INSERT FOR PROPOSED CHANGE TO
ELECTRICAL POWER SYSTEMS TECHNICAL SPECIFICATIONS

INSERT 1

...shall be preceded, within 5 minutes, by a prelube period and operation at rated load for at least 1 hour or until operating temperatures have stabilized.

SURVEILLANCE REQUIREMENTS (Continued)

3. Within 2 weeks after obtaining the sample, verify that the other properties specified in Table 1 of ASTM-D975-77 and Regulatory Guide 1.137, Position 2.a, are met when tested in accordance with ASTM-D975-77.

g. At least once per 2 months, by verifying the buried fuel oil transfer piping's cathodic protection system is OPERABLE and at least once per year by subjecting the cathodic protection system to a performance test.

h. At least once per 18 months #,## during shutdown, 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 diesel generator capability to reject a load of greater than or equal to that of the RHR pump motor (1003 kW) for each diesel generator while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz.

3. Verifying the diesel generator capability to reject a load of 4430 kW without tripping. The generator voltage shall not exceed 4580 volts during and following the load rejection.

4. Simulating a loss of offsite power by itself, and:

a) Verifying loss of power is detected and deenergization of the emergency busses and load shedding from the emergency busses.

b) Verifying the diesel generator starts* on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds after receipt of the start signal, energizes the autoconnected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

INSERT 1

*This diesel generator start (10 sec) and subsequent loading (130 sec) ~~from ambient conditions may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical stress and wear on the diesel engine is minimized.~~

#For any start of a diesel generator, the diesel must be loaded in accordance with the manufacturer's recommendations.

##The surveillance interval for Emergency Diesel Generators 1AG400 and 1DG400, overdue beginning August 19 and 27, 1989 respectively, is extended until October 15, 1989 and the provisions of Specification 4.0.2.a are not applicable for this one-time extension (i.e., this surveillance interval will be considered as an 18-month interval). With regard to the provisions of Specification 4.0.2.b, the combined time interval accrued for previous consecutive intervals for this surveillance section by all four Emergency Diesel Generators, on a one-time basis, is considered to be zero upon completion, during the second refueling outage, of all 18-month surveillance of this specification.

NO CHANGE, THIS PG. INCLUDED FOR CONTINUITY.

SURVEILLANCE REQUIREMENTS (Continued)

5. Verifying that on an ECCS actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.

6. Simulating a loss of offsite power in conjunction with an ECCS actuation test signal, and:

   a) Verifying loss of power is detected and deenergization of the emergency busses and load shedding from the emergency busses.

   b) Verifying the diesel generator starts* on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds after receipt of the start signal, energizes the autoconnected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz during this test.

7. Verifying that all automatic diesel generator trips, except engine overspeed, generator differential current, generator overcurrent, bus differential current and low lube oil pressure are automatically bypassed upon loss of voltage on the emergency bus concurrent with an ECCS actuation signal.#

8. Verifying the diesel generator operates for at least 24 hours. During the first 22 hours of this test, the diesel generator shall be loaded to between 4300 and 4400 kW** and during the remaining 2 hours of this test, the diesel generator shall be loaded to between 4800 and 4873 kW. The generator voltage and

*This diesel generator start (10 sec) and subsequent loading (130 sec) from ambient conditions may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical stress and wear on the diesel engine is minimized.

**This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band shall not invalidate the test; the loads; however, shall not be less than 4300 kW nor greater than 4873 kW.

#Generator differential current, generator overcurrent, and bus differential current is two-out-of-three logic and low lube oil pressure is two-out-of-four logic.

frequency shall be 4160 ± 420 volts and 60 ± 1.2 Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. ~~Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.h.4.b).~~ **

9. Verifying that the auto-connected loads to each diesel generator do not exceed the continuous rating of 4430 kW.

10. Verifying the diesel generator's capability to:

    a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power,

    b) Transfer its loads to the offsite power source,

    c) Be restored to its standby status, and

    d) Diesel generator circuit breaker is open.

11. Verifying that with the diesel generator operating in a test mode and connected to its bus, a simulated ECCS actuation signal overrides the test mode by (1) returning the diesel generator to standby operation, and (2) automatically energizes the emergency loads with offsite power.

12. Verifying that the fuel oil transfer pump transfers fuel oil from each fuel storage tank to the day tank of each diesel via the installed cross connection lines.

13. Verifying that the automatic load sequence timer is OPERABLE with the interval between each load block within ± 10% of its design interval.

14. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required:

    a) Engine overspeed, generator differential, and low lube oil pressure (regular lockout relay, (1) 86R).
    b) Backup generator differential and generator overcurrent (backup lockout relay, (1) 86B)
    c) Generator ground and lockout relays-regular, backup and test, energized (breaker failure lockout relay, (1) 86F)

~~**If Surveillance Requirement 4.8.1.1.2.h.4.b) is not satisfactorily completed, it is not necessary to repeat the preceding 24 hour test. Instead, the diesel generator may be operated at between 4300 kw and 4400 kw for one hour or until operating temperature has stabilized prior to repeating Surveillance Requirement 4.8.1.1.2.h.4.b).~~