

Attachment 1

McGuire Nuclear Station
Units 1 and 2

Proposed Revision to Technical Specifications
Concerning Maximum Centrifugal Charging Pumps Flow Rate

Included: (a) Technical Specifications page 3/4 5-8 revised
(b) Discussion and Justification for Proposed Revision

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EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- 2) At least once per 18 months.

Boron Injection
Throttle Valves

Valve Number

NI-480
NI-481
NI-482
NI-483

Safety Injection
Throttle Valves

Valve Number

NI-488
NI-489
NI-490
NI-491

- n. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:
- 1) For centrifugal charging pump lines, with a single pump running:
 - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 345 gpm, and
 - b) The total pump flow rate is less than or equal to 565 gpm.
 - 2) For Safety Injection pump lines, with a single pump running:
 - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 462 gpm, and
 - b) The total pump flow rate is less than or equal to 660 gpm.
 - 3) For RHR pump lines, with a single pump running, the sum of the injection line flow rates is greater than or equal to 3975 gpm.

Discussion and Justification for Proposed Revision

During preoperational ECCS flow balance testing for McGuire Unit 2, it was discovered that the requirement of Technical Specification 4.5.2.h.1).a) could only be met by allowing one pump to exceed the 550 gpm limit of Technical Specification 4.5.2.h.1).b). This flow rate was established as the maximum due to the unavailability of data for the Net Positive Suction Head Required (NPSHR) at flow rates greater than 550 gpm. One pump at McGuire was operated satisfactorily, however, at about 564 gpm.

To verify the acceptability of the higher flow rate, additional tests were performed by the manufacturer, Pacific Pumps. Using a spare rotating assembly, the NPSHR was determined for flow rates up to 588 gpm. Below about 575 gpm, the NPSHR was 21 feet or less. At about 575 gpm, the NPSHR increased abruptly.

The high flow operating conditions of concern in the Technical Specifications is the requirement to operate the centrifugal charging pump during a large size LOCA. In such an accident, it is calculated that the reactor coolant pressure will decrease rapidly to near zero allowing all of the operating ECCS pumps to run out to their maximum injection flow rates. If only one charging pump operates under this condition, the pump will run out to the highest flow allowed by the piping flow resistance and backpressure while the available NPSH is a minimum due to the high pressure drop in the suction line caused by all other ECCS pumps operating simultaneously. Calculations show that the minimum available NPSH is 45 feet for this condition and with the Refueling Water Storage Tank (RWST) at low level.

Based upon the testing described above, Pacific Pumps concluded that the centrifugal charging pumps can run for a limited time (about 3 days) at 565 gpm with a minimum NPSH of 45 feet and 100°F water temperature. Under these conditions only a small amount of incipient cavitation would be expected which would not compromise the integrity nor the operability of the pump. The limited time of about 3 days for operation at these conditions is acceptable because operation approaching these conditions would be encountered only while injecting into a depressurized system with all ECCS pumps operating and the RWST at the minimum level. After switchover to recirculation mode, the Residual Heat Removal (RHR) pumps provide suction to the Centrifugal Charging Pumps with an available NPSH of 184 feet.

Three days was chosen as an arbitrary time limit because it is conservative for acceptable pump operation and it clearly bounds any required operating time at the maximum flow.

This amendment has been reviewed and determined to have no adverse safety or environmental impact.

Attachment 2

McGuire Nuclear Station
Units 1 and 2

Proposed Revision to Technical Specifications to
Correct Typographical Errors

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TABLE 3.8-1a

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1. 6900 VAC-Swgr			
Primary Bkr-RCP1A	5.0	^{15.4} 14 + 1.4 @ 25A	Reactor Coolant Pump 1A
Backup Brk-1TA-5	5.0	16.5 15 + 1.5 @ 20A	
Primary Bkr-RCP1B	5.0	^{15.4} 14 + 1.4 @ 25A	Reactor Coolant Pump 1B
Backup Brk-1TB-5	5.0	16.5 15 + 1.5 @ 20A	
Primary Bkr-RCP1C	5.0	^{15.4} 14 + 1.4 @ 25A	Reactor Coolant Pump 1C
Backup Brk-1TC-5	5.0	16.5 15 + 1.5 @ 20A	
Primary Bkr-RCP1D	5.0	^{15.4} 14 + 1.4 @ 25A	Reactor Coolant Pump 1D
Backup Brk-1TD-5	5.0	16.5 15 + 1.5 @ 20A	
2. 600 VAC-MCC			
1EMXA-2 1D			
Primary Bkr	20	45 @ 60A	NC Pump 1C Thermal Barrier
Backup Fuse	20	N.A.	Outlet Auto Isol Vlv 1KC345A
1EMXA-2 1E			
Primary Bkr	20	45 @ 60A	NC Pump 1A Thermal Barrier
Backup Fuse	20	N.A.	Outlet Auto Isol Vlv 1KC394A
1EMXA-2 2A			
Primary Bkr	20	45 @ 60A	Cont Air Return Fan 1A Damper
Backup Fuse	20	N.A.	IRAF-D-2

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1EMXA-2 2B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	N2 to Prt Cont Isol Inside Vlv 1N154A
1EMXA-2 2C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	RCP Mtg Brg Oil Fill Isol Vlv 1N196A
1EMXA-2 3A Primary Bkr Backup Fuse	30 30	45 @ 90A N.A.	Accumulator 1A Disch Isol Vlv 1N154A I
1EMXA-2 3B Primary Bkr Backup Fuse	30 30	45 @ 90A N.A.	Accumulator 1C Disch Isol Vlv 1N176A I
1EMXA-2 3C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Test Hdr Inside Cont Isol Vlv 1N195A I
1EMXA-2 4A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	UHI Check Vlv Test Line Isol Vlv 1N1266A

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1EMXA-3 4A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	H2 Skimmer Fan 2A Suction Isol Vlv 1VX1A
1EMXA-3 5B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	RCDT Pump Disch Cont Isol Vlv 1WL2A
1EMXA-3 5C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	RCDT Vent Cont Isol Vlv 1WL39A
1EMXA-3 6A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	RB Sump Pump Disch Cont Isol Vlv 1WL64A
1EMXA-3 6B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Cont Vent Unit Condensate Cont Isol Vlv 1WL321A
1EMXB-4 1B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	NC Pump 1B Thermal Barrier Outlet Auto Isol Vlv 1KC364B
1EMXB-4 1C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	NC Pump 1D Thermal Barrier Auto Isol Vlv 1KC413B

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1EMXB-4 7C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	SG 1D Blowdown Line Sample Cont Isol Vlv 1NM220B
1EMXB-2 1A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	H2 Purge Exhaust Cont Vessel Isol Vlv 1VE6B
1EMXB-5 1C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	H2 Skimmer Fan 1B Suction Isol Vlv 1VX2B
1EMXC-1A 3B Primary Bkr Backup Fuse	200 200	250 @ 600A N.A.	Lower Containment Cooling Unit No. 1A
1EMXC-2A Primary Bkr Backup Fuse	200 20 200	250 @ 600A N.A.	Lower Containment Cooling Unit No. 1C
1EMXC-3C Primary Bkr Backup Fuse	100 20 100	110 @ 300A N.A.	Control Rod Drive Vent Fan No. 1A
1EMXC-3D Primary Bkr Backup Fuse	100 100	110 @ 300A N.A.	Control Rod Drive Vent Fan No. 1C

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1EMXC-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan
Backup Fuse	90	N.A.	No. 1A
1EMXC-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner
Backup Fuse	90	N.A.	No. 1A
1EMXC-6A			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel
Backup Fuse	40	N.A.	Rooster Fan CPT-BF-1A
1EMXC-6B			
Primary Bkr	30	45 @ 90A	Upper Containment Air
Backup Fuse	30	N.A.	Handling Unit. 1A
1EMXC-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg
Backup Fuse	30	N.A.	Unit 1C Not Used
1EMXC-6D			
Primary Bkr	90	110 @ 270A	Hydrogen Skimmer Fan
Backup Fuse	90	N.A.	No. 1
1EMXC-7C			
Primary Bkr	30	45 @ 90A	Upper Cont Return Air Fan
Backup Fuse	30	N.A.	No. 1C

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1MXM F4D			
Primary Bkr	100	110 @ 300A	Welding Feeder
Backup Fuse	100	N.A.	
1MXM F5C			
Primary Bkr	50	110 @ 150A	Ice Cond Floor Cooling
Backup Fuse	50	N.A.	Defrost Heater ^{1A}
1MXM F6C			
Primary Bkr	60	110 @ 150A	Reactor Coolant Drain Tank
Backup Fuse	60	N.A.	Pump 1A
1MXM F7A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A9 Blower A
Backup Fuse	20	N.A.	
1MXM F7B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A10 Blower A
Backup Fuse	20	N.A.	
1MXM F7C			
Primary Bkr	30	45 @ 90A	Lower Cont Aux Charcoal Filter
Backup Fuse	30	N.A.	Fan 1A
1MXM F8A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1A11 Blower A
Backup Fuse	20	N.A.	

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1MXM R7B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Incore Inst Drive 1A
1MXM R7D Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Ice Cond AHU 1B12
1MXM R7E Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Ice Cond AHU 1B13 Blower A
1MXM R8A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Incore Inst Drive 1C
1MXM R8D Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Ice Cond AHU 1B14 Blower A
1MXM R8E Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Ice Cond AHU 1B15 Blower A
1MXM R8B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Incore Inst. Drive 1C

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1MXN-R3A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B3 Blower B
Backup Fuse	20	N.A.	
1MXN-R3B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B4 Blower B
Backup Fuse	20	N.A.	
1MXN-R3C			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B5 Blower B
Backup Fuse	20	N.A.	
1MXN-R3D			
Primary Bkr	30	45 @ 90A	RCP 1C Oil Lift Pump No. 2
Backup Fuse	30	N.A.	
1MXN-R4A			
Primary Bkr	50	110 @ 150A	Ice Cond Bridge Crane
Backup Fuse	50	N.A.	
1MXN-R4B			
Primary Bkr	30	45 @ 90A	RB Equip Hatch Hoist No. 1
Backup Fuse	30	N.A.	
1MXN-R4D 1MXN-R4D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 1B6 Blower B
Backup Fuse	20	N.A.	

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
MXN-R5B			
Primary Bkr	20	45 @ 60A	Control Room Area Duct
Backup Fuse	20	N.A.	Heater
SMXG-F3G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to
Backup Fuse	20	N.A.	Cont Sump Isol Vlv INV1012C
SMXG-F4G			
Primary Bkr	20	45 @ 60A	Standby Makeup Pump to NC
Backup Fuse	20	N.A.	Pump Seals Isol Vlv INV1013 <i>fy c</i>
IMXNA-3C			
Primary Bkr	20	45 @ 60A	NC Pump Motor Drain Tank
Backup Fuse	20	N.A.	Pump No. 1
IMXNA-3D			
Primary Bkr	20	45 @ 60A	Ice Cond Equip Access Door 1B
Backup Fuse	20	N.A.	
SMXC-7D			
Primary Bkr	15	45 @ 45A	Unit 1 Personnel Lock
Backup Fuse	15	N.A.	
SMXA-F4A			
Primary Bkr	15	45 @ 45A	Unit 1 Emergency Personnel Lock
Backup Fuse	15	N.A.	

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
4. 120 VAC-Panelboards (Continued)			
1KM-2			
Primary Bkr	30	45 @ 90A	RCP 1C Space Htr
Backup Fuse	30	N.A.	
1KM-28			
Primary Bkr	20	36 @ 60A	Cont Spray Sys Rh Trans
Backup Fuse	20	N.A.	INSMT 5400
1KM-30			
Primary Bkr	20	36 @ 60A	Cont Spray Sys Rh Trans
Backup Fuse	20	N.A.	INSMT 5410
1KN-1			
Primary Bkr	30	45 @ 90A	RCP 1B Space Heater
Backup Fuse	30	N.A.	
1KN-2			
Primary Bkr	30	45 @ 90A	RCP 1D Space Heater
Backup Fuse	30	N.A.	
1KN-25			
Primary Bkr	20	36 @ 60A	<i>Dehum. # 1</i> Incore Inst Dehum. # 1
Backup Fuse	20	N.A.	
1KN-27			
Primary Bkr	20	36 @ 60A	Fuel Handling Control
Backup Fuse	20	N.A.	Console

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
4. 120 VAC-Panelboards (Continued)			
1KN-29			
Primary Bkr	20	36 @ 60A	Incore Inst ^{Dehum. #2} Bellum-2
Backup Fuse	20	N.A.	
5. 250 VDC-Lighting			
RB Deadlight Pnlbd			
1DLD #1			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 1LR1 & 1LR2
Backup Fuse	20	N.A.	
RB Deadlight Pnlbd			
1DLD #3			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 1LR4, 1LR5, &
Backup Fuse	20	N.A.	1LR6
RB Deadlight Pnlbd			
1DLD #4			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 1LR7, 1LR8,
Backup Fuse	20	N.A.	& 1LR9
RB Deadlight Pnlbd			
1DLD #6			
Primary Bkr	20	40 @ 60A	Ltg Pnl Nos. 1LR12
Backup Fuse	20	N.A.	

TABLE 3.8-1b
UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION		TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
1.	6900 VAC-Swgr			
	Primary Bkr-RCP2A	5.0	15.4 14 + 1.4 @ 25A	Reactor Coolant Pump 2A
	Backup Brk-2TA-5	5.0	16.5 15 + 1.5 @ 20A	
	Primary Bkr-RCP2B	5.0	15.4 14 + 1.4 @ 25A	Reactor Coolant Pump 2B
	Backup Brk-2TB-5	5.0	16.5 15 + 1.5 @ 20A	
	Primary Bkr-RCP2C	5.0	15.4 14 + 1.4 @ 25A	Reactor Coolant Pump 2C
	Backup Brk-2TC-5	5.0	16.5 15 + 1.5 @ 20A	
	Primary Bkr-RCP2D	5.0	15.4 14 + 1.4 @ 25A	Reactor Coolant Pump 2D
	Backup Brk-2TD-5	5.0	16.5 15 + 1.5 @ 20A	
2.	600 VAC-MCC			
	2EMXA-2 1D			
	Primary Bkr	20	45 @ 60A	NC Pump 2C Thermal Barrier
	Backup Fuse	20	N.A.	Outlet Auto Isol Vlv 2KC345A
	2EMXA-2 1E			
	Primary Bkr	20	45 @ 60A	NC Pump 2A Thermal Barrier
	Backup Fuse	20	N.A.	Outlet Auto Isol Vlv 2KC394A
	2EMXA-2 2A			
	Primary Bkr	20	45 @ 60A	Cont Air Return Fan 2A Damper
	Backup Fuse	20	N.A.	2RAF-D-2

TABLE 3.8-1b (Continued)

UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2EMXA-2 2B Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	N2 to Prt Cont Isol Inside Vlv 2NC54A
2EMXA-2 2C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	RCP Mtg Brg Oil Fill Isol Vlv 2NC196A
2EMXA-2 3A Primary Bkr Backup Fuse	30 30	45 @ 90A N.A.	Accumulator 2A Disch Isol Vlv 2N154A I
2EMXA-2 3B Primary Bkr Backup Fuse	30 30	45 @ 90A N.A.	Accumulator 2C Disch Isol Vlv 2N176A I
2EMXA-2 3C Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	Test Hdr Inside Cont Isol Vlv 2N195A I
2EMXA-2 4A Primary Bkr Backup Fuse	20 20	45 @ 60A N.A.	UHI Check Vlv Test Line Isol Vlv 2N1266A

TABLE 3.8-1b (Continued)

UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2EMXB-4 7C Primary Bkr	20	45 @ 60A	SG 2D Blowdown Line Sample
Backup Fuse	20	N.A.	Cont Isol Vlv 2NM220B
2EMXB-5 1A Primary Bkr	20	45 @ 60A	H2 Purge Exhaust Cont Vessel
Backup Fuse	20	N.A.	Isol Vlv 2VE6B
2EMXB-5 (C1) ←	20	45 @ 60A	H2 Skimmer Fan 2B Suction
Primary Bkr	20	N.A.	Isol Vlv 2VX2B
Backup Fuse	20		
2EMXC-1A Primary Bkr	200	250 @ 600A	Lower Containment Cooling
Backup Fuse	200	N.A.	Unit No. 2A
2EMXC-2A Primary Bkr	200	250 @ 600A	Lower Containment Cooling
Backup Fuse	200	N.A.	Unit No. 2C
2EMXC-3C Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan
Backup Fuse	100	N.A.	No. 2A
2EMXC-3D Primary Bkr	100	110 @ 300A	Control Rod Drive Vent Fan
Backup Fuse	100	N.A.	No. 2C

TABLE 3.8-1b (Continued)

UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2EMXC-7D			
Primary Bkr	20	45 @ 60A	Pwr Pwr Oper Relief
Backup Fuse	20	N.A.	Isol Vlv 2NC33A
2EMXC-8C			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm
Backup Fuse	20	N.A.	Air Hlpg Unit 2A
2EMXC-7B			
Primary Bkr	20	45 @ 60A	Upper Containment Return
Backup Fuse	20	N.A.	Air Fan No. 2A
2EMXA-4 3C			
Primary Bkr	30	45 @ 90A	NC Loop 2C Discharge to ND
Backup Fuse	30	N.A.	System Cont Isol Vlv 2ND 2AC
2EMXD-4			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit
Backup Fuse	200	N.A.	No. 2B
2EMXD-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling Unit
Backup Fuse	200	N.A.	No. 2D
2EMXD-3B			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel Rooster
Backup Fuse	40	N.A.	Fan CPT-BF-2B

B

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2MXM F2B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR15
Backup Fuse	40	N.A.	
2MXM F2D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A1 Blower A
Backup Fuse	20	N.A.	
2MXM F2B	20	45 @ 60A	Ice Cond AHU 2A2 Blower A
Primary Bkr	20	N.A.	
Backup Fuse			
2MXM F2E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A2 Blower A
Backup Fuse	20	N.A.	
2MXM F3A			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR ¹⁶
Backup Fuse	40	N.A.	
2MXM F3B			
Primary Bkr	40	45 @ 120A	Lighting Pnlbd 2LR17
Backup Fuse	40	N.A.	
2MXM F3C			
Primary Bkr	25	45 @ 75A	Reactor Bldg Equip Hdlg 5 Ton
Backup Fuse	25	N.A.	Jib Crane
2MXM F3D ^D			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A3 Blower A
Backup Fuse	20	N.A.	

TABLE 3.8-1b (Continued)

UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2MXM F3E			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A4 Blower A
Backup Fuse	20	N.A.	
2MXM F4A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A5 Blower A
Backup Fuse	20	N.A.	
2MXM F4B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A6 Blower A
Backup Fuse	20	N.A.	
2MXM F4C			
Primary Bkr	20	45 @ 60A	Incore Inst Room Sump Pump
Backup Fuse	20	N.A.	
2MXM F4D			
Primary Bkr	100	110 @ 300A	Upper Cont Welding Recpt
Backup Fuse	100	N.A.	
2MXM F5A			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A7 Blower A
Backup Fuse	20	N.A.	
2MXM F5B			
Primary Bkr	20	45 @ 60A	Ice Cond AHU 2A8 Blower A
Backup Fuse	20	N.A.	

TABLE 3.8-1b (Continued)

UNIT 2 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
2EMXC-4C			
Primary Bkr	90	110 @ 270A	Containment Air Return Fan
Backup Fuse	90	N.A.	No. 2A
2EMXC-4D			
Primary Bkr	90	110 @ 270A	Hydrogen Recombiner
Backup Fuse	90	N.A.	No. 2A
2EMXC-6A			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel
Backup Fuse	40	N.A.	<i>B</i> Booster Fan CPT-BF-2A
2EMXC-6B			
Primary Bkr	30	45 @ 90A	Upper Containment Air Handling
Backup Fuse	30	N.A.	Unit 2A
2EMXC-6C			
Primary Bkr	30	45 @ 90A	Upper Containment Air Hdlg
Backup Fuse	30	N.A.	Unit 2C No. 2C
2EMXC-6D			
Primary Bkr	90	110 @ 270A	Hydrogen Skimmer Fan
Backup Fuse	90	N.A.	
2EMXC-7C			
Primary Bkr	20	45 @ 60A	Upper Cont Return Air Fan
Backup Fuse	20	N.A.	No. 2C

TABLE 3.8-1a (Continued)

UNIT 1 CONTAINMENT PENETRATION CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

DEVICE NUMBER & LOCATION	TRIP SETPOINT OR CONT. RATING (AMPERES)	RESPONSE TIME (SECONDS)	SYSTEM POWERED
2. 600 VAC-MCC (Continued)			
1EMXC-7D			
Primary Bkr	20	45 @ 60A	Pzr Pwr Oper Relief
Backup Fuse	20	N.A.	Isol Vlv 1NC33A
1EMXC-8C			
Primary Bkr	20	45 @ 60A	Incore Instrumentation Rm
Backup Fuse	20	N.A.	Air Hdlg Unit 1A
1EMXC-8D			
Primary Bkr	20	45 @ 60A	Upper Containment Return
Backup Fuse	20	N.A.	Air Fan No. 1A
1EMXA-4 3C			
Primary Bkr	30	45 @ 90A	NC Loop 1C Discharge to ND
Backup Fuse	30	N.A.	System Cont Isol Vlv 1ND 2AC
1EMXD-1A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling
Backup Fuse	200	N.A.	Unit No. 1B
1EMXD-2A			
Primary Bkr	200	250 @ 600A	Lower Containment Cooling
Backup Fuse	200	N.A.	Unit No. 1D
1EMXD-3B			
Primary Bkr	40	45 @ 120A	Containment Pipe Tunnel
Backup Fuse	40	N.A.	Rooster Fan CPT-BF-1B

B