UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

LOUISIANA POWER AND LIGHT COMPANY

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 51
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Louisiana Power and Light Company (the licensee) dated October 31, 1988, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 51 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

José A. Calvo

Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 23, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 51

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove	Insert
3/4 8-18 thru	3/4 8-18 thru
3/4 8-51	3/4 8-51e

SURVEILLANCE REQUIREMENTS (Continued)

(c) For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

2. By selecting and functionally testing a representative sample of at least 10% of each type of lower voltage circuit breakers. Circuit breakers selected for functional testing shall be selected on a rotating basis. Testing of these circuit breakers, except as noted on Table 3.8-1, shall consist of injecting a current in excess of the breakers' nominal setpoint and measuring the response time. The measured response time will be compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

b. At least once per 60 months by subjecting each circuit breaker to an inspection and preventive maintenance in accordance with procedures prepared in conjunction with its manufacturer's recommendations.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
I.	**6.9 KV POWER FROM MEDIUM VOLTAGE SWITCHGEAR (NOTE I.3)**									
1	**REACTOR COOLANT PUMP 1A**									
	a Primary	289-11A1	Line 15, 16, 17	Note I.1	Note I.2	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	b Backup	424-220	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	c Backup	424-220	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
2	**REACTOR COOLANT PUMP 1B**									
	a Primary	289-12A1	Line 15, 16, 17	Note I.1	Note I.2	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	b Backup	424-230	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	c Backup	424-230	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
3	**REACTOR COOLANT PUMP 2A**									
	a Primary	289-11A1	Line 18, 19, 20	Note I.1	Note I.2	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	b Backup	424-240	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	c Backup	424-240	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
4	**REACTOR COOLANT PUMP 2B**									
	a Primary	289-12A1	Line 18, 19, 20	Note I.1	Note I.2	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	b Backup	424-250	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
	c Backup	424-250	TD Relay 2		adjust to 4 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4

Items I.1 thru I.4 - Transfer Trip Relays provide Backup protection via Startup Transformer and Unit Auxiliary Transformer Breakers. Performing the INTEG FUNCT TEST satisfies CHAN CALIB.

FSAR Figure 8.3-28 illustrates operation of primary and backup over-current protection.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
II. 480 VOLTS POWER FROM LOW VOLTAGE SWITCHGEAR (NOTE II.6)										
1	**POLAR CRANE**									
	a Primary	289-20A1	Line 16	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary	289-20A2	Line 16	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-2486	TD Relay 2		adjust to 2 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
2	**CEDM COOLING UNIT E-16 (3A)**									
	a Primary*	289-20A1	Line 17	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-20A2	Line 17	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-1139	TD Relay 2		adjust to 1 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
3	**CEDM COOLING UNIT E-16 (3C)**									
	a Primary*	289-20A3	Line 23	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-20A4	Line 23	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-1140	TD Relay 2		adjust to 1 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
4	**CEDM COOLING UNIT E-16 (3B)**									
	a Primary*	289-21A1	Line 18	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-21A2	Line 18	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-1140	TD Relay 2		adjust to 1 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4

* Note II.4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
5	**CEDM COOLING UNIT E-16 (3D)**									
	a Primary*	289-21A3	Line 24	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-21A4	Line 24	Note II.1	Notes II.2, II.3	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-1140	TD Relay 2		adjust to 1 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
6	**PRESSURIZER HEATERS BACKUP BANK 1 (B-1)**									
	a Primary*	289-23A1	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-23A2	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-286	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
7	**PRESSURIZER HEATERS BACKUP BANK 2 (B-2)**									
	a Primary*	289-23A1	Line 5	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-23A2	Line 5	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-286	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
8	**PRESSURIZER HEATERS BACKUP BANK 3 (B-3)**									
	a Primary*	289-23A1	Line 6	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-23A2	Line 6	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-287	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4

* Note II.4

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
9	**PRESSURIZER HEATERS BACKUP BANK 4 (B-4)**									
	a Primary*	289-24A1	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-24A2	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-288	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
10	**PRESSURIZER HEATERS BACKUP BANK 5 (B-5)**									
	a Primary*	289-24A1	Line 5	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-24A2	Line 5	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-289	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4
11	**PRESSURIZER HEATERS BACKUP BANK 6 (B-6)**									
	a Primary*	289-24A1	Line 6	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary*	289-24A2	Line 6	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	424-290	TD Relay 2		adjust to 0.5 sec	NA	≥10% per R	≥10% per R	≤ every 60 M	1, 2, 3, 4

Items II.6 thru II.11 -- The backup protection consists of Transfer Trip Relays activated by any one of the primary over-current protective relays illustrated on FSAR Figure 8.3-30.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
12	**PRESSURIZER HEATERS PROPORTIONAL BANK 1 (P-1)**									
	a Primary	289-23A1	Line 8	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary	289-23A2	Line 8	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup		CHASE -SHAWMUT A60P200	Fuse		NA	NA	NA	NA	1, 2, 3, 4
	* Note II.4									
13	**PRESSURIZER HEATERS PROPORTIONAL BANK 2 (P-2)**									
	a Primary	289-24A1	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Primary	289-24A2	Line 4	Note II.1	Notes II.2, II.5	≥10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup		CHASE -SHAWMUT A60P200	Fuse		NA	NA	NA	NA	1, 2, 3, 4

Items II.12 and II.13 -- The proportional heater local control panel houses the backup protection.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
BREAKER PROTECTION	DRAWING IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC		FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
III. 240 VOLTS CEDM POWER									
1 CEDM COILS (91 Circuits) (NOTES IV.3 & IV.4)									
a Primary	Sub-group Bus	Heinemann 40A	Heinemann Series AM, Curve 3		10% per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Primary	Hold Bus	Heinemann 30A	Heinemann Series AM, Curve 3		10% per R	NA	NA	≤ every 60 M	1, 2, 3, 4
c Backup	60 A International Rectifier Cat. No. SF26 x 60	Fuse	International Rectifier SF26 Series Curves		NA	NA	NA	NA	1, 2, 3, 4

240 V, 3 phase power feeds from the C-E Reactor Trip Switchgear to the CEDM Cabinets.
The 91 circuits separate into sub-groups and hold busses. One breaker and three fuses protect each sub-group/hold bus.
These cabinets feed power to the CEDM Coils via #4 AWG & #8 AWG penetration conductors.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
IV. 480 VOLTS POWER FROM MCCs										
1	**SAFETY INJECTION TANK 1A ISOLATION VALVE 1SI-V1865 TK 1A (SI-331A)**									
	a Primary	289-61 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-61	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
2	**SAFETY INJECTION TANK 2A ISOLATION VALVE 1SI-V1867 TK 2A (SI-332A)**									
	a Primary	289-61 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-61	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
3	**LP-311**									
	a Primary	289-62 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-62	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
4	**RCS LOOP 2 SDC ISOLATION VALVE 1SI-V1804A (SI-401A)**									
	a Primary	289-63 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-63	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
5	**CARS SUCTION VALVE 2HV-F263A (CAR-201A)**									
	a Primary	289-64 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-64	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
6	**HYDRAULIC PUMP FOR VALVE 1SI-V1863A (SI-405A)**									
	a Primary	289-64 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-64	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
7	**SAFETY INJECTION TANK 1B ISOLATION VALVE 1SI-V1506 TK 1B (SI-331B)**									
	a Primary	289-65 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-65	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
8	**SAFETY INJECTION TANK 2B ISOLATION VALVE 1SI-V1508 TK 2B (SI-332B)**									
	a Primary	289-65 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-65	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
9	**LP-318**									
	a Primary	289-66 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-66	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
10	**RCS LOOP 1 SDC ISOLATION VALVE 1SI-V1862B (SI-401B)**									
	a Primary	289-67 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-67	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
11	**CARS SUCTION VALVE 2HV-F264B (CAR-201B)**									
	a Primary	289-68 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-68	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
12	**HYDRAULIC PUMP FOR VALVE 1SI-V1501B (SI-405B)**									
	a Primary	289-68 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-68	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
13	**Cent. 30KVA Transf. PDP 377A**									
	a Primary	289-71 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-71	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
14	**RCP 2A OIL LIFT PUMP A**									
	a Primary	289-71 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-71	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
15	**RCP 1A OIL LIFT PUMP A**									
	a Primary	289-71 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-71	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
16	**STEAM GENERATOR 1 VENT VALVE 2MS-V668 (MS-101A)**									
	a Primary	289-71 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-71	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
17	**MOVEABLE DETECTOR DRIVE MACHINE 1**									
	a Primary	289-72 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-72	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
18	**STEAM GENERATOR 2 VENT VALVE 2MS-V667 (MS-101B)**									
	a Primary	289-74 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-74	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
19	**RCP 1B OIL LIFT PUMP A**									
	a Primary	289-74 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-74	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
20	**RCP 2B OIL LIFT PUMP A**									
	a Primary	289-74 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-74	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
21	**MOVEABLE DETECTOR DRIVE MACHINE 2**									
	a Primary	289-74 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-74	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
22	**Cont. 30KVA Transf. PDP 378B**									
	a Primary	289-76 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-76	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
23	**H2 RECOMBINER POWER SUPPLY A**									
	a Primary	289-77 Note IV.1	Breaker	FJ	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-77	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
24	**REACTOR CAVITY COOLING SYSTEM FAN S-2 (3A)**									
	a Primary	289-78 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-78	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
25	**RADIATION REMOVAL UNIT E-13 (3A)**									
	a Primary	289-78 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	289-78	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES				WITHIN EACH VOLTAGE LEVEL (ROMAN)				
BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	MODES FOR WHICH SURV IS REQUIR'D
26 RCP 1A OIL LIFT PUMP B									
a Primary	289-78 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-78	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
27 RCP 2A OIL LIFT PUMP B									
a Primary	289-78 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-78	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
28 H2 RECOMBINER POWER SUPPLY B									
a Primary	289-80 Note IV.1	Breaker	FJ	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-80	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
29 REACTOR CAVITY COOLING SYSTEM FAN S-2 (3B)									
a Primary	289-81 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-81	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
30 RADIATION REMOVAL UNIT E-13 (3B)									
a Primary	289-81 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-81	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
31 RCP 1B OIL LIFT PUMP B									
a Primary	289-81 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-81	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
32 RCP 2B OIL LIFT PUMP B									
a Primary	289-81 Note IV.1	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-81	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
33	**MISSILE SHIELD TRUCK RECEPTACLE**									
	a Primary*									
	b Backup*									
	* Item IV.33 -- Primary breaker is locked-out in the open position during MODES 1, 2, 3, and 4. Therfore, non-OPERABLE primary or backup protection does not place the plant in an LCO.									
34	**CONTAINMENT COOLING UNIT AH-1 (3A-SA)**									
	a Primary	289-97	Breaker	JL	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup Note IV.5	289-20A1	Breaker	ECS	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	289-20A2	Relay	IAC66T	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
35	**CONTAINMENT COOLING UNIT AH-1 (3C-SA)**									
	a Primary	289-97	Breaker	JL	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup Note IV.5	289-20A1	Breaker	ECS	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	289-20A2	Relay	IAC66T	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
36	**CONTAINMENT COOLING UNIT AH-1 (3B-SB)**									
	a Primary	289-97	Breaker	JL	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup Note IV.5	289-21A1	Breaker	ECS	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	c Backup	289-21A2	Relay	IAC66T	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
37 CONTAINMENT COOLING UNIT AH-1 (3D-SB)									
a Primary	289-97	Breaker	JL	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup Note IV.5	289-21A1	Breaker	ECS	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
c Backup	289-21A2	Relay	IAC66T	Notes IV.6, & IV.7, IV.8	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
38 CONTAINMENT SUMP PUMP A									
a Primary	289-46	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-46	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
39 LP-306									
a Primary	289-46	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-46	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
40 LP-301									
a Primary	289-46	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-46	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
41 LP-302									
a Primary	289-46	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-46	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
42 LP-304									
a Primary	289-46	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-46	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
43	**CONTAINMENT ELEVATOR D**									
	a Primary	289-47	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-47	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
44	**REFUELING CAVITY DRAIN PUMP**									
	a Primary	289-48	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-48	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
45	**REFUELING EQUIPMENT**									
	a Primary	289-50	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-50	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
46	**REFUELING EQUIPMENT**									
	a Primary	289-48	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-48	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
47	**CONTAINMENT SUMP PUMP B**									
	a Primary	289-49	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-49	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
48	**LP-303**									
	a Primary	289-49	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-49	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
49	**LP-306**									
	a Primary	289-49	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-49	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES				WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
80	LP-300									
	a Primary	289-49	Breaker	EF	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-49	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
81	SDC LOOP 1 VACUUM PRIMING PUMP									
	a Primary	289-45	Breaker	EF-3	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-43	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
82	SDC LOOP 2 VACUUM PRIMING PUMP									
	a Primary	289-47	Breaker	EF-3	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-47	Fuse	TRS	Note IV.4	NA	NA	NA	NA	1, 2, 3, 4
83	FDP 365A RECEPTACLES									
	a Primary	289-104	Breaker	TED	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-104	Breaker	TED	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
84	FDP 366B RECEPTACLES									
	a Primary	289-104	Breaker	TED	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-104	Breaker	TED	Notes IV.2 & IV.3	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
V.	208 VOLTS CONTROL POWER FROM PDPs OR MCCs									
1	RCP 1A HEATER									
	a Primary	424-2269	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-2269	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
2	RCP 2A HEATER									
	a Primary	424-2269	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-2269	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
3	RCP 1B HEATER									
	a Primary	424-2270	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-2270	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
4	RCP 2B HEATER									
	a Primary	424-2270	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-2270	Breaker	TEB	Note V.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIRED
VI	**120 VOLTS CONTROL POWER FROM PDPs OR MCCs**									
1	**SOLENOID VALVE 1SI-F155ITK1A (SI-303A)**									
	a Primary	289-186	Circuit 26	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 26	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
2	**SOLENOID VALVE 1SI-F155ITK2A (SI-304A)**									
	a Primary	289-186	Circuit 38	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 38	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
3	**SOLENOID VALVE 2CC-F243AB (CC-718)***									
	a Primary	289-108A	Circuit 4	Fuse FRN	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-108A	Circuit 4	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
4	**SOLENOID VALVE 2SI-F166IAB (SI-343)**									
	a Primary	289-186	Circuit 8	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 8	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
5	**SOLENOID VALVE 2SI-F606TK1A (NG-161A)**									
	a Primary	289-186	Circuit 16	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 16	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
6	**SOLENOID VALVE 2SI-F607TK2A (NG-162A)**									
	a Primary	289-186	Circuit 26	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 26	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

* Two fuses in-series, one each, + and - poles.

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
7	SOLENOID VALVE 2SI-E636 (SI-323A)									
	a Primary	289-186	Circuit 30	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 30	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
8	SOLENOID VALVE 2SI-E638 (SI-324A)									
	a Primary	289-186	Circuit 36	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 36	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
9	SOLENOID VALVE 1CH-F1516AB (CVC-181)									
	a Primary	289-147	Circuit 1	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 1	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
10	SOLENOID VALVE 1SI-V2604 (SI-301)									
	a Primary	289-147	Circuit 30	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 30	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
11	SOLENOID VALVE 2SI-F1564TK1A (SI-307A)									
	a Primary	289-186	Circuit 28	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 28	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
12	CONTAINMENT PURGE ISOLAITON SOLENOID VALVES 2HV-B151A (CAP-103) & 2HV-B152A (CAP-104)									
	a Primary	289-120	Circuit 26	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-120A	F1	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
13	**E2 ANALYZER VALVES A POWER**									
	a Primary	289-120	Circuit 7	Breaker EE	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup*	1564-2084	CB 2	Breaker P-15	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	* Backup in Hydrogen Analyzer Panel, Breaker CB 2									
14	**CONTAINMENT SPRAY RISER PUMP A SOLENOID VALVE 2CS-E608A (CS-129A)**									
	a Primary	289-120	Circuit 9	Breaker EE	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-120A	F3	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
15	**SOLENOID VALVE 2SI-F1566TK2A (SI-308A)**									
	a Primary	289-186	Circuit 40	Breaker CD	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 40	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
16	**SOLENOID VALVE 2SI-E633 (SI-323B)**									
	a Primary	289-186	Circuit 34	Breaker CD	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 34	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
17	**SOLENOID VALVE 2SI-E635 (SI-326B)**									
	a Primary	289-186	Circuit 27	Breaker CD	Note VI.2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 27	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
18	**SOLENOID VALVE FOR 1SI-1503A (SI-405A)**									
	a Primary	289-108a	Circuit 7	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	289-108A	Circuit 7	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
	* Two fuses in-series, one each, + and - poles.									

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.c	INTEG FUNCT TEST 4.8.4.1 a.1.b	ANSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
19	**SOLENOID VALVE 2HV-B156A (CVR-201)**									
	a Primary	289-147	Circuit 14	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 14	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
20	**CONTAINMENT FAN COOLERS DAMPERS**									
	a Primary	289-120	Circuit 17	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-120A	F6	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
21	**MOTOR HEATER LEADS AH-1 (3A-SA)**									
	a Primary	289-120	Circuit 13	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-120A	F4	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
22	**MOTOR HEATER LEADS AH-1 (3C-SA)**									
	a Primary	289-120	Circuit 15	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-120A	F5	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
23	**MOTOR HEATER LEADS E-16 (3A)***									
	a Primary	424-1139	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-1139	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
24	**MOTOR HEATER LEADS E-16 (3C)***									
	a Primary	424-1140	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-1140	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4

* 120/208V SWGR heater bus, double breaker protection.

* 120/208V SWGR heater bus, double breaker protection.

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
25	SOLENOID VALVE 2SI-F1552TK1B (SI-303B)									
	a Primary	289-187	Circuit 26	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 26	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
26	SOLENOID VALVE 2SI-F1554TK2B (SI-304B)									
	a Primary	289-187	Circuit 38	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 38	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
27	SOLENOID VALVE 2WM-F157AB (GWM-104)									
	a Primary	289-187	Circuit 7	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 7	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
28	SOLENOID VALVE 2SI-F606TK1B (NG-161B)									
	a Primary	289-187	Circuit 16	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 16	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
29	SOLENOID VALVE 2SI-F608TK2B (NG-162B)									
	a Primary	289-187	Circuit 25	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 25	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
30	SOLENOID VALVE 2SI-E637 (SI-326B)									
	a Primary	289-187	Circuit 30	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 30	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
31	SOLENOID VALVE 2SI-E639 (SI-324B)									
	a Primary	289-187	Circuit 27	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 27	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
32	**SOLENOID VALVE 2CH-F151SAB (RC-406)**									
	a Primary	289-187	Circuit 2	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 2	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
33	**SOLENOID VALVE 1CH-F2501AB (CVC-183)**									
	a Primary	289-148	Circuit 1	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 1	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
34	**SOLENOID VALVE 1SI-V2505 (SI-302)**									
	a Primary	289-148	Circuit 28	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 28	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
35	**SOLENOID VALVE 2BM-F108AB (BM-109)**									
	a Primary	289-187	Circuit 1	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 1	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
36	**CONTAINMENT PURGE ISOLATION SOLENOID VALVES 2HV-B164B (CAP-204) & 2HV-B183B (CAP-203)**									
	a Primary	289-121	Circuit 26	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-121A	F6	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
37	**SOLENOID VALVE 2HV-B157B (CVR-101)**									
	a Primary	289-148	Circuit 14	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 14	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES FOR WHICH SURV IS REQUIR'D
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	
38	**SOLENOID VALVE 2BD-F603 (BD-102A)**									
	a Primary	289-187	Circuit 6	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 6	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
39	**SOLENOID VALVE 2BD-F605 (BD-102B)**									
	a Primary	289-187	Circuit 8	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 8	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
40	**H2 ANALYZER VALVE B POWER***									
	a Primary	289-121	Circuit 7	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	1564-2084	CB 2	Breaker P-15	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	* Backup in Hydrogen Analyzer Panel Breaker CB 2.									
41	**CONTAINMENT SPRAY RISER PUMP B SOLENOID VALVE 2CS-E609B (CS-129B)**									
	a Primary	289-121	Circuit 9	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-121A	F2	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
42	**CONTANMENT SUMP ISOLATION VALVE 2WM-F104AB (SP-106)**									
	a Primary	289-187	Circuit 9	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 9	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
43	**SOLENOID VALVE 2SI-F156STK1B (SI-307B)**									
	a Primary	289-187	Circuit 28	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 28	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES				WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a 1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
45	SOLENOID VALVE 2SI-F1567TK2B (SI-308B)									
	a Primary	289-187	Circuit 40	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 40	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
46	SOLENOID VALVE 2SI-E632 (SI-326A)									
	a Primary	289-187	Circuit 36	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 36	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
46	SOLENOID VALVE 2SI-E634 (SI-326A)									
	a Primary	289-187	Circuit 34	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 34	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
47	SAMPLE SYSTEM SOLENOID VALVE 2SL-F1561AB (PSL-186)									
	a Primary	289-187	Circuit 29	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 29	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
48	SAMPLE SYSTEM SOLENOID VALVE 2SL-F1562AB (PSL-283)									
	a Primary	289-187	Circuit 31	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 31	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
49	SAMPLE SYSTEM SOLENOID VALVE 2SL-F1563AB (PSL-383)									
	a Primary	289-187	Circuit 33	Breaker CD	Note VI 2	10% of Type R per	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 33	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (RCMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
50	**SOLENOID VALVES FOR 1SI-1501B (SI-405B)***									
	a Primary	289-109A	Circuit 9	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	289-109A	Circuit 9	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
	* Two fuses in-series, one each, + and - poles.									
51	**MOTOR HEATER LEADS AH-1 (3B-SB)**									
	a Primary	289-121	Circuit 13	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-121A	F3	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
52	**MOTOR HEATER LEADS AH-1 (3D-SB)**									
	a Primary	289-121	Circuit 15	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-121A	F4	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
53	**MOTOR HEATER LEADS E-16 (3B)***									
	a Primary	424-1141	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-1141	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	* 120/208V SWGR heater bus, double breaker protection									
54	**MOTOR HEATER LEADS E-16 (3D)***									
	a Primary	424-1142	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-1142	Breaker	TED	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	* 120/208V SWGR heater bus, double breaker protection									

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
55	**CONTAINMENT FAN COOLERS DAMPERS**									
	a Primary	289-121	Circuit 17	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-121A	F5	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
56	**SAMPLE SYSTEM SOLENOID VALVE 2SL-F601 (PSL-404A)**									
	a Primary	289-148A	Circuit 49	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 49	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
57	**SAMPLE SYSTEM SOLENOID VALVE 2SL-F603 (PSL-404B)**									
	a Primary	289-148A	Circuit 45	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 45	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
58	**SAMPLE SYSTEM RECORDER PANEL**									
	a Primary	289-133	Circuit 35	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-133A	F12	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
59	**CONTAINMENT PURGE EXHAUST DAMPER SV-D22 (CAP-282) & SV-D23 (CAP-281)**									
	a Primary	289-133	Circuit 1	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-133A	F5	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
	c Primary	289-134	Circuit 1	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	d Backup	289-134A	F2	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
60	**SOLENOID VALVE 2RC-F604 (RC-323)**									
	a Primary	289-133	Circuit 8	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-133A	F3	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a 1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
61	**SOLENOID VALVE 7RC-F405 (RC-325)**									
	a Primary	289-133	Circuit 10	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-133A	F4	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
62	**SOLENOID VALVE 1CH-E2504B (CVC-218B)**									
	a Primary	289-148	Circuit 29	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 29	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
63	**SOLENOID VALVE 1CH-E2503A (CVC-218A)**									
	a Primary	289-147	Circuit 27	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 27	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
64	**SOLENOID VALVES 3CC-P1501A1 (CC-665A) & 3CC-P1505A1 (CC-679A)**									
	a Primary	289-150	Circuit 25	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-280	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
65	**SOLENOID VALVES 3CC-P1502A2 (CC-666A) & 3CC-P1507A2 (CC-680A)**									
	a Primary	289-150	Circuit 27	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-282	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
66	**RCP 1A INSTRUMENTATION AND ACCESSORIES***									
	a Primary	424-220	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	424-220	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4

* Two fuses in-series, one each, + and - poles

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
67	**2CP 2A INSTRUMENTATION AND ACCESSORIES**									
	a Primary	424-240	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	424-240	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	* Two fuses in-series, one each, + and - poles.									
68	**CEDM COOLER VALVES & DAMPERS**									
	a Primary	289-149	Circuit 14	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	424-1145	F2	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
69	**CEDM COOLER UNITS INLET DAMPER**									
	a Primary	289-150	Circuit 20	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	424-1145	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
70	**SOLENOID VALVE 2CH-F1514AB (RC-602)**									
	a Primary	289-150	Circuit 6	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	424-326	F2	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
71	**SOLENOID VALVE 7BM-P237 (GWM-101)**									
	a Primary	289-135	Circuit 11	Breaker EE	Note VI.2	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	424-401	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
72	**SOLENOID VALVE 8SI-F1863 (SI-342)**									
	a Primary	289-150	Circuit 1	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	S every 60 M	1, 2, 3, 4
	b Backup	424-499	F3	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
73	**SOLENOID VALVES 3CC-P1582B1 (CC-665B) & 3CC-P1586B1 (CC-679B)**									
	a Primary	289-150	Circuit 26	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-281	F2	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
74	**SOLENOID VALVES 3CC-P1584B2 (CC-666B) & 3CC-P1588B2 (CC-680B)**									
	a Primary	289-150	Circuit 28	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-283	F2	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
75	**RCP 1B INSTRUMENTATION AND ACCESSORIES***									
	a Primary	424-230	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	424-230	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	* Two fuses in-series, one each, + and - poles.									
76	**RCP 2B INSTRUMENTATION AND ACCESSORIES***									
	a Primary	424-250	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	424-250	Fuse	OTS		NA	NA	NA	NA	1, 2, 3, 4
	* Two fuses in-series, one each, + and - poles.									
77	**SOLENOID VALVE 2CA-E604B (ARM-109)**									
	a Primary	289-148	Circuit 26	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 26	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
78	**SOLENOID VALVE 1CH-E2505A (CVC-216A)**									
	a Primary	289-147	Circuit 31	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 31	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
BREAKER PROTECTION	DRAWING NUMBER	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
79 SOLENOID VALVE 1CH-E2505B (CVC-216B)									
a Primary	289-148	Circuit 31	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-148A	Circuit 31	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
80 SOLENOID VALVE 7WM-E677 (SP-102B)*									
a Primary	5817-6368	CB 2	Breaker CH	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	5817-6368	Circuit H4	Breaker QO	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
* 15a breakers on Skid #4 (5817-6368).									
81 SOLENOID VALVES 2RC-2557A (RC-3184), 2RC-2559A (RC-1015), 2RC-2561A (RC-3186)									
a Primary	289-212	Circuit 2	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-120A	F2	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
82 SOLENOID VALVES 2RC-2558B (RC-3183), 2RC-2560B (RC-1014), 2RC-2562B (RC-1017)									
a Primary	289-213	Circuit 2	Breaker EE	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-121A	F1	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
83 SPACE HEATER 1SI-V1505TK1A (SI-331A)									
a Primary	289-186	Circuit 13	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-186A	Circuit 13	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
84 LIMIT SWITCH & INDICATING LIGHTS 1SI-V1505TK1A (SI-331A)									
a Primary	289-147	Circuit 6	Breaker CD	Note VI 2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
b Backup	289-147A	Circuit 6	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3 8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a 1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
86	**SPACE HEATER 1SI-V1507TK2A (SI-332A)**									
	a Primary	289-186	Circuit 15	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-186A	Circuit 15	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
84	**LIMIT SWITCH & INDICATING LIGHTS 1SI-V1507TK2A (SI-332A)**									
	a Primary	289-147	Circuit 8	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 8	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
87	**RCP 1A SPEED SENSOR**									
	a Primary	289-126	Circuit 5	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-126A	F6	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
88	**RCP 2A SPEED SENSOR**									
	a Primary	289-126	Circuit 7	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-126A	F5	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
89	**RADIATION REMOVAL UNIT E-13 (3A) THERMISTOR**									
	a Primary	289-133	Circuit 24	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-133A	F6	Fuse TRS		NA	NA	NA	NA	1, 2, 3, 4
90	**CONTAINMENT COOLING UNIT CONDENSING POT FLOW DETECTOR**									
	a Primary	289-149	Circuit 3	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	626-829	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
91	**PRESSURIZER SPRAY VALVES 1RC-F1501A (RC-301A) & 1RC-F1502B (RC-301B)**									
	a Primary	289-150	Circuit 4	Breaker TEB	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-296	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
92	**MOVABLE INCORE DETECTOR DRIVE MACHINE #1 CONTROL**									
	a Primary	289-126	Circuit 32	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-158	Fuse	FRN		NA	NA	NA	NA	1, 2, 3, 4
93	**MOVABLE INCORE DETECTOR SWITCHING DEVICE**									
	a Primary	289-136	Circuit 7	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-168	Fuse	ABU		NA	NA	NA	NA	1, 2, 3, 4
94	**REFUELING MACHINE CONTROL**									
	a Primary	5817-4241	Fuse	TRS		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	5817-4241	Fuse	KTN/KTNR		NA	NA	NA	NA	1, 2, 3, 4
95	**SPACE HEATER 1SI-V1506TX1B (SI-331B)**									
	a Primary	289-187	Circuit 13	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 13	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
96	**LIMIT SWITCH & INDICATING LIGHTS 1SI-V1506TK1B (SI-331B)**									
	a Primary	289-148	Circuit 6	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 6	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES					WITHIN	EACH VOLTAGE LEVEL (ROMAN)			MODES
	BREAKER PROTECTION	DRAWING	IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
97	**SPACE HEATER 1SI-V150STK2B (SI-332B)**									
	a Primary	289-187	Circuit 15	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-187A	Circuit 15	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
98	**LIMIT SWITCH & INDICATING LIGHTS 1SI-V150STK2B (SI-332B)**									
	a Primary	289-148	Circuit 8	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 8	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
99	**RCP 1B SPEED SENSOR**									
	a Primary	289-127	Circuit 8	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-127A	F6	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
100	**RCP 2B SPEED SENSOR**									
	a Primary	289-127	Circuit 7	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-127A	F5	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
101	**RADIATION REMOVAL UNIT E-13 (3B) THERMISTOR**									
	a Primary	289-134	Circuit 24	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-134A	F1	Fuse ATM		NA	NA	NA	NA	1, 2, 3, 4
102	**CONTAINMENT AIR LOCKS DOOR POSITION INDICATOR**									
	a Primary	289-147	Circuit 33	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-147A	Circuit 33	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4

Table 3.8-1 CONTAINMENT PENETRATION CONDUCTOR OVER-CURRENT PROTECTIVE DEVICES

	OVER-CURRENT PROTECTIVE DEVICES				WITHIN EACH VOLTAGE LEVEL (ROMAN)				MODES
	BREAKER PROTECTION	DRAWING IDENTIFYING NUMBER OR DESCRIPTION	TYPE	TIME CURRENT CHARACTERISTIC	FUNCT TEST 4.8.4.1 a.2	CHAN CALIB 4.8.4.1 a.1.a	INTEG FUNCT TEST 4.8.4.1.a.1.b	INSP & PREV MAINT 4.8.4.1.b	FOR WHICH SURV IS REQUIR'D
103	**CONTAINMENT AIR LOCKS DOOR POSITION INDICATOR**								
	a Primary	289-148	Circuit 33	Breaker CD	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	289-148A	Circuit 33	Fuse FRN		NA	NA	NA	NA	1, 2, 3, 4
104	**POSITION INDICATOR 2BM-F108AB (BM-109)**								
	a Primary	289-133	Circuit 34	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-400 & 405	Circuit 2	Fuse NON		NA	NA	NA	NA	1, 2, 3, 4
105	**POSITION INDICATOR 2WM-F107AB (GWM-104)**								
	a Primary	289-133	Circuit 33	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-660 & 680	Circuit 19	Fuse NON		NA	NA	NA	NA	1, 2, 3, 4
106	**MOVABLE INCORE DETECTOR DRIVE MACHINE #2 CONTROL**								
	a Primary	289-133	Circuit 32	Breaker EE	Note VI.2	10% of Type per R	NA	NA	≤ every 60 M	1, 2, 3, 4
	b Backup	424-158	Fuse	FRN		NA	NA	NA	NA	1, 2, 3, 4
107	**CEDM COOLING UNITS VIBRATION SWITCHES***								
	a Primary	289-110A 424-771 & 2028	Fuse	FB		NA	NA	NA	NA	1, 2, 3, 4
	b Backup	289-110A 424-771 & 2028	Fuse	FB		NA	NA	NA	NA	1, 2, 3, 4

* Two fused breakers, one each, + and - poles.

TABLE 3.8-1 (Continued)

NOTES

I. 6.9 kV POWER FROM MEDIUM VOLTAGE SWITCHGEAT

I.1) Refer to drawing LOU-1564-B-289 sheet and line numbers as indicated.

I.2) Refer to G.E. curve in GEI-68751A and GEI-19959 instruction books for IAC 66M3A and IAC57 relays.

I.3) Relay testings to be performed in accordance with vendor's relay calibration procedures.

TABLE 3.8-1 (Continued)

NOTES (Continued)

II. 480 VOLTS POWER FROM LOW VOLTAGE SWITCHGEAR

II.1) Refer to drawing LOU-1564-B-289 sheet and line numbers as indicated.

II.2) Refer to G.E. curve GES-6032A for ECS programmer.

II.3) Refer to G.E. curve in GEI-19959 instruction book for IAC57 relays.

II.4) Primary breaker is equipped with two sets of protective devices.

II.5) Refer to G.E. curve GES-7005A for IAC77 relays.

II.6) Relay and programmer testing to be performed in accordance with vendor's calibration procedures.

TABLE 3.8-1 (Continued)

NOTES (Continued)

IV. VOLTS POWER FROM MCCs

IV.1) Refer to drawing LOU-1564-B-289 sheet numbers as indicated. Circuit breakers with adjustable instantaneous magnetic trip element are set on the basis of two times the motor locked rotor current. For static loads the setpoint is the minimum available.

IV.2) Refer to the appropriate curves as follows:

EF, EH - ITE/Gould TD8087
EF3 - ITE/Gould Instantaneous Trip
FJ Breaker - ITE/Gould TD4948
JL Breaker - ITE/Gould TD4950
TED Breaker - GE GES-6114A

IV.3) Circuit breaker testing to be performed in accordance with vendor's molded case breaker calibration procedures.

IV.4) Fuse testing to be performed in accordance with vendor's nondestructive resistance test procedures.

IV.5) Backup breaker is equipped with two sets of protective devices.

IV.6) Refer to G.E. curve GES-6032A for ECS programmer.

IV.7) Refer to G.E. curve GES-7004A for IAC66T relays.

IV.8) Relay and programmer testing to be performed in accordance with vendor's calibration procedures.

IV.9) Equivalent breakers and fuses may be substituted for the types specified.

TABLE 3.8-1 (Continued)

NOTES (Continued)

V. 208 VOLTS AND 120 VOLTS CONTROL POWER FROM PDPs or MCCs

V.1) For trip setpoint, refer to drawing LOU-1564-B-289 sheet numbers as indicated.

V.2) Below is listing of molded case breakers by type giving the curve number for time-current characteristic:

TYPE	MANUFACTURER	CURVE NO.
EE, EF	ITE	TD 4947
CD	Heineman	CD, CE, CF
TEB	GE	GES-6122B, 6122
TED	GE	GES-6119C
AM	Heineman	AM
QO	Square D	630-2
CH	Cutler Hammer	Safety Breaker Curve

V.3) Equivalent breakers and fuses may be substituted for the types specified.

TABLE 3.8-1 (Continued)

NOTES (Continued)

VI. 120 VOLTS CONTROL POWER FROM PDPs or MCCs

VI.1) For trip setpoint, refer to drawing LOU-1564-B-289 sheet numbers as indicated.

VI.2) Below is listing of molded case breakers by type giving the curve number for time-current characteristic:

TYPE	MANUFACTURER	CURVE NO.
EE, EF	ITE	TD 4947
CD	Heineman	CD, CE, CF
TEB	GE	GES-6122B, 6122
TED	GE	GES-6119C
AM	Heineman	AM
QO	Square D	630-2
CH	Cutler Hammer	Safety Breaker Curve

VI.3) Equivalent breakers and fuses may be substituted for the types specified.

ELECTRICAL POWER SYSTEMS

MOTOR-OPERATED VALVES THERMAL OVERLOAD PROTECTION AND BYPASS DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.2 The thermal overload protection and bypass devices, integral with the motor starter, of each valve listed in Table 3.8-2 shall be OPERABLE.

APPLICABILITY: Whenever the motor operated valve is required to be OPERABLE.

ACTION:

With one or more of the thermal overload protection and/or bypass devices inoperable, declare the affected valve(s) inoperable and apply the appropriate ACTION Statement(s) for the affected valve(s).

SURVEILLANCE REQUIREMENTS

4.8.4.2 The above required thermal overload protection and bypass devices shall be demonstrated OPERABLE.

a. At least once per 18 months, by the performance of a CHANNEL FUNCTIONAL TEST of the bypass circuitry for those thermal overload devices which are either:

   1. Continuously bypassed and temporarily placed in force only when the valve motors are undergoing periodic or maintenance testing, or

   2. Normally in force during plant operation and bypassed under accident conditions.

b. At least once per 18 months by the performance of a CHANNEL CALIBRATION of a representative sample of at least 25% of:

   1. All thermal overload devices which are not bypassed, such that each nonbypassed device is calibrated at least once per 6 years.

   2. All thermal overload devices which are continuously bypassed and temporarily placed in force only when the valve motors are undergoing periodic or maintenance testing, and thermal overload devices normally in force and bypassed under accident conditions such that each thermal overload is calibrated and each valve is cycled through at least one complete cycle of full travel with the motor-operator when the thermal overload is OPERABLE and not bypassed, at least once per 6 years.