ATTACHMENT (3)

CURRENT UNIT 1 TECHNICAL SPECIFICATION MARKED-UP PAGES

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Baltimore Gas & Electric Company Docket Nos. 50-317 and 50-318 October 2, 1997

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
 - 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.

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- 5. Verifying the generator is synchronized, loaded to > 4000 kW for No. 1A Emergency Diesel Generator or $\frac{2250}{100}$ 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 + 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.

CALVERT CLIFFS - UNIT 1

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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:
 - Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
 - Verifying the generator capability to reject a load of ≥ 500 hp without tripping.
 - 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.
 - 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.
 Verifying that the auto-connected loads to each diesel
 - 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.

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CALVERT CLIFFS - UNIT 1

Amendment No. 214

ATTACHMENT (4)

IMPROVED

TECHNICAL SPECIFICATION

MARKED-UP PAGES

3.8.1-8 3.8.1-10 B 3.8.1-2

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AC Sources-Operating 3.8.1

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.1.3	 Performance of SR 3.8.1.9 satisfies this SR. 	
	 All DG starts may be preceded by an engine prelube period and followed by a warmup period prior to loading. 	
	 A modified DG start involving idling and gradual acceleration to synchronous speed may be used for this SR as recommended by the manufacturer. 	
	Verify each DG starts and achieves steady state voltage \geq 3740 V and \leq 4580 V, and frequency \geq 58.8 Hz and \leq 61.2 Hz.	31 days
SR 3.8.1.4	 Momentary transients below the load range do not invalidate this test. 	
	 This SR shall be preceded by and immediately follow without shutdown a successful performance of SR 3.8.1.3 or SR 3.8.1.9. 	
	Verify each DG is synchronized and loaded, and operates for ≥ 60 minutes at a load ≥ 4000 kW for DG 1A, ≈ 2250 kW for DG 1B, and ≥ 2700 kW for DG 2A and 2B.	31 days

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AC Sources-Operating 3.8.1

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SURVEILLANCE REQUIREMENTS (continued)

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SR 3.8.1.11	Verify each DG operates for \geq 60 minutes while loaded to \geq 4000 kW for DG 1A, \geq 2700 kW for DG 2B, and \geq 3000 kW for DG 2A and 2B.	24 months
SR 3.8.1.12	Verify that auto-connected loads to each DG are \leq 4000 kW for DG 1A, ≤ 2700 kW for DG 16, and \leq 3300 kW for CG 2A and 2B.	24 months
SR 3.3.1.13	Verify each DG rejects a load \geq 500 hp without tripping.	24 months
SR 3.8.1.14	Verify that automatically bypassed DG trips are automatically bypassed on an actual or simulated required actuation signal.	24 months
R 3.8.1.15	Verify each DG synchronizes with offsite power source while loaded upon a simulated restoration of offsite power and the loads can be transferred to offsite power source.	24 months

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b. One 500 kV line, one P-13000, 500 kV/13 kV transformer and the 69 kV/13.8 kV SMECO line.

The onsite standby power source to each 4.16 kV ESF bus is a dedicated DG. A DG starts automatically on an safety injection actuation signal or on a 4.16 kV degraded or undervoltage signal. If both 4.16 kV offsite source breakers are open, the DG, after reaching rated voltage and frequency, will automatically close onto the 4.16 kV bus.

In the event of a loss of offsite power to a 4.16 kV 1E hus. if required, the ESF electrical loads will be automatically sequenced onto the DG in sufficient time to provide for safe shutdown for an anticipated operational occurrence (AOO) and ensure that the containment integrity and other vital functions are maintained in the event of a design bases accident.

Ratings for the 1A DG satisfies the requirements of Regulatory Guide 1.9 (Ref. 3) and ratings for the 1B, 2A, and 2B DG satisfy the requirements of Safety Guide 9 (Ref. 4). The continuous service rating for the 1A DG is 5400 kW, for the 1B DG is 2500 kW, and for the 2A and 2B DGs are 3000 kW.

APPLICABLE SAFETY ANALYSES The initial conditions of Design Basis Accident (DBA) and transient analyses in the UFSAR, Chapter 6 (Ref. 5) and Chapter 14 (Ref. 6), assume ESF systems are OPERABLE. The AC electrical power sources are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to ESF systems so that the fuel, Reactor Coolant System (RCS), and containment design limits are not exceeded. These limits are discussed in more detail in the Bases for Section 3.2, Power Distribution Limits; Section 3.4, Reactor Coolant System (RCS); and Section 3.6, Containment Systems.

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