

MISSISSIPPI POWER AND LIGHT COMPANY

MIDDLE SOUTH ENERGY, INC.

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

DOCKET NO. 50-416

GRAND GULF NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

License No. NPF-13
Amendment No. 4

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The applications for the amendments filed by the Mississippi Power and Light Company dated July 2, 1982 and September 13, 1982 comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended as follows:
 - A. Page changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) to read as follows:
 - (2) The Technical Specifications contained in Appendix A, as revised through Amendment No. 4, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

OFFICE							
SURNAME	8211060481	821014					
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B. Add paragraph 2.C.(46) to read as follows:

(46) Post-LOCA Vacuum Breaker Position Indicators

Prior to startup following the first refueling outage, MP&L shall install position indicators with redundant indication and alarm in the control room for the check valves associated with the drywell post-LOCA vacuum breakers.

3. This amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Date of Issuance: October 14, 1982

*SEE ATTACHED PAGE FOR PREVIOUS CONCURRENCES

File in amendment only, condition in marked changes 582 of transmitted letter

OFFICE	*DL:LB#2/PM	DL:LB#2/LA*	DL:LB#2/BC	OELD	DL:AD/L	DL:DIR	
SURNAME	DHouston:pt	EHylton	ASchwencer	R. RAWSON	TNOVAK	DEisenhut	
DATE	10/8/82	10/8/82	10/11/82	10/14/82	10/11/82	10/14/82	

B. Add paragraph 2.C.(46) to read as follows:

(46) Post-LOCA Vacuum Breaker Position Indicators

Prior to startup following the first refueling outage, MP&L shall install position indication switches on the check valves for the drywell post-LOCA vacuum breakers.

3. This amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Darrell G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation

Date of Issuance: October 14, 1982

OFFICE	DL:LB#2/PM	DL:LB#2/LA	DL:LB#2/BC	OELD	DL:AD/L	DL:DIR	
SURNAME	DHouston:pt	EHyton	ASchwencer		TNovak	DEisenhut	
DATE	10/8/82	10/8/82	10/ /82	10/ /82	10/ /82	10/ /82	

ATTACHMENT TO LICENSE AMENDMENT NO. 4

FACILITY OPERATING LICENSE NO. NPF-13

DOCKET NO. 50-416

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. This revised page is identified by Amendment number and contains a vertical line indicating the area of change.

REMOVE

3/4 6-45

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3/4 8-22

3/4 8-23

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INSERT

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3/4 8-31

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CONTAINMENT SYSTEMS

3/4.6.5 DRYWELL POST-LOCA VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.5 All drywell post-LOCA vacuum breakers shall be OPERABLE and closed.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

ACTION:

- a. With one drywell post-LOCA vacuum breaker inoperable for opening but known to be closed, restore the inoperable vacuum breaker to OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With one drywell post-LOCA vacuum breaker open, restore the open vacuum breaker to the closed position within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With the position indicator of an OPERABLE drywell post-LOCA vacuum breaker inoperable, verify the vacuum breaker to be closed at least once per 24 hours by local indication. Otherwise declare the vacuum breaker inoperable. (See Note 1)

SURVEILLANCE REQUIREMENTS

4.6.5 Each drywell post-LOCA vacuum breaker shall be:

- a. Verified closed at least once per 7 days.
- b. Demonstrated OPERABLE:
 1. At least once per 31 days by:
 - a) Cycling the vacuum breaker and isolation valve(s) through at least one complete cycle of full travel.
 - b) Verifying the position indicator OPERABLE by observing expected valve movement during the cycling test. (See Note 1)
 2. At least once per 18 months by:
 - a) Verifying the pressure differential required to open the vacuum breaker, from the closed position, to be less than or equal to 1.0 psid, and (See Note 1)
 - b) Verifying the position indicator OPERABLE by performance of a CHANNEL CALIBRATION. (See Note 1)

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

3. By verifying the OPERABILITY of the vacuum breaker isolation valve differential pressure actuation instrumentation with the opening setpoint 1.0 psid by performance of a:
 - a) CHANNEL CHECK at least once per 24 hours,
 - b) CHANNEL FUNCTIONAL TEST at least once per 31 days, and
 - c) CHANNEL CALIBRATION at least once per 18 months.
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Note 1: Until restart after the first refueling outage, the following requirements shall apply:

3.6.5

- c. With the position indicator of an OPERABLE drywell post-LOCA vacuum breaker inoperable, verify the isolation valve to be closed at least once per 24 hours by local indication. Otherwise declare the isolation valve inoperable.

4.6.5.b.1

- b. Verifying the position indicator for the vacuum breaker isolation valve OPERABLE by observing expected valve movement during the cycling test.

4.6.5.b.2

At least once per 18 months by:

- a) Verifying the pressure differential required to open the vacuum breaker, from the closed position, to be less than or equal to 1.0 psid by use of an equivalent test weight and lever arm on the vacuum breaker, and
- b) Verifying the position indicator for the vacuum breaker isolation valve OPERABLE by performance of a CHANNEL CALIBRATION.

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

2. Type, NZM

BREAKER NUMBER	TRIP SETPOINT (Amperes ¹)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1112-01	500	0.100	NEUTRON MON SYS DRIVE MECHANISM (1C51-J001A)
52-1112-02	500	0.100	NEUTRON MON SYS DRIVE MECHANISM (1C51-J001B)
52-1112-03	500	0.100	NEUTRON MON SYS DRIVE MECHANISM (1C51-J001C)
52-1112-04	500	0.100	NEUTRON MON SYS DRIVE MECHANISM (1C51-J001D)
52-1112-05	175	0.100	STEAM TUNNEL CLR INSIDE CTMT FAN (N1M41C004A-N)
52-1112-06	500	0.100	NEUTRON MON SYS DRIVE MECHANISM (1C51-J001E)
52-1112-07	1200	0.100	LIGHTING XFMR [#] 1X105 (N1R18S105-D)
52-1112-10	1200	0.100	LIGHTING XFRM [#] 1X109 (N1R18S109-D)
52-1112-15	320	0.100	RWCU BACKWASH TRANSFER PUMP (N1G36C004-N)
52-1112-18	24	0.100	PRECOAT TANK AGITATOR (N1G36D019-N)
52-1112-20	90	0.100	RWCU FILTER DEMIN HOLDING PUMP (N1G36C001A-N)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1112-21	800	0.100	480 V RECEPTACLE
52-1112-22	5	0.100	MOV-STM TUNNEL COOLER INLET (N1P44F105A-N)
52-1112-24	32	0.100	MOV CLEANUP LINE RECIRC LOOP A (Q1G33F100-N)
52-1112-27	24	0.100	RESIN TANK AGITATOR (N1G36D020-N)
52-1112-28	38	0.100	MOV RWCU HEAT EXCHANGER BYPASS (N1G33F104-N)
52-1112-31	38	0.100	MOV RWCU HEAT EXCHANGER BYPASS (N1G33F044-N)
52-1112-36	500	0.100	REAC. RECIRC. PUMP SPACE HEATER (TB1B33C001A)
52-1112-37	800	0.100	480 V RECEPTACLE
52-1113-07	125	0.100	CNTMT FLOOR DRAIN SUMP PUMP (N1P45C019B-N)
52-1113-21	60	0.100	DRYWELL EQUIP DRAIN SUMP PUMP (N1P45C002B-N)
52-1113-30	28	0.100	MOV RWCU HX OUTL ISOL VLV (N1G33F254-N)
52-1113-44	800	0.100	480 V RECEPTACLE

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1113-47	500	0.100	SPARE
52-1151-06	240	0.100	CNTMT COOLING FILTER TRAIN FAN (N1M41D002A-N)
52-1151-07	17.5	0.100	REAC. RECIRC. HPU OIL PUMP FAN (N1B33D003A3-N)
52-1151-10	600	0.100	REAC. RECIRC. HPU OIL PUMP (N1B33D003A1-N)
52-1151-12	75	0.100	MOV - RECIRC PUMP SUCTION (Q1B33F023A-N)
52-1151-19	75	0.100	MOV RECIRC PUMP DISCHARGE (Q1B33F067A-N)
52-1151-20	600	0.100	REAC. RECIRC. HPU OIL PUMP (N1B33D003A2-N)
52-1151-21	17.5	0.100	REAC. RECIRC. HPU OIL PUMP FAN (N1B33D003A4-N)
52-1151-22	60	0.100	DRYWELL CHEMICAL WASTE SUMP PUMP (N1P45C029-N)
52-1151-27	60	0.100	DRYWELL EQPT. DR. SUMP PUMP (N1P45C002A-N)
52-1151-28	125	0.100	CNTMT FLOOR DR. SUMP PUMP (N1P45C019A-N)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT ₁ (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1222-04	800	0.100	CNTMT CLR FAN COIL UNIT FAN (N1M41B001B-N)
52-1222-05	240	0.100	CNTMT COOLING SYS CHAR TRAIN FAN (N1M41D002B-N)
52-1222-09	1200	0.100	LIGHTING XFMR # 1X104 (N1R18S204-E)
52-1222-11	800	0.100	480 V RECEPTACLES
52-1222-18	500	0.100	REAC. RECIRC. PUMP SPACE HEATER (TB1B33C001B)
52-1222-19	75	0.100	MOV - RWCU RETURN TO REACTOR (N1G33F042-N)
52-1222-20	32	0.100	MOV - VESSEL DRAIN LINE RECIRC. (Q1G33F101-N)
52-1222-21	75	0.100	MOV - CLEANUP LINE SUCTION IN DRYWELL (Q1G33F102-N)
52-1222-22	32	0.100	MOV - CLEANUP LINE RECIRC LOOP B (Q1G33F106-N)
52-1251-01	175	0.100	STEAM TUNNEL CLR INSIDE CNTMT (N1M41C004B-N)
52-1251-07	60	0.100	CNTMT CHEM WASTE SUMP PUMP (N1P45C027A-N)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1251-13	800	0.100	CNTMT CLR FAN COIL UNIT FAN (N1M41B001C-N)
52-1251-15	32	0.100	MOV - RWCS HX INL ISOL VLV (N1G33F256-N)
52-1251-18	38	0.100	MOV - REGEN HEAT EXCHANGER BYPASS (Q1G33F107-N)
52-1251-19	38	0.100	MOV - RWCU DRAIN FLOW ORIFICE BYP (N1G33F031-N)
52-1251-20	320	0.100	CNTMT EQUIP DRAIN PUMP (N1P45C004B-N)
52-1251-22	32	0.100	MOV - RWCU HX BYPASS LINE ISOL VLV (N1G33F255-N)
52-1251-26	1200	0.100	LIGHTING XFMR [#] 1X112 (N1R18S112-D)
52-1251-28	5	0.100	MOV - STM TUNNEL COOLER INLET (N1P44F105B-N)
52-1252-23	60	0.100	DRYWELL FLOOR DRAIN SUMP PUMP (N1P45C001B-N)
52-1411-01	38	0.100	MOV - VESSEL HEAD VENTILATION (Q1B21F002-N)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes ¹)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1412-01	17.5	0.100	REAC RECIRC HPU OIL PUMP FAN (N1B33D003B3-N)
52-1412-02	60	0.100	CNTMT CHEM WASTE SUMP PUMP (N1P45C027B-N)
52-1412-03	60	0.100	DRYWELL FLOOR DRAIN SUMP PUMP (N1P45C001A-N)
52-1412-05	12.5	0.100	MOV CRD COOLWTR PRESS CONTROL (N1C11F003-N)
52-1412-08	105	0.100	MOV REAC RECIRC PUMP B SUCTION (Q1B33F023B-N)
52-1412-09	175	0.100	RWCU DEMIN PRECOAT PUMP (N1G36C002-N)
52-1412-12	90	0.100	RWCU DEMIN HOLDING PUMP (N1G36C001B-N)
52-1412-15	600	0.100	REAC RECIRC HPU OIL PUMP (N1B33D003B1-N)
52-1412-17	320	0.100	CNTMT EQUIP DRAIN SUMP PUMP (N1P45C004A-N)
52-1412-20	800	0.100	480 V RECEPTACLE
52-1412-23	600	0.100	REAC RECIRC HPU OIL PUMP (N1B33D003B2-N)

TABLE 3.8.4.1-1 (Continued)

• PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1412-25	17.5	0.100	REAC RECIRC HPU OIL PUMP FAN (N1B33D003B4-N)
52-1412-26	38	0.100	MOV REACTOR VESSEL HEAT VENT (Q1B21F001-N)
52-1412-28	38	0.100	MOV REACTOR VESSEL HEAT VENT (Q1B21F005-N)
52-1412-32	800	0.100	CNTMT CLR FAN COIL UNIT FAN (N1M41B001A-N)
52-1412-33	105	0.100	MOV - REAC RECIRC PUMP A DISCHARGE (Q1B33F067B-N)
52-1412-35	500	0.100	CRD REMOVAL HOIST (N1M31E003-N)
52-1412-39	1200	0.100	DRYWELL VALVE HOIST (Q1M31E002-N)
52-1412-41	32	0.100	CNTMT AIRLOCK AIR SHOWER FAN (N1M41C005-N)
52-1511-07	50	0.100	MOV - RWCS INL INB ISOL VLV (Q1G33F250-A)
52-1511-24	50	0.100	MOV - RWSC OUT INB ISOL VLV (Q1G33F252-A)
52-1511-44	12.5	0.100	MOV - DRYWELL CLG WATER ISOL (Q1P42F116-A)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1511-54	24	0.100	Spare
52-1521-02	6	0.100	MOV COMBUSTIBLE GAS CONTROL SYS (Q1E61F003A-A)
52-1521-03	6	0.100	MOV COMBUSTIBLE GAS CONTROL SYS (Q1E61F005A-A)
52-1521-07	10	0.100	MOV - SUPPR. POOL MAKE-UP VALVE (Q1E30F002A-A)
52-1521-14	600	0.100	SLC SYSTEM PUMP (Q1C41C001A-A)
52-1521-15	5	0.100	STORAGE TANK OUTLET VALVE (Q1C41F001A-A)
52-1521-28	12.5	0.100	MOV - INST LINE ISOL VALVE (Q1M71F595-A)
52-1521-44	10	0.100	MOV - SUPPR POOL MAKE-UP VALVE (Q1E30F001A-A)
52-1531-24	12.5	0.100	MOV - DRYWELL COOLER ISOLATION (Q1P44F076-A)
52-1531-25	8	0.100	MOV - REACTOR WATER SAMPLE (Q1B33F020-A)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT ₁ (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1531-36	320	0.100	MOV - LPCI A INJECTION ISOL (Q1E12F042A-A)
52-1531-44	125	0.100	MOV - RHR A UPPER CMT POOL SPRAY (Q1E12F037A-A)
52-1531-49	32	0.100	MOV - DRYWELL CHEM WASTE ISOL (Q1P45F096-A)
52-1531-50	105	0.100	MOV - RHR A CONTAINMENT SPRAY (Q1E12F028A-A)
52-1541-32	32	0.100	MOV - COMB GAS CONT COMP A OUT (Q1P41F168A-A)
52-1542-05	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B001A-A)
52-1542-06	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M5B002A-A)
52-1542-07	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B003A-A)
52-1542-08	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B004A-A)
52-1542-09	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B005A-A)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT, (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1542-10	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B006A-A)
52-1542-14	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F055-A)
52-1542-15	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F057-A)
52-1542-16	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F059-A)
52-1542-17	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F061-A)
52-1542-18	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F063-A)
52-1542-19	5	0.100	MOV - DRYWELL COOLER INLET (N1P44F065-A)
52-1542-21	800	0.100	SLCS OPERATING HEATER (N1C41D002)
52-1542-22	24	0.100	DRWL PURGE COMP AUX OIL PUMP (Q1E61C001A-A)
52-1542-23	500	0.100	REFUELING PLATFORM ASSY (N1R18S513-A)
52-1542-29	1200	0.100	STBY LIQ CONTROL SYS MIXING HEATER (Q1C41D003)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1611-10	12.5	0.100	MOV - DRYWELL COLL TK OUTLET ISOLATION (Q1G41F044-B)
52-1611-15	12.5	0.100	MOV - PSW CTMT STM TNL CLR ISOL (Q1P44F070-B)
52-1611-25	12.5	0.100	MOV - DRYWELL CLG WTR ISOL (Q1P42F117-B)
52-1611-31	12.5	0.100	MOV - DRYWELL CLG WTR INL ISOL (Q1P42F114-B)
52-1611-32	32	0.100	MOV - CTMT CLG WTR ISOLATION (Q1P42F068-B)
52-1611-42	12.5	0.100	MOV PSW STEAM TUNNEL CLR ISOL (Q1P44F074-B)
52-1611-43	12.5	0.100	MOV PSW STEAM TUNNEL CLR ISOL (Q1P44F077-B)
52-1611-44	38	0.100	MOV - SERVICE AIR DRYWELL ISOLATION (Q1P52F195-B)
52-1621-03	7	0.100	MOV - DRWL HYDR INST LINE ISO (Q1E61F595B-B)
52-1621-04	7	0.100	MOV - DRWL HYDR INST LINE ISO (Q1E61F597B-B)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1621-05	7	0.100	MOV - DRWL HYDR INST LINE ISO (Q1E61F595D-B)
52-1621-06	7	0.100	MOV - DRWL HYDR INST LINE ISO (Q1E61F597D-B)
52-1621-07	7	0.100	MOV CTMT HYDR INST LINE ISOL (Q1E61F596B-B)
52-1621-08	7	0.100	MOV CTMT HYDR INST LINE ISOL (Q1E61F598B-B)
52-1621-09	7	0.100	MOV CTMT HYDR INST LINE ISO (Q1E61F596D-B)
52-1621-10	7	0.100	MOV CTMT HYDR INST LINE ISO (Q1E61F598D-B)
52-1621-16	10	0.100	CONTAINMENT ISOL VALVE (Q1B33F128-B)
52-1621-17	6	0.100	MOV - DRWL PURGE INLET (Q1E61F003B-B)
52-1621-18	6	0.100	MOV - DRWL PURGE VACUUM RELIEF (Q1E61F005B-B)
52-1621-19	24	0.100	SPARE

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1621-40	32	0.100	MOV - COMB GAS CONT COMP B OUT (Q1P41F168B-B)
52-1631-06	125	0.100	MOV - RHR B UPPER CTMT POOL SPRAY (Q1E12F037B-B)
52-1631-13	320	0.100	MOV - RHR B LPCS (Q1E12F042B-B)
52-1631-20	12.5	0.100	MOV - MAIN STEAM LINE DRAIN INBD (Q1B21F016-B)
52-1631-29	600	0.100	STANDBY LIQUID CONTROL PUMP (Q1C41C001B-B)
52-1631-33	105	0.100	MOV - RHR B TO CONTAINMENT SPRAY (Q1E12F028B-B)
52-1631-34	105	0.100	MOV RCIC STEAM SUPPLY LINE ISOL (Q1E51F063-B)
52-1631-35	5	0.100	STORAGE TANK OUTLET VALVE (Q1C41F001B-B)
52-1631-37	240	0.100	MOV - RHR A SHT DN CLG INBD ISO (Q1E12F009-B)
52-1631-38	32	0.100	MOV - RCIC STEAM WARMUP LINE ISOL (Q1E51F076-B)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1631-41	8	0.100	MOV - REACTOR WATER SAMPLE (Q1B33F019-B)
52-1631-47	50	0.100	MOV - INST AIR DRWL OUTBD ISOL (Q1P53F007-B)
52-1631-50	32	0.100	MOV - RWCU OUTLET TO MAIN CONDENSER (Q1G33F028-B)
52-1631-51	32	0.100	MOV RWCU SYS ISOLATION VALVE (Q1G33F053-B)
52-1631-52	50	0.100	MOV - RWCU SYS ISOLATION (Q1G33F040-B)
52-1631-53	50	0.100	MOV - RWCU SYS ISOLATION (Q1G33F001-B)
52-1641-06	32	0.100	MOV - MAKE UP WATER CNTMT ISOL (Q1P21F018-B)
52-1641-07	50	0.100	MOV - RWCS INL OUT ISOL VLV (Q1G33F251-B)
52-1641-08	50	0.100	MOV - RWCS INL OUT ISOL VLV (Q1G33F253-B)
52-1641-16	7	0.100	MOV INSTRUMENT LINE INBOARD ISO (Q1D23F591-B)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1641-18	7	0.100	MOV - INSTRUMENT LINE INBOARD ISO (Q1D23F593-B)
52-1641-24	7	0.100	CONTAINMENT ISOL VALVE (Q1B33F126-B)
52-1641-26	32	0.100	MOV - DRYWELL CHEM WASTE ISOL (Q1P45F097-B)
52-1641-35	10	0.100	MOV - SUPPR POOL MAKE UP VALVE (Q1E30F001B-B)
52-1641-36	10	0.100	MOV - SUPPR POOL MAKE UP VALVE (Q1E30F002B-B)
52-1642-05	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B001B-B)
52-1642-06	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B002B-B)
52-1642-07	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B003B-B)
52-1642-08	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B004B-B)
52-1642-09	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B005B-B)

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

480 VAC Molded Case Circuit Breakers (Continued)

Type NZM (Continued)

BREAKER NUMBER	TRIP SETPOINT (Amperes)	RESPONSE TIME (Seconds)	SYSTEM/COMPONENT AFFECTED
52-1642-10	320	0.100	DRYWELL COOLER FAN COIL UNIT (N1M51B006B-B)
52-1642-14	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F056-B)
52-1642-15	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F058-B)
52-1642-16	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F060-B)
52-1642-17	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F062-B)
52-1642-18	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F064-B)
52-1642-19	12.5	0.100	MOV - DRYWELL COOLER INLET (N1P44F066-B)
52-1642-21	24	0.100	DRWL PURGE COMP AUX OIL PUMP (Q1E61C001B-B)