

3/4.3 INSTRUMENTATION

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS  
UNIT 1

ROOM/AREA AUX BLDG.	INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE*		
		HEAT	FLAME	SMOKE
306/1C	Cable Spreading Rm & Cable Chase	2		10
308	N/S Corridor			6
315	Main Steam Piping Area			6
317	Switchgear Room, Elev 27'-0"			6
318	Purge Air Supply Room			2
319/325	West Passage and Vestibule			6
320	Spent Fuel Heat Exchanger Room			3
323	Passage 27' Valve Alley & Filter Rm			3
324	Letdown Heat Exchanger Rm			1
Elev. 27'-0"	Switchgear Vent Duct	1		
1A	Cable Chase 1A			1
1B	Cable Chase 1B			1
405	Control Room			6
410	N/S Corridor			4
417/418	Solid Waste Processing		2	3
413/419/420	Cask and Equip Loading Area &			
424/425/426	Cask and Equip Loading Area		3	22
421	Diesel Generator No. (12) <sup>**</sup>	2		
<del>422</del>	<del>Diesel Generator No. (11)<sup>**</sup></del>	<del>2</del>		
423	West Electrical Pen Rm			3
428	East Piping Area			7
429	East Electrical Pen Rm			3
430	Switchgear Room Elev 45'-0"			8
439	Refueling Water Tank Pump Rm			2
441	Spent Resin Metering Tank Rm			1
Elev 45'-0"	Switchgear Vent Duct	1		

\* Detection instruments located within the containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

\*\* Detectors which automatically actuate Fire Suppression Systems.

3/4.3 INSTRUMENTATION

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS  
UNIT 1

ROOM/AREA AUX BLDG.	INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE*		
		HEAT	FLAME	SMOKE
Elev 69'-0"	Control Room Vent Duct "A"			1
Elev 69'-0"	Cable Spreading Room Vent Duct			1
512	Control Room HVAC Equipment			4
586/588/589/590	Radiation Chemistry Area,			
592/593	Radiation Chemistry Area,			
595/596/597	Radiation Chemistry Area,			
587	Frisker Area,			
591	Clothing Disposal, and			
523/594	Corridors			20
520	Spent Fuel Pool Area Vent Equip Rm			2
524	Main Plant Exhaust Equip Rm			8
525	Cntmt Access Area			3
529	Electrical Equip. Room			3
530/531/533	Spent Fuel Pool Area		5	17
536/537	Misc Waste Evaporator & Equip Rm			3
Elev 83'-0"	Cable Tunnel			4
603	Auxiliary Feedwater Pump Rm			2
<u>Containment Bldg.</u>				
U-1	RCP Bay East*	16		
U-1	RCP Bay West*	16		
U-1	East Electric Pen Area*	***		
U-1	West Electric Pen Area*	***		
<u>Intake Structure</u>	Elev 3'-0" Unit 1 Side			24

INSERT F

\* Detection instruments located within the containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

\*\*\* Monitored by four protecto wires.

INSERT F

<u>1A DG BLDG.</u>	<u>INSTRUMENT LOCATION</u>	<u>HEAT</u>	<u>FLAME</u>	<u>SMOKE</u>
Zone 1**	DG Room, Oil Separator Room, 1A DG Building Trench, Fan Room, Maintenance Shop and Hallway	33		
Zone 2**	Battery Room, Non-1E Electric Panel Rm., Control Room, 1-E Switchgear Room, Future Expansion Room	1		11
Zone 3**	Fuel Oil Storage Tank Room	8		
Zone 4	General Area, Third Floor	17		
Zone 5	HVAC Duct, Second & Third Floor			2

\*\* Detectors which automatically actuate Fire Suppression Systems.

3/4.7 PLANT SYSTEMS

TABLE 3.7-5

FIRE PROTECTION SPRINKLERS  
UNIT 1

SPRINKLER LOCATION	CONTROL VALVE ELEVATION
<del>11 Diesel Generator</del>	<del>45'-0"</del>
12 Diesel Generator	45'-0"
Unit 1 East Pipe Pen Room 227/316*	5'-0"
Unit 1 Aux Feed Pump Room 603*	12'-0"
Unit 1 East Piping Area Room 428*	45'-0"
Unit 1 East Electrical Penetration Room 429*	45'-0"
Unit 1 West Electrical Penetration Room 423*	45'-0"
Unit 1 Main Steam Piping Room 315*	45'-0"
Unit 1 Component Cooling Pump Room 228*	5'-0"
Unit 1 East Piping Area 224*	5'-0"
Unit 1 Radiation Exhaust Vent Equipment Room 225*	5'-0"
Unit 1 Service Water Pump Room 226*	5'-0"
Unit 1 Boric Acid Tank and Pump Room 217*	5'-0"
Unit 1 Reactor Coolant Makeup Pump Room 216*	5'-0"
Unit 1 Charging Pump Room 115*	(-)10'-0"
Unit 1 Misc Waste Mon Room 113*	(-)10'-0"
Cask and Eqpt Loading Area Rooms 419, 420, 425 & 426*	45'-0"
Solid Waste Processing*	45'-0"
Corridors 200, 202, 212 and 219*	5'-0"
Corridors 100, 103 and 116*	(-)10'-0"
Cable Chase 1A*	45'-0"
Cable Chase 1B*	45'-0"
Unit 1 ECCS Pump Room 119*	(-)15'-0"
Hot Instrument Shop Room 222*	5'-0"
Hot Machine Shop Room 223*	5'-0"
1A DG Building - Preaction Systems 1, 2 & 3	45'-6"

\* Sprinklers required to ensure the OPERABILITY of redundant safe shutdown equipment.

3/4.7 PLANT SYSTEMS

TABLE 3.7-6  
FIRE HOSE STATIONS

<u>LOCATION</u>	<u>ELEVATION</u>	<u>NUMBER OF HOSE STATIONS</u>
1. Containment	10'	2
	45'	2
	69'	2
2. Auxiliary Building	-15'*	1**
	-10'*	2**
	5'	6
	27'	3
	45'	5
	69'*	4
3. Turbine Building, Heater Bay Outside Service Water Pump Rooms and Aux Feedwater Pump Rooms	12'	3
	27'	2
	45'	3
	10'*	1
5. Diesel Generator Building	35'	1
	44'	1
	66'	1
	80'	1

ADD →

\* Fire Hose Stations required for primary protection to ensure the **OPERABILITY** of safety related equipment.

\*\* Hose Stations which serve both Units 1 and 2.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### Operating

#### LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be **OPERABLE**:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E Distribution System consisting of either:

1. Two 500 kV offsite power circuits, or as necessary
2. The 69 kV SMECO offsite power circuit described in the January 14, 1977 Safety Evaluation and one 500 kV offsite power circuit;

and

- b. ~~Two separate and independent diesel generators (one of which may be a swing diesel generator capable of serving either Unit 1 or Unit 2) with:~~

DELETE

1. ~~Separate fuel oil day tanks containing a minimum volume of 275 gallons of fuel for each diesel generator.~~

ADD

2. A common Fuel Storage System consisting of:

REPLACE WITH

INSERT A

- a. No. 21 Fuel Oil Storage Tank containing a minimum volume of 74,000 gallons of fuel oil, and
- b. No. 11 Fuel Oil Storage Tank containing a minimum volume of 32,000 gallons of fuel oil, and

3. A separate fuel transfer pump for each diesel generator.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With two offsite circuits of the above required A.C. electrical power sources inoperable, demonstrate the **OPERABILITY** of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and 4.8.1.1.2.a.4 within 24 hours, unless the diesel generators are already operating. Restore at least two

**INSERT A**

- a. 325 gallons for No. 1A Emergency Diesel Generator and
  - b. 275 gallons for No. 1B Emergency Diesel Generator,
2. Fuel Oil Storage Tanks containing a minimum volume:
- a. 49,500 gallons for No. 1A Fuel Oil Storage Tank, and
  - b. 33,000 gallons for No. 11 Fuel Oil Storage Tank, and
  - c. 85,000 gallons for No. 21 Fuel Oil Storage Tank, and

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

2 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours. Restore at least two diesel generators to **OPERABLE** status within 72 hours from time of initial loss or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

f. With No. 21 Fuel Oil Storage Tank inoperable, during the period from:

1. October 1 to March 31, demonstrate the **OPERABILITY** of No. 11 Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 74,000 gallons) within 1 hour and at least once per 8 hours thereafter; and 2) verifying the flow path from No. 11 Fuel Oil Storage Tank to the diesel generators within 1 hour. Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

2. April 1 to September 30, demonstrate the **OPERABILITY** of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 2 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

g. With No. 11 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 21 Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 74,000 gallons) within 1 hour and at least once per 8 hours thereafter; and 2) verifying the flow path from No. 21 Fuel Oil Storage Tank to the diesel generators within 1 hour. Restore the No. 11 Fuel Oil Storage Tank to **OPERABLE** status within 7 days or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

REPLACE  
WITH  
INSERT  
B

#### SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each required independent circuit between the offsite transmission network and the onsite Class 1E Distribution System shall be:

a. Demonstrated **OPERABLE**, as follows:

1. For each 500 kV offsite circuit, at least once per 7 days by verifying correct breaker alignments and indicated power availability.



## INSERT B

- f. With the No. 1A Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of the remaining A. C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and by performing Surveillance Requirement 4.8.1.1.2.a.4 on No. 1B Emergency Diesel Generator within 24 hours. Demonstrate the **OPERABILITY** of the No. 21 Fuel Oil Storage Tank by performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) and verifying the flow path from the No. 21 Fuel Oil Storage Tank to the No. 1B Emergency Diesel Generator within 1 hour. Restore No. 1A Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.
  
- g. With the Nos. 11 and 21 Fuel Oil Storage Tanks inoperable, demonstrate the **OPERABILITY** of the remaining A. C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and by performing Surveillance Requirement 4.8.1.1.2.a.4 on No. 1A Emergency Diesel Generator within 24 hours. Demonstrate the **OPERABILITY** of the No. 1A Fuel Oil Storage Tank by performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 49,500 gallons) and verifying the flow path from the No. 1A Fuel Oil Storage Tank to the No. 1A Emergency Diesel Generator within 1 hour. Restore either No. 11 or 21 Fuel Oil Storage Tanks to **OPERABLE** status within 72 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.
  
- h. With either the No. 11 or 21 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of the other Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) within 1 hour and at least once per 8 hours thereafter; and 2) verifying the flow path from the operable Fuel Oil Storage Tank to the No. 1B Emergency Diesel Generator within 1 hour.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### SURVEILLANCE REQUIREMENTS (Continued)

2. For the 69 kV SMECO offsite power circuit, within one hour of substitution for a 500 kV offsite power circuit, and at least once per 8 hours thereafter during use by verifying correct breaker alignments and indicated power availability; and
  - b. Demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during shutdown by manually transferring unit power supply from the normal circuit to the alternate circuit.
- 4.8.1.1.2 Each diesel generator shall be demonstrated **OPERABLE**:
- a. At least once per 31 days on a **STAGGERED TEST BASIS** by:
    1. Verifying the fuel level in the day fuel tank.
    2. Verifying the fuel level in the fuel storage tank.
    3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
    4. Verifying the diesel starts and achieves a generator voltage and frequency of  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz, respectively.
    5. Verifying the generator is synchronized, loaded to  $\geq 1250$  kW, and operates for  $\geq 60$  minutes.
    6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
    7. Verifying that the automatic load sequencer timer is **OPERABLE** with the interval between each load block within  $\pm 10\%$  of its design interval.
  - b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water and sediment.

$\geq 4000$  kW for No. 1A Emergency Diesel Generator, and  
 $\geq 2250$  kW for No. 1B Emergency Diesel Generator,

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 184 days by verifying the diesel starts from ambient condition and accelerates to at least ~~900 rpm~~ in  $\leq 10$  seconds. 60 Hz
- d. At least once per REFUELING INTERVAL by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
  2. Verifying the generator capability to reject a load of  $\geq 500$  hp without tripping.
  3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:
    - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
    - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer and operates for  $\geq 5$  minutes while its generator is loaded with the emergency loads.

REPLACE WITH  
INSERT C

- c) ~~Verifying that the high jacket coolant temperature, high crankcase pressure, and low jacket coolant pressure trips are automatically bypassed on a Safety Injection Actuation Signal.~~
4. Verifying the diesel generator operates for  $\geq 60$  minutes while loaded to  ~~$\geq 2500$  kW~~.  $\geq 4000$  kW for No. 1A Emergency Diesel Generator, and  $\geq 2700$  kW for No. 1B Emergency Diesel Generator.
5. Verifying that the auto-connected loads to each diesel generator do not exceed ~~the 2000 hour rating of each diesel generator.~~

4000 kW for No. 1A Emergency Diesel Generator, and  
2700 kW for No. 1B Emergency Diesel Generator.

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine pre-lube period recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.

\*\* ~~The high crankcase pressure trip bypass verification is applicable after the trip bypass is installed on the diesel engine being tested. Modifications are to be completed by February 28, 1996.~~

DELETE

**INSERT C**

Verifying that automatically bypassed diesel trips are automatically bypassed on a Safety Injection Actuation Signal.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### Shutdown

#### LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be **OPERABLE**:

- a. One circuit between the offsite transmission network and the onsite Class 1E Distribution System, and
- b. One diesel generator with:

1. A fuel oil day tank containing a minimum volume of ~~275~~<sup>300</sup> gallons of fuel, <sup>ADD</sup>

2. A common Fuel Storage System consisting of:

- a. No. 21 Fuel Oil Storage Tank containing a minimum volume of 74,000 gallons of fuel oil, and
- b. No. 11 Fuel Oil Storage Tank containing a minimum volume of 32,000 gallons of fuel oil, and

3. A fuel transfer pump.

REPLACE  
WITH  
INSERT  
D

APPLICABILITY: MODES 5 and 6.

#### ACTION:

- a. With less than the above minimum required A.C. electrical power sources **OPERABLE** for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:

DELETE

1. Immediately\* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, and
2. Immediately initiate corrective actions to restore the minimum A.C. electrical busses to **OPERABLE** status, and

\* Performance of **ACTION** a. shall not preclude completion of actions to establish a safe conservative position.

**INSERT D**

- a. 325 gallons for No. 1A Emergency Diesel Generator; or
  - b. 275 gallons for No. 1B Emergency Diesel Generator; and
2. A Fuel Oil Storage System containing a minimum volume of:
- a. 49,500 gallons in No. 1A Fuel Oil Storage Tank for the No. 1A Emergency Diesel Generator; or
  - b. 85,000 gallons in No. 21 Fuel Oil Storage Tank and 33,000 gallons in the No. 11 Fuel Oil Storage Tank for the No. 1B Emergency Diesel Generator, and

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an **OPERABLE** automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.

b. With less than the above minimum required A.C. electrical power sources **OPERABLE** for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:

1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the **OPERABLE** emergency diesel generators and once per shift thereafter.
2. Suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.
3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an **OPERABLE** automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.
4. An emergency diesel generator shall be **OPERABLE** and aligned to provide power to the emergency busses within seven days.
5. Within two weeks prior to the planned unavailability of an **OPERABLE** emergency diesel generator, a temporary diesel generator shall be demonstrated available.
6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
7. If **ACTIONS** b) 1 through b) 6 are not met, restore compliance with the **ACTIONS** within 4 hours or restore an **OPERABLE** emergency diesel generator within the next 4 hours.

DELETE

\*\* The provisions of **ACTION** b) are no longer applicable following the installation of two additional emergency diesel generators.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

- c. With No. 11 Fuel Oil Storage Tank inoperable, demonstrate the OPERABILITY of No. 21 Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 74,000 gallons) within 1 hour; and 2) verifying the flow path from No. 21 Fuel Oil Storage Tank to the diesel generator within 1 hour.
- d. With No. 21 Fuel Oil Storage Tank inoperable, restore No. 21 Fuel Oil Storage Tank to OPERABLE status within 72 hours or suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.

REPLACE WITH  
INSERT G

#### SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the Surveillance Requirements of 4.8.1.1.1 and 4.8.1.1.2 except for Requirements 4.8.1.1.2.a.5, 4.8.1.1.2.a.7, 4.8.1.1.2.d.3, and 4.8.1.1.2.d.5.



**INSERT G**

- b. With the No. 1B Emergency Diesel Generator required to be **OPERABLE** and the No. 11 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 21 Fuel Oil Storage Tank by:
1. performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) within 1 hour; and
  2. verifying the flow path from No. 21 Fuel Oil Storage Tank to No. 1B Emergency Diesel Generator within 1 hour.
- c. With the No. 1B Emergency Diesel Generator required to be **OPERABLE** and the No. 21 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 11 Fuel Oil Storage Tank by:
1. performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) within 1 hour; and
  2. verifying the flow path from No. 11 Fuel Oil Storage Tank to the No. 1B Emergency Diesel Generator within 1 hour.

Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.

- d. With the No. 1A Emergency Diesel Generator required to be **OPERABLE** and the No. 1A Fuel Oil Storage Tank inoperable, immediately\* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.

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\* Performance of ACTION d. shall not preclude completion of actions to establish a safe conservative position.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

##### A.C. Distribution - Shutdown

#### LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be **OPERABLE** and energized from sources of power other than a diesel generator but aligned to an **OPERABLE** diesel generator:

- 1 - 4160 volt Emergency Bus
- 1 - 480 volt Emergency Bus
- 2 - 120 volt A.C. Vital Busses

APPLICABILITY: MODES 5 and 6.

#### ACTION:

- a. With less than the above complement of A.C. busses **OPERABLE** and energized ~~for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:~~
- DELETE* →
1. Immediately\* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, until the minimum required A.C. busses are restored to **OPERABLE** and energized status, and
  2. Immediately initiate corrective actions to restore the minimum A.C. electrical busses to **OPERABLE** and energized status, and
  3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an **OPERABLE** automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.

\* Performance of **ACTION** a. shall not preclude completion of actions to establish a safe conservative position.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

- b. With less than the above minimum required A.C. electrical power sources OPERABLE for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the OPERABLE emergency diesel generators and once per shift thereafter,
  2. Suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
  3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an OPERABLE automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.
  4. An emergency diesel generator shall be OPERABLE and aligned to provide power to the emergency busses within seven days.
  5. Within two weeks prior to the planned unavailability of an OPERABLE emergency diesel generator, a temporary diesel generator shall be demonstrated available.
  6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
  7. If ACTIONS b) 1 through b) 6 are not met, restore compliance with the ACTIONS within 4 hours or restore an OPERABLE emergency diesel generator within the next 4 hours.

DELETE

#### SURVEILLANCE REQUIREMENTS

4.8.2.2 The specified A.C. busses shall be determined OPERABLE and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated power availability.

DELETE

The provisions of ACTION b. are no longer applicable following the installation of two additional emergency diesel generators.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

The **OPERABILITY** of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of 10 CFR Part 50, Appendix A, General Design Criteria 17.

The **OPERABILITY** of No. 21 and No. 11 Fuel Oil Storage Tanks ensure that at least 7 days of fuel oil will be reserved below the internal tank standpipes for operation of one diesel generator on each unit, assuming one unit under accident conditions with a diesel generator load of ~~3,000~~ Kw, and the opposite unit under normal shutdown conditions with a diesel generator load of ~~2,500~~ Kw. Additionally, the **OPERABILITY** of No. 21 Fuel Oil Storage Tank ensures that in the event of a loss of offsite power, concurrent with a loss of the non-bunkered fuel oil storage tank (tornado/missile event), at least 7 days of fuel oil will be available for operation of one diesel generator on each unit, assuming both diesel generators are loaded to ~~2,500~~ Kw.

3000

3500

3000

The **OPERABILITY** of the fuel oil day tanks ensures that at least one hour of diesel generator operation is available without makeup to the day tanks, assuming the associated diesel generator is loaded to 3,250 Kw.

The **ACTION** requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The **OPERABILITY** of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems **OPERABLE** during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The **OPERABILITY** of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

The **OPERABILITY** of No. 1A Fuel Oil Storage Tank ensures that at least 7 days of fuel oil is available to support operation of No. 1A Emergency Diesel Generator at 4000 kW.

No. 1A Emergency Diesel Generator is loaded to 4000 kW and No. 1B Emergency Diesel Generator is loaded to 3500 kW.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

The ACTION requirements for LCOs 3.8.1.2 and 3.8.2.2 are associated with the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator with Unit 1 shutdown and Unit 2 at power. This requires that No. 11 emergency diesel generator be aligned to Unit 2. The actions specified reduce the probability of a loss of offsite power by requiring the availability of two offsite power circuits. A temporary diesel is available which has sufficient capacity to carry all required shutdown loads. This ACTION only applies to the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator. Performance of Surveillance 4.8.1.1.2.d.1 on No. 11 emergency diesel generator would not violate the LCOs for 3.8.1.2 and 3.8.2.2 because the No. 12 emergency diesel generator may be aligned to either unit.

REPLACE WITH  
INSERT E

## INSERT E

Surveillance 4.8.1.1.2.d.3.c demonstrates that diesel generator noncritical protective functions are bypassed on a Safety Injection Actuation Signal. The diesel generator availability to mitigate the Design Basis Accident is more critical than protecting the engine against problems that are not immediately detrimental to emergency operation of the diesel generator. The automatic trips that are required to be bypassed on a Safety Injection Actuation Signal are identified in the Updated Final Safety Analysis Report.

Surveillance 4.8.1.1.2.a.5 for No. 1A Emergency Diesel Generator ensures that at least once per month the diesel generator is loaded to greater than the load required during accident conditions. For No. 1B Emergency Diesel Generator, Surveillance 4.8.1.1.2.a.5 verifies that this diesel generator is capable of synchronizing with the offsite electrical system and accepting loads greater than or equal to 90 percent of the diesel generator's continuous rating for a period of greater than or equal to 60 minutes. Surveillance 4.8.1.1.2.d.4 ensures that at least once per **REFUELING OUTAGE** each diesel generator is loaded to greater than the load required during accident conditions.

ATTACHMENT (4)

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UNIT 2

TECHNICAL SPECIFICATION

MARKED-UP PAGES

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3/4 3-40

3/4 7-39

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3/4 8-11

3/4 8-12

B 3/4 8-1

B 3/4 8-2

3/4.3 INSTRUMENTATION

TABLE 3.3-11 (Continued)  
 FIRE DETECTION INSTRUMENTS  
 UNIT 2

ROOM/AREA AUX BLDG.	INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE*		
		HEAT	FLAME	SMOKE
407	Switchgear Rm, Elev 45'-0" **			8
408	East Piping Area			7
409	East Electrical Pen Rm			3
414	West Electrical Pen Rm			3
416	Diesel Generator No. (2A) **			
440	Refueling Water Tank Pump Rm	2		2
Elev. 45'-0"	Switchgear Vent Duct	1		
526	Main Plant Exhaust Equip Rm			8
527	Containment Access			3
532	Electrical Equip Rm			3
Elev. 69'-0"	Cable Spreading Room Vent Duct			1
Elev. 83'-0"	Cable Tunnel			4
605	Auxiliary Feedwater Pump Rm			2
<u>Containment Bldg.</u>				
UNIT 2	RCP Bay East*	16		
UNIT 2	RCP Bay West*	16		
UNIT 2	East Electric Pen Area*	+		
UNIT 2	West Electric Pen Area*	+		
<u>Intake Structure Elev 3'-0" Unit 2 Side</u>				24
422	Diesel Generator No. (2A) **			2

Acc

\* Detection instruments located within the containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate Tests.

\*\* Detectors which automatically actuate Fire Suppression Systems.

+ Monitored by four protecto wires.



3/4.7 PLANT SYSTEMS

TABLE 3.7-5

**FIRE PROTECTION SPRINKLERS  
UNIT 2**

<u>SPRINKLER LOCATION</u>	<u>CONTROL VALVE ELEVATION</u>
Unit 2 Aux Feed Pump Room 605*	12'-0"
Unit 2 East Piping Area Room 408*	45'-0"
Unit 2 East Elec Pen Room 409*	45'-0"
Unit 2 West Elec Pen Room 414*	45'-0"
Cable Chase 2A*	45'-0"
Cable Chase 2B*	45'-0"
Unit 2 Main Steam Piping Room 309*	45'-0"
Unit 2 Component Cooling Pp Room 201	5'-0"
Unit 2 East Piping Area 203*	5'-0"
Unit 2 Rad Exh Vent Equip Room 204*	5'-0"
Unit 2 Service Water Pp Room 205*	5'-0"
Unit 2 Boric Acid Tk and Pp Room 215*	5'-0"
Unit 2 Reactor Coolant Makeup Pump Room 216A*	5'-0"
Unit 2 Charging Pump Room 105*	(-)-10'-0"
Unit 2 Misc Waste Monitor Tk Room 106*	(-)-10'-0"
Unit 2 ECCS Pump Room 101*	(-)-15'-0"
(28) → (21) Diesel Generator	45'-0"
Unit 2 East Pipe Pen Room 206/310*	5'-0"

2A Diesel Generator 45'-0"

\* Sprinklers required to ensure the **OPERABILITY** of redundant safe shutdown equipment.

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

Operating

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be **OPERABLE**:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E Distribution System consisting of either:
  - 1. Two 500 kV offsite power circuits, or as necessary
  - 2. The 69 kV SMECO offsite power circuit described in the January 14, 1977 Safety Evaluation and one 500 kV offsite power circuit;

and

- b. Two separate and independent diesel generators ~~(one of which may be a swing diesel generator capable of serving either Unit 1 or Unit 2)~~ with:

DELETE

- 1. Separate fuel oil day tanks containing a minimum volume of 275 gallons of fuel for each diesel generator.
- 2. A common Fuel Storage System consisting of:
  - a. No. 21 Fuel Oil Storage Tank containing a minimum volume of ~~74,000~~ 85,000 gallons of fuel oil, and
  - b. No. 11 Fuel Oil Storage Tank containing a minimum volume of ~~32,000~~ 33,000 gallons of fuel oil, and
- 3. A separate fuel transfer pump for each diesel generator.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With two offsite circuits of the above required A.C. electrical power sources inoperable, demonstrate the **OPERABILITY** of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and 4.8.1.1.2.a.4 within 24 hours, unless the diesel generators are already operating. Restore at least two

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

2 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours. Restore at least two diesel generators to **OPERABLE** status within 72 hours from time of initial loss or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

- f. With the No. 21 Fuel Oil Storage Tank inoperable, during the period from:

1. October 1 to March 31, demonstrate the **OPERABILITY** of the No. 11 Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying ~~74,000~~ <sup>85,000</sup> gallons) within 1 hour and at least once per 8 hours thereafter; and 2) verifying the flow path from the No. 11 Fuel Oil Storage Tank to the diesel generators within 1 hour. Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

2. April 1 to September 30, demonstrate the **OPERABILITY** of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 2 hours or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

- g. With No. 11 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 21 Fuel Oil Storage Tank by 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying ~~74,000~~ <sup>85,000</sup> gallons) within 1 hour and at least once per 8 hours thereafter, and 2) verifying the flow path from No. 21 Fuel Oil Storage Tank to the diesel generators within 1 hour. Restore No. 11 Fuel Oil Storage Tank to **OPERABLE** status within 7 days or be in at least **HOT STANDBY** within the next 6 hours and in **COLD SHUTDOWN** within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each required independent circuit between the offsite transmission network and the onsite Class 1E Distribution System shall be:

- a. Demonstrated **OPERABLE**, as follows:

1. For each 500 kV offsite circuit, at least once per 7 days by verifying correct breaker alignments and indicated power availability.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### SURVEILLANCE REQUIREMENTS (Continued)

2. For the 69 kV SMECO offsite power circuit, within one hour of substitution for a 500 kV offsite power circuit, and at least once per 8 hours thereafter during use by verifying correct breaker alignments and indicated power availability; and
- b. Demonstrated **OPERABLE** at least once per **REFUELING INTERVAL** during shutdown by manually transferring unit power supply from the normal circuit to the alternate circuit.
- 4.8.1.1.2 Each diesel generator shall be demonstrated **OPERABLE**:
- a. At least once per 31 days on a **STAGGERED TEST BASIS** by:
    1. Verifying the fuel level in the day fuel tank.
    2. Verifying the fuel level in the fuel storage tank.
    3. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank.
    4. Verifying the diesel starts and achieves a generator voltage and frequency of  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz, respectively.\*
    5. Verifying the generator is synchronized, loaded to  $\geq 2700$  kW, and operates for  $\geq 60$  minutes.
    6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
    7. Verifying that the automatic load sequencer timer is **OPERABLE** with the interval between each load block within  $\pm 10\%$  of its design interval.
  - b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank is within the acceptable limits specified in Table 1 of ASTM D975-81 when checked for viscosity, water and sediment.

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.

3/4.8 ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 184 days by verifying the diesel starts from ambient condition and accelerates to at least ~~900 rpm~~ in  $\leq 10$  seconds. 60 Hz
- d. At least once per REFUELING INTERVAL by:
1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
  2. Verifying the generator capability to reject a load of  $\geq 500$  hp without tripping.
  3. Simulating a loss of offsite power in conjunction with a safety injection actuation test signal, and:
    - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
    - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency loads through the load sequencer and operates for  $\geq 5$  minutes while its generator is loaded with the emergency loads.
  - c) REPLACE WITH INSERT C Verifying that the high jacket coolant temperature, high crankcase pressure, and low jacket coolant pressure trips are automatically bypassed on a Safety Injection Actuation Signal.
  4. Verifying the diesel generator operates for  $\geq 60$  minutes while loaded to  $\geq$  ~~2500~~ kW. 3000 kW
  5. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of each diesel generator. 3300 kW

\* All engine starts for the purpose of this Surveillance Requirement may be preceded by an engine pre-lube period recommended by the manufacturer so that mechanical wear and stress on the diesel engine is minimized.

\*\* The high crankcase pressure trip bypass verification is applicable after the trip bypass is installed on the diesel engine being tested. Modifications are to be completed by February 28, 1996.

DELETE

**INSERT C**

Verifying that automatically bypassed diesel trips are automatically bypassed on a Safety Injection Actuation Signal.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### Shutdown

#### LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the onsite Class 1E Distribution System, and
- b. One diesel generator with:
  1. A fuel oil day tank containing a minimum volume of 275 gallons of fuel,
  2. A common Fuel Storage System consisting of:
    - a. No. 21 Fuel Oil Storage Tank containing a minimum volume of ~~74,000~~ 85,000 gallons of fuel oil, and
    - b. No. 11 Fuel Oil Storage Tank containing a minimum volume of ~~32,000~~ 33,000 gallons of fuel oil, and
  3. A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

#### ACTION:

- a. With less than the above minimum required A.C. electrical power sources OPERABLE for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:

DELETE →

  1. Immediately\* suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, and
  2. Immediately initiate corrective actions to restore the minimum A.C. electrical power sources to OPERABLE status, and

\* Performance of ACTION a. shall not preclude completion of actions to establish a safe conservative position.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an OPERABLE automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.

b. With less than the above minimum required A.C. electrical power sources OPERABLE for the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 emergency diesel generator:

1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the OPERABLE emergency diesel generators and once per shift thereafter,
2. Suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel,
3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an OPERABLE automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.
4. An emergency diesel generator shall be OPERABLE and aligned to provide power to the emergency busses within seven days.
5. Within two weeks prior to the planned unavailability of an OPERABLE emergency diesel generator, a temporary diesel generator shall be demonstrated available.
6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
7. If ACTIONS b.1 through b.6 are not met, restore compliance with the ACTIONS within 4 hours or restore an OPERABLE emergency diesel generator within the next 4 hours.

DELETE

DELETE

\*\* The provisions of ACTION b. are no longer applicable following the installation of two additional emergency diesel generators.

\* During the 1995 Unit 2 refueling outage, an emergency diesel generator shall be OPERABLE and aligned to provide power to an emergency bus within 14 days.



### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

- c. With No. 11 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 21 Fuel Oil Storage Tank by: 1) performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 74,000 gallons) within 1 hour; and 2) verifying the flow path from No. 21 Fuel Oil Storage Tank to the diesel generator within 1 hour.
- d. With No. 21 Fuel Oil Storage Tank inoperable, restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.

*REPLACE  
WITH INSERT I*

#### SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated **OPERABLE** by the performance of each of the Surveillance Requirements of 4.8.1.1.1 and 4.8.1.1.2 except for Requirements 4.8.1.1.2.a.5, 4.8.1.1.2.a.7, 4.8.1.1.2.d.3, and 4.8.1.1.2.d.5.

**INSERT I**

- b. With the No. 11 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 21 Fuel Oil Storage Tank by:
  - 1. performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) within 1 hour; and
  - 2. verifying the flow path from No. 21 Fuel Oil Storage Tank to the diesel generator within 1 hour.
  
- c. With the No. 21 Fuel Oil Storage Tank inoperable, demonstrate the **OPERABILITY** of No. 11 Fuel Oil Storage Tank by:
  - 1. performing Surveillance Requirement 4.8.1.1.2.a.2 (verifying 85,000 gallons) within 1 hour; and
  - 2. verifying the flow path from No. 11 Fuel Oil Storage Tank to the diesel generator within 1 hour.

Restore No. 21 Fuel Oil Storage Tank to **OPERABLE** status within 72 hours or suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

##### A.C. Distribution - Shutdown

#### LIMITING CONDITION FOR OPERATION

3.8.2.2 As a minimum, the following A.C. electrical busses shall be **OPERABLE** and energized from sources of power other than a diesel generator but aligned to an **OPERABLE** diesel generator:

- 1 - 4160 volt Emergency Bus
- 1 - 480 volt Emergency Bus
- 2 - 120 volt A.C. Vital Busses

APPLICABILITY: MODES 5 and 6.

#### ACTION:

- a. With less than the above complement of A.C. busses **OPERABLE** and energized ~~for reasons other than the performance of Surveillance Requirement 4.8.1.1.2.d.1 on No. 12 diesel generator:~~

DELETE

1. Immediately\* suspend all operations involving **CORE ALTERATIONS**, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel, until the minimum required A.C. busses are restored to **OPERABLE** and energized status, and
2. Immediately initiate corrective actions to restore the minimum A.C. electrical busses to **OPERABLE** and energized status, and
3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an **OPERABLE** automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.

\* Performance of ACTION a. shall not preclude completion of actions to establish a safe conservative position.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### LIMITING CONDITION FOR OPERATION (Continued)

- b. With less than the above minimum required A.C. electrical power sources OPERABLE for the performance of Surveillance Requirement 4.B.1.1.2.d.1 on No. 12 emergency diesel generator:
1. Verify either two 500 kV offsite power circuits or a 500 kV offsite power circuit and the 69 kV SMECO offsite power circuit are available and capable of being used. This availability shall be verified prior to removing the OPERABLE emergency diesel generators and once per shift thereafter.
  2. Suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel and movement of heavy loads over irradiated fuel.
  3. All containment penetrations providing direct access from the containment atmosphere to the outside atmosphere shall be either closed by an isolation valve, blind flange, or manual valve, or be capable of being closed by an OPERABLE automatic purge valve. A minimum of one door in each airlock shall be closed and the equipment door shall be closed and held in place by a minimum of four bolts.
  4. An emergency diesel generator shall be OPERABLE and aligned to provide power to the emergency busses within seven days.
  5. Within two weeks prior to the planned unavailability of an OPERABLE emergency diesel generator, a temporary diesel generator shall be demonstrated available.
  6. A temporary diesel generator shall be demonstrated available by starting it at least once per 72 hours.
  7. If ACTIONS b.1 through b.6 are not met, restore compliance with the ACTIONS within 4 hours or restore an OPERABLE emergency diesel generator within the next 4 hours.

#### SURVEILLANCE REQUIREMENTS

4.B.2.2 The specified A.C. busses shall be determined OPERABLE and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated power availability.

\*\* The provisions of ACTION b. are no longer applicable following the installation of two additional emergency diesel generators.

\* During the 1995 Unit 2 refueling outage, an emergency diesel generator shall be OPERABLE and aligned to provide power to an emergency bus within 14 days.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

The **OPERABILITY** of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety related equipment required for 1) the safe shutdown of the facility and 2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of 10 CFR Part 50, Appendix A, General Design Criteria 17.

The **OPERABILITY** of No. 21 and No. 11 Fuel Oil Storage Tanks ensures that at least 7 days of fuel oil will be reserved below the internal tank standpipes for operation of one diesel generator on each unit, assuming one unit under accident conditions with a diesel generator load of ~~3,000~~ Kw, and the opposite unit under normal shutdown conditions with a diesel generator load of ~~2,500~~ Kw. Additionally, the **OPERABILITY** of No. 21 Fuel Oil Storage Tank ensures that in the event of a loss of offsite power, concurrent with a loss of No. 11 Fuel Oil Storage Tank (tornado/missile event), at least 7 days of fuel oil will be available for operation of one diesel generator on each unit, assuming both diesel generators are loaded to ~~2,500~~ Kw.

The **OPERABILITY** of the fuel oil day tanks ensures that at least one hour of diesel generator operation is available without makeup to the day tanks, assuming the associated diesel generator is loaded to ~~3,250~~ Kw.

The **ACTION** requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The **OPERABILITY** of the power sources are consistent with the initial condition assumptions of the accident analyses and are based upon maintaining at least one of each of the onsite A.C. and D.C. power sources and associated distribution systems **OPERABLE** during accident conditions coincident with an assumed loss of offsite power and single failure of the other onsite A.C. source.

The **OPERABILITY** of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that 1) the facility can be maintained in the shutdown or refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

ADD  
INSERT H

## INSERT H

Surveillance 4.8.1.1.2.d.3.c demonstrates that diesel generator noncritical protective functions are bypassed on a Safety Injection Actuation Signal. The diesel generator availability to mitigate the Design Basis Accident is more critical than protecting the engine against problems that are not immediately detrimental to emergency operation of the diesel generator. The automatic trips that are required to be bypassed on a Safety Injection Actuation Signal are identified in the Updated Final Safety Analysis Report.

Surveillance 4.8.1.1.2.a.5 verifies that the diesel generators are capable of synchronizing with the offsite electrical system and accepting loads greater than or equal to 90 percent of the diesel generator's continuous rating for a period of greater than or equal to 60 minutes. Surveillance 4.8.1.1.2.d.4 ensures that at least once per **REFUELING OUTAGE** the diesel generator is loaded to greater than the load required during accident conditions.

### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

The **ACTION** requirements for LCOs 3.8.1.2 and 3.8.2.2 are associated with the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator with Unit 2 shutdown and Unit 1 at power. This requires that No. 21 emergency diesel generator be aligned to Unit 1. The actions specified reduce the probability of a loss of offsite power by requiring the availability of two offsite power circuits. A temporary diesel is available which has sufficient capacity to carry all required shutdown loads. This **ACTION** only applies to the performance of Surveillance 4.8.1.1.2.d.1 on No. 12 emergency diesel generator. Performance of Surveillance 4.8.1.1.2.d.1 on No. 21 emergency diesel generator would not violate the LCOs for 3.8.1.2 and 3.8.2.2 because the No. 12 emergency diesel generator may be aligned to either unit.

DELETE

**ATTACHMENT (5)**

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**PRE-OUTAGE AND POST-OUTAGE  
ENGINEERED SAFETY FEATURES ELECTRICAL SYSTEM  
CONFIGURATION**

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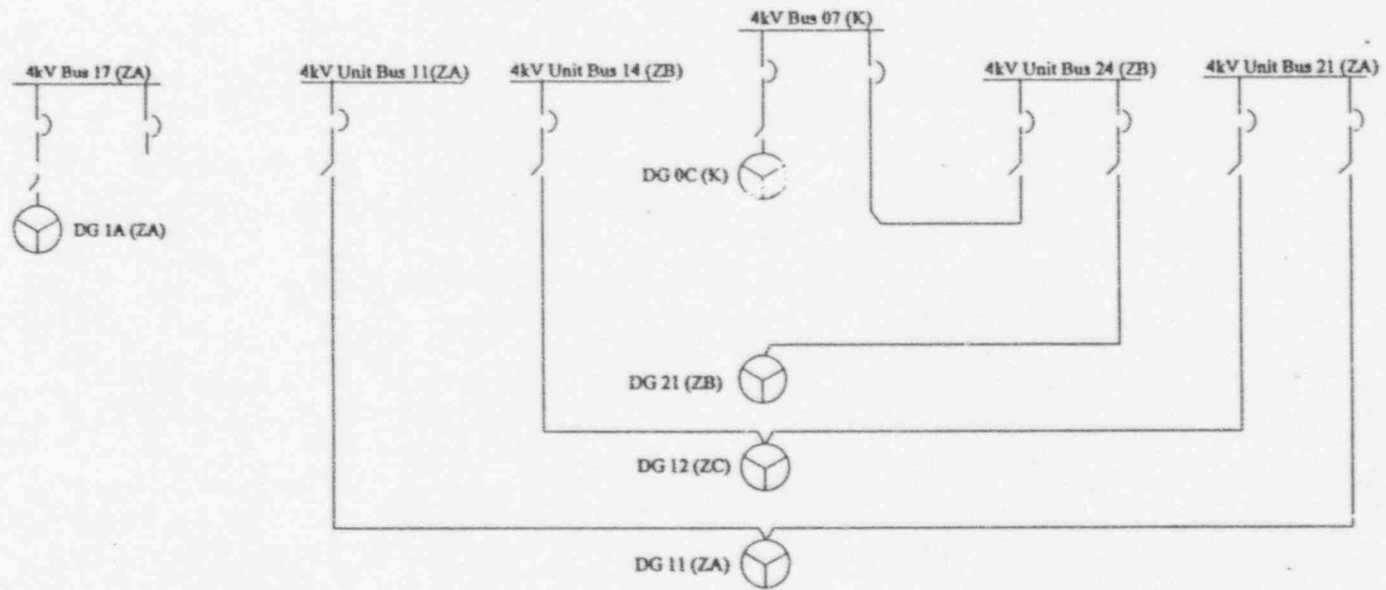
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**Baltimore Gas & Electric Company  
Docket Nos. 50-317 and 50-318  
November 1, 1995**



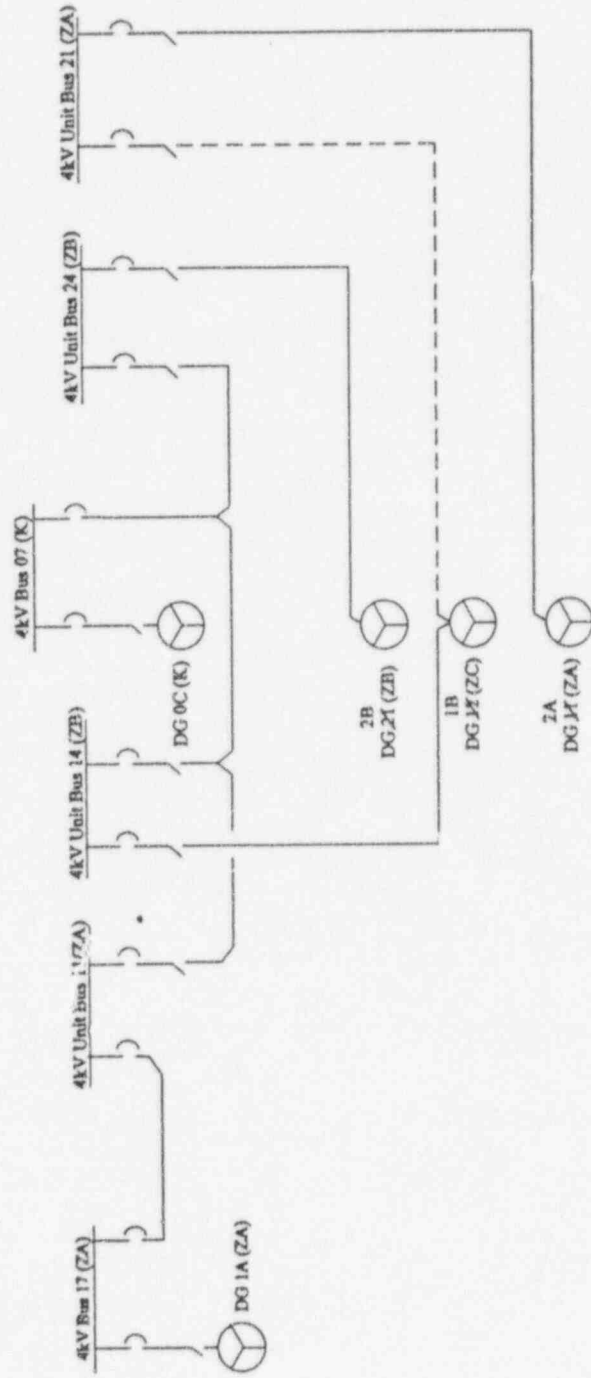
ATTACHMENT (5)

FIGURE 1, PRE-OUTAGE ELECTRICAL DISTRIBUTION CONFIGURATION



ATTACHMENT (S)

**FIGURE 2, POST-OUTAGE ELECTRICAL DISTRIBUTION CONFIGURATION**



--- Auto-start, auto-load capability has been eliminated.

ATTACHMENT (6)

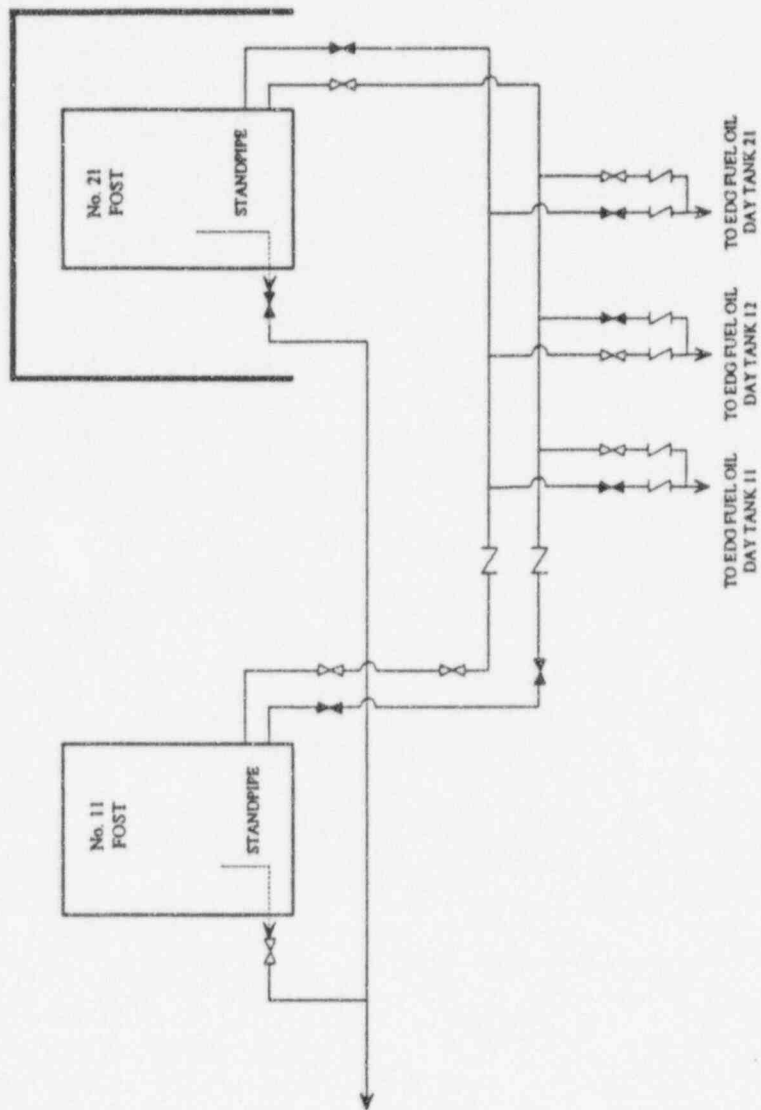
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PRE-OUTAGE AND POST-OUTAGE  
FUEL OIL SYSTEM CONFIGURATION

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ATTACHMENT (6)

**FIGURE 1, PRE-OUTAGE FUEL OIL SYSTEM CONFIGURATION**



ATTACHMENT (6)

FIGURE 2, POST-OUTAGE FUEL OIL SYSTEM CONFIGURATION

