

PRIORITY

Rush

DISPOSITION OF THE ORIGINAL DOCUMENT WILL BE TO THE TRANSMITTAL SIGNATURE UNLESS RECIPIENT IS OTHERWISE IDENTIFIED BELOW

- 1) 02532 MCG NRC INSP MG01A
- 2) 02546 R L MORGAN MG01WC
- 3) 03043 MCG MNT SUPERINTENDENT MG01IE
- 4) 03044 MCG DOC CNTRL MISC MAN MG01DM
- 5) 03102 H L MASSEY OPS PROC GP MG03OT
- 6) 03379 D E CALDWELL MG01MM
- 7) 03447 HARRY J SLOAN MG01RP
- 8) 03614 MCG OPS PROCEDURE GP MG01OP
- 9) 03744 OPS TRNG MGR. MG03OT
- 10) 03759 U S NUCLEAR REG WASH, DC
- 11) 04809 MCG PLANT ENG. LIBR. MG05SE
- 12) 05160 P T VU MG01RC
- 13) 05162 MCG SHIFT WORK MGRS MG01CC
- 14) 05512 REG. COMP. MANAGER CN01RC
- 15) 05610 K D THOMAS MG01WC
- 16) 05622 OPS MATRIX MG01WC
- 17) 05695 PATRICK F MCHALE MG03MT
- 18) 06593 D E HOLDEN MG03A2

**Duke Power Company
DOCUMENT TRANSMITTAL FORM**

REFERENCE

MCGUIRE NUCLEAR STATION
SELECTED LICENSEE
COMMITMENTS MANUAL

Page 2 of 3

Date: 03/09/00

Document Transmittal #: DUK003672199

QA CONDITION Yes No

OTHER ACKNOWLEDGEMENT REQUIRED Yes No

IF QA OR OTHER ACKNOWLEDGEMENT REQUIRED, PLEASE ACKNOWLEDGE RECEIPT BY RETURNING THIS FORM TO:

Duke Power Company
P.O. Box 12700
Document Management MG01 MOD
Hagers Ferry Road
Huntersville, N.C. 28078

Rec'd By _____

Date _____

DOCUMENT NO	QA COND	REV #/DATE	DISTR CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL
LOEP	NA	001 03/09/00	MADM-03A	V1	V1	V1	V1	V1	V1	V1	V1	V2	V8	V2	V1	V1	V1	V1	V1	V1	V1	66
16.8.1	NA	001 03/09/00																				
16.9.4	NA	001 03/09/00																				

REMARKS: PLEASE UPDATE YOUR MANUAL ACCORDINGLY

H B BARRON
VICE PRESIDENT
MCGUIRE NUCLEAR STATION

EB

BY:
P T VU MG01RC PTV/CJB

A001 0/3

March 2, 2000

MEMORANDUM

To: All McGuire Nuclear Station Selected Licensee Commitments (SLC) Manual Holders

Subject: McGuire Units 1 and 2 SLC Manual Update
SLC 16.8.1 – Cont. Pen. Conductor Overcurrent Protective Devices
SLC 16.9.4 – Fire Hose Stations

Changes are marked by vertical bars on the right margin.

Please revise your copy of the manual as follows:

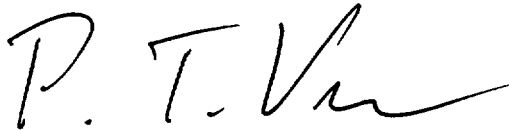
REMOVE

Entire LOEP, Rev. 0
Entire SLC 16.8.1, Rev. 0
Entire SLC 16.9.4, Rev. 0

INSERT

Entire LOEP, Rev. 1
Entire SLC 16.8.1, Rev. 1
Entire SLC 16.9.4, Rev. 1

Please call me if you have questions.



P.T. Vu
Regulatory Compliance, x 4302

SLC LIST OF AFFECTED SECTIONS

SECTION	REVISION NUMBER	DATE
16.1	REVISION 0	12/14/99
16.2	REVISION 0	12/14/99
16.3	REVISION 0	12/14/99
16.4	REVISION 0	12/14/99
16.5.1	REVISION 0	12/14/99
16.5.2	REVISION 0	12/14/99
16.5.3	REVISION 0	12/14/99
16.5.4	REVISION 0	12/14/99
16.5.5	REVISION 0	12/14/99
16.5.6	REVISION 0	12/14/99
16.5.7	REVISION 0	12/14/99
16.5.8	REVISION 0	12/14/99
16.5.9	REVISION 0	12/14/99
16.5.10	REVISION 0	12/14/99
16.6.1	REVISION 0	12/14/99
16.6.2	REVISION 0	12/14/99
16.6.3	REVISION 0	12/14/99
16.7.1	REVISION 0	12/14/99
16.7.2	REVISION 0	12/14/99
16.7.3	REVISION 0	12/14/99
16.7.4	REVISION 0	12/14/99
16.7.5	REVISION 0	12/14/99
16.7.6	REVISION 0	12/14/99
16.7.7	REVISION 0	12/14/99
16.7.8	REVISION 0	12/14/99
16.7.9	REVISION 0	12/14/99
16.7.10	REVISION 0	12/14/99
16.8.1	REVISION 1	03/02/00
16.8.2	REVISION 0	12/14/99
16.8.3	REVISION 0	12/14/99
16.9.1	REVISION 0	12/14/99
16.9.2	REVISION 0	12/14/99
16.9.3	REVISION 0	12/14/99
16.9.4	REVISION 1	03/02/00
16.9.5	REVISION 0	12/14/99
16.9.6	REVISION 0	12/14/99
16.9.7	REVISION 0	12/14/99
16.9.8	REVISION 0	12/14/99
16.9.9	REVISION 0	12/14/99
16.9.10	REVISION 0	12/14/99
16.9.11	REVISION 0	12/14/99
16.9.12	REVISION 0	12/14/99
16.9.13	REVISION 0	12/14/99
16.9.14	REVISION 0	12/14/99
16.9.15	REVISION 0	12/14/99
16.9.16	REVISION 0	12/14/99
16.9.17	REVISION 0	12/14/99

SLC LIST OF AFFECTED SECTIONS

SECTION	REVISION NUMBER	DATE
16.9.18	REVISION 0	12/14/99
16.9.19	REVISION 0	12/14/99
16.9.20	REVISION 0	12/14/99
16.9.21	REVISION 0	12/14/99
16.9.22	REVISION 0	12/14/99
16.10.1	REVISION 0	12/14/99
16.11.1	REVISION 0	12/14/99
16.11.2	REVISION 0	12/14/99
16.11.3	REVISION 0	12/14/99
16.11.4	REVISION 0	12/14/99
16.11.5	REVISION 0	12/14/99
16.11.6	REVISION 0	12/14/99
16.11.7	REVISION 0	12/14/99
16.11.8	REVISION 0	12/14/99
16.11.9	REVISION 0	12/14/99
16.11.10	REVISION 0	12/14/99
16.11.11	REVISION 0	12/14/99
16.11.12	REVISION 0	12/14/99
16.11.13	REVISION 0	12/14/99
16.11.14	REVISION 0	12/14/99
16.11.15	REVISION 0	12/14/99
16.11.16	REVISION 0	12/14/99
16.11.17	REVISION 0	12/14/99
16.11.18	REVISION 0	12/14/99
16.11.19	REVISION 0	12/14/99
16.11.20	REVISION 0	12/14/99
16.12.1	REVISION 0	12/14/99
16.12.2	REVISION 0	12/14/99
16.13.1	REVISION 0	12/14/99
16.13.2	REVISION 0	12/14/99
16.13.3	REVISION 0	12/14/99
16.14.1	REVISION 0	12/14/99

REMEDIAL ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3. <u>AND</u>	6 hours
	B.2 Be in MODE 5.	36 hours

TESTING REQUIREMENTS

-----NOTE-----

1. All containment penetration conductor overcurrent protective devices in Table 16.8.1-1 shall be demonstrated OPERABLE by performance of the following Testing Requirements.
2. TR 16.8.1.1, 16.8.1.2, and 16.8.1.3 are only required to be performed for 10% of the circuit breakers within each voltage level on a rotating basis during each surveillance interval.

TEST	FREQUENCY
TR 16.8.1.1 Perform a CHANNEL CALIBRATION of associated protective relays for medium voltage circuits (4 - 15 kV).	18 months
TR 16.8.1.2 -----NOTE----- For each circuit breaker found inoperable during functional tests, an additional representative sample of 10% of the defective type shall be functionally tested until no more failures are found, or all of that type have been functionally tested. Perform an integrated system functional test on each medium voltage (4 -15 kV) circuit breaker which includes simulated automatic actuation of the system and verifying that each relay and associated circuit breakers and control circuits function as designed.	18 months

(continued)

TESTING REQUIREMENTS (continued)

TEST	FREQUENCY
<p>TR 16.8.1.3 -----NOTES-----</p> <ol style="list-style-type: none"> 1. Circuit breakers selected for functional testing shall be selected on a rotating basis. 2. For each circuit breaker found inoperable during functional tests, an additional representative sample of 10% of all the defective type shall be functionally tested until no more failures are found or all of that type have been functionally tested. 3. Lower voltage circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. <p>-----</p> <p>Perform a functional test of lower voltage circuit breakers using the nominal trip setpoint and response time values in Table 16.8.1-1.</p>	18 months
<p>TR 16.8.1.4 Perform fuse inspection and maintenance program.</p>	18 months
<p>TR 16.1.8.5 Perform inspection and preventive maintenance on each circuit breaker in accordance with manufacturer's recommendations.</p>	60 months

BASES

The tables listed in this commitment were relocated from the McGuire Technical Specifications with the approval of the U.S. Nuclear Regulatory Commission. Any additions, deletions, or revisions to the table are considered a change in a commitment, can only be changed using the 10 CFR 50.59 process, and shall be performed pursuant to applicable procedure.

Containment electrical penetrations and penetration conductors are protected by either de-energizing circuits not required during reactor operation or by demonstrating the OPERABILITY of primary and backup overcurrent protection during periodic surveillance.

Electrical penetrations serve a mechanical integrity function in forming part of the containment pressure boundary. Redundant protective devices provide a means of maintaining this mechanical integrity, which ensures proper protection assuming a single random failure of one of the protective devices. In the event a Containment Penetration Conductor Overcurrent Protective device becomes inoperable, the affected electrical penetration must be de-energized. The method of de-energization must include the use of at least one protective device that cannot be adversely affected by a single active failure. Acceptable methods of de-energization the circuit(s) are tripping the associated backup circuit breaker, removing the associated backup fuses, racking out the inoperable circuit breaker, or removing the inoperable circuit breaker. Opening the inoperable circuit breaker and verifying all phases are open is not an acceptable means of de-energizing the circuit based on concerns with internal breaker integrity after interrupting a rated fault current.

The 31 day Completion Time to reverify that devices are removed or tripped in inoperable circuits is acceptable considering the fact that the devices are operated under administrative control and the probability of misalignment is low.

The Surveillance Requirements applicable to lower voltage circuit breakers provide assurance of breaker reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker. Testing of these circuit breakers consists of injecting a current in excess of the breaker's nominal setpoint and measuring the response time. The measured response time is compared to the manufacturer's data to ensure that it is less than or equal to a value specified by the manufacturer. Each manufacturer's molded case and metal case circuit breakers are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers are tested. If a wide variety exists within any manufacturer's brand of circuit breakers, it is necessary to divide that manufacturer's breakers into groups and treat each group as a separate type of breaker for surveillance purposes.

Fuse testing is in accordance with IEEE Standard 242-1975. This program will detect any significant degradation of the fuses or improperly sized fuses. Safety is further assured by the "fail safe" nature of fuses, that is, if the fuse fails, the circuit will deenergize.

REFERENCES

1. IEEE Standard 242-1975

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

Note: Device numbers will be put in alpha-numerical order later.

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1. 6900 VAC-Swgr			
Primary Bkr-RCP1A	5.0	15.4 @ 25A	Reactor Coolant Pump 1A
Backup Brk-1TA-5	5.0	16.5 @ 20A	
Primary Bkr RCP1B	5.0	15.4 @ 25A	Reactor Coolant Pump 1B
Backup Brk-ITB-5	5.0	16.5 @ 20A	
Primary Bkr RCP1C	5.0	15.4 @ 25A	Reactor Coolant Pump 1C
Backup Brk-ITC-5	5.0	16.5 @ 20A	
Primary Bkr RCP1D	5.0	15.4 @ 25A	Reactor Coolant Pump 1D
Backup Brk-ITD-5	5.0	16.5 @ 20A	
2. 600 VAC-MCC			
1EMXA-2 1D			
Primary Bkr	20	45 @ 60A	NC Pump 1C Thermal Barrier Outlet Auto Isol Vlv 1KC345A
Backup Fuse	20	NA	
1EMXA-2 1E			
Primary Bkr	20	45 @ 60A	NC Pump 1A Thermal Barrier Outlet Auto Isol Vlv 1KC394A
Backup Fuse	20	NA	
1EMXA-2 2A			
Primary Bkr	20	45 @ 60A	Cont Air Return Fan 1A Damper 1RAF-D-2
Backup Fuse	20	NA	
1EMXA-2 2B			
Primary Bkr	20	45 @ 60A	N2 to Prt Cont Isol Inside Vlv 1NC54A
Backup Fuse	20	NA	
1EMXA-2 2C			
Primary Bkr	20	45 @ 60A	RCP Mtg Brg Oil Fill Isol Vlv 1NC196A
Backup Fuse	20	NA	
1EMXA-2 3A			
Primary Bkr	30	45 @ 90A	Accumulator 1A Disch Isol Vlv 1N154A
Backup Fuse	30	NA	
1EMXA-2 3B			
Primary Bkr	30	45 @ 90A	Accumulator 1C Disch Isol Vlv 1NI76A
Backup Fuse	30	NA	
1EMXA-2 3C			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	Test Hdr Inside Cont Isol Vlv 1NI95A
Backup Fuse	20	NA	
1EMXA-2 4B			
Primary Bkr	20	45 @ 60A	PALS Pnl Smple Ret to Cont. Isol Vlv 1WL-1302A
Backup Fuse	20	NA	
1EMXA-2 4C			
Primary Bkr	20	45 @ 60A	Accum 1A Vent to 1NC34 for Blkout Vlv 1NI430A
Backup Fuse	20	NA	
1EMXA-2 5A			
Primary Bkr	20	45 @ 60A	RN Containment Isolation Vlv 1RN253A
Backup Fuse	20	NA	
1EMXA-2 5B			
Primary Bkr	20	45 @ 60A	RN Containment Isolation Vlv 1RN276A
Backup Fuse	20	NA	
1EMXA-3-2C			
Primary Bkr	20	45 @ 60A	RV Containment Isolation Vlv 1RV76A
Backup Fuse	20	NA	
1EMXA-5 1B			
Primary Bkr	20	45 @ 60A	Pzr Steam Sample Line Inside Cont Isol Vlv 1NM3A
Backup Fuse	20	NA	
1EMXA-5-2C			
Primary Bkr	20	45 @ 60A	Pzr Steam Sample Line Inside Cont Isol Vlv 1NM6A
Backup Fuse	20	NA	
1EMXA-5 3B			
Primary Bkr	20	45 @ 60A	NC Hotleg 1A Sample Line Cont Isol Vlv 1NM22A
Backup Fuse	20	NA	
1EMXA-5 2D			
Primary Bkr	20	45 @ 60A	NC Hotleg 1D Sample Line Cont Isol Vlv 1NM25A
Backup Fuse	20	NA	
1EMXA-2 7A			
Primary Bkr	20	45 @ 60A	S/G 1A Upper Shell Sample Cont Isol Vlv 1NM187A
Backup Fuse	20	NA	
1EMXA-2 7B			
Primary Bkr	20	45 @ 60A	S/G 1A Blowdown Line Sample Cont Isol Vlv 1NM190A

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	20	NA	
1EMXA-2 7C			
Primary Bkr	20	45 @ 60A	SG 1C Upper Shell Sample Cont Isol Vlv 1NM207A
Backup Fuse	20	NA	
1EMXA-2 8A			
Primary Bkr	20	45 @ 60A	SG 1C Blowdown Line Line Sample Cont Isol Vlv 1NM207A
Backup Fuse	20	NA	
1EMXA-4 1B			
Primary Bkr	20	45 @ 60A	NC Pump Seal Return Cont Vlv 1NV94AC
Backup Fuse	20	NA	
1EMXA-3 3A			
Primary Bkr	20	45 @ 60A	H2 Purge Exhaust Cont Vessel Isol Vlv 1VE5A
Backup Fuse	20	NA	
1EMXA-3 4A			
Primary Bkr	20	45 @ 60A	H2 Skimmer Fan 1A Suction Isol Vlv 1VX1A
Backup Fuse	20	NA	
1EMXA-3 5B			
Primary Bkr	20	45 @ 60A	RCDT Pump Disch Cont Isol Vlv 1WL2A
Backup Fuse	20	NA	
2EMXA-3 5C			
Primary Bkr	20	45 @ 60A	RCDT Vent Cont Isol Vlv 1WL39A
Backup Fuse	20	NA	
1EMXA-3 6A			
Primary Bkr	20	45 @ 60A	RB Sump Pump Disch Cont Isol Vlv 1WL64A
Backup Fuse	20	NA	
1EMXA-3 6B			
Primary Bkr	20	45 @ 60A	Cont Vent Unit Condensate Cont Isol Vlv 1WL321A
Backup Fuse	20	NA	
1EMXB-4 1B			
Primary Bkr	20	45 @ 60A	NC Pump 1B Thermal Barrier Outlet Auto Isol Vlv 1KC364B
Backup Fuse	20	NA	
1EMXB-4 1C			
Primary Bkr	20	45 @ 60A	NC Pump 1D Thermal Barrier Auto Isol Vlv 1KC413B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1EMXB-4 2A			
Primary Bkr	20	45 @ 60A	NC Pumps Return Hdr Pend Inside Isol Vlv 1KC424B
Backup Fuse	20	NA	
1EMXB-4 2B			
Primary Bkr	20	45 @ 60A	Reactor Bldg Drn Hdr Inside Cont Isol Vlv 1KC429B
Backup Fuse	20	NA	
1EMXB-4 2C			
Primary Bkr	30	45 @ 90A	Accumulator 1B Disch Isol Vlv 1NI65B
Backup Fuse	30	NA	
1EMXB-4 3D			
Primary Bkr	30	45 @ 90A	Accumulator 1D Disch Isol Vlv 1NI88B
Backup Fuse	30	NA	
1EMXB-4 3E			
Primary Bkr	20	45 @ 60A	Hotleg Inj Check 1NI124, 1NI128 Test Isol Vlv 1NI122B
Backup Fuse	20	NA	
1EMXB-4 4A			
Primary Bkr	20	45 @ 60A	Cont Air Return Fan 1B Damper 1RAF-D-4
Backup Fuse	20	NA	
1EMXB-4 4C			
Primary Bkr	20	45 @ 60A	NI Accum 1A Sample Line Inside Cont Isol Vlv 1NM72B
Backup Fuse	20	NA	
1EMXB-4 5A			
Primary Bkr	20	45 @ 60A	NI Accum 1B Sample Line Inside Cont Isol Vlv 1NI75B
Backup Fuse	20	NA	
1EMXB-4 5B			
Primary Bkr	20	45 @ 60A	NI Accum 1C Sample Line Inside Cont Isol Vlv 1NM78B
Backup Fuse	20	NA	
1EMXB-4 5C			
Primary Bkr	20	45 @ 60A	Accum 1B Vent to 1NC32 for Blkout Vlv 1NI431B
Backup Fuse	20	NA	
1EMXB-4 6A			
Primary Bkr	20	45 @ 60A	NI Accum 1D Sample Line Inside Cont Isol Vlv 1NM81B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1EMXB-4 6B			
Primary Bkr	20	45 @ 60A	SG 1B Upper Shell Sample Cont Isol Vlv 1NM197B
Backup Fuse	20	NA	
1EMXB-4 6C			
Primary Bkr	20	45 @ 60A	SG 1B Bowdown Line Sample Cont Isol Vlv 1NM200B
Backup Fuse	20	NA	
1EMXB-4 7B			
Primary Bkr	20	45 @ 60A	SG 1D Upper Shell Sample Cont Isol Vlv 1NM217B
Backup Fuse	20	NA	
1EMXB-4 7C			
Primary Bkr	20	45 @ 60A	SG 1D Blowdown Line Smple Cont Isol Vlv 1NM220B
Backup Fuse	20	NA	
1EMXB-5 1B			
Primary Bkr	20	45 @ 60A	RV Containment Isolation Vlv 1RV33B
Backup Fuse	20	NA	
1EMXB-5 1C			
Primary Bkr	20	45 @ 60A	H2 Skimmer Fan 1B Suction Isol Vlv 1VX2B
Backup Fuse	20	NA	
1EMXC-1A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 1A
Backup Fuse	200	NA	
1EMXC-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 1C
Backup Fuse	200	NA	
1EMXC-3B			
Primary Bkr	30	45 @ 90A	Pzr Compt. Fan A Normal Source
Backup Fuse	30	NA	
1EMXC-3C			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 1A
Backup Fuse	100	NA	
1EMXC-3D			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 1C
Backup Fuse	100	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1EMXC-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan No. 1A
Backup Fuse	90	NA	
1EMXC-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner No. 1A
Backup Fuse	90	NA	
1EMXC-6A			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel Booster Fan CPT-BF-1A
Backup Fuse	40	NA	
1EMXC-6B			
Primary Bkr	30	45 @ 90A	Upper Containment Air Handling Unit 1A
Backup Fuse	30	NA	
1EMXC-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit 1C
Backup Fuse	30	NA	
1EMXC-6D			
Primary Bkr	90	110 @ 270A	Hydrogen Skimmer Fan No. 1A
Backup Fuse	90	NA	
1EMXC-7C			
Primary Bkr	30	45 @ 90A	Upper Cont Return Air Fan No. 1C
Backup Fuse	30	NA	
1EMXC-7D			
Primary Bkr	20	45 @ 60A	Pzr Pwr Oper Relief Isol Vlv 1NC33A
Backup Fuse	20	NA	
1EMXC-8C			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm Air Hdlg Unit 1A
Backup Fuse	20	NA	
1EMXC-8D			
Primary Bkr	20	45 @ 60A	Upper Containment Return Air Fan No. 1A
Backup Fuse	20	NA	
1EMXA-4 3C			
Primary Bkr	30	45 @ 90A	NC Loop 1C Discharge to ND System Cont Isol Vlv 1ND2A,C
Backup Fuse	30	NA	
1EMXD-1A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 1B

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	200	NA	
1EMXD-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 1D
Backup Fuse	200	NA	
1EMXD-3B			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel Booster Fan CPT-BF-1B
Backup Fuse	40	NA	
1EMXD-3C			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 1B
Backup Fuse	100	NA	
1EMXD-3D			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 1D
Backup Fuse	100	NA	
1EMXD-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan No. 1B Fan CPT-BF-1A
Backup Fuse	90	NA	
1EMXD-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner No. 1B
Backup Fuse	90	NA	
1EMXD-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit No. 1B
Backup Fuse	30	NA	
1EMXD-6D			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit No. 1D
Backup Fuse	30	NA	
1EMXD-6E			
Primary Bkr	90	110 @ 270	Hydrogen Skimmer Fan No. 1B
Backup Fuse	90	NA	
1EMXD-7B			
Primary Bkr	30	45 @ 90A	Upper Cont Return Air Fan No. 1D
Backup Fuse	30	NA	
1EMXD-7C			
Primary Bkr	20	45 @ 60A	Pzr No. 1 Pwr Oper Safety Relief Isol Vlv 1NC31B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1EMXD-7D			
Primary Bkr	20	45 @ 60A	Pzr No. 1 Pwr Oper Safety Relief Isol Vlv 1NC35B
Backup Fuse	20	NA	
1EMXD-8A			
Primary Bkr	30	45 @ 90A	PZR Compt. Fan B Normal Source
Backup Fuse	30	NA	
1EMXD-8B			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm Air Hdlg Unit 1B
Backup Fuse	20	NA	
1EMXD-8C			
Primary Bkr	20	45 @ 60A	Upper Containment Return Air Fan 1B
Backup Fuse	20	NA	
1MXD-8D			
Primary Bkr	30	45 @ 90A	NC Loop 1C Disch to ND System Cont Isol Vlv 1ND1B
Backup Fuse	30	NA	
1MXM-F1A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR14
Backup Fuse	40	NA	
1MXM-F1B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR15
Backup Fuse	40	NA	
1MXM-F1C			
Primary Bkr	30	45 @ 90A	S/G Boost Fan 1C
Backup Fuse	30	NA	
EMXM-F1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A1 Blower A
Backup Fuse	20	NA	
1MXM-F1E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A2 Blower A
Backup Fuse	20	NA	
1MXM-F2A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR16
Backup Fuse	40	NA	
1MXM-F2B			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR17
Backup Fuse	40	NA	
1MXM-F2C			
Primary Bkr	25	45 @ 75A	Reactor Bldg Equip Hdlg 5 Ton Jib Crane
Backup Fuse	25	NA	
1MXM-F2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A3 Blower A
Backup Fuse	20	NA	
1MXM-F2E			
Primary Bkr	20	45 @ 60A	Ice Cont AhU 1A4 Blower A
Backup Fuse	20	NA	
1MXM-F3A			
Primary Bkr	20	45 @ 60A	Ice Cont AhU 1A5 Blower A
Backup Fuse	20	NA	
1MXM-F3B			
Primary Bkr	20	45 @ 60A	Ice Cont AhU 1A6 Blower A
Backup Fuse	20	NA	
1MXM-F3C			
Primary Bkr	20	45 @ 60A	Incore Inst Room Sump Pump
Backup Fuse	20	NA	
1MXM-F3D			
Primary Bkr	100	110 @ 300A	Upper Cont Welding Recept
Backup Fuse	100	NA	
1MXM-F4A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A7 Blower A
Backup Fuse	20	NA	
1MXM-F4B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A8 Blower A
Backup Fuse	20	NA	
1MXM-F4D			
Primary Bkr	100	110 @ 300A	Welding Feeder
Backup Fuse	100	NA	
1MXM-F5C			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Defrost Heater 1A
Backup Fuse	50	NA	
1MXM-F6C			
Primary Bkr	60	110 @ 180A	Reactor Coolant Drain Tank Pump 1A
Backup Fuse	60	NA	
1MXM-F7A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A9 Blower A
Backup Fuse	20	NA	
1MXM-F7B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A10 Blower A
Backup Fuse	20	NA	
1MXM-F7C			
Primary Bkr	30	45 @ 90A	Lower Cont Aux Charcoal Filter Fan 1A
Backup Fuse	30	NA	
1MXM-F8A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A11 Blower A
Backup Fuse	20	NA	
1MXM-F8B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A12 Blower A
Backup Fuse	20	NA	
1MXM-F8C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A13 Blower A
Backup Fuse	20	NA	
1MXM-R1A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B1 Blower A
Backup Fuse	20	NA	
1MXM-R1B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B2 Blower A
Backup Fuse	20	NA	
1MXM-R1C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B3 Blower A
Backup Fuse	20	NA	
1MXM-R1D			
Primary Bkr	30	45 @ 90A	RCP 1A Oil Lift Pump

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	30	NA	
1MXM-R2A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR12
Backup Fuse	40	NA	
1MXM-R2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B4 Blower A
Backup Fuse	20	NA	
1MXM-R2E			
Primary Bkr	30	45 @ 90A	RCP 1B Oil Lift Pump
Backup Fuse	30	NA	
1MXM-R3D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B5 Blower A
Backup Fuse	20	NA	
1MXM-R3E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B6 Blower A
Backup Fuse	20	NA	
1MXM-R3F			
Primary Bkr	30	45 @ 90A	RCP 1C Oil Lift Pump
Backup Fuse	30	NA	
1MXM-R4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B7 Blower A
Backup Fuse	20	NA	
1MXM-R4E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B8 Blower A
Backup Fuse	20	NA	
1MXM-R4F			
Primary Bkr	30	45 @ 90A	RCP 1D Oil Lift Pump
Backup Fuse	30	NA	
1MXM-R5B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B9 Blower A
Backup Fuse	20	NA	
1MXM-R5C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B10 Blower A
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1MXM-R5D			
Primary Bkr	175	200 @ 525A	Ice Cond Equip Pwr Pnlbd 1B
Backup Fuse	175	NA	
1MXM-R6A			
Primary Bkr	20	45 @ 60A	Rod Cntrl Cluster Change Fixture Hoist Drive
Backup Fuse	20	NA	
1MXM-R6B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B11 Blower A
Backup Fuse	20	NA	
1MXM-R7A			
Primary Bkr	20	45 @ 60A	Stud Tensioner Hoist
Backup Fuse	20	NA	
1MXM-R6E			
Primary Bkr	150	110 @ 450A	175 Ton Polar Crane
Backup Fuse	150	NA	
1MXM-R7B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 1A
Backup Fuse	20	NA	
1MXM-R7D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B12
Backup Fuse	20	NA	
1MXM-R7E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B13 Blower A
Backup Fuse	20	NA	
1MXM-R8A			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 1B
Backup Fuse	20	NA	
1MXM-R8B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 1C
Backup Fuse	20	NA	
1MXM-R8D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B14 Blower A
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1MXM-R8E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B15 Blower A
Backup Fuse	20	NA	
1MXMA-1B			
Primary Bkr	30	45 @ 90A	Vent Press Boost Fan 1B
Backup Fuse	30	NA	
1MXMA-1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A14 Blower A
Backup Fuse	20	NA	
1MXMA-1E			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 1A Pump 1A1
Backup Fuse	20	NA	
1MXMA-2A			
Primary Bkr	25	45 @ 75A	RCPM Maintenance Crane Recpt 1A, 1B, 1C, & 1D
Backup Fuse	25	NA	
1MXMA-2B			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR6
Backup Fuse	25	NA	
1MXMA-2C			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 1LR18
Backup Fuse	40	NA	
1MXMA-2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A15 Blower A
Backup Fuse	20	NA	
1MXMA-3A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR9
Backup Fuse	25	NA	
1MXMA-3B			
Primary Bkr	20	45 @ 60A	Ice Cond Equip Access Door 1A
Backup Fuse	20	NA	
1MXMA-3C			
Primary Bkr	50	110 @ 150	Ice Cond Floor Cooling Pump 1A
Backup Fuse	50	NA	
1MXMA-3D			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 1B Pump 1B1
Backup Fuse	20	NA	
1MXN-F1A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A1 Blower B
Backup Fuse	20	NA	
1MXN-F1B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A2 Blower B
Backup Fuse	20	NA	
1MXN-F1C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A3 Blower B
Backup Fuse	20	NA	
1MXN-F1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A4 Blower B
Backup Fuse	20	NA	
1MXN-F2A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A5 Blower B
Backup Fuse	20	NA	
1MXN-F2B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A6 Blower B
Backup Fuse	20	NA	
1MXN-F2C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A7 Blower B
Backup Fuse	20	NA	
1MXN-F2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A8 Blower B
Backup Fuse	20	NA	
1MXN-F3A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR1
Backup Fuse	25	NA	
1MXN-F3B			
Primary Bkr	30	45 @ 90A	S/G Booster Fan 1B
Backup Fuse	30	NA	
1MXN-F3C			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR2

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	25	NA	
1MXN-F3D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A9 Blower B
Backup Fuse	20	NA	
1MXN-F3E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A10 Blower B
Backup Fuse	20	NA	
1MXN-F4A			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No 1D
Backup Fuse	20	NA	
1MXN-F4B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No. 1E
Backup Fuse	20	NA	
1MXN-F4C			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No. 1F
Backup Fuse	20	NA	
1MXN-F4D			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 1A Pump 1A2
Backup Fuse	20	NA	
1MXN-F5C			
Primary Bkr	60	110 @ 180A	Reactor Coolant Drain Tank Pump 1B
Backup Fuse	60	NA	
1MXN-F6B			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 1B Pump 1B2
Backup Fuse	20	NA	
1MXN-F6C			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Defrost Htr 1B
Backup Fuse	50	NA	
1MXN-F7A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR4
Backup Fuse	25	NA	
1MXN-F7B			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR5
Backup Fuse	25	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1MXN-F7C			
Primary Bkr	20	45 @ 60A	Fuel Transfer Sys Reactor Side Fdr
Backup Fuse	20	NA	
1MXN-F7D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A11 Blower B
Backup Fuse	20	NA	
1MXN-F8B			
Primary Bkr	30	45 @ 90A	S/G Booster Fan 1A
Backup Fuse	30	NA	
1MXN-F8D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A12 Blower B
Backup Fuse	20	NA	
1MXN-F8E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A13 Blower B
Backup Fuse	20	NA	
1MXN-R1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B1 Blower B
Backup Fuse	20	NA	
1MXN-R1E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B2 Blower B
Backup Fuse	20	NA	
1MXN-R1F			
Primary Bkr	30	45 @ 90A	RCP 1A Oil Lift Pump No. 2
Backup Fuse	30	NA	
1MXN-R2C			
Primary Bkr	30	45 @ 90A	Reactor Cavity Manipulator Crane
Backup Fuse	30	NA	
1MXN-R2F			
Primary Bkr	30	45 @ 90A	RCP 1B Oil Lift Pump No. 2
Backup Fuse	30	NA	
1MXN-R3A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B3 Blower B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1MXN-R3B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B4 Blower B
Backup Fuse	20	NA	
1MXN-R3C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B5 Blower B
Backup Fuse	20	NA	
1MXN-R3D			
Primary Bkr	30	45 @ 90A	RCP 1C Oil Lift Pump No. 2
Backup Fuse	30	NA	
1MXN-R4A			
Primary Bkr	50	110 @ 150A	Ice Cond Bridge Crane
Backup Fuse	50	NA	
1MXN-R4B			
Primary Bkr	30	45 @ 90A	RB Equip Hatch Hoist No. 1
Backup Fuse	30	NA	
1MXN-R4C			
Primary Bkr	30	45 @ 90A	S/G Booster Fan 1A
Backup Fuse	30	NA	
1MXN-R4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B6 Blower B
Backup Fuse	20	NA	
1MXN-R4E			
Primary Bkr	30	45 @ 90A	RCP 1D Oil Lift Pump No.2
Backup Fuse	30	NA	
1MXN-R5D			
Primary Bkr	175	200 @ 525A	Ice Cond Equip Pwr Pnlbd 1A
Backup Fuse	175	NA	
1MXN-R6A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B7 Blower B
Backup Fuse	20	NA	
1MXN-R6B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B8 Blower B
Backup Fuse	20	NA	
1MXN-R6C			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B9 Blower B
Backup Fuse	20	NA	
1MXN-R6D			
Primary Bkr	100	110 @ 300A	Welding Fdr
Backup Fuse	100	NA	
1MXN-R7A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B10 Blower B
Backup Fuse	20	NA	
1MXN-R7B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B11 Blower B
Backup Fuse	20	NA	
1MXN-R7C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B12 Blower B
Backup Fuse	20	NA	
1MXN-R7D			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Pump 1B
Backup Fuse	50	NA	
1MXN-R8D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B13 Blower B
Backup Fuse	20	NA	
1MXN-R8E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B14 Blower B
Backup Fuse	20	NA	
1MXN-R8F			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B15 Blower B
Backup Fuse	20	NA	
1MXNA-1E			
Primary Bkr	30	45 @ 90A	Lower Cont Aux Charcoal Filter Fan 1B
Backup Fuse	30	NA	
1MXNA-2A			
Primary Bkr	30	45 @ 90A	Vent Press Boost Fan 1A
Backup Fuse	30	NA	
1MXNA-2B			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR7

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	25	NA	
1MXNA-2C			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 1LR8
Backup Fuse	25	NA	
1MXNA-2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A14 Blower B
Backup Fuse	20	NA	
1MXN-2E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A15 Blower B
Backup Fuse	20	NA	
1MXN-3A			
Primary Bkr	20	45 @ 60A	2 Ton CRDM Hdlg Jib Crane
Backup Fuse	20	NA	
1MXN-3B			
Primary Bkr	30	45 @ 90A	Cont Air Compressor
Backup Fuse	30	NA	
SMXG-F3G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to Cont Sump Isol Vlv 1NV1012C
Backup Fuse	20	NA	
SMXG-F4G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to NC Pump Seals Isol Vlv 1NV1013C
Backup Fuse	20	NA	
1MXNA-3C			
Primary Bkr	20	45 @ 60A	NC Pump Motor Drain Tank Pump No. 1
Backup Fuse	20	NA	
1MXNA-3D			
Primary Bkr	20	45 @ 60A	Ice Cond Equip Access Door 1B
Backup Fuse	20	NA	
SMXC-7D			
Primary Bkr	15	45 @ 45	Unit 1 Personnel Lock
Backup Fuse	15	NA	
SMXA-F4A			
Primary Bkr	15	45 @ 45A	Unit 1 Emergency Personnel Lock
Backup Fuse	15	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
3. 600 VAC-Press Htr Pwr Pnl			
Backup Press Htr Pwr Pnl 1A-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 1, 2, & 22
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1A-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 5, 6, & 27
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1A-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 9, 10, & 32
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1A-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 11, 12, & 35
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1A-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 13, 14, & 37
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1A-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 17, 18, & 42
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1B-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 21, 47, & 48
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1B-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 26, 53, & 54
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1B-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 31, 59, & 60
Backup Fuse	90	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Press Htr Pwr Pnl 1B-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 36, 65, & 66
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1B-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 41, 71, & 72
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1B-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 46, 77, & 78
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 7, 8, & 30
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 19, 20, & 45
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 24, 51, & 52
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-1D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 29, 57, & 58
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 34, 63, & 64
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1C-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 39, 69, & 70
Backup Fuse	90	NA	

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Press Htr Pwr Pnl 1C-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 44, 75, & 76
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 3, 4, & 25
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 15, 16, & 40
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 23, 49, & 50
Backup Fuse	90	NA	
MCC SMXG-F5A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 28, 55, & 56
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 33, 61, & 62
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 38, 67, & 68
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 1D-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 43, 73, & 74
Backup Fuse	90	NA	
4. 120 VAC-Panelboards			
1KM-1			
Primary Bkr	30	45 @ 90	RCP 1B Space Htr
Backup Fuse	30	NA	
1KM-2			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	30	45 @ 90	RCP 1C Space Htr
Backup Fuse	30	NA	
1KN-1			
Primary Bkr	30	45 @ 90	RCP 1B Space Htr
Backup Fuse	30	NA	
1KN-2			
Primary Bkr	30	45 @ 90	RCP 1D Space Htr
Backup Fuse	30	NA	
1KN-27			
Primary Bkr	20	36 @ 60	Fuel Handling Control Console
Backup Fuse	20	NA	
1KN-31			
Primary Bkr	20	36 @ 60	Incore Inst. 120 VAC Outlet Receptacles
Backup Fuse	20	NA	
5. 250 VDC-Lighting			
RB Deadlight Pnlbd 1DLD # 1			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR1 & 1LR2
Backup Fuse	20	NA	
RB Deadlight Pnlbd 1DLD # 3			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR4, 1LR5, & 1LR6
Backup Fuse	20	NA	
RB Deadlight Pnlbd 1DLD # 4			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR7, 1LR8, & 1LR9
Backup Fuse	20	NA	
RB Deadlight Pnlbd 1DLD # 6			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR12
Backup Fuse	20	NA	
RB Deadlight Pnlbd 1DLD # 7			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR16
Backup Fuse	20	NA	
RB Deadlight Pnlbd 1DLD # 9			
Primary Bkr	20	40 @ 60	Ltg Pnl Nos. 1LR18 & 1LR17
Backup Fuse	20	NA	
6. VAC - LC			

TABLE 16.8.1-1
UNIT 1 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Outage Power Fuse Box 1A			
Primary Bkr	150	NA	Upper Containment Safety Switch 1A
Backup Fuse	150		
Upper Containment Safety Switch 1B			
Primary Bkr	150	NA	Upper Containment Safety Switch 1B
Backup Fuse	150	NA	
Outage Power Distr. Pnl 1A			
Primary Bkr	150	NA	Outage Power Distr. Pnl 1A
Backup Fuse	150	NA	
Outage Power Distr, Pnl 1B			
Primary Bkr	150	NA	Outage Power Distr, Pnl 1B
Backup Fuse	150	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

Note: Device numbers will be put in alpha-numerical order later

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1. 6900 VAC-Swgr			
Primary Bkr-RCP2A	5.0	15.4 @ 25A	Reactor Coolant Pump 2A
Backup Brk-2TA-5	5.0	16.5 @ 20A	
Primary Bkr RCP2B	5.0	15.4 @ 25A	Reactor Coolant Pump 2B
Backup Brk-2TB-5	5.0	16.5 @ 20A	
Primary Bkr RCP2C	5.0	15.4 @ 25A	Reactor Coolant Pump 2C
Backup Bkr-2TC-5	5.0	16.5 @ 20A	
Primary Bkr RCP2D	5.0	15.4 @ 25A	Reactor Coolant Pump 2D
Backup Brk-2TD-5	5.0	16.5 @ 20A	
2. 600 VAC-MCC			
2EMXA-2 1D			
Primary Bkr	20	4.5 @ 60A	NC Pump 2C Thermal Barrier
Backup Fuse	20	NA	Outlet Auto Isol Vlv 2KC345A
2EMXA-2 1E			
Primary Bkr	20	4.5 @ 60A	NC Pump 2A Thermal Barrier
Backup Fuse	20	NA	Outlet Auto Isol Vlv 2KC394A
2EMXA-2 2A			
Primary Bkr	20	4.5 @ 60A	Cont Air Return Fan2A
Backup Fuse	20	NA	Damper 2RAF-D-2
2EMXA-2 2B			
Primary Bkr	20	45 @ 60A	N2 to Prt Cont Isol Inside Vlv
Backup Fuse	20	NA	2NC54A
2EMXA-2 2C			
Primary Bkr	20	45 @ 60A	RCP Mtg Brg Oil Fill Isol Vlv
Backup Fuse	20	NA	2NC196A
2EMXA-2 3A			
Primary Bkr	30	45 @ 90A	Accumulator 2A Disch Isol Vlv
Backup Fuse	30	NA	2N154A
2EMXA-2 3B			
Primary Bkr	30	45 @ 90A	Accumulator 2C Disch Isol Vlv
Backup Fuse	30	NA	2NI76A
2EMXA-2 3C			
Primary Bkr	20	45 @ 60A	Test Hdr Inside Cont Isol Vlv
Backup Fuse	20	NA	2NI95A

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2EMXA-2 4B			
Primary Bkr	20	45 @ 60A	PALS Pnl Smple Ret to Cont. Isol Vlv 2WL-1302A
Backup Fuse	20	NA	
2EMXA-2 4C			
Primary Bkr	20	45 @ 60A	Accum 2A Vent to 2NC34 for Blkout Vlv 2NI430A
Backup Fuse	20	NA	
2EMXA-2 5A			
Primary Bkr	20	45 @ 60A	RN Containment Isolation Vlv 2RN253A
Backup Fuse	20	NA	
2EMXA-2 5B			
Primary Bkr	20	45 @ 60A	RN Containment Isolation Vlv 2RN276A
Backup Fuse	20	NA	
2EMXA-5 1B			
Primary Bkr	20	45 @ 60A	Pzr Steam Sample Line Inside Cont Isol Vlv 2NM3A
Backup Fuse	20	NA	
2EMXA-5-2C			
Primary Bkr	20	45 @ 60A	Pzr Steam Sample Line Inside Cont Isol Vlv 2NM6A
Backup Fuse	20	NA	
2EMXA-5 3B			
Primary Bkr	20	45 @ 60A	NC Hotleg 2A Sample Line Cont Isol Vlv 2NM22A
Backup Fuse	20	NA	
2EMXA-5 2D			
Primary Bkr	20	45 @ 60A	NC Hotleg 2D Sample Line Cont Isol Vlv 2NM25A
Backup Fuse	20	NA	
2EMXA-2 7A			
Primary Bkr	20	45 @ 60A	S/G 2A Upper Shell Sample Cont Isol Vlv 2NM187A
Backup Fuse	20	NA	
2EMXA-2 7B			
Primary Bkr	20	45 @ 60A	S/G 2A Blowdown Line Sample Cont Isol Vlv 2NM190A
Backup Fuse	20	NA	
2EMXA-2 7C			
Primary Bkr	20	45 @ 60A	SG 2C Upper Shell Sample Cont Isol Vlv 2NM207A
Backup Fuse	20	NA	
2EMXA-2 8A			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	SG 2C Blowdown Line Line Sample Cont Isol Vlv 2NM210A
Backup Fuse	20	NA	
2EMXA-4 1B			
Primary Bkr	20	45 @ 60A	NC Pump Seal Return Cont Vlv 2NV94AC
Backup Fuse	20	NA	
2EMXA-3 1A			
Primary Bkr	20	45 @ 60A	Lower Cont Vent Unit discharge cont isol vlv 2RN76A
Backup Fuse	20	NA	
2EMXA-3 3A			
Primary Bkr	20	45 @ 60A	H2 Purge Exhaust Cont Vessel Isol Vlv 2VE5A
Backup Fuse	20	NA	
2EMXA-3 3B			
Primary Bkr	20	45 @ 60A	Cont H2 Purge Blower Inlet Valve 2VE8A
Backup Fuse	20	NA	
2EMXA-3 3C			
Primary Bkr	20	45 @ 60A	H2 Purge Inlet Cont Vessel Isol Vlv 2VE10A
Backup Fuse	20	NA	
2EMXA-4 2C			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump Inlet Isol Valve 2NV842AC
Backup Fuse	20	NA	
2EMXA-3 4A			
Primary Bkr	20	45 @ 60A	H2 Skimmer Fan 2A Suction Isol Vlv 2VX1A
Backup Fuse	20	NA	
2EMXA-3 5B			
Primary Bkr	20	45 @ 60A	RCDT Vent Cont Isol Vlv 2WL2A
Backup Fuse	20	NA	
2EMXA-3 5C			
Primary Bkr	20	45 @ 60A	RCDT Vent Cont Isol Vlv 2WL39A
Backup Fuse	20	NA	
2EMXA-3 6A			
Primary Bkr	20	45 @ 60A	RB Sump Pump Disch Cont Isol Vlv 2WL64A
Backup Fuse	20	NA	
2EMXA-3 6B			
Primary Bkr	20	45 @ 60A	Cont Vent Unit Condensate Cont Isol Vlv 2WL321A
Backup Fuse	20	NA	
2EMXB-4 1B			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	NC Pump 2B Thermal Barrier Outlet Auto Isol Vlv 2KC364B
Backup Fuse	20	NA	
2EMXB-4 1C			
Primary Bkr	20	45 @ 60A	NC Pump 2D Thermal Barrier Auto Isol Vlv 2KC413B
Backup Fuse	20	NA	
2EMXB-4 2A			
Primary Bkr	20	45 @ 60A	NC Pumps Return Hdr Pend Inside Isol Vlv 2KC424B
Backup Fuse	20	NA	
2EMXB-4 2B			
Primary Bkr	20	45 @ 60A	Reactor Bldg Dm Hdr Inside Cont Isol Vlv 2KC429B
Backup Fuse	20	NA	
2EMXB-4 2C			
Primary Bkr	30	45 @ 90A	Accumulator 2B Disch Isol Vlv 2NI65B
Backup Fuse	30	NA	
2EMXB-4 3D			
Primary Bkr	30	45 @ 90A	Accumulator 2D Disch Isol Vlv 2NI88B
Backup Fuse	30	NA	
2EMXB-4 3E			
Primary Bkr	20	45 @ 60A	Hotleg Inj Check 2NI124, 2NI128 Test Isol Vlv 2NI122B
Backup Fuse	20	NA	
2EMXB-4 4A			
Primary Bkr	20	45 @ 60A	Cont Air Return Fan 2B Damper 2RAF-D-4
Backup Fuse	20	NA	
2EMXB-4 4C			
Primary Bkr	20	45 @ 60A	NI Accum 2A Sample Line Inside Cont Isol Vlv 2NM72B
Backup Fuse	20	NA	
2EMXB-4 5A			
Primary Bkr	20	45 @ 60A	NI Accum 2B Sample Line Inside Cont Isol Vlv 2NI75B
Backup Fuse	20	NA	
2EMXB-4 5B			
Primary Bkr	20	45 @ 60A	NI Accum 2C Sample Line Inside Cont Isol Vlv 2NM78B
Backup Fuse	20	NA	
2EMXB-4 5C			
Primary Bkr	20	45 @ 60A	Accum 2B Vent to 1NC32 for Blkout Vlv 2NI431B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2EMXB-4 6A			
Primary Bkr	20	45 @ 60A	NI Accum 2D Sample Line Inside Cont Isol Vlv 2NM81B
Backup Fuse	20	NA	
2EMXB-4 6B			
Primary Bkr	20	45 @ 60A	SG 2B Upper Shell Sample Cont Isol Vlv 2NM197B
Backup Fuse	20	NA	
2EMXB-4 6C			
Primary Bkr	20	45 @ 60A	SG 2B Bowdown Line Sample Cont Isol Vlv 2NM200B
Backup Fuse	20	NA	
2EMXB-4 7B			
Primary Bkr	20	45 @ 60A	SG 2D Upper Shell Sample Cont Isol Vlv 2NM217B
Backup Fuse	20	NA	
2EMXB-4 7C			
Primary Bkr	20	45 @ 60A	SG 2D Blowdown Line Sample Cont Isol Vlv 2NM220B
Backup Fuse	20	NA	
2EMXB-5 1A			
Primary Bkr	20	45 @ 60A	H2 Purge Exhaust cont vessel isol. Vlv 2VE6B
Backup Fuse	20	NA	
2EMXB-5 1B			
Primary Bkr	20	45 @ 60A	Lower cont vent unit supply cont isol vlv 2RV33B
Backup Fuse	20	NA	
2EMXB-5 1C			
Primary Bkr	20	45 @ 60A	H2 Skimmer Fan 2B Suction Isol Vlv 2VX2B
Backup Fuse	20	NA	
2EMXC-1A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 2A
Backup Fuse	200	NA	
2EMXC-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 2C
Backup Fuse	200	NA	
2EMXC-3C			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 2A
Backup Fuse	100	NA	
2EMXC-3D			
Primary Bkr	90	110 @ 300A	Control Rod Drive Vent Fan No. 2C
Backup Fuse	90	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2EMXC-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan No. 2A
Backup Fuse	90	NA	
2EMXC-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner No. 2 A
Backup Fuse	90	NA	
2EMXC-6A			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel Booster Fan CPT-BF-2A
Backup Fuse	40	NA	
2EMXC-6B			
Primary Bkr	30	45 @ 90A	Upper Containment Air Handling Unit 2A
Backup Fuse	30	NA	
2EMXC-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit 2C No 2C
Backup Fuse	30	NA	
2EMXC-6D			
Primary Bkr	90	110 @ 270A	Hydrogen Skimmer Fan No. 2A
Backup Fuse	90	NA	
2EMXC-7A			
Primary Bkr	30	45 @ 90A	PZR Compt Fan A Normal Source
Backup Fuse	30	NA	
2EMXC-7C			
Primary Bkr	20	45 @ 60A	Upper Cont Return Air Fan No. 2C
Backup Fuse	20	NA	
2EMXC-7D			
Primary Bkr	20	45 @ 60A	PZR Pwr Oper Relief Isol Vlv 2NC33A
Backup Fuse	20	NA	
2EMXC-8C			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm Air Hdlg Unit 2A
Backup Fuse	20	NA	
2EMXC-7B			
Primary Bkr	20	45 @ 60A	Upper Containment Return Air Fan No. 2A
Backup Fuse	20	NA	
2EMXA-4 3C			
Primary Bkr	30	45 @ 90A	NC Loop 2C Discharge to ND System Cont Isol Vlv 2ND2A.C

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	30	NA	
2EMXD-1A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 2B
Backup Fuse	200	NA	
2EMXD-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit No. 2D
Backup Fuse	200	NA	
2EMXD-3B			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel Booster Fan CPT-BF-2B
Backup Fuse	40	NA	
2EMXD-3C			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 2B
Backup Fuse	100	NA	
2EMXD-3D			
Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan No. 2D
Backup Fuse	100	NA	
2EMXD-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan No. 2B Fan CPT-BF-2B
Backup Fuse	90	NA	
2EMXD-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner No.2B
Backup Fuse	90	NA	
2EMXD-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit No. 2B
Backup Fuse	30	NA	
2EMXD-6D			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg Unit No. 2D
Backup Fuse	30	NA	
2EMXD-6E			
Primary Bkr	90	110 @ 270	Hydrogen Skimmer Fan No. 2B
Backup Fuse	90	NA	
2EMXD-7B			
Primary Bkr	20	45 @ 60A	Upper Cont Return Air Fan No. 2D
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2EMXD-7C			
Primary Bkr	20	45 @ 60A	Pzr Pwr Oper Safety Relief Isol Vlv 2NC31B
Backup Fuse	20	NA	
2EMXD-7D			
Primary Bkr	20	45 @ 60A	Pzr Pwr Oper Safety Relief Isol Vlv 2NC35B
Backup Fuse	20	NA	
2EMXD-8A			
Primary Bkr	30	45 @ 90A	PZR Compt Fan B Normal Source to transfer switch
Backup Fuse	30	NA	
2EMXD-8B			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm Air Hdlg Unit 2B
Backup Fuse	20	NA	
2EMXD-5C			
Primary Bkr	20	45 @ 60A	Upper Containment Return Air Fan 2B
Backup Fuse	20	NA	
2MXD-8D			
Primary Bkr	30	45 @ 90A	NC Loop 2C Disch to ND System Cont Isol Vlv 2ND1B
Backup Fuse	30	NA	
2MXM-F2A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR14
Backup Fuse	40	NA	
2MXM-F2B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR15
Backup Fuse	40	NA	
2MXM-F2C			
Primary Bkr	30	45 @ 90A	Pzr Cmpt Fan B
Backup Fuse	30	NA	
2EMXM-F2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A1 Blower A
Backup Fuse	20	NA	
2MXM-F2E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A2 Blower A
Backup Fuse	20	NA	
2MXM-F3A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR16
Backup Fuse	40	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXM-F3B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR17
Backup Fuse	40	NA	
2MXM-F3C			
Primary Bkr	25	45 @ 75A	Reactor Bldg Equip Hdlg 5 Ton Jib Crane
Backup Fuse	25	NA	
2MXM-F3D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A3 Blower A
Backup Fuse	20	NA	
2MXM-F3E			
Primary Bkr	20	45 @ 60A	Ice Cont AHU 2A4 Blower A
Backup Fuse	20	NA	
2MXM-F4A			
Primary Bkr	20	45 @ 60A	Ice Cont AHU 2A5 Blower A
Backup Fuse	20	NA	
2MXM-F4B			
Primary Bkr	20	45 @ 60A	Ice Cont AHU 2A6 Blower A
Backup Fuse	20	NA	
2MXM-F4C			
Primary Bkr	20	45 @ 60A	Incore Inst Room Sump Pump
Backup Fuse	20	NA	
2MXM-F4D			
Primary Bkr	100	110 @ 300A	Upper Cont Welding Recpt
Backup Fuse	100	NA	
2MXM-F5A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A7 Blower A
Backup Fuse	20	NA	
2MXM-F5B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A8 Blower A
Backup Fuse	20	NA	
2MXM-F5D			
Primary Bkr	100	110 @ 300A	Welding Feeder
Backup Fuse	100	NA	
2MXM-F1C			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Defrost Heater 2A

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	50	NA	
2MXM-F8C			
Primary Bkr	60	110 @ 180A	Reactor Coolant Drain Tank Pump 2A
Backup Fuse	60	NA	
2MXM-F6A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A9 Blower A
Backup Fuse	20	NA	
2MXM-F6B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 12A10 Blower A
Backup Fuse	20	NA	
2MXM-F6C			
Primary Bkr	30	45 @ 90A	Lower Cont Aux Charcoal Filter Fan 2A
Backup Fuse	30	NA	
2MXM-F7A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A11 Blower A
Backup Fuse	20	NA	
2MXM-F7B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A12 Blower A
Backup Fuse	20	NA	
2MXM-F7C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A13Blower A
Backup Fuse	20	NA	
2MXM-R1A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B1 Blower A
Backup Fuse	20	NA	
1MXM-R1B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B2 Blower A
Backup Fuse	20	NA	
2MXM-R1C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B3 Blower A
Backup Fuse	20	NA	
1MXM-R1D			
Primary Bkr	30	45 @ 90A	RCP 2A Oil Lift Pump
Backup Fuse	30	NA	
2MXM-R2A			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR12
Backup Fuse	40	NA	
2MXM-R2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B4 Blower A
Backup Fuse	20	NA	
2MXM-R2E			
Primary Bkr	30	45 @ 90A	RCP 2B Oil Lift Pump
Backup Fuse	30	NA	
2MXM-R3D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B5 Blower A
Backup Fuse	20	NA	
2MXM-R3E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B6 Blower A
Backup Fuse	20	NA	
2MXM-R3F			
Primary Bkr	30	45 @ 90A	RCP 2C Oil Lift Pump
Backup Fuse	30	NA	
2MXM-R4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B7 Blower A
Backup Fuse	20	NA	
2MXM-R4E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B8 Blower A
Backup Fuse	20	NA	
2MXM-R4F			
Primary Bkr	30	45 @ 90A	RCP 2D Oil Lift Pump
Backup Fuse	30	NA	
2MXM-R5B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B9 Blower A
Backup Fuse	20	NA	
2MXM-R5C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU2B10 Blower A
Backup Fuse	20	NA	
2MXM-R5D			
Primary Bkr	175	200 @ 525A	Ice Cond Equip Pwr Pnlbd 2B
Backup Fuse	175	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1MXM-R6A			
Primary Bkr	20	45 @ 60A	Rod Cntrl Cluster Change Fixture Hoist Drive
Backup Fuse	20	NA	
2MXM-R6B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B11 Blower A
Backup Fuse	20	NA	
2MXM-R7A			
Primary Bkr	20	45 @ 60A	Stud Tensioner Hoist
Backup Fuse	20	NA	
2MXM-R6D			
Primary Bkr	150	110 @ 450A	175 Ton Polar Crane
Backup Fuse	150	NA	
2MXM-R7B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 2A
Backup Fuse	20	NA	
2MXM-R7C			
Primary Bkr	30	45 @ 90A	S/G Comp 2D Fan
Backup Fuse	30	NA	
2MXM-R7D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B12
Backup Fuse	20	NA	
2MXM-R7E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B13 Blower A
Backup Fuse	20	NA	
2MXM-R8A			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 2B
Backup Fuse	20	NA	
2MXM-R8B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive 2C
Backup Fuse	20	NA	
2MXM-R8C			
Primary Bkr	30	45 @ 90A	S/G Comp 2A Fan
Backup Fuse	30	NA	
2MXM-R8D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B14 Blower A
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXM-R8E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B15 Blower A
Backup Fuse	20	NA	
2MXMA-1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A14 Blower A
Backup Fuse	20	NA	
2MXMA-1E			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 2A Pump 2A1
Backup Fuse	20	NA	
2MXM-R2C			
Primary Bkr	20	45 @ 160A	RCPM Maintenance Crane Recpt 2A, 2B, 2C, & 2D
Backup Fuse	20	NA	
2MXMA-2B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR6
Backup Fuse	40	NA	
2MXMA-2C			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2R18
Backup Fuse	40	NA	
2MXMA-2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A15 Blower A
Backup Fuse	20	NA	
2MXMA-3A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR9
Backup Fuse	25	NA	
2MXMA-3B			
Primary Bkr	20	45 @ 60A	Ice Cond Equip Access Door 2A
Backup Fuse	20	NA	
2MXMA-3C			
Primary Bkr	50	110 @ 150	Ice Cond Floor Cooling Pump 2A
Backup Fuse	50	NA	
2MXMA-3D			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 2B Pump 2B1
Backup Fuse	20	NA	
2MXN-F2A			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A1 Blower B
Backup Fuse	20	NA	
2MXN-F2B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A2 Blower B
Backup Fuse	20	NA	
2MXN-F2C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A3 Blower B
Backup Fuse	20	NA	
2MXN-F2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A4 Blower B
Backup Fuse	20	NA	
2MXN-F3A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A5 Blower B
Backup Fuse	20	NA	
2MXN-F3B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A6 Blower B
Backup Fuse	20	NA	
2MXN-F3C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A7 Blower B
Backup Fuse	20	NA	
2MXN-F3D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A8 Blower B
Backup Fuse	20	NA	
2MXN-F4A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR1
Backup Fuse	25	NA	
2MXN-F4B			
Primary Bkr	30	45 @ 90A	S/G Comp 2C Fan
Backup Fuse	30	NA	
2MXN-F4C			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR2
Backup Fuse	25	NA	
2MXN-F4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A9 Blower B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXN-F4E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A10 Blower B
Backup Fuse	20	NA	
2MXN-F5A			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No 2D
Backup Fuse	20	NA	
2MXN-F5B			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No. 2E
Backup Fuse	20	NA	
2MXN-F5C			
Primary Bkr	20	45 @ 60A	Incore Inst Drive No. 2F
Backup Fuse	20	NA	
2MXN-F5D			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 2A Pump 2A2
Backup Fuse	20	NA	
2MXN-F1C			
Primary Bkr	60	110 @ 180A	Reactor Coolant Drain Tank Pump 2B
Backup Fuse	60	NA	
2MXN-F8B			
Primary Bkr	20	45 @ 60A	Cont Floor & Equip Sump 2B Pump 2B2
Backup Fuse	20	NA	
2MXN-F8C			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Defrost Htr 2B
Backup Fuse	50	NA	
2MXN-F6A			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR4
Backup Fuse	25	NA	
2MXN-F6B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR5
Backup Fuse	40	NA	
2MXN-F6C			
Primary Bkr	20	45 @ 60A	Fuel Transfer Sys Reactor Side Fdr
Backup Fuse	20	NA	
2MXN-F6D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A11 Blower B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXN-F7B			
Primary Bkr	30	45 @ 90A	S/G Booster Fan 2A
Backup Fuse	30	NA	
2MXN-F7D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A12 Blower B
Backup Fuse	20	NA	
2MXN-F7E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A13 Blower B
Backup Fuse	20	NA	
2MXN-R1D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B1 Blower B
Backup Fuse	20	NA	
2MXN-R1E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B2 Blower B
Backup Fuse	20	NA	
2MXN-R1F			
Primary Bkr	30	45 @ 90A	RCP 2A Oil Lift Pump No. 2
Backup Fuse	30	NA	
2MXN-R2C			
Primary Bkr	30	45 @ 90A	Reactor Cavity Manipulator Crane
Backup Fuse	30	NA	
2MXN-R2F			
Primary Bkr	30	45 @ 90A	RCP 2B Oil Lift Pump No. 2
Backup Fuse	30	NA	
2MXN-R3A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B3 Blower B
Backup Fuse	20	NA	
2MXN-R3B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B4 Blower B
Backup Fuse	20	NA	
2MXN-R3C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B5 Blower B
Backup Fuse	20	NA	
2MXN-R3D			
Primary Bkr	30	45 @ 90A	RCP 2C Oil Lift Pump No. 2

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	30	NA	
2MXN-R4A			
Primary Bkr	50	110 @ 150A	Ice Cond Bridge Crane
Backup Fuse	50	NA	
2MXN-R4B			
Primary Bkr	30	45 @ 90A	RB Equip Hatch Hoist
Backup Fuse	30	NA	
2MXN-R4C			
Primary Bkr	25	45 @ 75A	S/G Comp 2B Fan
Backup Fuse	25	NA	
2MXN-R4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B6 Blower B
Backup Fuse	20	NA	
2MXN-R4E			
Primary Bkr	30	45 @ 90A	RCP 2D Oil Lift Pump No.2
Backup Fuse	30	NA	
2MXN-R5D			
Primary Bkr	175	200 @ 525A	Ice Cond Equip Pwr Pnlbd 2A
Backup Fuse	175	NA	
2MXN-R6A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B7 Blower B
Backup Fuse	20	NA	
2MXN-R6B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B8 Blower B
Backup Fuse	20	NA	
2MXN-R6C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B9 Blower B
Backup Fuse	20	NA	
2MXN-R6D			
Primary Bkr	100	110 @ 300A	Welding Fdr
Backup Fuse	100	NA	
2MXN-R7A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B10 Blower B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXN-R7B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B11 Blower B
Backup Fuse	20	NA	
2MXN-R7C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B12 Blower B
Backup Fuse	20	NA	
2MXN-R7D			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling Pump 2B
Backup Fuse	50	NA	
2MXN-R8D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B13 Blower B
Backup Fuse	20	NA	
2MXN-R8E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B14 Blower B
Backup Fuse	20	NA	
2MXN-R8F			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2B15 Blower B
Backup Fuse	20	NA	
SMXG-R3G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to Cont Sump Isol Vlv 2NV1012C
Backup Fuse	20	NA	
2MXNA-1E			
Primary Bkr	30	45 @ 90A	Lower Cont Aux Charcoal Filter Fan 2B
Backup Fuse	30	NA	
2MXNA-2B			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR7
Backup Fuse	25	NA	
2MXNA-2C			
Primary Bkr	25	45 @ 75A	Lighting Pnlbd 2LR8
Backup Fuse	25	NA	
2MXNA-2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A14 Blower B
Backup Fuse	20	NA	
2MXN-2E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A15 Blower B
Backup Fuse	20	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2MXN-3A			
Primary Bkr	20	45 @ 60A	2 Ton CRDM Hdlg Jib Crane
Backup Fuse	20	NA	
2MXN-3B			
Primary Bkr	30	45 @ 90A	Cont Air Compressor
Backup Fuse	30	NA	
SMXG-R4G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to NC Pump Seals Isol Vlv 2NV1013C
Backup Fuse	20	NA	
2MXNA-3C			
Primary Bkr	20	45 @ 60A	NC Pump Motor Drain Tank Pump No. 1
Backup Fuse	20	NA	
2MXNA-3D			
Primary Bkr	20	45 @ 60A	Ice Cond Equip Access Door 2B
Backup Fuse	20	NA	
SMXD-3E			
Primary Bkr	15	45 @ 45	Unit 2 Personnel Lock
Backup Fuse	15	NA	
SMXV-2F			
Primary Bkr	15	45 @ 45A	Unit 2 Emergency Personnel Lock
Backup Fuse	15	NA	
3. 600 VAC-Press Htr Pwr Pnl			
Backup Press Htr Pwr Pnl 2A-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 1, 2, & 22
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2A-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 5, 6, & 27
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2A-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 9, 10, & 32
Backup Fuse	90	NA	

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Press Htr Pwr Pnl 2A-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 11, 12, & 35
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2A-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 13, 14, & 37
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2A-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 17, 18, & 42
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 21, 47, & 48
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 26, 53, & 54
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 31, 59, & 60
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 36, 65, & 66
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 41, 71, & 72
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2B-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 46, 77, & 78
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 7, 8, & 30

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 19, 20, & 45
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 24, 51, & 52
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-1D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 29, 57, & 58
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 34, 63, & 64
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 39, 69, & 70
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2C-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 44, 75, & 76
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-1A			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 3, 4, & 25
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-1B			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 15, 16, & 40
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-1C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 23, 49, & 50
Backup Fuse	90	NA	
SMXG-R5A			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 28, 55, & 56
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-2C			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 33, 61, & 62
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-2D			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 38, 67, & 68
Backup Fuse	90	NA	
Backup Press Htr Pwr Pnl 2D-2E			
Primary Bkr	90	110 @ 270A	Pressurizer Heaters 43, 73, & 74
Backup Fuse	90	NA	
4. 120 VAC-Panelboards			
2KM-19			
Primary Bkr	20	45 @ 60A	RCP 2A Space Htr
Backup Fuse	20	NA	
2KM-20			
Primary Bkr	20	45 @ 60A	RCP 2C Space Htr
Backup Fuse	20	NA	
2KN-19			
Primary Bkr	20	45 @ 60A	RCP 2B Space Htr
Backup Fuse	20	NA	
2KN-20			
Primary Bkr	20	45 @ 60A	RCP 2D Space Htr
Backup Fuse	20	NA	
2KN-27			
Primary Bkr	20	36 @ 60A	Fuel Handling Control Console
Backup Fuse	20	NA	
5. 250 VDC-Lighting			
RB Deadlight Pnlbd 2DLD # 1			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR1 & 2LR2
Backup Fuse	20	NA	
RB Deadlight Pnlbd 2DLD # 3			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR4, 2LR5, & 2LR6
Backup Fuse	20	NA	
RB Deadlight Pnlbd 2DLD # 4			

TABLE 16.8.1-1
UNIT 2 Containment Penetration Conductor Overcurrent Protective Devices

DEVICE NO. & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR7, 2LR8, & 2LR9
Backup Fuse	20	NA	
RB Deadlight Pnlbd 2DLD # 6			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR12
Backup Fuse	20	NA	
RB Deadlight Pnlbd 2DLD # 7			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR16
Backup Fuse	20	NA	
RB Deadlight Pnlbd 2DLD # 9			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 2LR18 & 2LR17
Backup Fuse	20	NA	
6. VAC - LC			
Outage Power Fuse Box2A			
Primary Bkr	150	NA	Upper Containment Safety Switch 2A
Backup Fuse	150	NA	
Primary Bkr	150	NA	Upper Containment Safety Switch 2B
Backup Fuse	150	NA	
Primary Bkr	200	NA	Lower Cont Outage Power Distr Pnl 2A
Backup Fuse	200	NA	
Primary Bkr	225	NA	Lower Cont Outage Power Distr Pnl 2B
Backup Fuse	225	NA	

16.9 AUXILIARY SYSTEMS

16.9.4 Fire Hose Stations

COMMITMENT The fire hose stations shown in Table 16.9.4-1 shall be OPERABLE.

APPLICABILITY Whenever equipment in areas protected by the fire hose stations is required to be OPERABLE.

REMEDIAL ACTIONS

-----NOTES-----

1. One outlet of the wye shall be connected to the standard length of hose provided for the hose station. The second outlet of the wye shall be connected to a length of hose sufficient to provide coverage for the area left unprotected by the inoperable hose station.
2. Where it can be demonstrated that the physical routing of the fire hose would result in a recognizable hazard to operating technicians, plant equipment, or the hose itself, the fire hose shall be stored in a roll at the outlet of the OPERABLE hose station.
3. Signs shall be mounted above the gate wye(s) to identify the proper hose to use.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more fire hose stations inoperable in an area in which the hose is the primary means of fire suppression.	A.1 Provide gated wye(s) on nearest OPERABLE hose station(s).	1 hour
B. One or more fire hose stations inoperable in an area in which the hose is not the primary means of fire suppression.	B.1 Provide gated wye(s) on nearest OPERABLE hose station(s).	24 hours

TESTING REQUIREMENTS

TEST	FREQUENCY
<p>TR 16.9.4.1 Perform visual inspection of the fire hose stations, accessible during plant operations, to assure all required equipment is at the station and the fire hose shows no physical damage.</p>	<p>In accordance with the performance based criteria stated in the Bases</p>
<p>TR 16.9.4.2 Perform a visual inspection of the fire hose stations not accessible during plant operations to assure all required equipment is at the station.</p>	<p>18 months</p>
<p>TR 16.9.4.3 Remove each fire hose for inspection and racking.</p>	<p>18 months</p>
<p>TR 16.9.4.4 Inspect all fire hose gaskets and replace degraded gaskets in the couplings.</p>	<p>18 months</p>
<p>TR 16.9.4.5 Open each hose station valve partially to verify valve OPERABILITY and no flow blockage.</p>	<p>3 years</p>
<p>TR 16.9.4.6 Conduct a hose hydrostatic test at a pressure \geq 150 psig or \geq 50 psig above maximum fire main operating pressure, whichever is greater.</p>	<p>3 years</p>

TABLE 16.9.4-1
Page 1 of 2

FIRE HOSE STATIONS

Number	Location	Elevation (feet)
157	55-FF	695
158	57-FF	695
175	51-LL/MM	716
176	55-MM	716
177	55-QQ	716
178	58/59-MM	716
179	61-LL	716
180	52-CC	716
181	54-C6	716
182	58-CG	716
183	59-CC /DD	716
167	51-JJ/KK	733
168	52-MM/NN	733
169	55-NN	733
170	57-LL	733
171	54-HH	733
172	58HH	733
173	60-MM/NN	733
174	61-JJ/KK	733
887	53-DD	733
889	51/52-DD	733
890	51-BB	733
891	40-CC	733
892	43/44-DD	733
893	40-AA/BB	733
894	44-AA/BB	733
895	46-BB	733
897	60-DD	733
898	61-BB	733
899	66-BB	733
900	68-AA/BB	733
901	72-BB	733
902	68/69-DD	733
903	72-DD	733
904	58-CC/DD	733

TABLE 16.9.4-1
Page 2 of 2

FIRE HOSE STATIONS

Number	Location	Elevation (feet)
913	45-AA/BB	733
914	66BB	733
1184	56-JJ	733
161	50/51-MM	750
162	54/55-LL	750
163	54-JJ	750
164	56-QQ	750
165	58-LL/MM	750
166	61-MM	750
302	60-KK	750
303	52-GG	750
961	45-BB	750
962	46-CC	750
963	51-BB	750
964	51-BB	750
965	51-CC	750
966	56-DD	750
967	67-BB	750
968	66-CC	750
969	61-CC	750
970	61-BB	750
971	58-BB	750
972	57-DD	750
1185	58-JJ	750
184	54-KK	767
185	54-MM	767
186	50/51-MM	767
191	56-CG	767
192	58-JJ	767
193	60-MM	767
194	61/62-MM	767
974	51-BB	767
975	61-BB	767

BASES

The OPERABILITY of the Fire Suppression Systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The Fire Suppression System consists of the water system, spray, and/or sprinklers, Halon, and fire hose stations. The collective capability of the Fire Suppression Systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the Fire Suppression Systems are inoperable, alternate backup fire-fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire-fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The Testing Requirements provide assurance that the minimum OPERABILITY requirements of the Fire Suppression Systems are met.

The location of the required equipment at the fire hose station and the physical condition of fire hose is critical to fire brigade operations. The option of increasing or decreasing the frequency of the fire hose station inspections, based on hose performance, allows the ability to optimize plant resources. Should an adverse trend develop with fire hose station equipment or fire hose condition, the frequency of the inspection shall be increased. Similarly if the fire hose station equipment or fire hose condition trends are positive, the frequency of verification could be decreased. Through programmed trending of fire hose station inspections, fire hose stations will be maintained at predetermined reliability standards. The Site Fire Protection Engineer is responsible for trending and determining inspection frequencies based on the following:

Annual review the results of the completed fire hose station inspection procedures.

- If the results demonstrate that the fire hose stations are found acceptable at least 99% of the time over the 3 year rolling period, the frequency of conducting the fire hose station inspection may be decreased from - monthly to quarterly or - quarterly to semiannually or - semiannually to annually - as applicable. The frequency shall not be extended beyond annually (including grace period).
- If the results demonstrate that the fire hose stations are not found acceptable at least 99% of the time, the frequency of conducting the fire hose station inspections shall be increased from - annually to semiannually or - semiannually to quarterly or - quarterly to monthly - as applicable. The verification need not be conducted more often than monthly.

This commitment is part of the McGuire Fire Protection Program and therefore subject to the provisions of McGuire Facility Operating License Conditions C.(4) (Unit 1) and C.(7) (Unit 2).

REFERENCES

1. McGuire Nuclear Station UFSAR, Chapter 9.5.1
2. McGuire Nuclear Station SER Supplement 2, Chapter 9.5.1 and Appendix D
3. McGuire Nuclear Station SER Supplement 5, Chapter 9.5.1 and Appendix B
4. McGuire Fire Protection Review, as revised
5. McGuire Nuclear Station SER Supplement 6, Chapter 9.5.1 and Appendix C
6. McGuire Nuclear Station Facility Operating Licenses, Unit 1 License Condition C.(4) and Unit 2 License Condition C.(7)