



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 214
License No. DPR-53

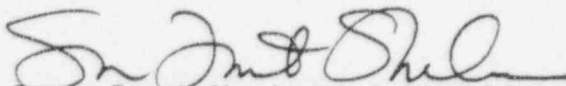
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Baltimore Gas and Electric Company (the licensee) dated November 1, 1995, as supplemented on December 1, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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 rules and 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 by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Facility Operating License No. DPR-53 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 214, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented prior to the restart from the spring 1996 Unit No. 1 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



Susan Frant Shankman, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 2, 1996



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 191
License No. DPR-69

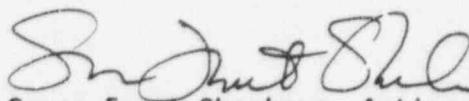
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 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - 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 by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Facility Operating License No. DPR-69 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.191, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented prior to restart from the spring 1996 Unit No. 1 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



Susan Frant Shankman, Acting Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 2, 1996

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 214 FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 191 FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-40	3/4 3-40
-----	3/4 3-42 (DPR 53 only)
3/4 3-42 through 3-57 (DPR 53 only)	3/4 3-43 through 3-52* (DPR 53 only)
3/4 7-39	3/4 7-39
3/4 7-44 (DPR 53 only)	3/4 7-44 (DPR 53 only)
3/4 8-1	3/4 8-1
3/4 8-3 through 8-8	3/4 8-3 through 8-8
3/4 8-11 and 8-12	3/4 8-11 and 8-12
B3/4 8-1 and 8-2	B3/4 8-1 and 8-2

*Indicates roll-over pages

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. (1B)**	2		
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
1A DG Bldg.				
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 Room, 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 and Third Floor			2

* 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

3/4.3.3 MONITORING INSTRUMENTATION

Radioactive Gaseous Effluent Monitoring Instrumentation

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-12 shall be **OPERABLE** with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the **ODCM**.

APPLICABILITY: As shown in Table 3.3-12.

ACTION:

- a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, without delay suspend the release of radioactive gaseous effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels **OPERABLE**, take the **ACTION** shown in Table 3.3-12. Exert best efforts to return the instruments to **OPERABLE** status within 30 days and, if unsuccessful, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated **OPERABLE** by performance of the **CHANNEL CHECK**, **SOURCE CHECK**, **CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations at the frequencies shown in Table 4.3-11.

TABLE 3.3-12

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1. WASTE GAS HOLDUP SYSTEM			
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release	1	*	35
b. Effluent System Flow Rate Measuring Device	1	*	36
2. MAIN VENT SYSTEM			
a. Noble Gas Activity Monitor	1	*	37
b. Iodine Sampler	1	*	38
c. Particulate Sampler	1	*	38

TABLE 3.3-12 (Continued)

TABLE NOTATION

* At all times.

ACTION STATEMENTS

- ACTION 35 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, the contents of the tank(s) may be released to the environment:
- a. Using the main vent monitor as a backup and recording RMS readings every 15 minutes during the release, or
 - b. Provided that prior to initiating the release, at least two independent samples of the tank's contents are analyzed, and at least two technically qualified members of the Facility Staff independently verify the release rate calculations and two qualified operators verify the discharge valve lineup.
- Otherwise, suspend release of radioactive effluents via this pathway.
- ACTION 36 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.
- ACTION 37 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases via this pathway may continue provided either (1) grab samples are taken and analyzed for gross activity at least once per 24 hours, or (2) an equivalent monitor is provided.
- ACTION 38 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases via the affected pathway may continue provided samples are continuously collected as required in Table 4.11-2 with auxiliary sampling equipment.

TABLE 4.3-11

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. WASTE GAS HOLDUP SYSTEM					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release	P	P	R ⁽³⁾	SA ⁽¹⁾	*
b. Effluent System Flow Rate Measuring Device	D ⁽⁴⁾	NA	R	NA	*
2. MAIN VENT SYSTEM					
a. Noble Gas Activity Monitor	D	M	R ⁽³⁾	SA ⁽²⁾	*
b. Iodine Sampler	W	NA	NA	NA	*
c. Particulate Sampler	W	NA	NA	NA	*

TABLE 4.3-11 (Continued)

TABLE NOTATION

- * At all times other than when the line is valved out and locked.
- (1) The **CHANNEL FUNCTIONAL TEST** shall also demonstrate the automatic isolation of this pathway and/or Control Room alarm annunciation occurs if the appropriate following condition(s) exists:
1. Instrument indicates measure levels above the alarm/trip setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
- (2) The **CHANNEL FUNCTIONAL TEST** shall also demonstrate that Control Room alarm annunciation occurs if any of the following conditions exists:
1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
- (3) The initial **CHANNEL CALIBRATION** shall be performed using one or more of the reference standards traceable to the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system within its intended range of energy and measurement range. For subsequent **CHANNEL CALIBRATION**, sources that have been related to the initial calibration can be used.
- (4) The **CHANNEL CHECK** shall consist of verifying indication of flow during periods of release and shall be made at least once per 24 hours on days on which effluent releases are made.

3/4.3 INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

Radioactive Liquid Effluent Monitoring Instrumentation

LIMITING CONDITION FOR OPERATION

3.3.3.10 The radioactive liquid effluent monitoring instrumentation channels shown in Table 3.3-13 shall be **OPERABLE** with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.1.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined and adjusted in accordance with the methodology and parameters in the **OFFSITE DOSE CALCULATION MANUAL (ODCM)**.

APPLICABILITY: At all times.

ACTION:

- a. With a radioactive liquid effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, without delay suspend the release of radioactive liquid effluents monitored by the affected channel, or declare the channel inoperable, or change the setpoint so it is acceptably conservative.
- b. With less than the minimum number of radioactive liquid effluent monitoring instrumentation channels **OPERABLE**, take the **ACTION** shown in Table 3.3-13. Exert best efforts to return the instruments to **OPERABLE** status within 30 days and, if unsuccessful, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each radioactive liquid effluent monitoring instrumentation channel shall be demonstrated **OPERABLE** by performance of the **CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION** and **CHANNEL FUNCTIONAL TEST** operations at the frequencies shown in Table 4.3-12.

TABLE 3.3-13

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE		
a. Liquid Radwaste Effluent Line	1	28
b. Steam Generator Blowdown Effluent Line	1	29
2. FLOW RATE MEASUREMENT DEVICES		
a. Liquid Radwaste Effluent Line	1	30
b. Steam Generator Blowdown Effluent Line	1	30

TABLE 3.3-13 (Continued)

ACTION STATEMENTS

- ACTION 28 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases may continue provided that prior to initiating a release:
- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1, and
 - b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and two qualified operators verify the discharge valve line up.
- ACTION 29 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases via this pathway may continue provided grab samples are analyzed for gross radioactivity (beta or gamma) at the lower limit of detection defined in Table 4.11-1:
- a. At least once per 12 hours when the specific activity of the secondary coolant is greater than 0.01 microcurie/gram **DOSE EQUIVALENT I-131**.
 - b. At least once per 48 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microcurie/gram **DOSE EQUIVALENT I-131**.
- ACTION 30 -** With the number of channels **OPERABLE** less than required by the Minimum Channels **OPERABLE** requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours during actual releases. Pump performance curves may be used to estimate flow.

TABLE 4.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. GROSS RADIOACTIVITY MONITORS PROVIDING ALARM AND AUTOMATIC TERMINATION OF RELEASE				
a. Liquid Radwaste Effluent Line	D	P	R ⁽²⁾	SA ⁽¹⁾
b. Steam Generator Blowdown Effluent Line	D	P	R ⁽²⁾	SA ⁽¹⁾
2. FLOW RATE MEASUREMENT DEVICES				
a. Liquid Radwaste Effluent Line	D ⁽³⁾	NA	R	NA
b. Steam Generator Blowdown Effluent Line	D ⁽³⁾	NA	R	NA

TABLE 4.3-12 (Continued)

TABLE NOTATION

- (1) The **CHANNEL FUNCTIONAL TEST** shall also demonstrate that automatic isolation of this pathway and/or Control Room alarm annunciation occur if the appropriate following condition(s) exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.
- (2) The initial **CHANNEL CALIBRATION** shall be performed using one or more of the reference standards traceable to the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system within its intended range of energy and measurement range. For subsequent **CHANNEL CALIBRATION**, sources that have been related to the initial calibration can be used.
- (3) **CHANNEL CHECK** shall consist of verifying indication of flow during periods of release. **CHANNEL CHECK** shall be made at least once per 24 hours on days on which effluent releases are made.

TABLE 3.7-5

**FIRE PROTECTION SPRINKLERS
UNIT 1**

<u>SPRINKLER LOCATION</u>	<u>CONTROL VALVE ELEVATION</u>
3 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.

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
4. Intake Structure	10'*	1
5. Diesel Generator Building	35'	1
	45'	1
	66'	1
	80'	1

* 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 with:
 1. Separate fuel oil day tanks containing a minimum volume of:
 - 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 of:
 - 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. 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. 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

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.
 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 ± 420 volts and 60 ± 1.2 Hz, respectively.
 5. Verifying the generator is synchronized, loaded to ≥ 4000 kW for No. 1A Emergency Diesel Generator or ≥ 2250 kW for No. 1B Emergency Diesel Generator, and operates for ≥ 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.

* 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)

- 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.
- c. At least once per 184 days by verifying the diesel starts from ambient condition and accelerates to at least 60 Hz in ≤ 10 seconds.
- 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 ≥ 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 ≥ 5 minutes while its generator is loaded with the emergency loads.*
 - c) Verifying that automatically bypassed diesel trips are automatically bypassed on a Safety Injection Actuation Signal.
 4. Verifying the diesel generator operates for ≥ 60 minutes while loaded to ≥ 4000 kW for No. 1A Emergency Diesel Generator or ≥ 2700 kW for No. 1B Emergency Diesel Generator.
 5. Verifying that the auto-connected loads to each diesel generator do not exceed 4000 kW for No. 1A Emergency Diesel Generator or 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.

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:
 - 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. A fuel transfer pump.

APPLICABILITY: **MODES** 5 and 6.

ACTION:

- a. With less than the above minimum required A.C. electrical power sources **OPERABLE**:
 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.

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 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.

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

3/4.8 ELECTRICAL POWER SYSTEMS

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.

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:
 - 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)

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.

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 3500 kW, and the opposite unit under normal shutdown conditions with a diesel generator load of 3000 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 3000 kW. The **OPERABILITY** of the 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.

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

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

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.

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. (2B) **	2		
422	Diesel Generator No. (2A) **	2		
440	Refueling Water Tank Pump Rm			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

* 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.

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"
2A Diesel Generator	45'-0"
2B Diesel Generator	45'-0"
Unit 2 East Pipe Pen Room 206/310*	5'-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 with:
 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 85,000 gallons of fuel oil, and
 - b. No. 11 Fuel Oil Storage Tank containing a minimum volume of 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 85,000 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 85,000 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 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 ± 420 volts and 60 ± 1.2 Hz, respectively.
 5. Verifying the generator is synchronized, loaded to ≥ 2700 kW, and operates for ≥ 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 60 Hz in ≤ 10 seconds.
- 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 ≥ 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 ≥ 5 minutes while its generator is loaded with the emergency loads.
 - c) Verifying that automatically bypassed diesel trips are automatically bypassed on a Safety Injection Actuation Signal.
 4. Verifying the diesel generator operates for ≥ 60 minutes while loaded to ≥ 3000 kW.
 5. Verifying that the auto-connected loads to each diesel generator do not exceed 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.

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 85,000 gallons of fuel oil, and
 - b. No. 11 Fuel Oil Storage Tank containing a minimum volume of 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**:
 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 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 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

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.

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:
 - 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)

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.

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 3500 kW, and the opposite unit under normal shutdown conditions with a diesel generator load of 3000 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 3000 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 3500 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.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

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.