

ATTACHMENT "A" TO

AMENDMENT APPLICATION NPF-10-2

8204090240 820407
PDR ADOCK 05000361
P PDR

ELECTRICAL POWER SYSTEMS

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

LIMITING CONDITION FOR OPERATION

3.8.4.1 All containment penetration conductor overcurrent protective devices shown in Table 3.8-1 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more of the above required containment penetration conductor overcurrent protective device(s) inoperable:

- a. Restore the protective device(s) to OPERABLE status or de-energize the circuit(s) by tripping the associated backup circuit breaker or racking out or removing the inoperable circuit breaker within 72 hours, declare the affected system or component inoperable, and verify the backup circuit breaker to be tripped or the inoperable circuit breaker racked out, or removed, at least once per 7 days thereafter; the provisions of Specification 3.0.4 are not applicable to overcurrent devices in circuits which have their backup circuit breakers tripped, their inoperable circuit breakers racked out, or removed, or
- b. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.4.1 All containment penetration conductor overcurrent protective devices shown in Table 3.8-1 shall be demonstrated OPERABLE:

- a. At least once per 18 months:
 1. By verifying that the medium voltage (4-15 KV) circuit breakers are OPERABLE by selecting, on a rotating basis, at least 10% of the circuit breakers of each voltage level, and performing the following:
 - (a) A CHANNEL CALIBRATION of the associated protective relays, and
 - (b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed and as specified in Table 3.8-1.

ELECTRICAL POWER SYSTEMS

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. For the lower voltage circuit breakers the nominal trip setpoint and short circuit response times are listed in Table 3.8-1. Testing of these circuit breakers 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 insure 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 OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2B0106	1000 (6)	.06	2BLP0101	960 (6)	.02	Containment Normal Cooling Fan E-387
2B0107	4000 (6)	.06	2BLP0102	4400 (6)	.02	CEDM Cooling Supply Fan E-403B
2B0109	4000 (6)	.06	2BLP0103	4400 (6)	.02	CEDM Cooling Supply Fan E-403A
2B0111	1000 (6)	.06	2BLP0104	960 (6)	.02	Standby Containment Normal Cooling Fan E-333
2B0209	1000 (6)	.06	2BLP0201	960 (6)	.02	Containment Normal Cooling Fan E-334
2B0406	600 (6)	.06	2BLP0301	906 (6)	.02	Hydrogen Recombiner E-145 Power Panel L-160
2B0409	1200 (6)	.06	2BLP0302	960 (6)	.02	Upper Dome Air Circulator A-701
2B0410	1500 (6)	.06	2BLP0303	1900 (6)	.02	Containment Emergency Fan E-399
2B0411	1500 (6)	.06	2BLP0304	1900 (6)	.02	Containment Emergency Fan E-401
2B0419	1200 (6)	.06	2BLP0305	960 (6)	.02	Standby Upper Dome Air Circulator A-074
2B0606	600 (6)	.06	2BLP0401	960 (6)	.02	Hydrogen Recombiner E-146 Power Panel L-161
2B0609	1200 (6)	.06	2BLP0402	960 (6)	.02	Upper Dome Air Circulator A-072
2B0610	1500 (6)	.06	2BLP0403	1900 (6)	.02	Containment Emergency Fan E-400
2B0611	1500 (6)	.06	2BLP0404	1900 (6)	.02	Containment Emergency Fan E-402
2B0619	1200 (6)	.06	2BLP0405	960 (6)	.02	Standby Upper Dome Air Circulator A-073
2B0809	1000 (6)	.06	2BLP0501	960 (6)	.02	Containment Normal Cooling Fan E-396
2B0811	1000 (6)	.06	2BLP0601	1200 (6)	.02	Containment Normal Cooling Fan E-398
2B0903	1500 (6)	.06	2BLP0701	1200 (6)	.02	Containment Recirculation Unit E-333
2B0906	1600 (6)	.06	2BLP0702	3200 (6)	.02	Polar Crane (Containment) R001 (C)
2B0907	4000 (6)	.06	2BLP0703	3200 (6)	.02	Standby Control Element Drive Mechanism Cooling Supply Fan E-404A
2B0909	4000 (6)	.06	2BLP0704	3200 (6)	.02	Standby CEDM Cooling Supply Fan E-404B
2B0911	600 (6)	.06	2BLP0705	1200 (6)	.02	Containment Recirculating Unit Heater E-568
2BA02	7 (1)	.03	2BLP0812	15 (2)	.02	CCW from RCP P-001 Seal Heat Exchanger TV-9144
2BA03	6 (1)	.03	2BLP0813	15 (2)	.02	CCW from RCP P-003 Seal Heat Exchanger TV-9154
2BA04 (2BA04-A)	15 (2)	.03	2BLP0801	30 (3)	.02	CEDM Cooling Supply Fan E-403A (Enclosure Heater)

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BA04 (2BA04-B)	15 (2)	.03	2BLP0802	30 (3)	.02	CEDM Cooling Supply Fan E-403B (Enclosure Heater)
2BA04 (2BA04-C)	15 (2)	.03	2BLP0814	30 (3)	.02	Standby Containment Normal Cooling Fan E-393 (Enclosure Heater)
2BA04 (2BA04-D)	15 (2)	.03	2BLP0826	30 (3)	.02	Containmnt Normal Cooling Fan E-394 (Enclosure Heater)
2BA04 (2BA04-E)	15 (2)	.03	2BLP0828	30 (3)	.02	Containment Normal Cooling Fan E-397
2BA08	15 (2)	.03	2BLP0803	30 (3)	.02	Movable Incore Detector Drive Package W338A
2BA11	100 (3)	.02	2BLP0905	750 (6)	.02	Cont. Structure Electric Heater E-467
2BA25	10 (1)	.03	2BLP0910	15 (2)	.02	Cont. Cooling Unit E-393 Circ. Water Outlet HV-9940FB
2BA26	10 (1)	.02	2BLP0911	15 (2)	.02	Cont. Cooling Unit E-394 Circ. Water Outlet HV-9930EB
2BA27	10 (1)	.02	2BLP0912	15 (2)	.02	Cont. Cooling Unit E-397 Circ. Water Outlet HV-9940DB
2BA31	10 (1)	.02	2BLP0913	15 (2)	.02	Cont. Cooling Unit E-393 Circ. Water Outlet HV-9940FC
2BA32	10 (1)	.02	2BLP0914	15 (2)	.02	Cont. Cooling Unit E-394 Circ. Water Inlet HV-9940EC
2BA33	10 (1)	.02	2BLP0915	15 (2)	.02	Cont. Cooling Unit E-397 Circ. Water Inlet HV-9940DC
2BA36	150 (1)	.02	2BLP0808	70 (4)	.02	RCP 1A Oil Lift Pump 1A1 P-260
2BA37	150 (1)	.02	2BLP0809	70 (4)	.02	RCP 1B Oil Lift Pump 1B1 P-264
2BA38	150 (1)	.02	2BLP0810	70 (4)	.02	RCP 2B Oil Lift Pump 2B1 P-262
2BA39	500 (1)	.02	2BLP0901	750 (6)	.02	Reactor Coolant Drain Pump (W) P-023
2BA40	150 (1)	.02	2BLP0811	70 (4)	.02	RCP 2A Oil Lift Pump 2A1 P-266
2BA41	13 (1)	.02	2BLP0817	15 (2)	.02	RCP 1A Anti Rev. Rotation Device Lube Pump 1 P-399
2BA42	13 (1)	.02	2BLP0818	15 (2)	.02	RCP 2B Anti Rev. Rotation Device Lube Pump 1 P-401
2BA43	13 (1)	.02	2BLP0819	15 (2)	.02	RCP 1B Anti Rev. Rotation Device Lube Pump 1 P-403
2BA44	13 (1)	.02	2BLP0820	15 (2)	.02	RCP 2A Anti Rev. Rotation Device Lube Pump 1 P-405
2BA45	625 (1)	.02	2BLP0902	750 (6)	.02	Reactor Cavity Cooling Fan A-313
2BA46	625 (1)	.02	2BLP0903	750 (6)	.02	Standby Reactor Cavity Cooling Fan A-321

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BA47	7 (1)	.02	2BLP0807	15 (2)	.02	Charging Line to Reactor Cooling Loop 1A HV-9203
2BA49	7 (1)	.02	2BLP0821	30 (3)	.02	Reactor Cavity Cooling Unit C HV-9905C
2BA50	7 (1)	.02	2BLP0822	30 (3)	.02	Reactor Cavity Cooling Unit A HV-9905A
2BA51	7 (1)	.02	2BLP0804	15 (2)	.02	Quench Tank to Reactor Drain Tank HV-9101
2BA55	7 (1)	.02	2BLP0805	15 (2)	.02	RCP Bleed Off to Quench Tank HV-9216
2BA57	7 (1)	.02	2BLP0916	15 (2)	.02	CEDM Cooling Unit E-403 CCW Outlet HV-9907AA
2BA58	7 (1)	.02	2BLP0917	15 (2)	.02	CEDM Cooling Unit E-403 CCW Inlet HV-9907AC
2BA59	7 (1)	.02	2BLP0806	15 (2)	.02	Safety Injection Tank to Reactor Drain Tank HV-9335
2BA60	90 (3)	.02	2BLP0904	750 (6)	.02	Welding Receptacles Containment (50 KVA)
2BA62	15 (2)	.03	2BLP0824	30 (3)	.02	Recept. for Portable Cont. Sump Pump (H.P.) P-005 (A)
2BA63	50 (3)	.03	2BLP0906	750 (6)	.02	Containment Elevator P-002 (A)
2BA65	150 (1)	.02	2BLP0815	70 (4)	.02	Lower Level Air Circulator A-031
2BA66	150 (1)	.02	2BLP0816	70 (4)	.02	Lower Level Air Circulator A-033
2BE09	30 (1)	.02	2BLP1001	15 (2)	.02	Saf. Inj. Tank Drain to Refueling Wtr Tank HV-9334
2BE11	100 (1)	.02	2BLP1002	30 (3)	.02	Saf. Inj. Tk T-007 to Reactor Coolant Loop 1B HV-9350
2BE11	100 (1)	.02	2BLP1003	30 (3)	.02	Saf. Inj. Tk T-009 to Reactor Coolant Loop 1V HV-9360
2BE17	13 (1)	.02	2BLP1010	15 (2)	.02	Auxiliary Spray to Pressurizer HV-9201
2BE21	13 (1)	.02	2BLP1012	15 (2)	.02	CCW Noncritical Cont. Inlet Isolation Valve HV-6223
2BE25	200 (1)	.02	2BLP1005	70 (4)	.02	Shutdn Coolant Flow from Reac. Coolant Loop 2 HV-9337
2BE26	7 (1)	.02	2BLP1015	15 (2)	.02	Reac. Coolant Drain Tk Sample Cont. Isolation HV-0516
2BE27	7 (1)	.02	2BLP1016	15 (2)	.02	Containment Isolation Reactor Coolant Drain to Radwaste System HV-7512
2BE30	7 (1)	.02	2BLP1017	15 (2)	.02	Quench Tank Vapor Sample Cont. Isol. HV-0514
2BE31	7 (1)	.02	2BLP1004	15 (2)	.02	Containment Sump to Radwaste Sump HV-5803
2BE33	100 (1)	.02	2BLP1021	30 (3)	.02	Containment Purge Inlet HV-9949
2BE35	20 (1)	.02	2BLP1018	15 (2)	.02	Containment Emergency Sump Outlet HV-9305

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BE46	13 (1)	.02	2BLP1011	15 (2)	.02	CCW Noncritical Containment Isolation Valve HV-6336
2BF08	55 (1)	.02	2BLP0823	30 (3)	.02	Containment Sump Pump P-008
2BF09	55 (1)	.02	2BLP1220	30 (3)	.02	Containment Sump Pump P-007
2BJ05	200 (1)	.02	2BLP1101	70 (4)	.02	Shutdn Coolant Flow from Reac. Coolant Loop 2 HV-9339
2BJ06	100 (1)	.02	2BLP1104	30 (3)	.02	Saf. Inj. Tk T-008 to Reactor Coolant Loop 1A HV-9340
2BJ07	100 (1)	.02	2BLP1105	30 (3)	.02	Saf. Inj. Tk T-010 to Reactor Coolant Loop 2B HV-9370
2BJ17	7 (1)	.02	2BLP1123	15 (2)	.02	RCP Bleed off to Volume Control Tank HV-9217
2BJ21	13 (1)	.02	2BLP1106	15 (2)	.02	Cont. Isol. Safety
2BJ22	7 (1)	.02	2BLP1115	15 (2)	.02	
2BJ23	7 (1)	.02				

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BA47	7 (1)	.02	2BLP0807	15 (2)	.02	Charging Line to Reactor Cooling Loop 1A HV-9203
2BA49	7 (1)	.02	2BLP0821	30 (3)	.02	Reactor Cavity Cooling Unit C HV-9905C
2BA50	7 (1)	.02	2BLP0822	30 (3)	.02	Reactor Cavity Cooling Unit A HV-9905A
2BA51	7 (1)	.02	2BLP0804	15 (2)	.02	Quench Tank to Reactor Drain Tank HV-9101
2BA55	7 (1)	.02	2BLP0805	15 (2)	.02	RCP Bleed Off to Quench Tank HV-9216
2BA57	7 (1)	.02	2BLP0916	15 (2)	.02	CEDM Cooling Unit E-403 CCW Outlet HV-9907AA
2BA58	7 (1)	.02	2BLP0917	15 (2)	.02	CEDM Cooling Unit E-403 CCW Inlet HV-9907AC
2BA59	7 (1)	.02	2BLP0806	15 (2)	.02	Safety Injection Tank to Reactor Drain Tank HV-9335
2BA60	90 (3)	.02	2BLP0904	750 (6)	.02	Welding Receptacles Containment (50 KVA)
			2BLP0824	30 (3)	.02	Recept. for Portable Cont. Sump Pump (H.P.) P-005 (A)

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BN28	7 (1)	.02	2BLP1207	30 (3)	.02	Reactor Cavity Cooling Unit D HV-9905D
2BN29	7 (1)	.02	2BLP1208	30 (3)	.02	Reactor Cavity Cooling Unit B HV-9905B
2BN30	150 (1)	.02	2BLP1209	70 (4)	.02	RCP 1A Oil Lift Pump 1A2 P-261
2BN31	150 (1)	.02	2BLP1210	70 (4)	.02	RCP 1B Oil Lift Pump 1B2 P-265
2BN32	150 (1)	.02	2BLP1211	70 (4)	.02	RCP 2B Oil Lift Pump 2B2-263
2BN33	150 (1)	.02	2BLP1212	70 (4)	.02	RCP 2A Oil Lift Pump 2A2-267
2BN34	500 (1)	.02	2BLP1303	750 (6)	.02	Reactor Coolant Drain Tank Pump (E) P-022
2BN37	13 (1)	.02	2BLP1213	15 (2)	.02	RCP 1A Anti Rev. Rotation Device Lube Pump 2 P-402
2BN38	13 (1)	.02	2BLP1214	15 (2)	.02	RCP 2B Anti Rev. Rotation Device Lube Pump 2 P-402
2BN39	13 (1)	.02	2BLP1215	15 (2)	.02	RCP 1B Anti Rev. Rotation Device Lube Pump 2 P-404
2BN40	13 (1)	.02	2BLP1216	15 (2)	.02	RCP 2A Anti Rev. Rotation Device Lube Pump 2 P-406
2BN42	90 (3)	.02	2BLP1305	750 (6)	.02	Welding Recpt. Cont. (50KVA) 2R005A, 2R005b, 2R005C
2BN43	15 (2)	.03	2BLP1217	30 (3)	.02	CEA Change Mechanism Transfer Machine Control Console (8 KVA) L-023
2BN44	90 (3)	.02	2BLP1306	750 (6)	.02	Welding Recpt. Cont. (50 KVA) 2R007A, 2R007B, 2R007C
2BN45	15 (2)	.03	2BLP1218	30 (3)	.02	Refueling Pool End Junction Box (8KVA) L-371
2BN46	90 (3)	.02	2BLP1308	750 (6)	.02	Welding Recpt. Cont. (50KVA) 2R013A, 2R013B, 2R013C
2BN47	15 (2)	.03	2BLP1219	30 (3)	.02	Receptacle for Portable Cont. Sump Pump (1hp) P-005
2BN48	30 (2)	.03	2BLP1319	20 (4)	.02	Equipment Hatch 200R, Electrical Hoist Z-028, Z-029
2BN52	150 (1)	.02	2BLP1221	70 (4)	.02	Lower Level Air Circulator A-032
2BN53	150 (1)	.02	2BLP1222	70 (4)	.02	Lower Level Air Circulator A-024
2BN56	10 (1)	.02	2BLP1310	15 (2)	.02	Cont. Cooling Unit E-346 Circ. Water Outlet HV-9940BB
2BN57	10 (1)	.02	2BLP1311	15 (2)	.02	Cont. Cooling Unit E-396 Circ. Water Inlet HV-9940BC
2BN58	10 (1)	.02	2BLP1312	15 (2)	.02	Cont. Cooling Unit E-348 Circ. Water Outlet HV-9940CB
2BN59	17 (1)	.02	2BLP1313	15 (2)	.02	Cont. Cooling Unit E-398 Circ. Water Inlet HV-9940CC
2BN60	7 (1)	.02	2BLP1314	15 (2)	.02	CEDM Cooling Unit E-404 CCW Outlet HV-9907BA

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BE46	13 (1)	.02	2BLP1011	15 (2)	.02	CCW Noncritical Containment Isolation Valve HV-6336
2BF08	55 (1)	.02	2BLP0823	30 (3)	.02	Containment Sump Pump P-008
2BF09	55 (1)	.02	2BLP1220	30 (3)	.02	Containment Sump Pump P-007
2BJ05	200 (1)	.02	2BLP1101	70 (4)	.02	Shutdn Coolant Flow from Reac. Coolant Loop 2 HV-9339
2BJ06	100 (1)	.02	2BLP1104	30 (3)	.02	Saf. Inj. Tk T-008 to Reactor Coolant Loop 1A HV-9340
2BJ07	100 (1)	.02	2BLP1105	30 (3)	.02	Saf. Inj. Tk T-010 to Reactor Coolant Loop 2B HV-9370
2BJ17	7 (1)	.02	2BLP1123	15 (2)	.02	RCP Bleed off to Volume Control Tank HV-9217
2BJ21	13 (1)	.02	2BLP1106	15 (2)	.02	Cont. Isol. Safety Injection Tank Vent Header HV-7258
2BJ22	7 (1)	.02	2BLP1115	15 (2)	.02	Reactor Coolant Hot Leg Sample Cont. Isol. HV-0508
2BJ23	7 (1)	.02	2BLP1116	15 (2)	.02	Reactor Coolant Hot Leg Sample Cont. Isol. HV-0517
2BJ26	7 (1)	.02	2BLP1117	15 (2)	.02	Pressurizer Vapor Sample Containment Isol. HV-0510
2BJ27	7 (1)	.02	2BLP1121	15 (2)	.02	Pressur. Surge Line Liquid Smpl. Cont. Isol. HV-0512
2BJ29	100 (1)	.02	2BLP1110	30 (3)	.02	Containment Purge Outlet HV-9950
2BJ30	7 (1)	.02	2BLP1102	15 (2)	.02	Hydrogen Purge Exhaust Unit Inlet HV-9917
2BJ31	7 (1)	.02	2BLP1103	15 (2)	.02	Hydrogen Purge Supply Unit Discharge HV-9946
2BJ34	20 (1)	.02	2BLP1118	15 (2)	.02	Containment Emergency Sump Outlet HV-9304
2BJ47	13 (1)	.02	2BLP1124	15 (2)	.02	Containment Normal Cooling Supply Isol. Valve HV-9400
2BJ48	13 (1)	.02	2BLP1125	15 (2)	.02	Containment Normal Cooling Return Isol. Valve HV-9971
2BN04	15 (2)	.03	2BLP1201	30 (3)	.02	Movable Incore Detector Drive Pack W-3383
2BN07	100 (3)	.02	2BLP1304	750 (6)	.02	Containment Structure Electric Heater E-466
2BN21	7 (1)	.02	2BLP1206	15 (2)	.02	Charging Line to Reactor Coolant Loop 2A HV-9202
2BN24	625 (1)	.02	2BLP1301	750 (6)	.02	Reactor Cavity Cooling Fan A-320
2BN25	625 (1)	.02	2BLP1302	750 (6)	.02	Standby Reactor Cavity Cooling Fan A-322
2BN26	7 (1)	.02	2BLP1226	15 (2)	.02	CCW from RCP P-004 Seal Heat Exchanger TV-9164
2BN27	7 (1)	.02	2BLP1227	15 (2)	.02	CCW from RCP P-002 Seal Heat Exchanger TV-9174

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BN61	7 (1)	.02	2BLP1315	15 (2)	.02	CEDM Cooling Unit E-404 CCW Inlet HV-9907BC
2BN62	15 (2)	.03	2BLP1223	30 (3)	.02	Containment Recirculation Unit A-353 (Motor Enclosure Heater)
(2BN62-A)						
2BN62	15 (2)	.03	2BLP1224	30 (3)	.02	CEDM Cooling Supply Fan E-404A (Motor Enclosure Heater)
(2BN62-B)						
2BN62	15 (2)	.03	2BLP1225	30 (3)	.02	CEDM Cooling Supply Fan E-404B (Motor Enclosure Heater)
(2BN62-C)						
2BN62	15 (2)	.03	2BLP1202	30 (3)	.02	Containment Normal Cooling Fan A-398 (Motor Enclosure Heater)
(2BN62-H)						
2BN62	15 (2)	.03	2BLP1228	30 (3)	.02	Containment Normal Cooling Fan E-398 (Motor Enclosure Heater)
(2BN62-G)						
L0108	900 (6)	.02	L0101	8000 (6)	.05	Panel 2LP4 Emergency Lighting
L0118	900 (6)	.02	L0101	8000 (6)	.05	Panel 2LP11 Emergency Lighting
L0120	900 (6)	.02	L0101	8000 (6)	.05	Panel 2LP16 Emergency Lighting
2BHP0201	70 (3)	.03	2B0205	1000 (6)	.06	Backup Pressurizer Heater E-607
2BHP0202	70 (3)	.03	2B0205	1000 (6)	.06	Backup Pressurizer Heater E-608
2BHP0203	70 (3)	.03	2B0205	1000 (6)	.06	Backup Pressurizer Heater E-609
2BHP0204	70 (3)	.03	2B0205	1000 (6)	.06	Backup Pressurizer Heater E-610
2BHP0301	70 (3)	.03	2B0206	1000 (6)	.06	Backup Pressurizer Heater E-611
2BHP0302	70 (3)	.03	2B0206	1000 (6)	.06	Backup Pressurizer Heater E-612
2BHP0303	70 (3)	.03	2B0206	1000 (6)	.06	Backup Pressurizer Heater E-613
2BHP0304	70 (3)	.03	2B0206	1000 (6)	.06	Backup Pressurizer Heater E-614
2BHP0101	70 (3)	.03	2B0210	900 (6)	.06	Proportional Pressurizer Heater E-601
2BHP0102	70 (3)	.03	2B0210	900 (6)	.06	Proportional Pressurizer Heater E-602
2BHP0103	70 (3)	.03	2B0210	900 (6)	.06	Proportional Pressurizer Heater E-603
2BHP0401	70 (3)	.03	2B0402	1600 (6)	.06	Backup Pressurizer Heater E-615

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2BHP0402	70 (3)	.03	2B0402	1600 (6)	.06	Backup Pressurizer Heater E-616
2BHP0403	70 (3)	.03	2B0402	1600 (6)	.06	Backup Pressurizer Heater E-617
2BHP0404	70 (3)	.03	2B0402	1600 (6)	.06	Backup Pressurizer Heater E-618
2BHP0601	70 (3)	.03	2B0805	1600 (6)	.06	Backup Pressurizer Heater E-619
2BHP0602	70 (3)	.03	2B0805	1600 (6)	.06	Backup Pressurizer Heater E-602
2BHP0603	70 (3)	.03	2B0805	1600 (6)	.06	Backup Pressurizer Heater E-621
2BHP0604	70 (3)	.03	2B0805	1600 (6)	.06	Backup Pressurizer Heater E-622
2BHP0701	70 (3)	.03	2B0806	1600 (6)	.06	Backup Pressurizer Heater E-623
2BHP0702	70 (3)	.03	2B0806	1600 (6)	.06	Backup Pressurizer Heater E-624
2BHP0703	70 (3)	.03	2B0806	1600 (6)	.06	Backup Pressurizer Heater E-625
2BHP0704	70 (3)	.03	2B0806	1600 (6)	.06	Backup Pressurizer Heater E-626
2BHP0501	70 (3)	.03	2B0810	900 (6)	.06	Proportional Pressurizer Heater E-604
2BHP0502	70 (3)	.03	2B0810	900 (6)	.06	Proportional Pressurizer Heater E-605
2BHP0503	70 (3)	.03	2B0810	900 (6)	.06	Proportional Pressurizer Heater E-606
2BHP0801	70 (3)	.03	2B0602	1000 (6)	.06	Backup Pressurizer Heater E-627
2BHP0802	70 (3)	.03	2B0602	1000 (6)	.06	Backup Pressurizer Heater E-628
2BHP0803	70 (3)	.03	2B0602	1000 (6)	.06	Backup Pressurizer Heater E-639
2BHP0804	70 (3)	.03	2B0602	1000 (6)	.06	Backup Pressurizer Heater E-630
2RY40	20 (3)	.02	2BLP1013	15 (2)	.02	Cont. Bldg. Emer. A/C Unit E-399 (Motor Enclos. Htr.)
2BY40	20 (3)	.02	2BCP1014	15 (2)	.02	Cont. Bldg. Emer. A/C Unit E-401 (Motor Enclos. Htr.)
2BZ32	35 (1)	.02	2BLP1111	15 (2)	.02	Reactor Coolant Regen. Heat Exch. Isol. Valve TV-9267
2BZ38	20 (3)	.02	2BLP1112	15 (2)	.02	Containment Bldg. Emergency A/C Unit E-400
2BZ38	20 (3)	.02	2BLP1126	15 (2)	.02	Containment Bldg. Emergency A/C Unit E-403
2Q01704	15 (2)	.03	2Q017 (Main Breaker)	100 (3)	.02	Containment Peactor Cavity Cooling Fan E-319 (Motor Enclosure Heater)
2Q01706	15 (2)	.03	2Q017 (Main Breaker)	100 (3)	.02	Containment Reactor Cavity Cooling Fan A-321 (Motor Enclosure Heater)

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2Q01724	20 (2)	.03	2Q017 (Main Breaker)	100 (3)	.02	Containment Sump Inlet Flow 2FT5799A/B, 2FT5802A/B
2Q02801	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	RCP P-001 (Motor Enclosure Heater)
2Q02802	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	RCP P-004 (Motor Enclosure Heater)
2Q02803	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	RCP P-002 (Motor Enclosure Heater)
2Q02804	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	Containment Reactor Cavity Cooling Fan A-320 (Motor Enclosure Heater)
2Q02805	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	RCP P-003 (Motor Enclosure Heater)
2Q02808	15 (2)	.03	2Q028 (Main Breaker)	100 (3)	.02	Containment Reactor Cavity Cooling Fan (Motor Enclosure Heater)
2Q03904	15 (2)	.02	2Q039 (Main Breaker)	100 (3)	.02	Dome Circulating Fan A-071 (Motor Enclosure Heater)
2Q03906	15 (2)	.02	2Q039 (Main Breaker)	100 (3)	.02	Dome Circulating Fan A-074 (Motor Enclosure Heater)
2Q04104	15 (2)	.02	2Q041 (Main Breaker)	100 (3)	.02	Standby Dome Circulating Fan A-072 (Motor Enclosure Heater)
2Q04106	15 (2)	.02	2Q041 (Main Breaker)	100 (3)	.02	Standby Dome Circulating Fan A-073
2D5P108	70 (2)	.02	2D503	1500 (6)	.03	Panel 2LP4 Emergency Lighting
2D5P109	70 (2)	.02	2D503	1500 (6)	.03	Panel 2LP11 Emergency Lighting
2D5P118	100 (2)	.02	2D503	1500 (6)	.03	Panel 3LP16 Emergency Lighting
2A0101	(7)	(7)	2A0102	24,800	1.5	Reactor Coolant Pump P-001
			2A0104	24,800	1.5	Reactor Coolant Pump P-001
			2A0105	24,800	1.5	Reactor Coolant Pump P-001

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
2A0103	(7)	(7)	2A0102	24,800	1.5	Reactor Coolant Pump P-004
			2A0104	24,800	1.5	Reactor Coolant Pump P-004
			2A0105	24,800	1.5	Reactor Coolant Pump P-004
2A0201	(7)	(7)	2A0202	24,800	1.5	Reactor Coolant Pump P-002
			2A0204	24,800	1.5	Reactor Coolant Pump P-002
			2A0205	24,800	1.5	Reactor Coolant Pump P-002
2A0203	(7)	(7)	2A0202	24,800	1.5	Reactor Coolant Pump P-003
			2A0204	24,800	1.5	Reactor Coolant Pump P-003
			2A0205	24,800	1.5	Reactor Coolant Pump P-003
CEA04	100 (8)	.03	CB3001	400 (8)	.03	CEA4
CEA05	100 (8)	.03	CB3001	400 (8)	.03	CEA5
CEA06	100 (8)	.03	CB3001	400 (8)	.03	CEA6
CEA07	100 (8)	.03	CB3001	400 (8)	.03	CEA7
CEA08	100 (8)	.03	CB3002	400 (8)	.03	CEA8
CEA09	100 (8)	.03	CB3002	400 (8)	.03	CEA9
CEA10	100 (8)	.03	CB3002	400 (8)	.03	CEA10
CEA11	100 (8)	.03	CB3002	400 (8)	.03	CEA11
CEA12	100 (8)	.03	CB3003	400 (8)	.03	CEA12
CEA14	100 (8)	.03	CB3003	400 (8)	.03	CEA14
CEA16	100 (8)	.03	CB3003	400 (8)	.03	CEA16
CEA18	100 (8)	.03	CB3003	400 (8)	.03	CEA16
CEA13	100 (8)	.03	CB3004	400 (8)	.03	CEA13
CEA15	100 (8)	.03	CB3004	400 (8)	.03	CEA15
CEA17	100 (8)	.03	CB3004	400 (8)	.03	CEA17
CEA19	100 (8)	.03	CB3004	400 (8)	.03	CEA19

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
CEA20	100 (8)	.03	CB3005	400 (8)	.03	CEA20
CEA21	100 (8)	.03	CB3005	400 (8)	.03	CEA21
CEA22	100 (8)	.03	CB3005	400 (8)	.03	CEA22
CEA23	100 (8)	.03	CB3005	400 (8)	.03	CEA23
CEA24	100 (8)	.03	CB3006	400 (8)	.03	CEA24
CEA25	100 (8)	.03	CB3006	400 (8)	.03	CEA25
CEA26	100 (8)	.03	CB3006	400 (8)	.03	CEA26
CEA27	100 (8)	.03	CB3006	400 (8)	.03	CEA27
CEA28	100 (8)	.03	CB3007	400 (8)	.03	CEA28
CEA30	100 (8)	.03	CB3007	400 (8)	.03	CEA30
CEA32	100 (8)	.03	CB3007	400 (8)	.03	CEA32
CEA34	100 (8)	.03	CB3007	400 (8)	.03	CEA34
CEA29	100 (8)	.03	CB3008	400 (8)	.03	CEA29
CEA31	100 (8)	.03	CB3008	400 (8)	.03	CEA31
CEA33	100 (8)	.03	CB3008	400 (8)	.03	CEA33
CEA35	100 (8)	.03	CB3008	400 (8)	.03	CEA35
CEA36	100 (8)	.03	CB3009	400 (8)	.03	CEA36
CEA38	100 (8)	.03	CB3009	400 (8)	.03	CEA38
CEA40	100 (8)	.03	CB3009	400 (8)	.03	CEA40
CEA42	100 (8)	.03	CB3009	400 (8)	.03	CEA42
CEA37	100 (8)	.03	CB3010	400 (8)	.03	CEA37
CEA39	100 (8)	.03	CB3010	400 (8)	.03	CEA39
CEA41	100 (8)	.03	CB3010	400 (8)	.03	CEA41
CEA43	100 (8)	.03	CB3010	400 (8)	.03	CEA43

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
CEA44	100 (8)	.03	CB3023	400 (8)	.03	CEA44
CEA45	100 (8)	.03	CB3023	400 (8)	.03	CEA45
CEA46	100 (8)	.03	CB3023	400 (8)	.03	CEA46
CEA47	100 (8)	.03	CB3023	400 (8)	.03	CEA47
CEA48	100 (8)	.03	CB3024	400 (8)	.03	CEA48
CEA50	100 (8)	.03	CB3024	400 (8)	.03	CEA50
CEA52	100 (8)	.03	CB3024	400 (8)	.03	CEA52
CEA54	100 (8)	.03	CB3024	400 (8)	.03	CEA54
CEA49	100 (8)	.03	CB3011	400 (8)	.03	CEA49
CEA51	100 (8)	.03	CB3011	400 (8)	.03	CEA51
CEA53	100 (8)	.03	CB3011	400 (8)	.03	CEA53
CEA55	100 (8)	.03	CB3011	400 (8)	.03	CEA55
CEA56	100 (8)	.03	CB3012	400 (8)	.03	CEA56
CEA57	100 (8)	.03	CB3012	400 (8)	.03	CEA57
CEA58	100 (8)	.03	CB3012	400 (8)	.03	CEA58
CEA59	100 (8)	.03	CB3012	400 (8)	.03	CEA59
CEA60	100 (8)	.03	CB3013	400 (8)	.03	CEA60
CEA62	100 (8)	.03	CB3013	400 (8)	.03	CEA62
CEA64	100 (8)	.03	CB3013	400 (8)	.03	CEA64
CEA66	100 (8)	.03	CB3013	400 (8)	.03	CEA66
CEA61	100 (8)	.03	CB3014	400 (8)	.03	CEA61
CEA63	100 (8)	.03	CB3014	400 (8)	.03	CEA63
CEA65	100 (8)	.03	CB3014	400 (8)	.03	CEA65
CEA67	100 (8)	.03	CB3014	400 (8)	.03	CEA67

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
CEA68	100 (8)	.03	CB3015	400 (8)	.03	CEA68
CEA71	100 (8)	.03	CB3015	400 (8)	.03	CEA71
CEA74	100 (8)	.03	CB3015	400 (8)	.03	CEA74
CEA77	100 (8)	.03	CB3015	400 (8)	.03	CEA77
CEA69	100 (8)	.03	CB3016	400 (8)	.03	CEA69
CEA72	100 (8)	.03	CB3016	400 (8)	.03	CEA72
CEA75	100 (8)	.03	CB3016	400 (8)	.03	CEA75
CEA78	100 (8)	.03	CB3016	400 (8)	.03	CEA78
CEA70	100 (8)	.03	CB3017	400 (8)	.03	CEA70
CEA73	100 (8)	.03	CB3017	400 (8)	.03	CEA73
CEA76	100 (8)	.03	CB3017	400 (8)	.03	CEA76
CEA79	100 (8)	.03	CB3017	400 (8)	.03	CEA79
CEA80	100 (8)	.03	CB3018	400 (8)	.03	CEA80
CEA82	100 (8)	.03	CB3018	400 (8)	.03	CEA82
CEA84	100 (8)	.03	CB3018	400 (8)	.03	CEA84
CEA86	100 (8)	.03	CB3018	400 (8)	.03	CEA86
CEA81	100 (8)	.03	CB3019	400 (8)	.03	CEA81
CEA83	100 (8)	.03	CB3019	400 (8)	.03	CEA83
CEA85	100 (8)	.03	CB3019	400 (8)	.03	CEA85
CEA87	100 (8)	.03	CB3019	400 (8)	.03	CEA87
CEA88	100 (8)	.03	CB3020	400 (8)	.03	CEA88
CEA89	100 (8)	.03	CB3020	400 (8)	.03	CEA89
CEA90	100 (8)	.03	CB3020	400 (8)	.03	CEA90
CEA91	100 (8)	.03	CB3020	400 (8)	.03	CEA91

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Primary Device			Backup Device			Service Description
Number	Trip Setpoint (amperes)	Resp. Time (sec)	Number	Trip Setpoint (amperes)	Resp. Time (sec)	
CEA02	100 (8)	.03	CB3025	400 (8)	.03	CEA2
CEA03	100 (8)	.03	CB3025	400 (8)	.03	CEA3
CEA01	100 (8)	.03	CB3026	400 (8)	.03	CEA1

1. Instantaneous setpoint
2. Thermal magnetic breaker, response time is for 50 times of rated current.
3. Thermal magnetic breaker, response time is for 25 times of rated current.
4. Thermal magnetic breaker, response time is for 15 times of rated current.
5. Thermal magnetic breaker, response time is for 10 times of rated current.
6. Instantaneous setpoint, response time is for 2 times of instantaneous setpoint.
7. Use differential relay, will cause breaker to trip in 0.03 second.
8. No instantaneous setpoint, response time is for 10 times of rated current.

ATTACHMENT "B" TO
AMENDMENT APPLICATION NO. NPF-10-2

We propose that Technical Specification 4.8.4.1.a.1.b be modified to read as follows:

- (b) An integrated system functional test which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed.

We also propose that Specification 4.8.4.1.a.2 be modified to read as follows:

- 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 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 insure 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.

LP:3907

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2B0106	2BLP0101	Containment Normal Cooling Fan E-397
2B0107	2BLP0102	CEDM Cooling Supply Fan E-403B
2B0109	2BLP0103	CEDM Cooling Supply Fan E-403A
2B0111	2BLP0104	Standby Containment Normal Cooling Fan E-393
2B0209	2BLP0201	Containment Normal Cooling Fan E-394
2B0406	2BLP0301	Hydrogen Recombiner E-145 Power Panel L-160
2B0409	2BLP0302	Upper Dome Air Circulator A-071
2B0410	2BLP0303	Containment Emergency Fan E-399
2B0411	2BLP0304	Containment Emergency Fan E-401
2B0419	2BLP0305	Standby Upper Dome Air Circulator A-074
2B0606	2BLP0401	Hydrogen Recombiner E-146 Power Panel L-161
2B0609	2BLP0402	Upper Dome Air Circulator A-072
2B0610	2BLP0403	Containment Emergency Fan E-400
2B0611	2BLP0404	Containment Emergency Fan E-402
2B0619	2BLP0405	Standby Upper Dome Air Circulator A-073
2B0809	2BLP0501	Containment Normal Cooling Fan E-396
2B0811	2BLP0601	Containment Normal Cooling Fan E-398
2B0903	2BLP0701	Containment Recirculation Unit E-333
2B0906	2BLP0702	Polar Crane (Containment) R001 (C)
2B0907	2BLP0703	Standby Control Element Drive Mechanism Cooling Supply Fan E-404A
2B0909	2BLP0704	Standby CEDM Cooling Supply Fan E-404B
2B0911	2BLP0705	Containment Recirculating Unit Heater E-568
2BA02	2BLP0812	CCW from RCP P-001 Seal Heat Exchanger TV-9144
2BA03	2BLP0813	CCW from RCP P-003 Seal Heat Exchanger TV-9154
2BA04 (2BA04-A)	2BLP0801	CEDM Cooling Supply Fan E-403A (Enclosure Heater)

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BA04 (2BA04-B)	2BLP0802	CEDM Cooling Supply Fan E-403B (Enclosure Heater)
2BA04 (2BA04-C)	2BLP0814	Standby Containment Normal Cooling Fan E-393 (Enclosure Heater)
2BA04 (2BA04-D)	2BLP0826	Containment Normal Cooling Fan E-394 (Enclosure Heater)
2BA04 (2BA04-E)	2BLP0828	Containment Normal Cooling Fan E-397
2BA08	2BLP0803	Movable Incore Detector Drive Package W338A
2BA11	2BLP0905	Cont. Structure Electric Heater E-467
2BA25	2BLP0910	Cont. Cooling Unit E-393 Circ. Water Outlet HV-9940FB
2BA26	2BLP0911	Cont. Cooling Unit E-394 Circ. Water Outlet HV-9930EB
2BA27	2BLP0912	Cont. Cooling Unit E-397 Circ. Water Outlet HV-9940DB
2BA31	2BLP0913	Cont. Cooling Unit E-393 Circ. Water Outlet HV-9940FC
2BA32	2BLP0914	Cont. Cooling Unit E-394 Circ. Water Inlet HV-9940EC
2BA33	2BLP0915	Cont. Cooling Unit E-397 Circ. Water Inlet HV-9940DC
2BA36	2BLP0808	RCP 1A Oil Lift Pump 1A1 P-260
2BA37	2BLP0809	RCP 1B Oil Lift Pump 1B1 P-264
2BA38	2BLP0810	RCP 2B Oil Lift Pump 2B1 P-262
2BA39	2BLP0901	Reactor Coolant Drain Pump (W) P-023
2BA40	2BLP0811	RCP 2A Oil Lift Pump 2A1 P-266
2BA41	2BLP0817	RCP 1A Anti Rev. Rotation Device Lube Pump 1 P-399
2BA42	2BLP0818	RCP 2B Anti Rev. Rotation Device Lube Pump 1 P-401
2BA43	2BLP0819	RCP 1B Anti Rev. Rotation Device Lube Pump 1 P-403
2BA44	2BLP0820	RCP 2A Anti Rev. Rotation Device Lube Pump 1 P-405
2BA45	2BLP0902	Reactor Cavity Cooling Fan A-313
2BA46	2BLP0903	Standby Reactor Cavity Cooling Fan A-321

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BA47	2BLP0807	Charging Line to Reactor Cooling Loop 1A HV-9203
2BA49	2BLP0821	Reactor Cavity Cooling Unit C HV-9905C
2BA50	2BLP0822	Reactor Cavity Cooling Unit A HV-9905A
2BA51	2BLP0804	Quench Tank to Reactor Drain Tank HV-9101
2BA55	2BLP0805	RCP Bleed Off to Quench Tank HV-9216
2BA57	2BLP0916	CEDM Cooling Unit E-403 CCW Outlet HV-9907AA
2BA58	2BLP0917	CEDM Cooling Unit E-403 CCW Inlet HV-9907AC
2BA59	2BLP0806	Safety Injection Tank to Reactor Drain Tank HV-9335
2BA60	2BLP0904	Welding Receptacles Containment (50 KVA)
2BA62	2BLP0824	Recept. for Portable Cont. Sump Pump (H.P.) P-005 (A)
2BA63	2BLP0906	Containment Elevator P-002 (A)
2BA65	2BLP0815	Lower Level Air Circulator A-031
2BA66	2BLP0816	Lower Level Air Circulator A-033
2BE09	2BLP1001	Saf. Inj. Tank Drain to Refueling Wtr Tank HV-9334
2BE11	2BLP1002	Saf. Inj. Tk T-007 to Reactor Coolant Loop 1B HV-9350
2BE11	2BLP1003	Saf. Inj. Tk T-009 to Reactor Coolant Loop 2A HV-9360
2BE17	2BLP1010	Auxiliary Spray to Pressurizer HV-9201
2BE21	2BLP1012	CCW Noncritical Cont. Inlet Isolation Valve HV-6223
2BE25	2BLP1005	Shutdown Coolant Flow from Reac. Cool. Loop 2 HV-9337
2BE26	2BLP1015	Reac. Coolant Drain Tk Sample Cont. Isolation HV-0516
2BE27	2BLP1016	Containment Isolation Reactor Coolant Drain to Radwaste System HV-7512
2BE30	2BLP1017	Quench Tank Vapor Sample Cont. Isol. HV-0514
2BE31	2BLP1004	Containment Sump to Radwaste Sump HV-5803
2BE33	2BLP1021	Containment Purge Inlet HV-9949
2BE35	2BLP1018	Containment Emergency Sump Outlet HV-9305

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BE46	2BLP1011	CCW Noncritical Containment Isolation Valve HV-6336
2BF08	2BLP0823	Containment Sump Pump P-008
2BF09	2BLP1220	Containment Sump Pump P-007
2BJ05	2BLP1101	Shutdown Coolant Flow from Reac. Cool. Loop 2 HV-9339
2BJ06	2BLP1104	Saf. Inj. Tk T-008 to Reactor Coolant Loop 1A HV-9340
2BJ07	2BLP1105	Saf. Inj. Tk T-010 to Reactor Coolant Loop 2B HV-9370
2BJ17	2BLP1123	RCP Bleed off to Volume Control Tank HV-9217
2BJ21	2BLP1106	Cont. Isol. Safety Injection Tank Vent Header HV-7258
2BJ22	2BLP1115	Reactor Coolant Hot Leg Sample Cont. Isol. HV-0508
2BJ23	2BLP1116	Reactor Coolant Hot Leg Sample Cont. Isol. HV-0517
2BJ26	2BLP1117	Pressurizer Vapor Sample Containment Isol. HV-0510
2BJ27	2BLP1121	Pressur. Surge Line Liquid Smpl. Cont. Isol. HV-0512
2BJ29	2BLP1110	Containment Purge Outlet HV-9950
2BJ30	2BLP1102	Hydrogen Purge Exhaust Unit Inlet HV-9917
2BJ31	2BLP1103	Hydrogen Purge Supply Unit Discharge HV-9946
2BJ34	2BLP1118	Containment Emergency Sump Outlet HV-9304
2BJ47	2BLP1124	Containment Normal Cooling Supply Isol. Valve HV-9400
2BJ48	2BLP1125	Containment Normal Cooling Return Isol. Valve HV-9971
2BN04	2BLP1201	Movable Incore Detector Drive Pack W-3383
2BN07	2BLP1304	Containment Structure Electric Heater E-466
2BN21	2BLP1206	Charging Line to Reactor Coolant Loop 2A HV-9202
2BN24	2BLP1301	Reactor Cavity Cooling Fan A-320
2BN25	2BLP1302	Standby Reactor Cavity Cooling Fan A-322
2BN26	2BLP1226	CCW from RCP P-004 Seal Heat Exchanger TV-9164
2BN27	2BLP1227	CCW from RCP P-002 Seal Heat Exchanger TV-9174

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BN28	2BLP1207	Reactor Cavity Cooling Unit D HV-9905D
2BN29	2BLP1208	Reactor Cavity Cooling Unit B HV-9905B
2BN30	2BLP1209	RCP 1A Oil Lift Pump 1A2 P-261
2BN31	2BLP1210	RCP 1B Oil Lift Pump 1B2 P-265
2BN32	2BLP1211	RCP 2B Oil Lift Pump 2B2 P-263
2BN33	2BLP1212	RCP 2A Oil Lift Pump 2A2 P-267
2BN34	2BLP1303	Reactor Coolant Drain Tank Pump (E) P-022
2BN37	2BLP1213	RCP 1A Anti Rev. Rotation Device Lube Pump 2 P-400
2BN38	2BLP1214	RCP 2B Anti Rev. Rotation Device Lube Pump 2 P-402
2BN39	2BLP1215	RCP 1B Anti Rev. Rotation Device Lube Pump 2 P-404
2BN40	2BLP1216	RCP 2A Anti Rev. Rotation Device Lube Pump 2 P-406
2BN42	2BLP1305	Welding Recpt. Cont. (50KVA) 2R005A, 2R005b, 2R005C
2BN43	2BLP1217	CEA Change Mechanism Transfer Machine Control Console (8 KVA) L-023
2BN44	2BLP1306	Welding Recpt. Cont. (50 KVA) 2R007A, 2R007B, 2R007C
2BN45	2BLP1218	Refueling Pool End Junction Box (8KVA) L-371
2BN46	2BLP1308	Welding Recpt. Cont. (50KVA) 2R013A, 2R013B, 2R013C
2BN47	2BLP1219	Receptacle for Portable Cont. Sump Pump (1hp) P-005
2BN49	2BLP1319	Equipment Hatch 200R, Electrical Hoist Z-028, Z-029
2BN52	2BLP1221	Lower Level Air Circulator A-032
2BN53	2BLP1222	Lower Level Air Circulator A-024
2BN56	2BLP1310	Cont. Cooling Unit E-346 Circ. Water Outlet HV-9940BB
2BN57	2BLP1311	Cont. Cooling Unit E-396 Circ. Water Inlet HV-9940BC
2BN58	2BLP1312	Cont. Cooling Unit E-348 Circ. Water Outlet HV-9940CB
2BN59	2BLP1313	Cont. Cooling Unit E-398 Circ. Water Inlet HV-9940CC
2BN60	2BLP1314	CEDM Cooling Unit E-404 CCW Outlet HV-9907BA

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BN61	2BLP1315	CEDM Cooling Unit E-404 CCW Inlet HV-9907BC
2BN62 (2BN62-A)	2BLP1223	Containment Recirculation Unit A-353 (Motor Enclosure Heater)
2BN62 (2BN62-B)	2BLP1224	CEDM Cooling Supply Fan E-404A (Motor Enclosure Heater)
2BN62 (2BN62-C)	2BLP1225	CEDM Cooling Supply Fan E-404B (Motor Enclosure Heater)
2BN62 (2BN62-H)	2BLP1202	Containment Normal Cooling Fan A-398 (Motor Enclosure Heater)
2BN62 (2BN62-G)	2BLP1228	Containment Normal cooling Fan E-398 (Motor Enclosure Heater)
L0108	L0101	Panel 2LP4 Emergency Lighting
L0118	L0101	Panel 2LP11 Emergency Lighting
L0120	L0101	Panel 2LP16 Emergency Lighting
2BHP0201	2B0205	Backup Pressurizer Heater E-607
2BHP0202	2B0205	Backup Pressurizer Heater E-608
2BHP0203	2B0205	Backup Pressurizer Heater E-609
2BHP0204	2B0205	Backup Pressurizer Heater E-610
2BHP0301	2B0206	Backup Pressurizer Heater E-611
2BHP0302	2B0206	Backup Pressurizer Heater E-612
2BHP0303	2B0206	Backup Pressurizer Heater E-613
2BHP0304	2B0206	Backup Pressurizer Heater E-614
2BHP0101	2B0210	Proportional Pressurizer Heater E-601
2BHP0102	2B0210	Proportional Pressurizer Heater E-602
2BHP0103	2B0210	Proportional Pressurizer Heater E-603
2BHP0401	2B0402	Backup Pressurizer Heater E-615

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2BHP0402	2B0402	Backup Pressurizer Heater E-616
2BHP0403	2B0402	Backup Pressurizer Heater E-617
2BHP0404	2B0402	Backup Pressurizer Heater E-618
2BHP0601	2B0805	Backup Pressurizer Heater E-619
2BHP0602	2B0805	Backup Pressurizer Heater E-602
2BHP0603	2B0805	Backup Pressurizer Heater E-621
2BHP0604	2B0805	Backup Pressurizer Heater E-622
2BHP0701	2B0806	Backup Pressurizer Heater E-623
2BHP0702	2B0806	Backup Pressurizer Heater E-624
2BHP0703	2B0806	Backup Pressurizer Heater E-625
2BHP0704	2B0806	Backup Pressurizer Heater E-626
2BHP0501	2B0810	Proportional Pressurizer Heater E-604
2BHP0502	2B0810	Proportional Pressurizer Heater E-605
2BHP0503	2B0810	Proportional Pressurizer Heater E-606
2BHP0801	2B0602	Backup Pressurizer Heater E-627
2BHP0802	2B0602	Backup Pressurizer Heater E-628
2BHP0803	2B0602	Backup Pressurizer Heater E-639
2BHP0804	2B0602	Backup Pressurizer Heater E-630
2BY40	2BLP1013	Cont. Bldg. Emer. A/C Unit E-399 (Motor Enclos. Htr.)
2BY40	2BCP1014	Cont. Bldg. Emer. A/C Unit E-401 (Motor Enclos. Htr.)
2BZ32	2BLP1111	Reactor Coolant Regen. Heat Exch. Isol. Valve TV-9267
2BZ38	2BLP1112	Containment Bldg. Emergency A/C Unit E-400
2BZ38	2BLP1126	Containment Bldg. Emergency A/C Unit E-403
2Q01704	2Q017 (Main Breaker)	Containment Reactor Cavity Cooling Fan E-319 (Motor Enclosure Heater)
2Q01706	2Q017 (Main Breaker)	Containment Reactor Cavity Cooling Fan A-321 (Motor Enclosure Heater)

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2Q01724	2Q017 (Main Breaker)	Containment Sump Inlet Flow 2FT5799A/B, 2FT5802A/B
2Q02801	2Q028 (Main Breaker)	RCP P-001 (Motor Enclosure Heater)
2Q02802	2Q028 (Main Breaker)	RCP P-004 (Motor Enclosure Heater)
2Q02803	2Q028 (Main Breaker)	RCP P-002 (Motor Enclosure Heater)
2Q02804	2Q028 (Main Breaker)	Containment Reactor Cavity Cooling Fan A-320 (Motor Enclosure Heater)
2Q02805	2Q028 (Main Breaker)	RCP P-003 (Motor Enclosure Heater)
2Q02808	2Q028 (Main Breaker)	Containment Reactor Cavity Cooling Fan (Motor Enclosure Heater)
2Q03904	2Q039 (Main Breaker)	Dome Circulating Fan A-071 (Motor Enclosure Heater)
2Q03906	2Q039 (Main Breaker)	Dome Circulating Fan A-074 (Motor Enclosure Heater)
2Q04104	2Q041 (Main Breaker)	Standby Dome Circulating Fan A-072 (Motor Enclosure Heater)
2Q04106	2Q041 (Main Breaker)	Standby Dome Circulating Fan A-073
2D5P108	2D503	Panel 2LP4 Emergency Lighting
2D5P109	2D503	Panel 2LP11 Emergency Lighting
2D5P118	2D503	Panel 3LP16 Emergency Lighting
2A0101	2A0102 2A0104 2A0105	Reactor Coolant Pump P-001 Reactor Coolant Pump P-001 Reactor Coolant Pump P-001

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
2A0103	2A0102	Reactor Coolant Pump P-004
	2A0104	Reactor Coolant Pump P-004
	2A0105	Reactor Coolant Pump P-004
2A0201	2A0202	Reactor Coolant Pump P-002
	2A0204	Reactor Coolant Pump P-002
	2A0205	Reactor Coolant Pump P-002
2A0203	2A0202	Reactor Coolant Pump P-003
	2A0204	Reactor Coolant Pump P-003
	2A0205	Reactor Coolant Pump P-003
CEA04	CB3001	CEA4
CEA05	CB3001	CEA5
CEA06	CB3001	CEA6
CEA07	CB3001	CEA7
CEA08	CB3002	CEA8
CEA09	CB3002	CEA9
CEA10	CB3002	CEA10
CEA11	CB3002	CEA11
CEA12	CB3003	CEA12
CEA14	CB3003	CEA14
CEA16	CB3003	CEA16
CEA18	CB3003	CEA16
CEA13	CB3004	CEA13
CEA15	CB3004	CEA15
CEA17	CB3004	CEA17
CEA19	CB3004	CEA19

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
CEA20	CB3005	CEA20
CEA21	CB3005	CEA21
CEA22	CB3005	CEA22
CEA23	CB3005	CEA23
CEA24	CB3006	CEA24
CEA25	CB3006	CEA25
CEA26	CB3006	CEA26
CEA27	CB3006	CEA27
CEA28	CB3007	CEA28
CEA30	CB3007	CEA30
CEA32	CB3007	CEA32
CEA34	CB3007	CEA34
CEA29	CB3008	CEA29
CEA31	CB3008	CEA31
CEA33	CB3008	CEA33
CEA35	CB3008	CEA35
CEA36	CB3009	CEA36
CEA38	CB3009	CEA38
CEA40	CB3009	CEA40
CEA42	CB3009	CEA42
CEA37	CB3010	CEA37
CEA39	CB3010	CEA39
CEA41	CB3010	CEA41
CEA43	CB3010	CEA43

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
CEA44	CB3023	CEA44
CEA45	CB3023	CEA45
CEA46	CB3023	CEA46
CEA47	CB3023	CEA47
CEA48	CB3024	CEA48
CEA50	CB3024	CEA50
CEA52	CB3024	CEA52
CEA54	CB3024	CEA54
CEA49	CB3011	CEA49
CEA51	CB3011	CEA51
CEA53	CB3011	CEA53
CEA55	CB3011	CEA55
CEA56	CB3012	CEA56
CEA57	CB3012	CEA57
CEA58	CB3012	CEA58
CEA59	CB3012	CEA59
CEA60	CB3013	CEA60
CEA62	CB3013	CEA62
CEA64	CB3013	CEA64
CEA66	CB3013	CEA66
CEA61	CB3014	CEA61
CEA63	CB3014	CEA63
CEA65	CB3014	CEA65
CEA67	CB3014	CEA67

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
CEA68	CB3015	CEA68
CEA71	CB3015	CEA71
CEA74	CB3015	CEA74
CEA77	CB3015	CEA77
CEA69	CB3016	CEA69
CEA72	CB3016	CEA72
CEA75	CB3016	CEA75
CEA78	CB3016	CEA78
CEA70	CB3017	CEA70
CEA73	CB3017	CEA73
CEA76	CB3017	CEA76
CEA79	CB3017	CEA79
CEA80	CB3018	CEA80
CEA82	CB3018	CEA82
CEA84	CB3018	CEA84
CEA86	CB3018	CEA86
CEA81	CB3019	CEA81
CEA83	CB3019	CEA83
CEA85	CB3019	CEA85
CEA87	CB3019	CEA87
CEA88	CB3020	CEA88
CEA89	CB3020	CEA89
CEA90	CB3020	CEA90
CEA91	CB3020	CEA91

TABLE 3.8-1

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

<u>Primary Device</u>	<u>Backup Device</u>	<u>Service Description</u>
CEA02	CB3025	CEA2
CEA03	CB3025	CEA3
CEA01	CB3026	CEA1