

PLANT SYSTEMS

3/4.7.14 STANDBY SHUTDOWN SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.14 The Standby Shutdown System (SSS) shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With less than the minimum SSS equipment in Table 3.7-8 OPERABLE, restore the inoperable equipment to OPERABLE within 7 days, or provide equivalent capability to achieve HOT STANDBY and restore the inoperable equipment to OPERABLE within 60 days, or be in HOT STANDBY within the next 12 hours and HOT SHUTDOWN within the following 24 hours.
- b. The provisions of Specifications 3.0.3, 3.0.4 and 4.0.4 do not apply.

SURVEILLANCE REQUIREMENTS

4.7.14.1 The Standby Shutdown System diesel generator shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
 - 1) The fuel level in the fuel storage tank is greater than or equal to 4.0 feet, and
 - 2) The diesel starts from ambient conditions and operates for at least 30 minutes at greater than or equal to 700 kW.
- b. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the storage tanks and:
 - 1) By verifying in accordance with the tests specified in ASTM D975-81 prior to addition to the storage tanks that the sample has:
 - a) An API Gravity of within 0.3 degrees at 60°F or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89 or an API gravity at 60°F of greater than or equal to 27 degrees but less than or equal to 39 degrees.

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- b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes but less than or equal to 4.1 centistokes (on a Saybolt Universal Viscommeter at 100°F of greater than or equal to 32.6 SUS but less than or equal to 40.1 SUS).
 - c) A flash point equal to or greater than 125°F, and
 - d) A clear and bright appearance with proper color when tested in accordance with ASTM D4176-82.
- 2) By verifying within 31 days of obtaining the sample that the other properties specified in Table 1 of ASTM D975-81 are met when tested in accordance with ASTM D975-81 except that the analysis for sulfur may be performed in accordance with ASTM D1552-79 or ASTM D2622-82.
- c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

4.7.14.2

The Standby Shutdown System diesel starting 24-volt Nickel-Cadmium battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that the overall battery voltage is greater than or equal to 24 volts.
- b. At least once per 18 months by verifying that:
 - 1) The batteries and battery racks show no visual indication of physical damage or abnormal deterioration, and
 - 2) The battery-to-battery and terminal connections are clean, tight, and free of corrosion.

4.7.14.3

The Standby Makeup Pump water supply shall be demonstrated OPERABLE by:

- a. Verifying at least once per 72 hours that IDENTIFIED LEAKAGE, UNIDENTIFIED LEAKAGE, and Reactor Coolant Pump Seal leakoff do not exceed a total of 26 gpm.
- b. Verifying at least once per 7 days:
 - 1) That the requirements of Specification 3.9.10 are met and the boron concentration in the storage pool is greater than or equal to 2000 ppm, or
 - 2) That the refueling water storage tank is capable of being aligned to the Standby Makeup Pump.

- c. Verifying at each Cold Shutdown, but not more than once every 92 days, that the Standby Makeup Pump develops a flow of greater than or equal to 26 gpm at a pressure greater than or equal to 2485 psig.

4.7.14.4

The Standby Shutdown System 250/125-Volt Battery Bank and its associated charger shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying:
 - 1) That the electrolyte level of each battery is above the plates, and
 - 2) The total battery terminal voltage is greater than or equal to 258/129 volts on float charge.
- b. At least once per 92 days by verifying that the average specific gravity is greater than or equal to 1.200.
- c. At least once per 18 months by verifying that:
 - 1) The batteries, cell plates, and battery racks show no visual indications of physical damage or abnormal deterioration, and
 - 2) The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

4.7.14.5

The Steam Turbine Driven Auxiliary Feedwater Pump and associated components shall be demonstrated OPERABLE in accordance with portions of Specification 3/4.7.1.2 applicable to SSS.

4.7.14.6

The "C" solenoid shall be demonstrated OPERABLE and capable of being deenergized to open valve SA48ABC to provide steam supply to the turbine driven auxiliary feedwater pump at least once per 18 months.

4.7.14.7

Standby Shutdown System instrumentation shall be demonstrated OPERABLE by performance of surveillance requirements listed in Table 4.7-2.

Table 3.7-8
Standby Shutdown System
Minimum Equipment

<u>INSTRUMENT</u>	<u>READOUT LOCATION</u>	<u>MINIMUM CHANNELS OPERABLE</u>
Reactor Coolant Pressure	SSF Control Panel	1
Pressurizer Level	SSF Control Panel	1
Steam Generator Level	SSF Control Panel	1/S.G.
Incore Temperature	SSF Control Panel	1*
Standby Makeup Pump Flow	SSF Control Panel	1

<u>EQUIPMENT</u>	<u>LOCATION</u>
Diesel Generator and associated switchgear	SSF
Diesel starting 24-Volt battery bank and charger	SSF
Standby makeup pump and water supply	Containment/Spent Fuel Pool
250/125 V battery bank, associated charger, and associated switchgear	SSF
Steam Turbine Driven Auxiliary Feedwater Pump	Aux. Bldg.
Solenoid "C" to valve SA 48 ABC	Interior Doghouse

*Capable of being connected at SSF Control Panel.

Table 4.7-2
Standby Shutdown System
Instrumentation Surveillance Requirements

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
Reactor Coolant Pressure	M	R
Pressurizer Level	M	R
Steam Generator Level	M	R
Incore Temperature	M	R
Standby Makeup Pump Flow	N/A	R

PLANT SYSTEMS

BASES

3/4.7.13 GROUNDWATER LEVEL

This specification is provided to ensure that groundwater levels will be monitored and prevented from rising to excessively high levels which could cause unacceptable structural stresses in the reactor containment and/or auxiliary building due to uplift forces. Structural stresses due to high groundwater levels will not exceed allowable stresses until groundwater rises to elevation 732 MSL.

3/4.7.13 STANDBY SHUTDOWN SYSTEM

The OPERABILITY of the SSS ensures that a fire will not preclude achieving safe shutdown. The SSS equipment are independent of areas where a fire could damage systems normally used to shutdown the reactor. This capability is consistent with GDC 3 and 10CFR50, Appendix R.

The equivalent shutdown capability provided when the SSS is inoperable depends on the specific equipment involved and, therefore, should be sufficient to assure that the intended shutdown actions can be accomplished, or that fires can be reasonably precluded during that time for which SSS equipment would otherwise be required, consistent with the SSS design basis. Any temporary procedures or special fire watch patrols established to provide this equivalent capability shall be reviewed and approved prior to implementation in accordance with Section 6.0 of Technical Specification.