE: Pzr Unit 2 LOCATION: Containment	OPERATING TIME	24 HOURS		5			See Note 1
	TEMP. Deg. F	268°F		1			"
	PRESSURE (PSIA)	60.7 psia		1			"
	RELATIVE HUMIDITY (%)	100%		4			"
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5		2			"
	RADIATION	3.6×10^7		3			"
	AGING						"
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1). Not environmentally qualified. On order. Will replace during the next outages. Purchase Order MQ-05042

A.14.2

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT:Prairie Island 1&2

DOCKET:50-282 & 50- 306

EQUIPMENT DESCRIPTION	ENVIROMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM:Reac Clnt (RC) PLANT ID NO.: See Note 1 COMPONENT: Limit Switch MANUFACTURE: NAMCO MODEL NUMBER: EA-180 FUNCTION:Position Indication Pzr Relief Valve ACCURACY: SPEC.NR DEMON:NR SERVICE:Pzr Unit 1&2 LOCATION:Containment	OPERATING TIME	24 hours	30 days	5	6	TYPE TEST	NONE
	TEMP. Deg. F	268°F	280°F in 10 sec 340°F in 5 min	1	6	TYPE TEST	See Note 2
	PRESSURE (PSIA)	60.7psia	84.7psia	1	6	TYPE TEST	See Note 2
	RELATIVE HUMIDITY (%)	100%	100%	4	6	TYPE TEST	See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	6	TYPE TEST	See Note 2
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	6	TYPE TEST	NONE
	AGING		40 years		6	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL:YES	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chaoter 5 Fig. 5.2-7
2) FSAR Chapter 6 Sect. 6.4.3
3) FSAR Chapter 7 Pg. 7.5-12
4) FSAR Chapter 5 Table 5.4-4
5) Engineering Evaluation
6) ACNE-Cleveland Development Co. Test Plan 8/31/77

NOTES:

1) Switches for valves: CV-31231, CV-31232, CV-31233, CV-31234.
2) Will install Conax fittings to hermetically seal switch during next outages. PO#MQ-05427.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Reactor Coolant (RC) PLANT ID NO.: SV-33761 & SV-33762 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-831654E FUNCTION: Pzr Relief Valve ACCURACY: SPEC. NR DEMON: NR SERVICE: Pzr Unit 1 LOCATION: Containment	OPERATING TIME	24 Hours	30 Days	5	6		NONE
	TEMP. Deg. F	268°F	300°F	1	6		NONE
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	6		NONE
	RELATIVE HUMIDITY (%)	100%	100%	4	6		NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	6		NONE
	RADIATION	3.6×10^7 Rads	1.5×10^8 Rads	3	6		NONE
	AGING		4.4 Yrs.		6		NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not required					

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect. 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation
6) ASCO Test Report AQS-21678/TR-Rev. A

NOTES:

SYSTEM: Radiation Monitoring (RD)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
CV 31019	Limit Switch	X	
CV 31092	Limit Switch	X	
CV 31643	Limit Switch	X	
CV 31129	Limit Switch	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Rad Monitoring PLANT ID NO.: (RD) See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: EA-180 FUNCTION: Containment Isolation ACCURACY: SPEC. NR DEMON: NR SERVICE: Rad Monitoring LOCATION: Unit 1 & 2 Containment FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: yes	OPERATING TIME	2 HOURS	30 days	6	4	Type Test	None
	TEMP. Deg. F	268°F	280°F in 10 sec & 340°F in 5 min	1	4	Type Test	See Note 2
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	4	Type Test	See Note 2
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	4	Type Test	See Note 2
	RADIATION	3.6×10^7 Rads	2.04×10^8 Rads	3	4	Type Test	None
	AGING		40 years		4	Type Test	None
	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap. 5 Figure 5.2-7
2) FSAR Chap 6 Sect. 6.4.3
3) FSAR Chap 7 Pg. 7.5-12
4) ACME - Cleveland Development Co Test Plan 8-31-77
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES: 1) Switches for Valves: CV 31019, CV 31092, CV 31643, CV 31129 (open indication switches)

2) Will install Conax fittings to hermetically seal switch during next outage PO#MQ-05427

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Rad Monitoring PLANT ID NO.: (RD) See Note 1 COMPONENT: Limit Switches MANUFACTURER: NAMCO MODEL NUMBER: D2400X FUNCTION: Containment Isolation ACCURACY: SPEC. NR DEMON: NR SERVICE: Rad Monitoring LOCATION: Units 1 & 2 Containment	OPERATING TIME	2 HOURS		5			See Notes 2
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5		2			See Note 2
	RADIATION	3.6×10^7 Rad		3			See Note 2
	AGING						
FLOOD LEVEL ELEV: E1706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect. 6.4.3
3) FSAR Chap 7 Pg. 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES: 1) Switches for Valves: CV 31019, CV 31092, CV 31643, CV 31129 (closed indication switches)

2) Will be replaced next outages.

Req. #'s: G655318 & G680001

MASTER LIST

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SYSTEM: Reactor Hot Sampling (SM)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SV-33655	Solenoid Valve	X	
SV-33661	Solenoid Valve	X	
SV-33738	Solenoid Valve	X	
SV-33739	Solenoid Valve	X	
SV-33740	Solenoid Valve	X	
SV-33741	Solenoid Valve	X	
CV-31296	Limit Switch	X	
CV-31298	Limit Switch	X	
CV-31300	Limit Switch	X	
CV-31303	Limit Switch	X	
CV-31305	Limit Switch	X	
CV-31307	Limit Switch	X	
CV-31637	Limit Switch	X	
CV-31638	Limit Switch	X	
CV-31639	Limit Switch	X	
CV-31640	Limit Switch	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Rctr Hot Smplng PLANT ID NO.: (SM) SV33655 COMPONENT: Solenoid Valve MANUFACTURER: Asco MODEL NUMBER: NP-8320A186E FUNCTION: Containment Isolation ACCURACY: SPEC. NR DEMON: NR SERVICE: #11 Reactor Coolant Sample Line LOCATION: Containment FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	OPERATING TIME	24 HOURS	30 Days	5	6		NONE
	TEMP. Deg. F	268°F	300°F	1	6		NONE
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	6		NONE
	RELATIVE HUMIDITY (%)	100%	100%	4	6		NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2			NONE
	RADIATION	3.6×10^7 Rads	1.5×10^8 Rads	3			NONE
	AGING		4.4 Yrs.				NONE
	SUB-MERGENCE	Not req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap. 5 Fig 5.2-7
2) FSAR Chap. 6 Sect 6.4.3
3) FSAR Chap. 7 Pg 7.5-12
4) FSAR Chap. 5 Table 5.4-4
5) Engineering Evaluation
6) ASCO Test Report No. AQS-21678/TR-Rev. A

NOTES:

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SYSTEM COMPONENT EVALUATION WORKSHEET

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10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Retr Hot Smpling (SM) PLANT ID NO.: SV33661 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: RHT8321A1 FUNCTION: Containment Isolation ACCURACY: SPEC. NR DEMON: NR SERVICE: #21 Reactor Coolant Sample line LOCATION: Containment FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	OPERATING TIME	24 HOURS		5			See Note 1
	TEMP. Deg. F	268°F		1			See Note 1
	PRESSURE (PSIA)	60.7 psia		1			See Note 1
	RELATIVE HUMIDITY (%)	100%		4			See Note 1
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 1
	RADIATION	3.6×10^7 Rads		3			See Note 1
	AGING						See Note 1
	SUB-MERGENCE	Not req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5. Fig. 5.2-7
2) FSAR Chap 6. Sect 6.4.3
3) FSAR Chap 7. Pg 7.5-12
4) FSAR Chap 5. Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Not environmentally qualified. Solenoid valve and air operated valve will be replaced at the next outage.
PO # MQ-05017

SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Retr Hot Smpling PLANT ID NO.: SV-33738, SV-33739 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP 8320A182E FUNCTION: Containment Isolation ACCURACY: SPEC. DEMON: SERVICE: #11, #12 SG LOCATION: Samp Line Containment FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	OPERATING TIME	24 Hours	30 Days	5	6		NONE
	TEMP. Deg. F	268°F	300°F	1	6		NONE
	PRESSURE (PSIA)	60.7 psia	84.7 psia	1	6		NONE
	RELATIVE HUMIDITY (%)	100%	100%	4	6		NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$	2	6		NONE
	RADIATION	3.6×10^7 Rads	1.5×10^8 Rads	3	6		NONE
	AGING		4.4 Yrs		6		NONE
	SUB-MERGENCE	Not required					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig. 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg. 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation
6) ASCO Test Report -AQS-21678/TR-Rev. A

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Retr Hot Smpln; PLANT ID NO.: (SM) See Note 1 COMPONENT: Solenoid Valve MANUFACTURER: Asco MODEL NUMBER: RHT 8320A19 FUNCTION: Containment Isolation ACCURACY: SPEC. NR DEMON: NR SERVICE: See Note 3 LOCATION: Containment	OPERATING TIME	24 HOURS		5			See Note 2 & 4
	TEMP. Deg. F	268°F		1			See Note 2 & 4
	PRESSURE (PSIA)	60.7 psia		1			See Note 2 & 4
	RELATIVE HUMIDITY (%)	100%		4			See Note 2 & 4
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2 & 4
	RADIATION	3.6×10^7 Rads		3			See Note 2 & 4
	AGING						See Note 2 & 4
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Valves include: SV33740 & SV33741
2) Not enviromentally qualified.
3) #21 & 22 Steam Generator Sample lines.
4) Will replace next outage. PO #MQ-05214

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10/24/80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Retr Hot Smplng PLANT ID NO.: (SM) See Note 4 COMPONENT: Limit Switch MANUFACTURER: Namco MODEL NUMBER: D2400X FUNCTION: Closed position switches ACCURACY: SPEC. NR DEMON: NR SERVICE: See Note 3 LOCATION: Containment	OPERATING TIME	2 HOURS		5			See Note 2&4
	TEMP. Deg. F	268°F		1			See Note 2&4
	PRESSURE (PSIA)	60.7 psia		1			See Note 2&4
	RELATIVE HUMIDITY (%)	100%		4			See Note 2&4
	CHEMICAL SPRAY	H_3BO_3 / NaOH pH 9.0 - 9.5		2			See Note 2&4
	RADIATION	3.6×10^7 Rad		3			See Note 2&4
	AGING						See Note 2&4
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Req'd					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Switches for valves: CV31296, CV31300, CV31303, CV31298, CV31637, CV31638, CV31305, CV31307, CV31639, CV31640.
2) Not environmentally qualified.
3) #11 & #21 PZR, Reactor Coolant & 11, 12, 21 & 22 steam generator sample lines.
4) Limit switches for valves CV-31637 - 40 being replaced. Req. #'s G655318 & G680001 other valve assemblies being replaced with new valves with indication features. PO #: MQ-05017

SYSTEM: Residual Heat Removal (RH)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
11	Motor		X
12	Motor		X
21	Motor		X
22	Motor		X
CV-31235	Limit Switches		X
CV-31236	Limit Switches		X
CV-31237	Limit Switches		X
CV-31238	Limit Switches		X
CV-31239	Limit Switches		X
CV-31240	Limit Switches		X

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Residual Heat Removal (RHR) PLANT ID NO.: COMPONENT: Motor MANUFACTURER: Westinghouse MODEL NUMBER: (Class B) HSD-P FUNCTION: RHR Pump Motor ACCURACY: SPEC. NR DEMON: NR SERVICE:#11,12,21,22 LOCATION: RHR Pumps Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED					NONE
	TEMP. Deg. F	Not Required					None
	PRESSURE (PSIA)	Not Required					None
	RELATIVE HUMIDITY (%)	Not Required					None
	CHEMICAL SPRAY	Not Required					None
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	1	2		NONE
	AGING		40 YEARS		2		NONE
	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) WCAP-8754 Rev. 1

NOTES:

A.17.1

SYSTEM COMPONENT EVALUATION WORKSHEET

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10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Residual Heat Removal (RH) PLANT ID NO.: See Note 1	OPERATING TIME						None
COMPONENT: Limit Switches	TEMP. Deg. F	Not Required					None
MANUFACTURER: Namco	PRESSURE (PSIA)	Not Required					None
MODEL NUMBER: D2400X	RELATIVE HUMIDITY (%)	Not Required					None
FUNCTION: Open/Closed Indication	CHEMICAL SPRAY	Not Required					None
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^5 RAD		1			See Note 2
SERVICE: RHR Flow	AGING	Not Required					See Note 2
LOCATION: Aux Bldg							
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 7 Page 7.5-12

NOTES:

1) Switches for Valves: CV-31235 thru CV-31240

2) Replacing with model EA-170.

A.17.2

SYSTEM: SAFETY INJECTION (SI)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32069	Valve Operator	X	
MV-32070	" "	X	
MV-32071	" "	X	
MV-32072	" "	X	
MV-32073	" "		X
MV-32074	" "		X
MV-32075	" "		X
MV-32076	" "		X
MV-32077	" "		X
MV-32078	" "		X
MV-32081	" "		X
MV-32082	" "		X
MV-32083	" "		X
MV-32084	" "		X
MV-32085	" "		X
MV-32162	" "		X
MV-32185	" "		X
MV-32186	" "		X
MV-32187	" "		X
MV-32188	" "		X
MV-32190	" "		X
MV-32191	" "		X

SYSTEM: SAFETY INJECTION (SI)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32163	Valve Operator		X
MV-32206	" "		X
MV-32207	" "		X
MV-32167	" "	X	
MV-32168	" "	X	
MV-32170	" "	X	
MV-32171	" "	X	
MV-32172	" "	X	
MV-32173	" "	X	
MV-32174	" "	X	
MV-32175	" "	X	
MV-32176	" "		X
MV-32177	" "		X
MV-32178	" "		X
MV-32179	" "		X
MV-32180	" "		X
MV-32181	" "		X
MV-32184	" "		X
MV-32064	" "	X	
MV-32065	" "	X	
MV-32067	" "	X	
MV-32068	" "	X	

MASTER LIST

SYSTEM: SAFETY INJECTION (SI)

COMPONENTS			
PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32208	Valve Operator		X
MV-32209	" "		X
11	Motor		X
12	"		X
21	"		X
22	"		X
23073	Flow Transmitter		X
23074	" "		X
23075	" "		X
23076	" "		X

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: SI PUMP SUCT ACCURACY: SPEC. NR DEMON: NR SERVICE: #11,12,21 & 22 SI PUMPS LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED	69 HOURS		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2	TYPE TEST	NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psig		2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED	$H_3BO_3/Na_3S_2O_3/NaOH$ pH 7.85		2	TYPE TEST	NONE
	RADIATION	3.5×10^5 RAD	2×10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) Westinghouse WCAP's 7410-L of December, 1970 & 7744 of August, 1971
3) FIRL Report F-C3271 dated February, 1972

NOTES:

1) Valves Included: MV-32163, MV-32162
MV-32190, MV-32191

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEL NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: FR RHR EXCH ACCURACY: SPEC. NR DEMON: NR SERVICE: #11,12,21,22 SI PUMPS LOCATION: AUX BLDG	OPERATING TIME	NOT REQUIRED	69 HOURS		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2	TYPE TEST	NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psia		2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	3.6 X 10^5 RAD	2 X 10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS	1	2	TYPE TEST	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) Westinghouse WCAP's 7410-L of December 1970; 7744 of August, 1971.
3) FIRL Report - F-C 3271 dated February, 1972

NOTES:

1) Valves Include: MV-32206, MV-32207
MV-32208, MV-32209

SYSTEM COMPONENT EVALUATION WORKSHEET

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10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: MV-32174 & MV-32175 COMPONENT: VALVE OPERATOR LIMIT SWITCHES MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-3 FUNCTION: #21 ACCUM ISOL & #22 ACCUM ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: #21 & 22 ACCUM LOCATION: CONTAINMENT FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	OPERATING TIME	5 MIN	6 DAYS	6	7	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	7	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	$NaOH/H_3BO_3$ pH 9.0 - 9.5	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING	SEE NOTE 1	40 YEARS		4	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED	SEE NOTE 1				NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 5 Figure 5.2-7
2) FSAR Chapter 6 Section 6.4.3
3) FSAR Chapter 7 Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project # 600456, December 9, 1975.
5) FSAR Chapter 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP7410-L-December, 1970; WCAP 7744 - August, 1971

NOTES:

1) Accumulators will have injected. Position indication not required.

SYSTEM COMPONENT EVALUATION WORKSHEET

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10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF. METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-1 FUNCTION: RHR SUCTION ACCURACY: SPEC. NR, DEMON: NR SERVICE: CNTMT SUMP "B" UNITS 1 & 2 LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED	69 HOURS		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2		NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psia		2		NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3		NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) Westinghouse WCAP's 7410-L of December, 1970 & 7744 of August, 1971.
3) FIRL Report F-C3271 dated February, 1972

NOTES:
1) Valves Include: MV-32077, MV-32078, MV-32178, MV-32179, MV-32180, MV-32181, MV-32075, MV-32076.

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SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: COLD LEG INJECTION ACCURACY: SPEC. NR, DEMON: NR SERVICE: RCS 1 & 2 LOCATION: AUX BLDG	OPERATING TIME	1 HOUR	69 HOURS	4	5	TYPE TEST	NONE
	TEMP. Deg. F	210°F	325°F	1	3	TYPE TEST	NONE
	PRESSURE (PSIA)	15.2 psia	74.7 psia	1	3	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	5	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3/NaOH pH 7.85		3	TYPE TEST	NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	2	3	TYPE TEST	NONE
	AGING		40 YEARS		3	TYPE TEST	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I, para. I.11.1
2) FSAR Chapter 7 Page 7.5-12
3) Westinghouse WCAP's 7410-L of December, 1970 & 7744 of August, 1971.
4) Engineering Evaluation
5) FIRL Report F-C3271 dated February, 1972

NOTES:

1) Valves Include: MV-32177 & MV-32073

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION PLANT ID NO.: (SI) SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: SI TO RX VESSEL ACCURACY: SPEC. NR DEMON: NR SERVICE: RX 1 & 2 LOCATION: AUX BLDG	OPERATING TIME	1 HOUR	69 HOURS	4	5	TYPE TEST	NONE
	TEMP. Deg. F	170°F	325°F	1	3	TYPE TEST	NONE
	PRESSURE (PSIA)	15.2 psia	74.7 psia	1	3	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	5	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	2	3	TYPE TEST	NONE
	AGING		40 YEARS		3	TYPE TEST	NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para. I.11.1
2) FSAR Chapter 7 Page 7.5-12
3) Westinghouse WCAP's 7410-L of December, 1970 & 7744 of August, 1971.
4) Engineering Evaluation
5) FIRL Report F-C3271 dated February, 1972

NOTES:

1) Valves Include: MV-32176 & MV-32074

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION PLANT ID NO.: (SI) SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-0 FUNCTION: FR RWST SUCT ACCURACY: SPEC. NR DEMON: NR SERVICE: RH PUMPS #11,12,21 & 22 LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED	69 HOURS		4	TYPE TEST	NONE
	TEMP. Deg. F	180°F	325°F	3	1	TYPE TEST	NONE
	PRESSURE (PSIA)	15.45 psia	74.7 psia	3	1	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	3	4	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED	H_3BO_3/NaOH pH 7.85		1	TYPE TEST	NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	2	1	TYPE TEST	NONE
	AGING		40 YEARS		1	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) Westinghouse WCAP's 7410-L of December , 1970 & 7744 of August, 1971.
2) FSAR Chapter 7 Page 7.5-12
3) FSAR Appd I para I.11.1
4) FIRL - Report F-C3271 dated February, 1972

NOTES:

1) Valves Include: MV-32084, MV-32085
MV-32187, MV-32188

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SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM:SAFETY INJECTION PLANT ID NO.: (SI) SEE NOTE 1 COMPONENT: VALVE OPERATOR LIMIT SWITCHES MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-1 FUNCTION: ACCUM ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: ACCUMULATOR 11 & 12 LOCATION: CONTAINMENT	OPERATING TIME	5 MIN	6 DAYS	6	7	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	7	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	$NaOH/H_3BO_3$ pH 9.0 - 9.5	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	SUB-MERGENCE		SEE NOTE 2				NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project # 600456, December 9, 1975
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L - December, 1970 and WCAP 7744 - August, 1971

NOTES:

1) Switches for valves: MV-32071 & MV-32072
2) Accumulators will have injected. Indication not needed.

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SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION PLANT ID NO.: (SI) SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: Cold Leg Injection ACCURACY: SPEC. NR DEMON: NR SERVICE: RCS 1 & 2 LOCATION: CONTAINMENT	OPERATING TIME	LOCKED OPEN	6 DAYS		6	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	6	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	6	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	$NaOH/H_3BO_3$ pH 9.0 - 9.5	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	SUB-MERGENCE						NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 Pages 7.5-12
4) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project # 600456, December 9, 1975.
5) FSAR Chap 5 Table 5.4-4
6) WCAP 7410-L - December, 1970, WCAP 7744 - August, 1971

NOTES:

1) Valves Include: MV-32171, MV-32173, MV-32068, MV-32070.

A-18.9

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM:SAFETY INJECTION PLANT ID NO.: (SI) SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-1 FUNCTION: LO HEAD Rx VESSEL INJECTION LINE ACCURACY: SPEC. NR DEMON: NR SERVICE: UNIT 1 & 2 LOCATION: CONTAINMENT	OPERATING TIME	24 HOURS	6 DAYS	6	7	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	7	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	SUB-MERGENCE						NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 5 Figure 5.2-7
2) FSAR Chapter 6 Section 6.4.3
3) FSAR Chapter 7 Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project # 600456, December 9, 1975.
5) FSAR Chapter 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L-December, 1970; WCAP 7744 - August, 1971

NOTES:

1) Valves Include: MV-32167, MV-32168, MV-32064, MV-32065

A.13.10

SYSTEM COMPONENT EVALUATION WORKSHEET

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10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM:SAFETY INJECTION PLANT ID NO.: (SI) MV-32170 & MV-32067 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: Rx VESSEL INJECTION LINE ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: 1 & 2 Rx VSL LOCATION: CONTAINMENT FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	OPERATING TIME	24 HOURS	6 DAYS	6	7	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	7	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/$Na_2S_2O_3$/ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2.04×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 5 Figure 5.2-7
2) FSAR Chapter 6 Section 6.4.3
3) FSAR Chapter 7 Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report Limitorque Valve Actuators for PWR Service, Project # 600456, December 9, 1975.
5) FSAR Chapter 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L - December, 1970; WCAP 7744 - August, 1971

NOTES:

A.13.11

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF. METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Safety Inj. (SI) PLANT ID NO.: MV-32069 & MV-32172 COMPONENT: Valve Operator MANUFACTURER: Limitorque MODEL NUMBER: SMB-00 FUNCTION: Rx Vessel Injection ACCURACY: SPEC. NR DEMON: NR SERVICE: Rx Vsl 1 & 2 LOCATION: Containment	OPERATING TIME	24 HOURS	6 DAYS	6	7	TYPE TEST	NONE
	TEMP. Deg. F	268°F	325°F	1	7	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	TYPE TEST	NONE
	CHEMICAL SPRAY	$H_3BO_3/NaOH$ pH 9.0 - 9.5	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5	2	4	TYPE TEST	NONE
	RADIATION	3.6×10^7 RAD	2×10^8 RAD	3	4	TYPE TEST	NONE
	AGING		40 YEARS		4	TYPE TEST	NONE
FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: NO	SUB-MERGENCE	NOT REQUIRED	SEE NOTE 1				NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) Nuclear Power Station, Qualification Type Test Report Limitorque Valve Actuators for Pwr Service, Project #600456
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L-December, 1970; WCAP 7744 - August, 1971

NOTES:

1) Failure of components would not result in failure of ECCS to perform its function. Ref. - PINGP's ECCS Actuation Study

A-18.12

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEE NOTE 1 COMPONENT: VALVE OPERATOR MANUFACTURER: LIMITORQUE MODEL NUMBER: SMB-00 FUNCTION: SI SUCT BAT ACCURACY: SPEC. NR DEMON: NR SERVICE: #11,12,21 & 22 SI PUMPS LOCATION: AUX BLDG	OPERATING TIME	NOT REQUIRED	69 HOURS		3	TYPE TEST	NONE
	TEMP. Deg. F	NOT REQUIRED	325°F		2	TYPE TEST	NONE
	PRESSURE (PSIA)	NOT REQUIRED	74.7 psia		2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED	100%		3	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED			2		NONE
	RADIATION	3.6 X 10^5 RAD	2 X 10^8 RAD	1	2	TYPE TEST	NONE
	AGING		40 YEARS				NONE
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) WCAP's 7410-L of December, 1970 & 7744 of August, 1971.
3) FIRL Report F-C3271 dated February, 1972

NOTES:

1) Valve Include: MV-32184, MV-32185, MV-32186 MV-32081, MV-32082, MV-32083.

SYSTEM COMPONENT EVALUATION WORKSHEET

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10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: #11,12,21 & 22 COMPONENT: MOTOR MANUFACTURER: WESTINGHOUSE MODEL NUMBER: HSD-P FUNCTION: SI PUMP MOTOR ACCURACY: SPEC. NR DEMON: NR SERVICE: SI PUMPS #11,12,21 & 22 LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	NOT REQUIRED					NONE
	TEMP. Deg. F	NOT REQUIRED					NONE
	PRESSURE (PSIA)	NOT REQUIRED					NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED					NONE
	CHEMICAL SPRAY	NOT REQUIRED					NONE
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	1	2		NONE
	AGING		40 YEARS.		2		NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12

2) WCAP - 8754 Rev. 1

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: PRAIRIE ISLAND 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: SAFETY INJECTION (SI) PLANT ID NO.: SEE NOTE 1 COMPONENT: FLOW TRANS MANUFACTURER: EATON MODEL NUMBER: 332 FUNCTION: FLOW INDICATION ACCURACY: SPEC. 25% DEMON: 13.5% SERVICE: #11,12,21 & 22 SI PUMPS LOCATION: AUX BLDG	OPERATING TIME	1 HOUR		3			
	TEMP. Deg. F	NOT REQUIRED				TYPE TEST	NONE
	PRESSURE (PSIA)	NOT REQUIRED				TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	NOT REQUIRED				TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED					
	RADIATION	3.6×10^5 RAD	2×10^8 RAD	1	2	TYPE TEST	NONE
	AGING	NOT REQUIRED					SEE NOTE 2
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chapter 7 Page 7.5-12
2) Westinghouse WCAP 7410-L of December, 1970.
3) Engineering Evaluation

NOTES:

1) Include: 23073, 23074, 23075 & 23076
2) NSP will perform an analysis to establish aging qualifications.

MASTER LIST

Rev. 1
5/7/80

SYSTEM: Station & Instrument Air (SA)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
SV-33281	Solenoid Valve		X
SV-33282	Solenoid Valve	X	
SV-33283	Solenoid Valve		X
SV-33284	Solenoid Valve	X	
CV-31741	Limit Switch	X	
CV-31743	Limit Switch	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Ins Air (SA) PLANT ID NO.: SV-33281 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-8321A1E FUNCTION: CNT Isol ACCURACY: SPEC. NR DEMON: NR SERVICE: unit 1 CNTMT LOCATION: Aux Bldg FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	24 HOURS	30 days	2	3		NONE
	TEMP. Deg. F	184°F	300°F	1	3		NONE
	PRESSURE (PSIA)	15.3psia	84.7 psia	1	3		NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	3		NONE
	CHEMICAL SPRAY	NOT REQUIRED	$H_3BO_3/Na_2S_2O_3/$ NaOH pH 10.5		3		NONE
	RADIATION	NOT REQUIRED	1.5×10^8 RADS		3		NONE
	AGING		4.4 yrs		3		NONE
	SUB-MERGENCE	NOT REQUIRED			3		NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1
2) Engineering Evaluation
3) ASCO Test Report No. AQS-21678/TR-Rev. A

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2
DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Inst Air (SA) PLANT ID NO.: SV-33282 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: RHT832427 FUNCTION: CNT Isol ACCURACY: SPEC. NR DEMON: NR SERVICE: CNT Unit 1 Air LOCATION: Containment FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	OPERATING TIME	24 HOURS		5			See Note 1
	TEMP. Deg. F	268°F		1			See Note 1
	PRESSURE (PSIA)	60.7psia		1			See Note 1
	RELATIVE HUMIDITY (%)	100%		4			See Note 1
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 1
	RADIATION	3.6×10^7 Rads		3			See Note 1
	AGING						See Note 1
	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Not Environmentally Qualified - will be replaced next outage with same model as Unit 2.

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island Units 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Inst Air PLANT ID NO.: (SA) SV-33283 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP-8321A1E FUNCTION: CNT ISOL ACCURACY: SPEC. NR DEMON: NR SERVICE: CNT AIR Unit2 LOCATION: AUX BLDG FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	OPERATING TIME	24 HOURS	30 DAYS	3	2	TYPE TEST	NONE
	TEMP. Deg. F	184°F	300°F	1	2	TYPE TEST	NONE
	PRESSURE (PSIA)	15.3 psia	84.7 psia	1	2	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	2	TYPE TEST	NONE
	CHEMICAL SPRAY	NOT REQUIRED	$H_3BO_3/NaOH/N_2$ S_2O_3 pH 10.5		2	TYPE TEST	NONE
	RADIATION	NOT REQUIRED	1.5×10^8 RADS		2	TYPE TEST	NONE
	AGING		4.4 YEARS		2	TYPE TEST	NONE
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I para I.11.1

2) ASCO Test Report No AQS-21678/Tr-REV A

3) Engineering Evaluation

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
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UNIT: Prairie Island Unit 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Inst Air PLANT ID NO.: (SA) SV-33284 COMPONENT: Solenoid Valve MANUFACTURER: ASCO MODEL NUMBER: NP8321A1E FUNCTION: CNT Isol ACCURACY: SPEC. NR DEMON: NR SERVICE: CNT Unit 2 Air LOCATION: Containment	OPERATING TIME	24 HOURS	30 days	6	4	Type Test	None
	TEMP. Deg. F	268°F	300°F	1	4	Type Test	None
	PRESSURE (PSIA)	60.7psia	84.7psia	1	4	Type Test	None
	RELATIVE HUMIDITY (%)	100%	100%		4	Type Test	None
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	4	Type Test	None
	RADIATION	3.6×10^7 Rads	1.5×10^8 Rads	3	4	Type Test	None
	AGING		4.4 yrs		4	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) ASCO Test Report No AQS-21678/TR-REV. A
5) FSAR Chap 7 Table 5.4-4
6) Engineering Evaluation

NOTES:

A.19.4

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Inst Air PLANT ID NO.: (SA) See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: EA-180 FUNCTION: Open Indication ACCURACY: SPEC. NR DEMON: NR SERVICE: Unit 1&2 Air LOCATION: CNT	OPERATING TIME	2 HOURS	30 days	6	4	Type Test	None
	TEMP. Deg. F	268°F	280°F in 10 sec and 340°F in 5 min	1	4	Type Test	See Note 2
	PRESSURE (PSIA)	70.6psia	84.7psia	1	4	Type Test	See Note 2
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	4	Type Test	See Note 2
	RADIATION	3.6×10^7 Rads	2.04×10^8 Rads	3	4	Type Test	None
	AGING		40 yrs		4	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2.7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) ACME - Cleveland Development Co. Test Plan 8-31-77
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES:

1) Switches for Valves: CV-31741 & CV-31743 (Open indication switches)

2) Will install Conax fittings to hermetically seal switch during next outages PO#MQ-05427

A.19.5

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Sta & Inst Air PLANT ID NO.: (SA) See Note 1 COMPONENT: Limit Switch MANUFACTURER: NAMCO MODEL NUMBER: D2400X FUNCTION: Closed Indication ACCURACY: SPEC. NR DEMON: NR SERVICE: Unit 1 & 2 Ai LOCATION: Containment	OPERATING TIME	2 HOURS		5			See Note 2
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2
	RADIATION	3.6×10^7 Rads		3			See Note 2
	AGING						See Note 2
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Figure 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) FSAR Chap 5 Table 5.4-4
5) Engineering Evaluation

NOTES:

1) Switches for valves: CV-31741 & CV-31743 (closed indication switches)
2) Not Environmentally qualified
Will replace next outage
Req. #C655318 & C680001

A.19.6

SYSTEM: Steam Generator Blowdown (SB)

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
MV-32040	Valve Operator	X	
MV-32043	Valve Operator	X	
MV-32049	Valve Operator	X	
MV-32046	Valve Operator	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50.282 & 50.306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: S/G Blowdown(SB) PLANT ID NO.: See Note 1 COMPONENT: Valve Operators MANUFACTURER: Limitorque MODEL NUMBER: SMB - 00 FUNCTION: Stm Gen Iso. ACCURACY: SPEC. NR DEMON: NR SERVICE: See Note 2 LOCATION: Containment	OPERATING TIME	5 MIN.	6 Days	6	7	Type Test	NONE
	TEMP. Deg. F	268°F	325°F	1	7	Type Test	NONE
	PRESSURE (PSIA)	60.7 psia	104.7 psia	1	7	Type Test	NONE
	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0-9.5	$H_3BO_3/Na_2S_2O_3$/ NaOH pH 10.5	2	4	Type Test	NONE
	RADIATION	3.6×10^7 Rad	2.04×10^8 Rad	3	4	Type Test	NONE
	AGING		40 years		4	Type Test	NONE
FLOOD LEVEL ELEV: El. 706' ABOVE FLOOD LEVEL: YES	SUB-MERGENCE	NOT REQ'D					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5. Fig 5.2.7
2) FSAR Chap. 6 Sect. 6.4.3
3) FSAR Chap. 7 Pg. 7.5-12
4) Nuclear Power Station, Qualification Type Test Report, Limitorque Valve Actuators for PWR Service, Project #600456, Dec. 9, 1975.
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation
7) WCAP 7410-L-Dec. 1970; WCAP 7744- Aug. 1972

NOTES: 1) Valves Include: MV-32043, MV-32040 MV-32046, MV-32049
2) Blowdown lines 11, 12, 21 & 22 Stm Gen

A.20.1

SYSTEM: D. C. Distribution

COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
PNL. 153	D. C. Dist. Panel	X	
PNL. 163	D. C. Dist. Panel	X	
PNL. 253	D. C. Dist. Panel	X	
PNL. 263	D. C. Dist. Panel	X	

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: D. C. Dist. PLANT ID NO.: See Note 1 COMPONENT: D. C. Dist. Panels MANUFACTURER: Creiger Elec. Mfg. Co MODEL NUMBER: FUNCTION: Power to D. C. Auxiliaries ACCURACY: SPEC. NR DEMON: NR SERVICE: D.C. Safegrds LOCATION: Unit 1 & 2 Cnt. FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	OPERATING TIME	24 HOURS		3			NONE
	TEMP. Deg. F	268°F		1			See Note 2
	PRESSURE (PSIA)	60.7 psia		1			See Note 2
	RELATIVE HUMIDITY (%)	100%		4			See Note 2
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 2
	RADIATION	3.6×10^7 RAD		3			See Note 2
	AGING						See Note 2
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Fig 5.2-7
2) FSAR Sect 6.43
3) Engineering Evaluation

NOTES:

1) D. C. Dist Panels 153, 163, 253, 263
2) Not environmentally qualified.
   Design Change in progress to relocate power supply for those loads needed for accident mitigation to an area outside containment.
   NSP will perform an analysis to establish aging qualifications.

ANCILLARY COMPONENTS

PLANT IDENTIFICATION NUMBER	GENERIC NAME	LOCATION	
		INSIDE PRIMARY CONTAINMENT	OUTSIDE PRIMARY CONTAINMENT
BUSSMAN TYPE HEB-A	Fuse Holder		X
MOBIL DTE-Hvy Med	Lubricating Oil		X
CHEVRON SRI-2	Lubricating Grease	X	X
GEN. ELEC. Type 74010/74010A	Epoxy Varnish	X	X
ALLEN-BRADLEY 1492-CD3	Terminal Block/Strip/Box	X	X
OKONITE 604-92-1571	Splice Kit	X	X
OKONITE	Power Cable	X	X
KERITE	Power and Control Cable	X	X
BOSTON INSULATED WIRE	Power, Control, Signal and Instrument Cable	X	X
D. G. O'BRIEN	Containment Electrical Penetrations	X	X
KERITE D-S-1001 D-S-1002	Splice Kits Jacket and Insulating Material	X	X

SYSTEM COMPONENT EVALUATION WORKSHEET

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DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Electrical PLANT ID NO.: Type HEB-A COMPONENT: Fuse Holder MANUFACTURER: BUSSMAN MODEL NUMBER: Type HEB-A FUNCTION: Fuse Holder ACCURACY: SPEC. NR DEMON: NR SERVICE: MSIV's LOCATION: Aux Bldg	OPERATING TIME		5 HOURS		2	TYPE TEST	None
	TEMP. Deg. F	210°F	149°F (400°F)	1	2 , 3	TYPE TEST	None
	PRESSURE (PSIA)	15.45psia	14.7 psia	1	2 , 3	TYPE TEST	None
	RELATIVE HUMIDITY (%)	100%	Immersion	1	2 , 3	TYPE TEST	None
	CHEMICAL SPRAY	Not Required				TYPE TEST	None
	RADIATION	Not Required	3.5×10^8 RADS		3	TYPE TEST	None
	AGING	Not Required	40 yrs		3	TYPE TEST	None
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I, Para I.11.1
2) MIL-STD-202D 14 April 1969
3) NSC Letter to NSP-dated 9/29/80
   Component Aging Evaluation

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Various PLANT ID NO.: None	OPERATING TIME	Not Required					None
COMPONENT: Lubricating Oil	TEMP. Deg. F	Not Required					None
MANUFACTURER: Mobil	PRESSURE (PSIA)	Not Required					None
MODEL NUMBER: DTE-Hvy Med	RELATIVE HUMIDITY (%)	Not Required					None
FUNCTION: Lubrication	CHEMICAL SPRAY	Not Required					None
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^5 Rads	2×10^8 Rads	2	3		None
SERVICE: Various LOCATION: Aux Bldg	AGING	Not Required					None
FLOOD LEVEL ELEV: NR ABOVE FLOOD LEVEL: NR	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Appendix I, para I.11.1
2) FSAR Chap 7 pg 7.5-12
3) Letter from J. M. Allen, Mobil Oil, to Mr. Joel Sorenson, NSP, February 7, 1980

NOTES:

A.22.2

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Various PLANT ID NO.: None	OPERATING TIME	Not Required					None
COMPONENT: Lubricating Grease	TEMP. Deg. F	268°F	350°F	1	3,4,5	Type Test	None
MANUFACTURER: Chevron	PRESSURE (PSIA)	Not Required					None
MODEL NUMBER: SRI-2	RELATIVE HUMIDITY (%)	Not Required					None
FUNCTION: Lubrication	CHEMICAL SPRAY	Not Required					None
ACCURACY: SPEC. NR DEMON: NR	RADIATION	2.6×10^7 Rads	2×10^8 Rads	2	3,4,5	Type Test	None
SERVICE: Various LOCATION: Aux Bldg/CNT	AGING	Not Required					None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

A.22.3

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 7 Page 7.5-12
3) Chevron USA, Inc. - Mr. D. R. Jones, Correspondence with Mr. Al Smith, NSP, October 30, 1979
4) WCAP 7829 dated April 1972
5) Letter from Mr. R. E. Shoults, Westinghouse to Mr. G. A. Reed, Wis-Minn Power, January 19, 1977

NOTES:

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UNIT: Prairie Island 1 & 2

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: All Terminals PLANT ID NO.: None	OPERATING TIME	NOT REQUIRED					NONE
COMPONENT: Epoxy Varnish	TEMP. Deg. F	268°F	500°F		2	TYPE TEST	NONE
MANUFACTURER: General Electric	PRESSURE (PSIA)	Not Required					NONE
MODEL NUMBER: 74010/74010A	RELATIVE HUMIDITY (%)	100%	Water Resistant		3	TYPE TEST	NONE
FUNCTION: Insulation	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	10% H_2SO_4 20% NaOH		3	TYPE TEST	NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rads	1×10^9 Rads		1	TYPE TEST	NONE
SERVICE: All Terminal LOCATION: Aux Bldg/CNT	AGING						See Note 1
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: NO	SUB-MERGENCE	NOT REQUIRED					NONE

A.22.4

*DOCUMENTATION REFERENCES:

1) Letter GE to A. Smith (NSP) dated 11/21/78 (attachment)
2) G. E., H. C. Lauroesch Correspondance to J. King G. E. August 7, 1978
3) G. E., "Insulating Materials Product Data, 74010A Epoxy Resin and 74010 Epoxy Catalyst, March 24, 1964, and " "Effect of Radiation on Materials"

NOTES:

1) Epoxy varnish to be tested with terminal strips in cooperation with Wisconsin Public Service Corp.

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DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Various PLANT ID NO.: None	OPERATING TIME	Continuous					See Note 1
COMPONENT: Terminal Block/Strip/ Box	TEMP. Deg. F	268°F		1			See Note 1
MANUFACTURER: Allen-Bradley	PRESSURE (PSIA)	60.7psia		1			See Note 1
MODEL NUMBER: 1492-CD3	RELATIVE HUMIDITY (%)						See Note 1
FUNCTION: Electrical Connections	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5		2			See Note 1
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rad		3			See Note 1
SERVICE: Various LOCATION: Aux Bldg/CNT	AGING						See Note 1
FLOOD LEVEL ELEV: EL706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12

NOTES:

1) Terminal strips coated with G.E. Epoxy varnish to be tested in cooperation with Wisconsin Public Service.

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cable PLANT ID NO.: None COMPONENT: Splice Kit MANUFACTURER: OKONITE MODEL NUMBER: 604-92-1571 FUNCTION: Cable Splice ACCURACY: SPEC. NR DEMON: NR SERVICE: Splices LOCATION: Various	OPERATING TIME	2 MONTHS	3 months	6	4,7	Type Test	None
	TEMP. Deg. F	268°F	346°F	1	4	Type Test	None
	PRESSURE (PSIA)	60.7psig	127.7psia	1	4	Type Test	None
	RELATIVE HUMIDITY (%)	100%	100%	5	4,7	Type Test	None
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.5	H_3BO_3/NaOH/$Na_2S_3O_3$ pH 10.5	2	4,7	Type Test	None
	RADIATION	3.6×10^7 Rads	2×10^8 Rads	3	4	Type Test	None
	AGING		40 yrs		4	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: No	SUB-MERGENCE		6 months		4	Type Test	None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2.7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 page 7.5-12
4) Okonite Company Test Procedure sent to Mr. Albrecht - NSP on April 20, 1978
5) FSAR Chap 5 Table 5.4-4
6) Engineering evaluation
7) Okonite Company Letter to NSP (A.Smith) dated 8/31/78

NOTES:

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EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Electrical PLANT ID NO.: None	OPERATING TIME	2 MONTHS	3 months	6	4	Type Test	None
COMPONENT: Power Cable	TEMP. Deg. F	268°F	346°F	1	4	Type Test	None
MANUFACTURER: Okonite	PRESSURE (PSIA)	60.7psia	127.7 psia	1	4	Type Test	None
MODEL NUMBER: Various	RELATIVE HUMIDITY (%)	100%	100%	5	4	Type Test	none
FUNCTION: Power Supply	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.5	H_3BO_3/NaOH/$Na_2S_2O_3$ pH 10.5	2	4	Type Test	None
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rads	2×10^8 Rads	3	4	Type Test	None
SERVICE: Various LOCATION: Aux Bldg/CNT	AGING		40 yrs		4	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: NO	SUB-MERGENCE		6 months				None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 page 7.5-12
4) Okonite Company Test Procedure sent to Mr. Albrecht on April 20, 1978
5) FSAR Chap 5 Table 5.4-4
6) Engineering Evaluation

NOTES:

A.23.7

SYSTEM COMPONENT EVALUATION WORKSHEET

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Cable PLANT ID NO.: None	OPERATING TIME	24 HOURS	3 weeks	7	4	Type Test	None
COMPONENT: Power & Control Cable	TEMP. Deg. F	268°F	285°F/320°F	1	4/6	Type Test	None
MANUFACTURER: Kerite	PRESSURE (PSIA)	60.7psia	69.7psia/96.7 psia	1	4/6	Type Test	None
MODEL NUMBER: HTK & FR	RELATIVE HUMIDITY (%)	100%	100%	5	4/6	Type Test	None
FUNCTION: Electrical Power	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.5	H_3BO_3/Buffer to pH9.25/9.5	2	4/6	Type Test	None
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rads	2×10^8 Rads/ 10^8 Rads	3	4/6	Type Test	None
SERVICE: Various LOCATION: Aux Bldg/CNT	AGING		40 yrs		4/6	Type Test	None
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: NO	SUB-MERGENCE		24 hrs		8		None

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Section 6.4.3
3) FSAR Chap 7 Page 7.5-12
4) WCAP 7410-L Vol II - December 1970
5) FSAR Chap 7 Table 5.4-4
6) FIRL Report F-C2737, April 15, 1970
7) Engineering Evaluation
8) Kerite Company's Report KPT-LVC-1 of April 13, 1977 (Confidential proprietary to the Kerite Company).

NOTES:

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UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Electrical PLANT ID NO.: None COMPONENT: Instrument Cable MANUFACTURER: Boston Insulated Wire MODEL NUMBER: Various FUNCTION: Various Electrical Cables ACCURACY: SPEC. NR DEMON: NR SERVICE: Various LOCATION: Aux Bldg/CNT FLOOD LEVEL ELEV: EL706 ABOVE FLOOD LEVEL: NO	OPERATING TIME	30 days	24 hrs	7			None
	TEMP. Deg. F	268°F	316°F	1	4	Type Test	None
	PRESSURE (PSIA)	60.7psia	104.7psia	1	4	Type Test	None
	RELATIVE HUMIDITY (%)	100%	100%	6	4	Type Test	None
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH pH 4.0 - 10.0	2	5	Type Test	None
	RADIATION	3.6×10^7 Rad	2×10^8 Rad	3	4	Type Test	None
	AGING		40 yrs		4	Type Test	None
	SUB-MERGENCE						See Note 1

*DOCUMENTATION REFERENCES:

1) FSAR Chap 5 Fig 5.2-7
2) FSAR Chap 6 Sect 6.4.3
3) FSAR Chap 7 Pg 7.5-12
4) BTW Report #B901; Sept. 1969
5) BTW Report #B904; July 15, 1970
6) FSAR Chap 5 Table 5.4-4
7) Engineering Evaluation

NOTES:

SYSTEM COMPONENT EVALUATION WORKSHEET

REV.4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Elec Penetra. PLANT ID NO.: None COMPONENT: Elec Penetrations MANUFACTURER: D. G. O'Brien MODEL NUMBER: S/N Pr-110 (MVP) FUNCTION: Elec Connections ACCURACY: SPEC. NR DEMON: NR SERVICE: Elec Components LOCATION: Aux Bldg/CNT FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	OPERATING TIME	See Note 1	48 hrs	1	5	TYPE TEST	NONE
	TEMP. Deg. F	268°F	270°F	2	5	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7psia	66.7psia	2	5	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	5	TYPE TEST	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH pH 9.0 - 9.5	3	6	Eng. Anal	NONE
	RADIATION	3.6×10^7 Rads	3×10^8 RADS	4	7	Eng. Anal	NONE
	AGING	40 yrs		1			See Note 2
	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) NSP, Prairie Island Specification #188, Rev. 2 February 23, 1971
2) FSAR Chap 5 Fig 5.2-7
3) FSAR Chap 6 Section 6.4.3
4) FSAR Chap 7 Page 7.5-12
5) D. G. O'Brien Test Report #CI9QA053 of September 3, 1971
6) Letter Mr. C. E. Agan, Fluor-Pioneer to Mr. M E. Sterd, WPS, June 20, 1978
7) D. G. O'Brien Report ER-192

NOTES:

1) Must be able to operate 48 hrs in LOCA environment and 1 yr at 140°, 19.7psia
2) See Item A in cover letter under aging tests.

A.22.10

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-24-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF	OUTSTANDING
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.	METHOD	ITEMS
SYSTEM: Electrical Pent PLANT ID NO.: None	OPERATING TIME	See Note 1	10 days	1	5	TYPE TEST	NONE
COMPONENT: Penetration Electrical	TEMP. Deg. F	268°F	270°F	2	5	TYPE TEST	NONE
MANUFACTURER: D. G. O'Brien	PRESSURE (PSIA)	60.7psia	66.7psia	2	5	TYPE TEST	NONE
MODEL NUMBER: S/N Pr-12 (LVP)	RELATIVE HUMIDITY (3)	100%	100%	1	5	TYPE TEST	NONE
FUNCTION: Electrical Connections	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH pH 9.0 - 9.5	3	6	Eng. Anal.	NONE
ACCURACY: SPEC. NR DEMON: NR	RADIATION	3.6×10^7 Rads	3×10^8 RADS	4	7	Eng. Anal.	NONE
SERVICE: Elec Components LOCATION: Aux Bldg/CNT	AGING	40 yrs		1			See Note 2
FLOOD LEVEL ELEV: 706 ABOVE FLOOD LEVEL: Yes	SUB-MERGENCE	Not Required					None

*DOCUMENTATION REFERENCES:

1) NSP, Prairie Island Specification #188, Rev. 2, February 23, 1971
2) FSAR Chap 5 Fig 5.2-7
3) FSAR Chap 6 Section 6.4.3
4) FSAR Chap 7, age 7.5-12
5) D. G. O'Brien Test Report #C19QA059 of February 11, 1972
6) Letter, Mr. C. E. Agan, Fluor-Pioneer, to Mr. M.E. Stern, WPS, June 20, 1978.
7) D. G. O'Brien Report ER-192

NOTES:

1) Must be able to operate 48 hours in LOCA environment and 1 year at 140°F, 19.7 psia.

2) See Item A in cover letter aging tests.

A.22.11

SYSTEM COMPONENT EVALUATION WORKSHEET

Rev. 4
10-21-80

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: Elec. Pent. PLANT ID NO.: None COMPONENT: Elec. Penetration MANUFACTURER: D. G. O'Brien MODEL NUMBER: S/N PR-2 (T.I.) FUNCTION: Inst Connections ACCURACY: SPEC. NR DEMON: NR SERVICE: Inst. LOCATION: Aux Bldg/Cnt FLOOD LEVEL ELEV: 706' ABOVE FLOOD LEVEL: YES	OPERATING TIME	See Note 1	48 HOURS	1	5	TYPE TEST	NONE
	TEMP. Deg. F	268°F	270°F	2	5	TYPE TEST	NONE
	PRESSURE (PSIA)	60.7 psia	66.7 psia	2	5	TYPE TEST	NONE
	RELATIVE HUMIDITY (%)	100%	100%	1	5	TYPE TEST	NONE
	CHEMICAL SPRAY	H_3BO_3/NaOH pH 9.0 - 9.5	H_3BO_3/NaOH pH 9.0 - 9.5	3	6	Eng Anal	NONE
	RADIATION	3.6×10^7 RADS	3×10^8 RADS	4	7	Eng Anal	NONE
	AGING	40 YEARS		1			See Note 2
	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) NSP, Prairie Island Specification #188, Rev. 2, February 23, 1971.
2) FSAR Chap 5 Figure 5.2-7
3) FSAR Chap 6 Section 6.4.3
4) FSAR Chap 7 Page 7.5-12
5) D.G. O'Brien Test Report #C19QA049 of March 27, 1982
6) Letter Mr. C. E. Agan, Fluor-Pioneer to Mr. M. E. Stern, WPS, June 20, 1978
7) D. G. O'Brien Report ER-192

NOTES:

1) Must be able to operate 48 hours in LOCA environment and 1 year at 140°, 19.7 psia.
2) See Item A in cover letter under aging tests.

4.22.12

REV. 4
10-24-80

SYSTEM COMPONENT EVALUATION WORKSHEET

UNIT: Prairie Island 1 & 2

DOCKET: 50-282 & 50-306

EQUIPMENT DESCRIPTION	ENVIRONMENT			DOCUMENTATION REF*		QUALIF METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPEC.	QUALIF.		
SYSTEM: ELECTRICAL PLANT ID NO.: None COMPONENT: Splice Kits, Jacket & Insulating Material MANUFACTURER: Kerite MODEL NUMBER: D-S-1001; D-S-1002 FUNCTION: Splice ACCURACY: SPEC. NR DEMON: NR SERVICE: Various LOCATION: INS/OUT/CNT	OPERATING TIME	2 months	1 YEAR	1	6		NONE
	TEMP. Deg. F	268°F	325°F	1	7		NONE
	PRESSURE (PSIA)	70.6 psia	96.7 psia	1	7		NONE
	RELATIVE HUMIDITY (%)	100%	100%	2	7		NONE
	CHEMICAL SPRAY	H_3BO_3 NaOH pH 9.0-9.5	H_3BO_3/NaOH pH 9.5	3	7		NONE
	RADIATION	3.6×10^7 RAD	1.2×10^8 RAD	4	7		NONE
	AGING	40 years	40 years	5	6		NONE
FLOOD LEVEL ELEV: ABOVE FLOOD LEVEL:	SUB-MERGENCE	NOT REQUIRED					NONE

*DOCUMENTATION REFERENCES:

1) FSAR Sect. 5 Fig. 5.2-7
2) FSAR Appendix I pg. I.11.1
3) FSAR Sect. 6.4.3
4) FSAR p. 7.5-12
5) NSP, Prairie Island Specification #188, Rev.2 February 23, 1971
6) LOCA Qualification of Kerite 1000 volt FR Insulated, FR Jacketed Control Cables. March 10, 1980.

NOTES:

7) Qualification Tests of Electrical Cables Under Simulated Post-Accident Reactor Containment Service Conditions. Final Report R-C2737. April 15, 1970

A.22.13

APPENDIX B

Non-Proprietary

Environmental Qualification Reports

(includes service condition profiles)

The following reports are proprietary and are not included. They are available for review at the Prairie Island site:

1.) "Qualification Tests of Limitorque Valve Actuator INA Steam Environment," prepared by Franklin Institute for Limitorque Corp., February 1972 - Report # F-C3271.

2.) "Qualification Tests of Solenoid Valves By Environmental Exposure to Elevated Temperature, Radiation, Wear-aging, Seismic Simulation, Vibration Endurance, Accident Radiation, and loss - of Coolant Accident (LOCA) Simulation," prepared by Automatic Switch Co.; July 1979 - Report #AQS 1678/TR, Rev. A.

3.) "Nuclear Radiation & Switch Applications:" October 7, 1974, and "Engineering Test Laboratory, Technical Bulletin No. 6, issue No. 2, Application of Switches in Space Vechicles."

The following reports are not included because of reproduction and transmittal problems.

1.) ACME-CLEVELAND DEVELOPMENT CO. "Qualification of Namco Controls Limit Switch" Model EA-170.

2.) ACME-CLEVELAND DEVELOPMENT CO. "Qualification of Namco Controls Limit Switch" Model EA-180.

NSP

NORTHERN STATES POWER COMPANY

MINNEAPOLIS, MINNESOTA 55401

March 13, 1980

Mr. James G. Keppler
Director, Region III
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

PRAIRIE ISLAND NUCLEAR GENERATING PLANT
Docket Nos. 50-282 and 50-306

In response to IE Bulletin 79-01B, the following is offered:

(Delay of this response till March 14, 1980 was approved by Mr. J. Hughes of your office by telephone on February 29, 1980.)

ITEM NO. 1

Attached Appendix A includes the "Master List" of all Engineered Safety Feature Systems required to function under postulated accident conditions.

ITEM NO. 2

The Master List includes individual lists by system and attached to each list are the evaluation work sheets for each component. These sheets provide information requested to assist in determining whether the components are qualified for the conditions under which they are expected to operate.

ITEM NO. 3

We have provided the reference material, Appendix B, in the form of letters, test reports, etc., which were used to verify that the components have been qualified. It is our understanding that when the FSAR and WCAP's were used as the reference, they need not be attached.

DISCUSSION

As a result of our ongoing review of systems and new requirements resulting from the TMI Lessons Learned, we have already initiated several modifications which include the replacement of instruments, limit switches and solenoid valves. Some of these modifications will be made during our next two outages, September 1980 and January 1981. These dates correspond with our intended fulfillment of TMI Lessons Learned requirements.

The requirement for locating components above the flood level, other than those addressed in the initial accident analyses, is a new one and we have addressed it herein. The flood level of 705 feet 9 inches is based on a LOCA. It will be noted that some components are listed in the attached sheets as being located below flood level. Those that are below flood level and required only for an HELB, will not be modified since they are located well above HELB flood level, and will not be required in the event of a LOCA.

Specified and demonstrated accuracies for components under accident conditions have been requested. This also is a new requirement. On March 3, 1980, a visit was made to Westinghouse to discuss their performing an evaluation of accident effect on setpoint accuracies needed to meet the accident condition. We are presently awaiting a proposal from Westinghouse. We will keep you appraised of any resultant program, including a schedule for initiation and completion. Aging requirements have been requested. This is presently under discussion by the Owners Group. We await the results of these discussions.

Limit switches used on the letdown isolation orifice control valves which denote "OPEN" have been replaced with switches qualified for the LOCA environment, but do not meet the flood requirement. In reference to Bulletins 78-04 and 79-28 which also addressed limit switches, we note reference to the requirement for limit switches used for "valve position circuitry" related to containment isolation valves. We believe this requirement is not a licensing issue. Our policy has been to qualify those switches which are used for interlocking and control. When the requirement for safety system monitoring, as discussed in NUREG-0585 and 0660 and Regulatory Guide 1.97, are made a condition of the license, we will then proceed to replace the limit switches used for valve position indication.

The Barton steam flow transmitters are not presently qualified for a LOCA. Steam flow signals are not used to provide protection against steam pipe rupture. Reference FSAR, Section 14.2.5. In a LOCA, containment pressure along with other signals are used as the parameters for mitigating the consequences of the accident. For a HELB, Appendix L - FSAR, steam flow signals are used, and the present transmitters will meet the environmental requirements. Transmitter replacement is planned; however, it is due to other factors such as transmitter problems not associated with the environment. Environmentally qualified transmitters will be used for this replacement.

Signal converters used to convert the electrical signal to a pneumatic signal for the steam generator power operated relief valves are not environmentally qualified. The PORV's are noted in the emergency procedures to effect an orderly cooldown. The transient analysis assumed initial control of pressure to hot shutdown conditions by CODE safety valves. Pressure control for long term cooldown can be accomplished without the signal converters, if necessary. These valves are separated physically such that the HELB environment should only affect one signal converter and valve operator. Only one PORV is needed for controlling pressure to assure cooldown. We believe the signal converters are adequate as they are and no further qualification is necessary.

The safety injection flow meters are Barton 386. WCAP 7410 discusses the qualification of Barton 332, Mod 1 transmitter which was the prototype for 386 used for pressurizer level. The WCAP covers the radiation qualification of those components most susceptible to radiation e.g., electronic boards, strain gage, zero and span pots, etc. We conclude that the Model 332 is qualified for this use.

Terminal blocks are not qualified for LOCA/HELB conditions. We are contacting the supplier to determine whether he has any information regarding the qualifying of the blocks. It is our opinion that the materials of construction are such that the accident environment would have no effect on the blocks, except submergence. In any event, we have initiated an in-house program to perform qualification testing analysis. We are preparing requests for proposals to be sent to several test laboratories to determine whether they can qualify the blocks. We intend to keep you informed of our progress and results of such tests.

Our criteria for determining whether a solenoid valve should be qualified was as follows: "If a solenoid failed in the safe direction and its use was not required during or post accident, no replacement was necessary. If a solenoid was required to function during or post accident, it would be replaced with a qualified solenoid valve, if not already qualified."

During the course of this investigation, numerous telephone calls were made to various suppliers to determine whether they had qualification data on components which were purchased from them. Due to many such verbal reports, a formal written request will be made to the various suppliers. Since collecting data to meet the response date of this Bulletin took precedence, we have not referenced any official correspondence. The letters are in the process of being prepared now.

Yours truly,

D. E. Gilberts
Vice President
Power Production

cc: Mr. G. Charnoff
NRC Office of Inspection and Enforcement
Washington, D. C.

Enclosures

DEG:nk

UNITED STATES NUCLEAR REGULATORY COMMISSION

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

Docket Nos. 50-282 and 50-306

LETTER DATED MARCH 13, 1980
RESPONDING TO NRC REQUEST
FOR INFORMATION IN IE BULLETIN 79-01B

Northern States Power Company, a Minnesota corporation, by this letter dated March 13, 1980, hereby submits information in response to NRC request for information concerning IE Bulletin 79-01B.

This request contains no restricted or other defense information.

NORTHERN STATES POWER COMPANY

By: D E Gilberts

D. E. Gilberts
Vice President
Power Production

On this 13th day of March, 1980, before me a notary public in and for said County, personally appeared D. E. Gilberts, Vice President Power Production, and being first duly sworn acknowledged that he is authorized to execute this document on behalf of Northern States Power Company, that he knows the contents thereof and that to the best of his knowledge, information and belief, the statements made in it are true and that it is not interposed for delay.

Jeanne M Hacker

JEANNE M. HACKER
NOTARY PUBLIC - MINNESOTA
HENNEPIN COUNTY
My Commission Expires March 1986

NSP

NORTHERN STATES POWER COMPANY

May 12, 1980

Mr. James G. Keppler, Director
Region III Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

Prairie Island Nuclear Generating Plant
Docket Nos. 50-282 and 50-306

Re: NSP Letter to J. Keppler dated March 12, 1980

In response to IE Bulletin 79-01B, the following additional information is offered. (Delay of this response until 5/16/80 was approved by Mr. J. Hughes of your office by telephone on 4/25/80).

Item No. 4

The qualification of Class IE electrical equipment against the guidelines was performed in the response to this Bulletin, dated March 12, 1980, except for the radiation and aging conditions. These are discussed herein.

a. Aging

An aging qualification program is being prepared and is intended to establish when failure might be expected, or to prevent common mode failure which might be induced in aged components during a LOCA or HELB. The stress factors to be considered in the aging qualification program are: temperature, voltage, current load, humidity, radiation, chemical exposure and mechanical wear. The tests are intended to prove the ability of components to perform their intended function after being subjected to the stress factors versus time.

Attached Enclosure 1, Letter NSC to NSP, dated April 29, 1980, transmitted an aging program which is presently being evaluated by NSP prior to commencing the program.

b. Radiation

A total gamma dose radiation service condition of 2×10^7 RADS is acceptable for Class IE equipment located in general areas inside containment for PWR's with dry type containments. The components used in the Prairie Island Plant inside containment have been qualified for a total gamma dose of 5×10^7 to 2×10^8 RADS. We believe, therefore, that components located in the Prairie Island containment will withstand the radiation service conditions under both normal and accident conditions.

We have examined the beta radiation dose effect on electrical cables. Using the conservative unshielded surface beta dose of 2×10^8 RADS and considering the shielding factors, it will be shown that the beta dose to the cables is less than or equal to 10% of the total gamma dose to which the cables have been qualified.

The safety related equipment cables are large diameter in comparison to the smaller diameter non safety related cables. The safety related instrument cables are Bostrad 2, 3 and 4 conductor No. 16 cable. The outer cable jacket diameter varies from 93 mils to 140 mils. These measurements were made from sample cables which were cut and the jackets measured for thickness. Using the allowable 40 mils of insulation resulting in a factor of 10 reduction in dose, the outer jacket thickness of 93 mils to 140 mils provides a 2 to 3 decade reduction in dose or 2.0×10^6 to 2×10^5 RADS which is below the 5×10^7 RADS to 2×10^8 RADS gamma qualifying dose. This does not take into account the added shielding provided by the metallic shield used in the instrument cables nor the insulation around each conductor nor any shielding provided by the cable tray, concrete shielding or shielding afforded by other equipment.

Power cables have either an aluminum or galvanized steel shield. Control cables have an outer jacket wall thickness of at least 50 mils; the measured values of sample cables is 93 mils. We believe the cables will withstand any beta dose radiation since they have been qualified to 1 to 2×10^8 RADS. The manufacturers of the power and control cables are Kerite and Okonite. The safety related instrument cables are supplied by BIW.

c. Other Instruments

Other components such as solenoids, valve operators, and transmitters have been qualified from 5×10^7 to 2×10^8 RADS. The materials of construction of these components prevent any deleterious effect on the components due to beta radiation.

Item No. 5

The maximum expected flood level inside the primary containment resulting from the postulated accidents has been identified and is listed on the data sheets submitted in the March 12, 1980 letter.

DISCUSSION

The aging and radiation service conditions are discussed in Item No. 4 above. Some additional changes have been made since the last submittal. These are discussed herein.

Instruments

As a result of TMI and other considerations, we are replacing or adding the following qualified instruments inside containment:

a. Containment sump level

b. Reactor Coolant Wide Range Pressure*

c. Steam Generator Wide Range Level*

d. Main Steam Flow

e. Incore Thermocouple junction boxes

These instruments will be replaced or added during the December 1980 and January 1981 outages for Units 1 and 2 respectively. Our letter of March 12, 1980 discussed the present status of the Barton steam flow transmitters. These are being replaced due to problems connected with drift and calibration.

We had included the accumulator pressure transmitters in our March 12, 1980 transmittal. We have re-examined the function and requirement of these instruments and have determined their usefulness is mainly prior to an accident and serve little if any purpose once the accident has been initiated and definitely serve no purpose once the accumulators have dumped their contents. The time span between accident initiation and accumulator dump actuation is of shorter duration than the time for the containment environment to reach conditions which may affect the pressure transmitters. Furthermore, since the transmitters provide no control signal, the actual pressure indication of the accumulators during the accident serves no safety related purpose. Therefore, we believe no further qualification of these transmitters is justified. We expect that this item will have to be addressed again pursuant to the forthcoming issuance of Revision 2 to Regulatory Guide 1.97.

* Denotes instruments being added

Limit Switches

Limit switches employed on safety related equipment inside containment are all being replaced except for the gap and dome dampers. The limit switches which provide "open" indication on the dome dampers and actuate the gap dampers were replaced with environmentally qualified switches as a result of a previous bulletin. With the exception of these switches, other switches employed on the dome and gap dampers are not presently qualified. Since they do not provide direct damper position indication in the Control Room, they do not provide information pertinent to the operator and therefore will not be replaced. Pursuant to discussions and information received from the Region III cognizant inspector, we decided to replace limit switches used to monitor air operated control valves critical to containment isolation. These switches have been requisitioned and delivery is expected in time for the December/ January outages. We have communicated with the switch mnaufacturer regarding the limit switches used on equipment located in the Auxiliary Building regarding the differences between models and qualifications. When this information is received, we will determine the need for replacement of these switches.

Solenoid Valves

Replacement solenoid valves reported pursuant to this bulletin have been ordered and their delivery is expected in time for the December/January outages. Information received from the vendor denotes that the expected life of certain parts of the solenoid valves is such that replacement is recommended after 4.4 years. We plan to develop a maintenance program which will take into account the vendor's recommendation of periodic maintenance of the solenoid valves.

Submergence

The previous response for this bulletin dated March 12, 1980 addressed equipment located below the flood level in the event of a LOCA. We have reviewed several components with respect to their probable submergence and have concluded the following:

Accumulator Pressure Transmitters

These transmitters are located halfway between the floor level and the maximum flood level. In order to have the pressure transmitters submerged following a LOCA, it will be necessary to empty the reactor coolant system, accumulators, boric acid tanks, and the refueling water storage tank. Since the accumulators will have been emptied, the need for the pressure transmitters will no longer exist and, therefore, we believe that relocation is not justified.

Letdown Orifice Valves

The limit switches located on these valves were evaluated from their operational ability to provide indication and isolation. One of the limit switches was previously replaced with an environmentally qualified switch and a second limit switch on the valve which provides "open" indication will be replaced during the December/January outage. These switches, although environmentally qualified, have not been tested for submergence. LOCA procedures do not address using letdown line during the mitigation of the accident; therefore, there is no need to open the valves after containment isolation is reset. The location of these valves is such that containment isolation will have occurred prior to having reached flood level. There is a low probability of flooding actually causing a failure of the environmentally qualified EA180 switches located inside containment. There still remains the capability of isolating the letdown line with valves located outside the containment building.

Accumulator Isolation Valves

The limit switches on the accumulator isolation valves are located below flood level. Our engineering analysis has shown that the accumulators will have expended their contents before flood level is reached. In addition, the breakers for these valves are locked open to prevent inadvertent closure.

Potential flood concerns were discussed in "ECCS Actuation - Compliance with the Acceptance Criteria for ECCS for Light Water Nuclear Power Reactors" transmitted by letter dated December 22, 1976, from Mr. L. Mayer (NSP) to Mr. Dennis L. Ziemann (USNRC).

Cables

We have contacted our cable vendors regarding information on the effects of submergence on cables used at Prairie Island. We have, at this time, not received any information.

Accuracies

Our review of transient analyses performed by both Exxon and Westinghouse show that analyzed parameters independent of the accident environment are available for initiation of required actuations to mitigate the consequences of an accident; therefore, accident environment inaccuracies need not be considered. However, a proposal has been received from Westinghouse concerning a review of safety setpoints. We are reviewing the proposal to determine whether information pertinent to accident inaccuracies would be of further benefit in this analysis. We have verbal comment from Westinghouse advising that acceptable post accident monitoring accuracy guidelines are $\pm$ 25%.

Signal Converters

We refer to our discussion on signal converters in our March 12, 1980 transmittal.

Terminal Blocks

We have contacted several laboratories regarding their performing environmental qualification tests on the terminal blocks. We have had a positive response from Wyle and Franklin Research Institute. Wisconsin Public Service Corp. and Northern States Power Company have agreed to a joint environmental qualification test. We have transmitted to the laboratories a tentative test schedule and program. We believe that due to the physical construction of our terminal blocks, that the results of the qualification tests will be favorable and that our terminal blocks will be qualified. The blocks are coated with a qualified epoxy to protect them against chemical spray. The epoxy will be included in the tests to be performed.

Fuse Holder

The fuse holders employed in the Prairie Island Plant were purchased and tested to a military specification. Although the fuse holders were tested to a temperature ($149^{o}F$) lower than the expected temperature ($210^{o}F$), the temperature transient will be of short duration (1 hour) and the pressure transient will not have an appreciable driving force and with the fuse holders being water tight, we have determined that there will be no deleterious effect on the fuse holders. The present current loading on the fuse is substantially lower than the fuse rating, such that any degradation of the fuses due to the short temperature transient will not affect the circuit continuity.

DC Power Panels

The loads associated with DC power panels located inside containment were reviewed with respect to the environment and we have decided to purchase new DC fuse panels to be located outside the containment for the safety related circuits.

We have included a revised Appendix A - Master List and Individual Data Sheets - correcting information which was previously submitted. We have not submitted the reference material - Appendix B - since there is no change in this material from our previous submittal.

Sincerely,

D. E. Gilberts
Vice President, Power Production

Rec'd

NSP

NORTHERN STATES POWER COMPANY

May 21, 1980

Mr. James G. Keppler, Director
Region III, Office of Inspection & Enforcement
US Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

Enclosed is the system component evaluation worksheet on Kerite Cable, Revision 2. This is a replacement for the worksheet sent in our May 12, 1980 response to IE Bulletin 79-01B.

The Kerite Test Report, KPT-LVC-1 of April 13, 1977, was received at Prairie Island May 15, 1980, classified as confidential and therefore is not enclosed.

It is available on-site at the Prairie Island Nuclear Generating Plant for review.

Sincerely,

D. E. Gilberts
Vice President, Power Production

NSP

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

RR #2

Welch, MN 55089

July 8, 1980

Mr. James G. Keppler, Director
Region III, Office of Inspection & Enforcement
U S Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

SUBJECT: Additional Response IE Bulletin 79-01B

Dear Mr. Keppler:

Enclosed are revised system component evaluation sheets for limit switches in the containment purge, main steam and residual heat removal systems. These Revision 3 sheets are replacements for the worksheets sent in our May 12, 1980, response to IE Bulletin 79-01B. Also enclosed are the Prairie Island annulus temperature and pressure profiles for a design basis LOCA.

NAMCO model D-2400X limit switches, presently used on some control valves for previously mentioned switches, have a NEMA 4 (watertight) enclosure and are designed for a maximum temperature of 90°C (194°F). The only area in the Auxiliary Building which will exceed 194°F is on the 735' level during a HELB. This area is postulated to rise to temperature and pressure of 210°F, 0.75 psig. This affects the Main Steam Isolation Valves and the Power Operated Relief Valves for #11 and #21 Steam Generators, Due to the expected short duration of the temperature transient above 194°F and the low pressure, we have concluded that the D-2400X limit switch will be adequate and replacement is not necessary.

The limit switches for the containment purge and residual heat removal systems while not subjected to a temperature in excess of 194°F may be subjected to a high radiation level. We have decided to replace those limit switches with NAMCO Model EA-170 which are suitable for a typical HELB environment and a radiation dosage of 2×10^8 RAD. These switches have been ordered and are presently being scheduled for replacement during the August 80 and January 81 outages.

Sincerely,

D. E. Gilberts
Vice President, Power Production

NUCLEAR SERVICES CORPORATION
A DIVISION OF LITTON INDUSTRIES CORPORATION
1700 DELL AVENUE CAMPBELL, CALIFORNIA 95008 TELEPHONE (408) 446-2500 TWX 910-590-2438

September 29, 1980

RD-80-026
NOR-0188
P.O. MQ05386

Mr. J. L. Hoffman
Supt. Technical Engineering
Northern States Power Company
Prairie Island Nuclear Generating Plant
Route 2
Welch, Minnesota 55089

Subject: Component Aging Evaluation

Dear Mr. Hoffman:

Herewith transmitted is the Component Aging Evaluation.

The matrix, SK#SB092680, constitutes the formal completion of the assigned task. We have, however, included some comments which are the result of our investigation. They include some background data. We hope that these data will help you understand the reason for our conclusions and recommendations.

If you have any question, please call me at (408) 866-4510, Ext. 367.

Sincerely,

Bob Dille

Bob Dille
Senior Consultant Engineer

BD/ak
Encl.
cc: D. Duffy
S. Berman
C. Sathrum
K. Allen
File NOR-0188

CONTAINMENT SPRAY PUMP MOTOR - ELECTRIC MACHINERY CO.

AGING EVALUATION AND RECOMMENDATION

This motor, in its application at Prairie Island, is dedicated to a single function - Containment Spray Pump operation.

In determining the adequacy of a continuous duty Class 1E electric motor, located outside the Containment, the constituent materials most susceptible to a time/temperature related failure are examined; the electrical insulation of its windings is the most significant contributor to such failure.

Although the exact chemical composition of the insulation has not been disclosed by the manufacturer, the procurement specification to which the motor was delivered required an insulation thermal classification of Class F.

Studies made of electrical insulation deterioration have produced curves establishing the life of insulation used in motor windings over a range of temperature (^{o}C) which are appropriate to the study being made for the Prairie Island application. For Class F insulation systems, at its rated RPM of 3500, a life of 20,000 hours is predictable. The service (normal) operating conditions for the Containment Spray motor, as expressed in Prairie Island's Technical Specifications, require the motor's operation during each reactor refueling shutdown. Also, in accordance with Section 4.5 of the same Specifications, the containment spray pumps and motor are started and operated at intervals of one month, for an operating time of no less than 15 minutes; thus, it is apparent that the characteristics of the motor, when operated within its ratings, support the conclusion that aging effects would be negligible. Failure rate studies of motors similar in electrical rating, rpm, insulation and operating temperatures are predicted safely to have about 20,000 hours of mean-time-to-failure.

The following assumptions are made in developing an aging evaluation of the motor:

1. The motor is operated at its rated voltages.
2. An in-service inspection is made once-a-month for an operational time no less than 15 minutes (recent test data verifies the performance of the inspection).
3. The original purchase specification requirements for appropriate seismic and radiation levels tolerance tests were satisfied by the manufacturer.
4. The Class F insulation system is used in this motor.

It is concluded that no accelerated aging test is required to establish a qualified life of 40 years for this item.

FUSEHOLDER, MODEL HEB-A-BUSSMAN MANUFACTURING CO.

Aging Evaluation and Recommendations

This unit has a phenolic body which completely encloses the fuse, providing total protection against the effects of water and corrosive chemicals. The aging mechanism of the phenolic material would have no recognizable effect on the unit's qualified life, in its Auxiliary Building location. When used within the fuse's specified electrical rating, and at the temperature levels of its location, including those of a postulated high energy line break, its phenolic material would show no degradation; it has a maximum temperature tolerance of about $400^{o}F$, and a radiation level tolerance of $3.5 \times 10^{8}R$. The recommendation of a 40-year qualified life is made with no added requirements for a corollary test program.

ELECTRICAL PENETRATIONS, D.G. O'BRIEN

Models PR-12 (LVP)
PR-110 (MVP)
PR-2

AGING EVALUATION AND RECOMMENDATIONS

The D.G.O'Brien Electrical Penetrations are designated for Low-Voltage (LV) and Medium Voltage (MV) applications. An aging study of this unit was necessarily focused on the single insulating material - for these models - ethylene propylene, possessing a known aging mechanism, with no competing materials which might require a more complex analysis to predict the Penetration's qualified life in its installed locations. The goal of this evaluation is to find either a sound basis for a life prediction or a justification for recommending an accelerated aging program. In the search for a possible failure mode, this study will consider only the characteristics of the ethylene propylene insulation. The material is a synthetic rubber which can tolerate a temperature of 195°F continuously, but will not show significant deterioration, even at temperatures of more than 300°F, for the period during which the Electrical Penetrations are required to remain functional in an accident situation. The containment end of this unit will be exposed in an accident to radiation levels of 12×10^6 RADS during a 48 hour required period; the ethylene propylene insulation will not be degraded by that level in the time given.

On the assumption that these units are applied at their specified voltage ratings, in their operating service conditions, they will experience no common mode failure as a result of thermal stress and should be exempt, therefore, from an accelerated aging test. On that basis it is believed that these units should be assigned a qualified life of 40 years. In an accident situation the most significant stress to be anticipated for these units would be in a seismic event.

The model PR-2 Electrical Penetration which carries instrumentation connections has a chloro-sulphinated polyethylene insulation whose characteristics are somewhat

different from the ethylene propylene; this material will tolerate 285°F continuously and, therefore, will not be degraded by the maximum temperatures of a postulated accident in the containment. The radiation tolerance of this material is 9.0×10^7 RADS, exceeding the requirement shown on the Equipment Aging Matrix. This model of Electric Penetration should experience no common mode failure from thermal stress and is, therefore, exempted from an aging test and assigned a 40 years qualified life.

#8

THE OKONITE COMPANY

Post Office Box 340
Ramsey, New Jersey 07446
201-825-0300/Cable: Okonite

August 31, 1978

Mr. A. Smith
Prairie Island Nuclear Plant
Route 2
Welch, Minnesota 55089

Dear Mr. Smith:

Enclosed is a copy of the Nuclear Qualification Test on T-95 as the test was performed back in 1970.

I trust this information will help you in your present situation.

Very truly yours,

THE OKONITE COMPANY

L. J. Kelly, Manager
Applications Engineering

LJK/row
Enclosure

THE OKONITE COMPANY
[illegible]

August 22, 1978

NUCLEAR QUALIFICATION TEST ON T-95 TAPE

During the period of August to October 1970, two hand-wrapped field splices utilizing Okonite's T-95 tape were included in a test program to qualify insulating compounds for nuclear plant use. These splices were not jacketed with any other tape. The sequential test profile performed by Franklin Research Laboratories was as follows:

(1) Samples were exposed to a total dosage of 3.5×10^7 rads.

(2) Upon completion of irradiation, the samples were exposed to a steam environment consisting of 12 hours at 60 psig and 7 days at 5 psig. During this exposure a boric acid chemical solution was sprayed onto the samples.

(3) After the loss of coolant accident was complete, the samples passed both a 5 kV ac and dc withstand test.

The Scotch #27 tape illustrated in the termination drawing was added to provide additional mechanical strength. This tape is also a heat and fire resistant tape.

J. R. Cancelosi
Electrical Engineer

JRC/row

NAMCO CONTROLS

1170 EAST 131ST STREET • CLEVELAND, OHIO 44108 • (216) 268-4200 • TELE

March 13, 1978

Mr. James Hoffman
Prairie Island Generating Plant
Rural Route #2
Welch, Minnesota 55089

Subject: Limit Switches for Use in Nuclear Power Plants

Dear Mr. Hoffman:

NAMCO CONTROLS has adapted two of our switch lines to make them suitable for use in a nuclear power plant. The two lines are our EA170 (D2400X) series and the EA700 (SL) series switches. We are attaching copies of our catalogs for both of these series switches.

The switches shown in the catalog are standard units, but the nuclear models are mechanically and electrically the same as these shown. They vary only in the special materials which are used in their fabrication in order to make them suitable for use in a nuclear power plant environment.

We are enclosing a list of the part numbers for the three types of switches in each line. Taking the D2400X series first, the EA170-11100 part numbers represent our standard switch and are cross-referenced with the old D2400X part numbers. This switch has a NEMA 4 enclosure and is suitable for use in an ambient of 90°C, but is not suitable for other than a general use, and is not satisfactory for use in areas that will see any unusual environmental conditions. This switch has been seismically tested to IEEE-344-1975.

The EA170-__302 part numbers are shown on the second sheet, and these are modifications of the standard switch. These switches have also been seismically tested and are suitable for use in areas outside of the containment area that might be subjected to a typical steam line break environment and a cumulative radiation dosage of 2×10^8 rads.

The EA180 part numbers are shown on the last sheet. These are the switch models that we have qualified to IEEE-344-1975, IEEE-323-1974 and IEEE-382-1972. These units differ only in the materials used in their construction and are chosen to withstand the environmental conditions that may exist in the containment area.

The SL (EA700) series switch is also available in three models for the various locations as described above. The EA700 series represents the standard switch. The EA750 series is the switch modified for areas outside of the containment but suitable for steam line break environments. The EA740 units are containment area switches.

For your information we are attaching a copy of our test plan which outlines the procedures that were followed in our qualification testing.

We are also enclosing a copy of our Series EL lever bulletin which shows many of the levers available for use with both series of switches. We would suggest that on switches to be used in the containment area that levers fabricated from brass or bronze be used.

We would suggest that if you have any difficulty in mounting replacement switches, you should contact the valve manufacturer.

We hope that the enclosed information is helpful to you, and if you require any additional information, please contact me at any time.

Yours very truly,

Robert H. Kantner
Staff Sales Engineer
NAMCO CONTROLS

RHK/kg
Enc.

cc: D. Clark
I. Scheel

E#676

NSP

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

RR #2

Welch, MN 55089
September 11, 1980

Bob Katner
Staff Sales Engineer
Namco Controls
7567 Tyler Boulevard
Mentor, Ohio 44060

Subject: NSP Purchase Order MQ-05274

Dear Bob:

We have received and reviewed the test report applicable to the EA-170 limit switches. Please ship those requested by the above purchase order.

Sincerely,

F.P. Tierney, Jr.
Plant Manager
Prairie Island Nuclear Plant

By _____
J.L. Hoffman
Supt. Tech. Engineering

FPT/JLH/jmc

cc: Subj File - Environmental Qualification
Paul Roska

E693

NSP

NORTHERN STATES POWER COMPANY

PRAIRIE ISLAND NUCLEAR GENERATING PLANT

RR #2

Welch, MN 55089

10-17-80

Mr. Robert Kantner
Namco Controls
170E. 131st Street
Cleveland, OH 44108

Dear Bob:

This letter is to clarify what I need to know. What I would like is information stating to what pressures (partial vacuum to be exact) your EA-170 limit switch is qualified to.

If you could get this information to me as soon as possible, it would be greatly appreciated.

Sincerely yours,

Paul T. Roska
Prairie Island Nuclear Plant

cc: Subject File - Environmental Qualification
Chron File

PTR:JKB