

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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2. Verifying the generator capability to reject a load of ≥ 515 kw without tripping.
 - ** 3. Simulating a loss of offsite power in conjunction with Reactor Building high pressure and Reactor Building high-high pressure tests signals, and;
 - a) Verifying de-energization of the emergency buses and load shedding from the emergency busses,
 - b) Verifying that the 4160 v. emergency bus tie breakers open,
 - c) 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.
 4. Verifying the diesel generator operates for at least 60 minutes. During the first 5 minutes but no greater than 6 minutes of this test the diesel generator shall be loaded to greater than or equal to 3248 kw but less than 3300 kw and during the remaining time of this 60 minute test, the diesel generator shall be loaded to greater than or equal to 2750 kw but less than 3000 kw,
 5. Verifying that the auto-connected loads to each diesel generator for the worst case diesel generator operating condition do not exceed 3248 kw, and
 6. Verifying that the automatic load sequence timers are OPERABLE with each load sequence time interval within $\pm 10\%$.
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* This test shall be performed in MODE 3

The specified 18 month frequency may be waived for Cycle VI startup

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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 General Design Criterion 17 of Appendix "A" to 10 CFR 50.

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 is consistent with the initial condition assumptions of the safety analyses and is based upon maintaining at least one 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.

For the purposes of the diesel generator start testing, "ambient condition" means the diesel engine coolant and oil are being continuously circulated and maintained at a temperature consistent with the manufacturer's recommendations.

All preplanned diesel generator starts, including action statement required starts, may be preceded by prelube and or other warmup procedures recommended by the manufacturer. Additionally, except for the 18-month simulated loss of offsite power diesel test, all preplanned diesel generator runs, including action statement required runs, may be gradually loaded, reloaded and unloaded as recommended by the manufacturer. The purpose of following these manufacturer's recommendations is to minimize the mechanical and thermal stress and wear on the diesel engine.

Diesel generator operability is normally demonstrated by carrying load. Because the diesel generator can be affected by offsite disturbances when it is synchronized with the grid, the diesel loading may be limited or eliminated during inclement weather (i.e., lightning, etc.) or any other time loading would present a safety concern. In cases as outlined above, diesel operability is not contingent upon loading.

Testing the diesel generators at refueling intervals under their worst case loading condition provides assurance that the diesel generators are capable of supplying their required engineered safeguards loads. Testing at these loads for 5 minutes but limiting the diesel generators operating time in the 30 minute rating to less than 6 minutes provides assurance that the diesel generators will remain capable of supplying their required engineered safeguards loads for the length of the fuel cycle.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES (Continued)

The worst case diesel generator loading condition is a 3248 kw load and would occur during a postulated loss of offsite power coincident with an engineered safeguards actuation due to a large break loss of coolant accident. A single failure of the train "B" diesel generator is also assumed to occur.

The refueling interval verification of the diesel generators auto-connected loads assures that the diesel generators are capable of supplying the worst case loading condition and that additional loads have not been added to the diesel generator which could result in an overload condition. This verification will be performed by simulating a loss of offsite power in conjunction with an ES test signal and assuring that the total load on the diesel generator is no greater than 3248 kw when pump loads are corrected to account for load differences between recirculation flow and the assumed accident flows from the worst case diesel generator loading condition.

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 and refueling condition for extended time periods and 2) sufficient instrumentation and control capability is available for monitoring and maintaining the facility status.

ATTACHMENT 2
EMERGENCY DIESEL GENERATOR
LOADING EVALUATION, REVISION 1