50-395

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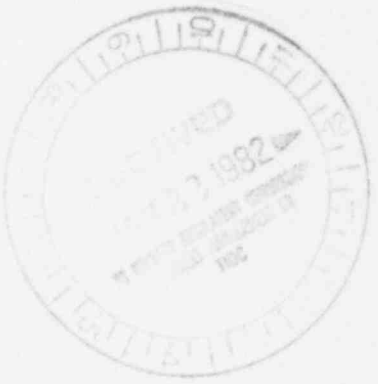

Mr. Martin Virgilio
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Virgil C. Summer Nuclear Station
Technical Specifications

Dear Mr. Virgilio:

In reference to Table 3.8-1, Containment Penetration Conductor Overcurrent Protective Device Test Setpoint Criteria, we asked our engineers to determine if there were any electrical penetrations to which the cables would fuse before damaging the penetration. Gilbert Associates, Inc. performed a study to determine the maximum cable size that would fuse before the penetration reached its thermal limit of 350°C. The approach of the analysis was to determine the energy required to raise the cable conductor temperature to its melting point taking into account ambient heat losses and comparing it with the energy required to raise the penetration conductor temperature to 350°C. The result of the analysis is that the cable sizes which will fuse before the penetration reaches its thermal limit are as follows:

250 MCM Penetration	# 1 Awg Cable or Smaller
#1/0 Penetration	# 4 Awg Cable or Smaller
#4 Awg Penetration	# 8 Awg Cable or Smaller

Based on the above, it is requested that the following items be eliminated from Table 3.8-1:

18-65, 67, 68, 71, 98-107, 109, 111, 113, 114, 117-119, 122-124, 126, 128-131, 133-137, 140, 141, 144-157, 159-163.

For these penetrations, the cable will fuse before the thermal limit of the penetration is reached eliminating the need for overcurrent protective devices.

It is also requested that the surveillance requirement for fuses be eliminated since the above analysis has eliminated all the electrical penetrations which were protected by fuses.

Enclosed are the corresponding corrections to the Technical Specifications. In addition to the changes above, please note that several corrections have also been made in the Table.

Cordially yours,

Ronald B Clary

Ronald B. Clary, Manager
Nuclear Licensing

B001
S
1/1

cc: D. A. Nauman
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NPCF
File

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 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.

3. By selecting and functionally testing a representative sample of each type of fuse on a rotating basis. Each representative sample of fuses shall include at least 10% of all fuses of that type. The functional test shall consist of a non-destructive resistance measurement test which demonstrates that the fuse meets its manufacturer's design criteria. Fuses found inoperable during these functional tests shall be replaced with OPERABLE fuses prior to resuming operation. For each fuse found inoperable during these functional tests, an additional representative sample of at least 10% of all fuses of that type shall be functionally tested until no more failures are found or all fuses 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 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
480 V SWGR.					
1) XFN0067A-AH CRDM CLNG. SYS. FAN A	PRIMARY	XSW1A3/1C	LONG TIME	540 Amps	≤ ~~12~~ 30 Sec.
			SHORT TIME	2700 Amps	≤ 0.17 Sec.
			INSTANT	~~3375~~ 2025 Amps	≤ 0.09 Sec.
XSW1A3 MAIN INCOMING	BACKUP	XSW1A3/4B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
BUS TIE TO XSWIC3	BACKUP	XSW1A3/4C	LONG TIME	3000 Amps	≤ 12 Sec.
			SHORT TIME	4500 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
2) XFN0067D-AH CDRM CLNG. SYS. FAN D	PRIMARY	XSW1A3/~~BA~~ 3A	LONG TIME	540 Amps	≤ ~~12~~ 30 Sec.
			SHORT TIME	2700 Amps	≤ 0.17 Sec.
			INSTANT	~~3375~~ 2025 Amps	≤ 0.09 Sec.
XSW1A3 MAIN INCOMING	BACKUP	XSW1A3/4B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
BUS TIE TO XSWIC3	BACKUP	XSW1A3/4C	LONG TIME	3000 Amps	≤ 12 Sec.
			SHORT TIME	4500 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
3) XCR0004-FH REACTOR BLDG POLAR CRANE	PRIMARY	XSW1A3/2C	LONG TIME	744 Amps	≤ 98 Sec.
			SHORT TIME	N/A	N/A
			INSTANT	4050 Amps	≤ 0.09 Sec.
XSW1A3 MAIN INCOMING	BACKUP	XSW1A3/4B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
3) CONTINUED:					
BUS TIE TO XSWIC3	BACKUP	XSW1A3/4C	LONG TIME	3000 Amps	≤ 12 Sec.
			SHORT TIME	4500 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
4) XFN0009A-AH R.B., REACTOR COMPART. CLNG FAN A	PRIMARY	XSW1A3/2A	LONG TIME	360 Amps	≤ 30 Sec.
			SHORT TIME	1350 Amps	≤ 0.17 Sec.
			INSTANT	~~1800~~ 1350 Amps	≤ 0.09 Sec.
XSWIA3 MAIN INCOMING	BACKUP	XSW1A3/4B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
BUS TIE TO XSWIC3	BACKUP	XSW1A3/4C	LONG TIME	3000 Amps	≤ 12 Sec.
			SHORT TIME	4500 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
5) XFN0067B-AH CRDM CLNG. SYS. FAN B	PRIMARY	XSW1B3/2D	LONG TIME	525 Amps	≤ 30 Sec.
			SHORT TIME	2250 Amps	≤ 0.17 Sec.
			INSTANT	~~3000~~ 2250 Amps	≤ 0.09 Sec.
XSWIB3 MAIN INCOMING	BACKUP	XSW1B3/4B	LONG TIME	9000 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
EMERGENCY FEED FROM XSW1DB1	BACKUP	XSW1B3/3B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	6000 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
6) XFN0009B-AH R.B., REACTOR COMPART. CLNG FAN B	PRIMARY	XSW1B3/3A	LONG TIME	525 Amps	≤ 12 Sec.
			SHORT TIME	1125 Amps.	≤ 0.17 Sec.
			INSTANT	1500 Amps	≤ 0.09 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
6) CONTINUED:					
XSW1B3 MAIN INCOMING	BACKUP	XSW1B3/4B	LONG TIME	9000 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
EMERGENCY FEED FROM XSW1DB1	BACKUP	XSW1B3/3B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	6000 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
7) XFN00067C-AH CDRM CLNG. SYSTEM FAN C	PRIMARY	XSW1C3/2D	LONG TIME	540 Amps	≤ 30 Sec.
			SHORT TIME	2700 Amps	≤ 0.17 Sec.
			INSTANT	~~3375~~ 2025 Amps	≤ 0.09 Sec.
XSW1C3 MAIN INCOMING	BACKUP	XSW1C3/3B	LONG TIME	4800 Amps	≤ 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
BUS TIE TO XSW1A3	BACKUP	XSW1A3/4C	LONG TIME	3000 Amps	≤ 12 Sec.
			SHORT TIME	4500 Amps	≤ 0.32 Sec.
			INSTANT	N/A	N/A
8) MFN0097B-AH R.B. CLNG. UNIT FAN XFN64B EMERGENCY MOTOR	PRIMARY	XSW1DB1/6D	LONG TIME	525 Amps	≤ 30 Sec.
			SHORT TIME	1500 Amps	≤ 0.17 Sec.
			INSTANT	2250 Amps	≤ 0.09 Sec.
XSW1DB1 MAIN INCOMING	BACKUP	XSW1DB1/4B	LONG TIME	~~9000~~ 6300 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
9) MFN0096B-AH R.B. CLNG. UNIT FAN XFN64B NORMAL MOTOR	PRIMARY	XSW1DB1/7B	LONG TIME	1260 Amps	≤ 30 Sec.
			SHORT TIME	5400 Amps	≤ 0.17 Sec.
			INSTANT	~~7200~~ 5400 Amps	≤ 0.09 Sec.

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TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
9) CONTINUED:					
XSWIDB1 MAIN INCOMING	BACKUP	XSW1DB1/4B	LONG TIME	~~9000~~ 6300 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
10) MFN0096C-AH R.B. CLNG. UNIT FAN XFN65A NORMAL MOTOR	PRIMARY	XSW1DA1/5B	LONG TIME	1260 Amps	≤ 30 Sec.
			SHORT TIME	5400 Amps	≤ 0.17 Sec.
			INSTANT	~~7200~~ 5400 Amps	≤ 0.09 Sec.
XSWIDA1 MAIN INCOMING	BACKUP	XSW1DA1/4B	LONG TIME	~~9000~~ 6300 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
11) MFN0097C-AH R.B. CLNG. UNIT FAN XFN65A EMERGENCY MOTOR	PRIMARY	XSW1DA1/6C	LONG TIME	525 Amps	≤ 30 Sec.
			SHORT TIME	1500 Amps	≤ 0.17 Sec.
			INSTANT	2250 Amps	≤ 0.09 Sec.
XSWIDA1 MAIN INCOMING	BACKUP	XSW1DA1/4B	LONG TIME	~~9000~~ 6300 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
12) MFN0096A-AH R.B. CLNG. UNIT FAN XFN64A NORMAL MOTOR	PRIMARY	XSW1DA1/6B	LONG TIME	1260 Amps	≤ 30 Sec.
			SHORT TIME	5400 Amps	≤ 0.17 Sec.
			INSTANT	~~7200~~ 5400 Amps	≤ 0.09 Sec.
XSWIDA1 MAIN INCOMING	BACKUP	XSW1DA1/4B	LONG TIME	~~9000~~ 6300 Amps	≤ 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.17 Sec.
			INSTANT	N/A	N/A
13) MFN0097A-AH R.B. CLNG. UNIT FAN XFN64A EMERGENCY MOTOR	PRIMARY	XSW1DA1/5C	LONG TIME	525 Amps	≤ 30 Sec.
			SHORT TIME	1500 Amps	≤ 0.17 Sec.
			INSTANT	2250 Amps	≤ 0.09 Sec.

PROPOSED CHANGE

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
13) CONTINUED:					
XSWIDA1 MAIN INCOMING	BACKUP	XSW1DA1/4B	LONG TIME	~~9000~~ 6300 Amps	< 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
14) MFN0096D-AH R.B. CLNG. UNIT FAN XFN65B NORMAL MOTOR	PRIMARY	XSW1DB1/7C	LONG TIME	1260 Amps	< 30 Sec.
			SHORT TIME	5400 Amps	≤ 0.17 Sec.
			INSTANT	~~7200~~ 5400 Amps	≤ 0.09 Sec.
XSWIDB1 MAIN INCOMING	BACKUP	XSW1DB1/4B	LONG TIME	~~9000~~ 6300 Amps	< 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
15) MFN0097D-AH R.B. CLNG. UNIT FAN XFN65B EMERGENCY MOTOR	PRIMARY	XSW1DB1/6C	LONG TIME	525 Amps	< 30 Sec.
			SHORT TIME	1500 Amps	≤ 0.17 Sec.
			INSTANT	2250 Amps	≤ 0.09 Sec.
XSWIDB1 MAIN INCOMING	BACKUP	XSW1DB1/4B	LONG TIME	~~9000~~ 6300 Amps	< 12 Sec.
			SHORT TIME	9000 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
16) XHR0004A-HR H_2 RECOMBINER PWR. PNL. TO RECOMBINER FEED	PRIMARY	XSW1DA2/5C	LONG TIME	315 Amps	< 12 Sec.
			SHORT TIME	N/A	N/A
			INSTANT	900 Amps	≤ 0.09 Sec.
XSWIDA2 MAIN INCOMING	BACKUP	XSW1DA2/4B	LONG TIME	4800 Amps	< 12 Sec.
			SHORT TIME	7200 Amps	≤ 0.50 Sec.
			INSTANT	N/A	N/A
17) XHR0004B-HR Hz RECOMBINER PWR. PNL. TO RECOMBINER FEED	PRIMARY	XSW1DB2/5C	LONG TIME	315 Amps	< 12 Sec.
			SHORT TIME	N/A	N/A
			INSTANT	900 Amps	≤ 0.09 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT		RESPONSE TIME
17) CONTINUED:					
XSWIDB2 MAIN INCOMING	BACKUP	XSW1DB2/4B	LONG TIME SHORT TIME INSTANT	4800 Amps 7200 Amps N/A	$\leq$ 12 Sec. $\leq$ 0.50 Sec. N/A
440 Vac CDRM PWR. CAB. 1AC, CONTROL BANK A,					
18) MECHANISM 1 -					
XCA1A-CR	A59-Fu13	PRIMARY	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A59-Fu17	BACKUP	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A51-Fu1	PRIMARY	XCA1A	$\geq$ 1.4 Milliohms	N/A
XCA1A-CR	A57-Fu1	BACKUP	XCA1A	$\geq$ 1.4 Milliohms	N/A
XCA1A-CR	A59-Fu21	PRIMARY	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A61-Fu45	BACKUP	XCA1A	$\geq$ 18 Milliohms	N/A
19) MECHANISM 2 -					
XCA1A-CR	A59-Fu14	PRIMARY	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A59-Fu18	BACKUP	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A51-Fu2	PRIMARY	XCA1A	$\geq$ 1.4 Milliohms	N/A
XCA1A-CR	A57-Fu2	BACKUP	XCA1A	$\geq$ 1.4 Milliohms	N/A
XCA1A-CR	A59-Fu22	PRIMARY	XCA1A	$\geq$ 18 Milliohms	N/A
XCA1A-CR	A61-Fu46	BACKUP	XCA1A	$\geq$ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1AC, CONTINUED:				
20) MECHANISM 3 -				
XCA1A-CR	A59-Fu15	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A59-Fu19	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A52-Fu1	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A58-Fu1	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A59-Fu23	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A61-Fu47	BACKUP	XCA1A	≥ 18 Milliohms	N/A
21) MECHANISM 4 -				
XCA1A-CR	A59-Fu16	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A59-Fu20	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A52-Fu2	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A58-Fu2	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A59-Fu24	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A61-Fu48	BACKUP	XCA1A	≥ 18 Milliohms	N/A
440 Vac CDRM POWER CABINET 1AC, CONTROL BANK C, GROUP 1				
22) MECHANISM 1 -				
XCA1A-CR	A60-Fu25	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A60-Fu29	BACKUP	XCA1A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. IAC, CONTINUED:				
XCA1A-CR A53-Fu1	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A57-Fu1	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A60-Fu33	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu45	BACKUP	XCA1A	≥ 18 Milliohms	N/A
23) MECHANISM 2 -				
XCA1A-CR A60-Fu26	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A60-Fu30	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A53-Fu2	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A57-Fu2	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A60-Fu34	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu46	BACKUP	XCA1A	≥ 18 Milliohms	N/A
24) MECHANSIMS 3 -				
XCA1A-CR A60-Fu27	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A60-Fu31	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A54-Fu1	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A58-Fu1	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A60-Fu35	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu47	BACKUP	XCA1A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION		DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1AC, CONTINUED:					
25) MECHANISM 4 -					
XCA1A-CR	A60-Fu28	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A60-Fu32	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A54-Fu2	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A58-Fu2	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A60-Fu36	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A61-Fu48	BACKUP	XCA1A	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 1AC, SHUTDOWN BANK A, GROUP 1					
26) MECHANISM 1 -					
XCA1A-CR	A61-Fu41	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A60-Fu37	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A55-Fu1	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A57-Fu1	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR	A61-Fu49	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A61-Fu45	BACKUP	XCA1A	≥ 18 Milliohms	N/A
27) MECHANISM 2 -					
XCA1A-CR	A61-Fu42	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR	A60-Fu38	BACKUP	XCA1A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1AC, CONTINUED:				
XCA1A-CR A55-Fu2	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A57-Fu2	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A61-Fu50	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu46	BACKUP	XCA1A	≥ 18 Milliohms	N/A
28) MECHANISM 3 -				
XCA1A-CR A61-Fu43	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A60-Fu39	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A56-Fu1	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A58-Fu1	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A61-Fu51	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu47	BACKUP	XCA1A	≥ 18 Milliohms	N/A
29) MECHANSIMS 4 -				
XCA1A-CR A61-Fu44	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A60-Fu40	BACKUP	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A56-Fu2	PRIMARY	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A58-Fu2	BACKUP	XCA1A	≥ 1.4 Milliohms	N/A
XCA1A-CR A61-Fu52	PRIMARY	XCA1A	≥ 18 Milliohms	N/A
XCA1A-CR A61-Fu48	BACKUP	XCA1A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
~~440 VAC CRDM POWER CABINET 2AC, SHUTDOWN BANK A, GROUP 2~~				
30) MECHANISM 1 -				
XCA2A-CR	A59-Fu13	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A59-Fu17	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A51-Fu1	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A57-Fu1	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A59-Fu21	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu45	BACKUP	XCA2A	≥ 18 Milliohms	N/A
31) MECHANISM 2 -				
XCA2A-CR	A59-Fu14	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A59-Fu18	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A51-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A57-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A59-Fu15	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A59-Fu19	BACKUP	XCA2A	≥ 18 Milliohms	N/A
32) MECHANISM 3 -				
XCA2A-CR	A59-Fu15	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A59-Fu19	BACKUP	XCA2A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 AC, CONTINUED:				
XCA2A-CR A52-Ful1	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A58-Ful	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A59-Fu23	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A61-Fu47	BACKUP	XCA2A	≥ 18 Milliohms	N/A
33) MECHANISM 4 -				
XCA2A-CR A59-Fu16	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A59-Fu20	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A52-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A58-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A59-Fu24	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A61-Fu45	BACKUP	XCA2A	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 2 AC, CONTROL BANK C, GROUP 2				
34) MECHANISM 1-				
XCA2A-CR A60-F25	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A60-Fu29	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A53-Ful	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A57-Ful	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 AC, CONTINUED:				
XCA2A-CR	A60-Fu33	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu45	BACKUP	XCA2A	≥ 18 Milliohms	N/A
35) MECHANISM 2 -				
XCA2A-CR	A60-Fu26	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A60-Fu30	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A53-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A57-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A60-Fu34	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A60-Fu46	BACKUP	XCA2A	≥ 18 Milliohms	N/A
36) MECHANISM 3 -				
XCA2A-CR	A60-Fu27	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A60-Fu31	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A54-Fu1	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A58-Fu1	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A60-Fu35	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu47	BACKUP	XCA2A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM POW. CAB. 2AC, CONTINUED:				
37) MECHANISM 4 -				
XCA2A-CR A60-Fu28	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A60-Fu32	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A54-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A58-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A60-Fu36	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A61-Fu48	BACKUP	XCA2A	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 2AC, SHUTDOWN BANK A, GROUP 2				
38) MECHANISM 1 -				
XCA2A-CR A61-Fu41	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A60-Fu37	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A55-Fu1	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A57-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR A61-Fu49	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A61-Fu45	BACKUP	XCA2A	≥ 18 Milliohms	N/A
39) MECHANISM 2 -				
XCA2A-CR A61-Fu42	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR A60-Fu38	BACKUP	XCA2A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION		DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 AC, CONTINUED:					
XCA2A-CR	A55-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A57-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A61-Fu50	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu46	BACKUP	XCA2A	≥ 18 Milliohms	N/A
40) MECHANISM 3 -					
XCA2A-CR	A61-Fu43	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A60-Fu39	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A56-Fu1	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A58-Fu1	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A61-Fu51	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu47	BACKUP	XCA2A	≥ 18 Milliohms	N/A
41) MECHANISM 4-					
XCA2A-CR	A61-Fu44	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A60-Fu40	BACKUP	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A56-Fu2	PRIMARY	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A58-Fu2	BACKUP	XCA2A	≥ 1.4 Milliohms	N/A
XCA2A-CR	A61-Fu52	PRIMARY	XCA2A	≥ 18 Milliohms	N/A
XCA2A-CR	A61-Fu48	BACKUP	XCA2A	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
~~440 VAC CRDM POWER CABINET 1BD, SHUTDOWN BANK B, GROUP 1~~				
42) MECHANISM 1 -				
XCA1B-CR A59-Fu13	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A59-Fu17	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A51-Fu1	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A57-Fu1	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A59-Fu21	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A61-Fu45	BACKUP	XCA1B	≥ 18 Milliohms	N/A
43) MECHANISM 2 -				
XCA1B-CR A59-Fu14	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A59-Fu18	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A51-Fu2	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A57-Fu2	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A59-Fu22	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A61-Fu46	BACKUP	XCA1B	≥ 18 Milliohms	N/A
44) MECHANISM 3 -				
XCA1B-CR A59-Fu15	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A59-Fu19	BACKUP	XCA1B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1BD, CONTINUED:				
XCA1B-CR A52-Fu1	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A58-Fu1	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A59-Fu23	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A61-Fu47	BACKUP	XCA1B	≥ 18 Milliohms	N/A
45) MECHANISM 4 -				
XCA1B-CR A59-Fu16	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A59-Fu20	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A52-Fu2	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A58-Fu2	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A59-Fu24	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A61-Fu48	BACKUP	XCA1B	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET, CONTROL BANK D, GROUP 1				
46) MECHANISM 1 -				
XCA1B-CR A60-Fu25	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A60-Fu29	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR A53-Fu1	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR A57-Fu1	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1BD, CONTINUED:				
XCA1B-CR	A60-Fu33	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A61-Fu45	BACKUP	XCA1B	≥ 18 Milliohms	N/A
47) MECHANISM 2 -				
XCA1B-CR	A60-Fu26	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A60-Fu30	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A53-Fu2	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A57-Fu2	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A60-Fu34	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A61-Fu46	BACKUP	XCA1B	≥ 18 Milliohms	N/A
48) MECHANISM 3 -				
XCA1B-CR	A60-Fu27	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A60-Fu31	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A54-Fu1	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A58-Fu1	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A60-Fu35	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A61-Fu47	BACKUP	XCA1B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1BD, CONTINUED:				
49) MECHANISM 4 -				
XCA1B-CR	A60-Fu28	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A60-Fu32	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A54-Fu2	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A58-Fu2	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A60-Fu36	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A61-Fu48	BACKUP	XCA1B	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 1BD, SHUTDOWN BANK B, GROUP 1				
50) MECHANISM 1 -				
XCA1B-CR	A61-Fu41	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A60-Fu37	BACKUP	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A55-Fu1	PRIMARY	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A57-Fu1	BACKUP	XCA1B	≥ 1.4 Milliohms	N/A
XCA1B-CR	A61-Fu49	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A61-Fu45	BACKUP	XCA1B	≥ 18 Milliohms	N/A
51) MECHANISM 2 -				
XCA1B-CR	A61-Fu42	PRIMARY	XCA1B	≥ 18 Milliohms	N/A
XCA1B-CR	A60-Fu38	BACKUP	XCA1B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 1BD, CONTINUED:				
XCA1B-CR A55-Fu2	PRIMARY	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A57-Fu2	BACKUP	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A61-Fu50	PRIMARY	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A61-Fu46	BACKUP	XCA1B	$\geq$ 18 Milliohms	N/A
52) MECHANISM 3 -				
XCA1B-CR A61-Fu43	PRIMARY	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A60-Fu39	BACKUP	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A56-Fu1	PRIMARY	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A58-Fu1	BACKUP	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A61-Fu51	PRIMARY	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A61-Fu47	BACKUP	XCA1B	$\geq$ 18 Milliohms	N/A
53) MECHANISM 4 -				
XCA1B-CR A61-Fu44	PRIMARY	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A60-Fu40	BACKUP	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A56-Fu2	PRIMARY	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A58-Fu2	BACKUP	XCA1B	$\geq$ 1.4 Milliohms	N/A
XCA1B-CR A61-Fu52	PRIMARY	XCA1B	$\geq$ 18 Milliohms	N/A
XCA1B-CR A61-Fu48	BACKUP	XCA1B	$\geq$ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
440 VAC CRDM POWER CABINET 2 BD, CONTROL BANK B, GROUP 2				
54) MECHANISM 1 -				
XCA2B-CR	A59-Fu13	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A59-Fu17	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A51-Fu1	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A57-Fu1	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A59-Fu21	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu45	BACKUP	XCA2B	≥ 18 Milliohms	N/A
55) MECHANISM 2 -				
XCA2B-CR	A59-Fu14	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A59-Fu18	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A51-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A57-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A59-Fu22	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu46	BACKUP	XCA2B	≥ 18 Milliohms	N/A
56) MECHANISM 3 -				
XCA2B-CR	A59-Fu15	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A59-Fu19	BACKUP	XCA2B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 BD, CONTINUED:				
XCA2B-CR A52-Fu1	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A58-Fu1	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A59-Fu23	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A61-Fu47	BACKUP	XCA2B	≥ 18 Milliohms	N/A
57) MECHANISM 4 -				
XCA2B-CR A59-Fu16	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A59-Fu20	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A52-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A58-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A59-Fu24	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A61-Fu48	BACKUP	XCA2B	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 2BD, CONTROL BANK D, GROUP 2				
58) MECHANISM 1 -				
XCA2B-CR A60-Fu25	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A60-Fu29	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A53-Fu1	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A57-Fu1	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 BD, CONTINUED:				
XCA2B-CR	A60-Fu33	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu45	BACKUP	XCA2B	≥ 18 Milliohms	N/A
59) MECHANISM 2 -				
XCA2B-CR	A60-Fu26	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A60-Fu30	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A53-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A57-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A60-Fu34	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu46	BACKUP	XCA2B	≥ 18 Milliohms	N/A
60) MECHANISM 3 -				
XCA2B-CR	A60-Fu27	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A60-Fu31	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A54-Ful	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A58-Ful	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A60-Fu35	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu47	BACKUP	XCA2B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 BD, CONTINUED:				
61) MECHANISM 4 -				
XCA2B-CR A60-Fu28	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A60-Fu32	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A54-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A58-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A60-Fu36	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A61-Fu4B	BACKUP	XCA2B	≥ 18 Milliohms	N/A
440 VAC CRDM POWER CABINET 2BD, SHUTDOWN BANK D, GROUP 2				
62) MECHANISM 1-				
XCA2B-CR A61-Fu41	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A60-Fu37	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A55-Fu1	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A57-Fu1	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR A61-Fu49	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A61-Fu45	BACKUP	XCA2B	≥ 18 Milliohms	N/A
63) MECHANISM 2 -				
XCA2B-CR A61-Fu42	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR A60-Fu38	BACKUP	XCA2B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
CRDM PWR. CAB. 2 BD, CONTINUED:				
XCA2B-CR	A55-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A57-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A61-Fu50	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu46	BACKUP	XCA2B	≥ 18 Milliohms	N/A
64) MECHANISM 3 -				
XCA2B-CR	A61-Fu43	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A60-Fu39	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A56-Fu1	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A58-Fu1	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A61-Fu51	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu47	BACKUP	XCA2B	≥ 18 Milliohms	N/A
65) MECHANISM 4 -				
XCA2B-CR	A61-Fu44	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A60-Fu40	BACKUP	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A56-Fu2	PRIMARY	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A58-Fu2	BACKUP	XCA2B	≥ 1.4 Milliohms	N/A
XCA2B-CR	A61-Fu48	PRIMARY	XCA2B	≥ 18 Milliohms	N/A
XCA2B-CR	A61-Fu48	BACKUP	XCA2B	≥ 18 Milliohms	N/A

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
18 125 VAC				
~~66~~) DPN8007C-ED Emergency LTG. PNL. 7	PRIMARY	DPN1HX/14	120 Amps	≤ 30 sec.
	BACKUP	DPN1HX/M2	1500 Amps	≤ 250 Sec.
120 VAC MISC.				
~~67) XBJ0002-IC/INCORE THERMOCOUPLE REF. JUNCT. BOX 2~~	~~PRIMARY~~	~~APN1FX1/25~~	~~45 Amps~~	~~≤ 45 Sec.~~
	~~BACKUP~~	~~APN1FX1/27~~	~~450 Amps~~	~~≤ 150 Sec.~~
~~68) XBJ0002-IC/INCORE THERMOCOUPLE REF. JUNCT. BOX 1~~	~~PRIMARY~~	~~APN1FX1/24~~	~~45 Amps~~	~~≤ 45 Sec.~~
	~~BACKUP~~	~~APN1FX1/27~~	~~450 AMPS~~	~~≤ 150 Sec.~~
19 ~~69) XPN7060-CR/ROD POSITION INDICATION PNL. 1~~	PRIMARY	APN1FC1/2	120 Amps	≤ 30 Sec.
	BACKUP	APN1FA/25 (Normal Feed)	450 Amps	≤ 150 Sec.
	BACKUP	APN1FB/25 (Emerg. Feed)	450 Amps	≤ 150 Sec.
20 ~~70) XPN7061-CR/ROD POSITION INDICATION PNL. 2~~	PRIMARY	APN1FC1/4	120 Amps	≤ 30 Sec.
	BACKUP	APN1FA/25 (Normal Feed)	450 Amps	≤ 150 Sec.
	BACKUP	APN1FB/25 (Emerg. Feed)	450 Amps	≤ 150 Sec.
~~71) APN5915-EV/TRANSMITTER PWR. SUPPLY CAB. NO. 3~~	~~PRIMARY~~	~~APN5906/25~~	~~60 Amps~~	~~≤ 45 Sec.~~
	~~BACKUP~~	~~X1T5906 (Normal Feed)~~	~~Later~~	
	~~BACKGGROUND~~	~~APN1FX/25 (Emerg. Feed)~~	~~375 Amps~~	~~≤ 150 Sec.~~

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
21 460 VAC MISC.				
~~72~~) PRESS. HTR. GROUP 23,49,50 -RC	PRIMARY	APN4101/1	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
22				
~~73~~) PRESS. HTR. GROUP 28, 55, 56 -RC	PRIMARY	APN4101/2	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
23				
~~74~~) PRESS. HTR. GROUP 29, 57, 58 -RC	PRIMARY	APN4101/3	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
24				
~~75~~) PRESS. HTR. GROUP 26, 53, 54 -RC	PRIMARY	APN4101/4	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
25				
~~76~~) PRESS. HTR, GROUP 21, 47, 48 -RC	PRIMARY	APN4101/5	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
26				
~~77~~) PRESS. HTR. GROUP 1, 2, 22 - RC	PRIMARY	APN4101/6	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
27				
~~78~~) PRESS. HTR. GROUP 5, 6, 27 -RC	PRIMARY	APN4101/7	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
28				
~~79~~) PRESS. HTR. GROUP 3, 4, 35 -RC	PRIMARY	APN4101/8	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
460 VAC MISC. CONTINUED:				
29 ~~80~~) PRESS. HTR. GROUP 7, 8, 30 -RC	PRIMARY	APN4101/9	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
30 ~~81~~) PRESS. HTR. GROUP 24, 51, 52 -RC	PRIMARY	APN4101/10	270 Amps	≤ 75 Sec.
	BACKUP	APN4101/MN.	2400 Amps	≤ 350 Sec.
31 ~~82~~) PRESS. HTR. GROUP 17, 18, 42 -RC	PRIMARY	APN4102/1	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
32 ~~82~~) PRESS. HTR. GROUP 19, 20, 45 -RC	PRIMARY	APN4102/2	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
33 ~~83~~) PRESS. HTR, GROUP 38, 67, 68 -RC	PRIMARY	APN4102/3	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
34 ~~84~~) PRESS. HTR. GROUP 39, 69, 70 - RC	PRIMARY	APN4102/4	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
35 ~~85~~) PRESS. HTR. GROUP 44, 75, 76 -RC	PRIMARY	APN4102/5	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
36 ~~86~~) PRESS. HTR. GROUP 41, 71, 72 -RC	PRIMARY	APN4102/6	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
460 VAC MISC. CONTINUED:				
37 ~~87~~) PRESS. HTR. GROUP 43, 73, 74 -RC	PRIMARY	APN4102/7	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
38 ~~88~~) PRESS. HTR. GROUP 15, 16, 40 -RC	PRIMARY	APN4102/8	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
39 ~~89~~) PRESS. HTR. GROUP 46, 77, 78 -RC	PRIMARY	APN4102/9	270 Amps	≤ 75 Sec.
	BACKUP	APN4102/MN.	1500 Amps	≤ 200 Sec.
40 ~~90~~) PRESS. HTR. GROUP 9, 10, 32 -RC	PRIMARY	APN4103/1	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
41 ~~91~~) PRESS. HTR, GROUP 11, 12, 35 -RC	PRIMARY	APN4103/2	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
42 ~~92~~) PRESS. HTR. GROUP 31, 59, 60 - RC	PRIMARY	APN4103/3	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
43 ~~93~~) PRESS. HTR. GROUP 36, 65, 66 -RC	PRIMARY	APN4103/4	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
44 ~~94~~) PRESS. HTR. GROUP 13, 14, 37 -RC	PRIMARY	APN4103/5	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
45 460 VAC MISC. CONTINUED:				
~~95)~~ PRESS. HTR. GROUP 33, 61, 62 -RC	PRIMARY	APN4103/6	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
46				
~~96)~~ PRESS. HTR. GROUP 34, 63, 64 -RC	PRIMARY	APN4103/7	270 Amps	≤ 75 Sec.
	BACKUP	APN4103/MN.	2400 Amps	≤ 350 Sec.
47 480 VAC MOTOR CONTROL CENTERS				
~~97)~~ XFN0066A-AH/RB CHARCOAL CLEANUP UNIT FAN A	PRIMARY	XMC1A3X/10GK	1500 Amps	N/A
	BACKUP	XMC1A3X/10GK	210 Amps	≤ 200 Sec ≤ ~~95~~ Sec.
~~98) XPP0138-ND/LEAK DETECTION SUMP PUMP~~	~~PRIMARY~~	~~XMC1A3X/41L~~	~~225 Amps~~	~~N/A~~
	BACKUP	XMC1A3X/41L	45 Amps	≤ 100 Sec.
99) XDO 0001-IC/TERM. BOX FOR INCORE NEUTRON DETECTOR DRIVES A,B,C,D,E	~~PRIMARY~~	XMC1A3X/3EG	45 Amps	≤ 100 Sec.
	~~BACKUP~~	~~XMC1A3X/3EG~~	45 Amps	≤ 100 Sec.
100) XVG9593A-CC/MOV REACT. COOL Pump A THERMAL Barrier	PRIMARY	XMC1A3X/9IM	~~33 Amps~~	N/A
	~~BACKUP~~	~~XMC1A3X/9IM~~	45 Amps	≤ ~~30~~ Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MISC. CONTINUED:				
101) XPP0149-SW/DRPI COOLING UNIT BSTR. PUMP	PRIMARY	XMC1A3X/11AD	225 Amps	N/A
	BACKUP	XMC1A3X/11AD	45 Amps	≤ 100 Sec.
102) XFN0068A.AA/SECONDARY COMPT. (LOOP A) CLG. FAN A	PRIMARY	XMC1A3X/11EH	720 Amps	N/A
	BACKUP	XMC1A3X/11EH	150 Amps	≤ 200 Sec.
103) XFN0069A-AH/SECONDARY COMPT. (LOOP B) CLG. FAN A	PRIMARY	XMC1A3X/10CF	720 Amps	N/A
	BACKUP	XMC1A3X/10CF	150 Amps	≤ 200 Sec.
104) XFN0070A-AH/SECONDARY COMPT. (LOOP C) CLG. FAN A	PRIMARY	XMC1A3X/9AD	720 Amps	N/A
	BACKUP	XMC1A3X/9AD	150 Amps	≤ 200 Sec.
105) XPP0051A-WL/R.C. DRAIN TANK - PUMP A	PRIMARY	XMC1A3X/6CG	720 Amps	N/A
	BACKUP	XMC1A3X/6CG	210 Amps	≤ 200 Sec.
106) XPP0059A-ND/INCORE INSTR. CHASE SUMP PUMP A	PRIMARY	XMC1A3X/4AD	225 Amps	N/A
	BACKUP	XMC1A3X/4AD	45 Amps	≤ 100 Sec.
107) XPP0115A-ND/R.B. SUMP PUMP A	PRIMARY	XMC1A3X/4EH	87 Amps	N/A
	BACKUP	XMC1A3X/4EH	45 Amps	≤ 100 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
48 480 VAC MCC*, CONTINUED:				
~~108)~~ XTF9003-EM/RECEPTACLE TRANSFORMER 3	PRIMARY	XMC1A3X/1AC	240 Amps	≤ 200 Sec.
	BACKUP	XMC1A3X/1AC	240 Amps	≤ 200 Sec.
~~109) XVG9576-CC/MOV, ISOLATION RCDT~~	~~PRIMARY~~	~~XMC1B2X/5IM~~	~~225 Amps~~	~~N/A~~
	~~BACKUP~~	~~N/A~~	~~60 Amps~~	~~≤ 100 Sec.~~
49 ~~110)~~ XVG9583-CC/MOV, GATE EXCESS LETDOWN HX	PRIMARY	XMC1B2X/3AE	225 Amps	N/A
	BACKUP	XMC1B2X/3AE	45 Amps	≤ 100 Sec.
~~111) XFN0007B-AH/REFUELING WATER SURFACE SUPPLY FAN B~~	~~PRIMARY~~	~~XMC1B3X/9AD~~	~~87 Amps~~	~~N/A~~
	~~BACKUP~~	~~XMC1B3X/9AD~~	~~45 Amps~~	~~≤ 100 Sec.~~
50 ~~110)~~ XFN0066B-AN/R.B. CHARCOAL CLEANUP UNIT FAN B	PRIMARY	XMC183X/10FJ	1,500 Amps	N/A
	BACKUP	XMC1B3X/10FJ	210 Amps	≤ 200 Sec.
~~113) XXP0059B-ND/INCORE INSTR. CHASE SUMP PUMP B~~	~~PRIMARY~~	~~XMC1B3X/3EH~~	~~225 Amps~~	~~N/A~~
	~~BACKUP~~	~~XMC1B3X/3EH~~	~~45 Amps~~	~~≤ 100 Sec.~~
~~114) XPP0115B-ND/R.B. SUMP PUMP B~~	~~PRIMARY~~	~~XMC1B3X/3IL~~	~~87 Amps~~	~~N/A~~
	~~BACKUP~~	~~XMC1B3X/3IL~~	~~45 Amps~~	~~≤ 100 Sec.~~

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
~~115~~) APN4005-EM/480 VAC POWER PNL.-FEEDER	PRIMARY	XMC1B3X/5CE	270 Amps	≤ 200 Sec.
	BACKUP	XMC1B3X/5CE	270 Amps	≤ 200 Sec.
~~116~~) XTF8009-EM/TRANSFORMER FOR LIGHTING PNL. 9 (NORMAL LTG.)	PRIMARY	XMC1B3X/5HJ	240 Amps	≤ 200 Sec.
	BACKUP	XMC1B3X/5HJ	240 Amps	≤ 200 Sec.
~~117) XFN0068B-AH/SECONDARY COMPT. (LOOP A)CLG FAN B~~	~~PRIMARY~~	~~XMC1B3Y/3AD~~	~~720 Amps~~	~~N/A~~
	BACKUP	XMC1B3Y/3AD	180 Amps	≤ 200 Sec.
118) XFN0069B-AH/SECONDARY COMPT. (LOOP B) CLG FAN B	PRIMARY	XMC1B3Y/3EH	720 Amps	N/A
	BACKUP	XMC1B3Y/3EH	180 Amps	≤ 200 Sec.
119) XFN0070B-AH/SECONDARY COMPT. (LOOP C) CLG. FAN B	PRIMARY	XMC1B3Y/3IL	720 Amps	N/A
	BACKUP	XMC1B3Y/3IL	180 Amps	≤ 200 Sec.
~~120~~) APN4012-EM/WELDING RECEPT. PWR. PNL.	PRIMARY	XMC1B3Y/7GL	600 Amps	≤ 300 Sec.
	BACKUP	XMC1B3Y/7GL	600 Amps	≤ 300 Sec.
~~121~~) APN4013-EM/WELDING RECEPT. PWR. PNL.	PRIMARY	XMC1B3Y/9GL	600 Amps	≤ 300 Sec.
	BACKUP	XMC1B3Y/9GL	600 Amps	≤ 300 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
~~122) R.C. PUMP C HEATER-RC~~	~~PRIMARY~~	~~XMC1B3Y/5AD~~	~~225 Amps~~	~~N/A~~
	BACKUP	XMC1B3Y/5AD	45 Amps	$\leq$ 100 Sec.
123) R.C. PUMP C, OIL LIFT PMP -RC	PRIMARY	XMC1B3Y/5EH	450 Amps	N/A
	BACKUP	XMC1B3Y/5EH	75 Amps	$\leq$ 100 Sec.
124) XPP0051B-WL/R.C. DRAIN TANK PUMP B	PRIMARY	XMC1B3Y/8GK	720 Amps	N/A
	BACKUP	XMC1B3Y/8GK	210 Amps	$\leq$ 95 Sec.
55 ~~125)~~ XTF8008-EM/TRANSFORMER FOR LTG. PNL. 8, UNDERWATER LIGHTING	PRIMARY	XMC1B3Y/4HI	240 Amps	$\leq$ 200 Sec.
	BACKUP	XMC1B3Y/4HJ	240 Amps	$\leq$ 200 Sec.
~~126) XV89593B-CC/MOV, RC PUMP B THERMAL BARRIER~~	~~PRIMARY~~	~~XMC1B3Y/4AE~~	~~225 Amps~~	~~N/A~~
	~~BACKUP~~	~~XMC1B3Y/4AE~~	~~45 Amps~~	~~$\leq$ 100 Sec.~~
56 ~~127)~~ XFN0068C-AH/SECONDARY COMPT. (LOOP A) CLG FAN C	PRIMARY	XMC1C3X/8AE	1500 Amps	N/A
	BACKUP	XMC1C3X/8AE	210 Amps	$\leq$ 200 Sec.
~~128) R.C. PUMP B HEATER -RC~~	~~PRIMARY~~	~~XMC1C3X/5EH~~	~~225 Amps~~	~~N/A~~
	~~BACKUP~~	~~XMC1C3X/5EH~~	~~45 Amps~~	~~$\leq$ 100 Sec.~~

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
) 480 VAC MCC, CONTINUED:				
~~129) R.C. PUMP B OIL LIFT PUMP -RC~~	~~PRIMARY~~	~~XMC1C3X/6EH~~	~~450 Amps~~	~~N/A~~
	BACKUP	XMC1C3X/6EH	75 Amps	≤ 100 Sec.
130) XFN0069C-AH/SECONDARY COMPT. (LOOP B)CLG. FAN C	PRIMARY	XMC1C3X/2EH	~~720 Amps~~	N/A
	BACKUP	XMC1C3X/2EH	150 Amps	≤ 200 Sec.
131) XFN0070C-AH/SECONDARY COMPT. (LOOP C) CLG FAN C	PRIMARY	XMC1C3X/2IL	~~720 Amps~~	N/A
	BACKUP	XMC1C3X/2IL	~~150 Amps~~	~~≤ 200 Sec.~~
~~132)~~ XTF8006-EM/TRANSFORMER FOR LTG. PNL. 6, NORMAL LIGHTING	PRIMARY	XMC1C3X/4CE	240 Amps	≤ 200 Sec.
	BACKUP	XMC1C3X/4CE	240 Amps	≤ 200 Sec.
~~133) XV09593C-CC/MOV, R.C. PUMP C THERMAL BARRIER~~	~~PRIMARY~~	~~XMC1C3X/4IM~~	~~225 Amps~~	~~N/A~~
	BACKUP	XMC1C3X/4IM	45 Amps	≤ 100 Sec.
134) XFN0107-VL/CONTROL ROD POSIT. DATA CAB. CLG FAN	PRIMARY	XMC1C3X/2AD	450 Amps	N/A
	BACKUP	XMC1C3X/2AD	75 Amps	≤ 100 Sec.
135) R.C. PUMP A HEATER -RC	PRIMARY	XMC1C3X/5AD	225 Amps	N/A
	BACKUP	XMC1C3X/5AD	45 Amps	≤ 100 Sec.

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TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
~~136) R.C. PUMP A OIL LIFT PUMP -RC~~	PRIMARY	XMC1C3X/6AD	450 Amps	N/A
	BACKUP	XMC1C3X/6AD	75 Amps	≤ 100 Sec.
137) XFN0007A-AH/REFUELING WATER SURFACE SUPPLY FAN A	PRIMARY	~~XMC1C3X/3EH~~	87 Amps	N/A
	BACKUP	XMC1C3X/3EH	45 Amps	≤ ~~100~~ Sec.
59 ~~139)~~ XFN0008-AH/REFUELING WATER SURFACE EXHAUST FAN	PRIMARY	XMC1C3X/3IL	720 Amps	N/A
	BACKUP	XMC1C3X/3IL	150 Amps	≤ 200 Sec.
~~140) XVG9605-CC/MOV - R.B.~~	PRIMARY	XMC1DA2X/3IM	45 Amps	≤ ~~100~~ Sec.
	BACKUP	XMC1DA2X/3IM	45 Amps	≤ 100 Sec.
141) XVG8701A-RH/RHR LOOP 1 INLET ISOLATION VLV.	PRIMARY	XMC1DA2X/7FJ	225 Amps	N/A
	BACKUP	XMC1DA2X/7FJ	45 Amps	≤ ~~100~~ Sec.
59 ~~142)~~ XVG8808A-SI/ACCUMULATOR A ISOLATION VLV.	PRIMARY	XMC1DA2X/8AE	300 Amps	≤ 200 Sec.
	BACKUP	XMC1DA2X/8AE	300 Amps	≤ 200 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
60 ~~143~~) XVG8808C-SI/ACCUMULATOR C ISOLATION VLV.	PRIMARY	XMC1DA2X/8FS	300 Amps	≤ 200 sec.
	BACKUP	XMC1DA2X/8FJ	300 Amps	≤ 200 sec.
144) XVG8000B-RC/PRESS. RELIEF ISOLATION VLV.	PRIMARY	XMC1DA2X/6IM	225 Amps	N/A
	BACKUP	XMC1DA2X/6IM	45 Amps	≤ 100 sec.
145) XVG3108A-SW/R.B. Recirc. Unit A -Isolation Vlv.	PRIMARY	XMC1DA2Y/16IM	45 Amps	≤ 100 sec.
	BACKUP	XMC1DA2Y/16IM	45 Amps	≤ 100 sec.
146) XVG3108B-SW/R.B. Recirc. Unit B - Isolation Vlv.	PRIMARY	XMC1DA2Y/15CG	45 Amps	≤ 100 sec.
	BACKUP	XMC1DA2Y/15CG	45 Amps	≤ 100 sec.
147) XVG3109A-SW/R.B. Recirc. Unit A - Isolation Vlv.	PRIMARY	XMC1DA2Y/15HL	45 Amps	≤ 100 sec.
	BACKUP	XMC1DA2Y/15HL	45 Amps	≤ 100 sec.
148) XVG3109B-SW/R.B. Recirc. Unit B - Isolation Vlv.	PRIMARY	XMC1DA2Y/14CG	45 Amps	≤ 100 sec.
	BACKUP	XMC1DA2Y/14CG	45 Amps	≤ 100 sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
149) XVT8112-CS/SEAL WATER RETURN ISOLATION VLV.	PRIMARY	XMC1DA2Y/3IM	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DA2Y/3IM	45 Amps	≤ 100 Sec.
150) XVG8701B-RH/RHR LOOP 3 INLET ISOLATION VLV.	PRIMARY	XMC1DA2Y/18IM	225 Amps	N/A
	BACKUP	XMC1DA2Y/18IM	45 Amps	≤ 100 Sec.
151) XVG8000C-RC/PRESS. RELIEF ISOLATION VLV.	PRIMARY	XMC1DB2X/8DH	225 Amps	N/A
	BACKUP	XMC1DB2../8DH	45 Amps	≤ 100 Sec.
152) XVG3108C-SW/R.B. RECIRC UNIT C ISOLATION VLV.	PRIMARY	XMC1DB2Y/18IM	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DB2Y/18IM	45 Amps	≤ 100 Sec.
153) XVG3108D-SW/R.B.RECIRC. UNIT D ISOLATION VLV.	PRIMARY	XMC1DB2Y/19IM	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DB2Y/19IM	45 Amps	≤ 100 Sec.
154) XVG3109C-SW/R.B. RECIRC UNIT C ISOLATION VLV.	PRIMARY	XMC1DB2Y/20 IM	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DB2Y/20IM	45 Amps	≤ 100 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
155) XVG 3109D-SW/R.B. RECIRC. UNIT D ISOLATION VLV.	PRIMARY	XMC1DB2Y/21IM	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DB2Y/21IM	45 Amps	≤ 100 Sec.
156) XVG 8702A-RH/RHR LOOP 1 INLET ISOLATION VLV.	PRIMARY	XMC1DB2Y/4AE	225 Amps	N/A
	BACKUP	XMC1DB2Y/4AE	45 Amps	≤ 100 Sec.
157) XVG 8702B-RH/RHR LOOP 3 INLET ISOLATION VLV.	PRIMARY	XMC1DB2Y/4FS	225 Amps	N/A
	BACKUP	XMC1DB2Y/4FS	45 Amps	≤ 100 Sec.
6 / 158) XVG 8808B-SI/ACCUMULATOR B ISOLATION VLV.	PRIMARY	XMC1DB2Y/16IM	300 Amps	≤ 200 Sec.
	BACKUP	XMC1DB2Y/16IM	300 Amps	≤ 200 Sec.
159) XVG 8000A-RC/PRESS. RELIEF ISOLATION VLV.	PRIMARY	XMC1DB2Y/3IM	45 Amps	N/A
	BACKUP	XMC1DB2Y/3IM	45 Amps	≤ 100 Sec.
160) XVG 8095A-RC/REACTOR HEAD VENT VLV. TO PRESS. RELIEF TANK	PRIMARY	XMC1DA2X/5IM	225 Amps	N/A
	BACKUP	XMC1DA2X/5IM	45 Amps	≤ 100 Sec.

TABLE 3.8-1 (continued)

CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICE TEST SETPOINT CRITERIA

EQUIP NO.-SYS/DESCRIPTION	DEVICE	LOCATION	TEST SETPOINT	RESPONSE TIME
480 VAC MCC, CONTINUED:				
161) XVG 8095B-RC/REACTOR HEAD VENT VLV. TO PRESS. RELIEF TANK	PRIMARY	XMC1DB2Y/23FJ	45 Amps	≤ 100 Sec.
	BACKUP	XMC1DB2Y/23FJ	60 Amps	≤ 100 Sec.
162) XVG 8096A-RC/REACTOR HEAD VENT VLV. TO PRESS. RELIEF TANK	PRIMARY	XMC1DA2X/7AE	225 Amps	N/A
	BACKUP	XMC1DA2X/7AE	60 Amps	≤ 100 Sec.
163) XVG 8096B-RC/REACTOR HEAD VENT VLV. TO PRESS. RELIEF TANK	PRIMARY	XMC1DB2Y/12IM	225 Amps	N/A
	BACKUP	XMC1DB2Y/12IM	60 Amps	≤ 100 Sec.