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Revision 127 dated 08/17/2021

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Note: The changes above reflect those justified and described in LCR#s 20-036-TRM and 21-004-TRM.

END

Fermi 2

Technical Requirements Manual

Volume I

DTE Electric

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ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. As required by Required Action A.1 and referenced in Table TR3.3.9-1.	D.1 Restore channel to OPERABLE status.	7 days
E. Required Action and associated Completion Time of Condition D not met.	E.1 Enter TRLCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

----------NOTE----------
These SRs apply to each Function in Table TR3.3.9-1.

SURVEILLANCE		FREQUENCY
TRSR 3.3.9.1	Perform CHANNEL CHECK.	31 days
TRSR 3.3.9.2	Perform CHANNEL CALIBRATION.	24 months

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TRSR 3.7.7.1	For the SBFW system, verify by venting at the high point vents that the system piping from the pump discharge to the system isolation valves is filled with water.	31 days
TRSR 3.7.7.2	For the SBFW system, verify that each valve (manual, power-operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position.	31 days
TRSR 3.7.7.3	For CTG 11 Unit 1, start and supply load of at least 10 MW to the Peaker Bus.	31 days
TRSR 3.7.7.4	Verify that each SBFW pump develops a flow of $\geq$ 600 gpm in a test flow path with a system head corresponding to the reactor vessel operating pressure including injection line losses.	46 days on a STAGGERED TEST BASIS
TRSR 3.7.7.5	For the drywell cooling units, operate the unit for 72 hours with the fan in "HIGH" speed.	46 days on a STAGGERED TEST BASIS
TRSR 3.7.7.6	Verify each required alternative shutdown system control circuit in Table TR3.7.7-1 is capable of performing its intended function(s).	24 months

TR 3.12 FIRE PROTECTION

TR 3.12.2 Fire Suppression Water System

TRLCO 3.12.2 The fire suppression water system shall be OPERABLE with:

a. Two fire suppression pumps, each with a capacity of 2500 gpm at 150 psig, with their discharge aligned to the fire suppression header;

b. The general service water intake structure water level $\geq$ 562 feet; and

c. An OPERABLE flow path capable of taking suction from the general service water intake structure and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves, the last valve ahead of the water flow alarm device in each sprinkler or hose standpipe and the last valve ahead of the spray system required to be OPERABLE per TRLCO 3.12.3, TRLCO 3.12.6, and TRLCO 3.12.7.

APPLICABILITY: At all times.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One fire suppression pump inoperable.	A.1	Restore the inoperable pump to OPERABLE status.	14 days
	OR		
	A.2	Provide an alternate backup pump.	14 days
B. The fire suppression water system inoperable for reasons other than Condition A.	B.1	Establish backup fire suppression water system.	24 hours
	OR		
	B.2	Perform evaluation to determine extent of inoperability and establish required compensatory measures.	24 hours
C. Required Actions and associated Completion Time of Condition B not met.	C.1	Be in MODE 2.	7 hours
	AND		
	C.2	Be in MODE 3.	13 hours
	AND		
	C.3	Be in MODE 4.	37 hours

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
TRSR 3.12.2.13	----------NOTE---------- Measured performance shall be recorded at minimum and rated loads. ---------- Verify that each fire pump develops a minimum calculated value of 2500 gpm at 150 psig at the discharge flange of the pump adjusted for the minimum allowed lake level of 562'-0".	18 months
TRSR 3.12.2.14	Cycle each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.	18 months
TRSR 3.12.2.15	Verify that each fire suppression pump starts sequentially to maintain the fire suppression water system pressure $\geq$ 105 psig.	18 months
TRSR 3.12.2.16	Inspect the diesel of the diesel-driven fire suppression pump to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.	18 months
TRSR 3.12.2.17	Verify the diesel-driven fire pump starting 24-volt battery bank battery and battery racks, show no visual indication of physical damage or abnormal deterioration.	18 months

(continued)

SURVEILLANCE REQUIREMENTS

----------NOTE----------
These SRs apply to each Area in Table TR3.12.3-1.

SURVEILLANCE		FREQUENCY
TRSR 3.12.3.1	----------NOTE---------- For valves that are not accessible during unit operation, not required to be performed in MODES 1, 2, and 3, or MODE 4 of $\leq$ 24 hours. --- Verify each manual, powered-operated, or automatic valve in the flow path is in its correct position.	31 days
TRSR 3.12.3.2	----------NOTE---------- For valves that are not accessible during unit operation, not required to be performed in MODES 1, 2, and 3, or MODE 4 of $\leq$ 24 hours. --- Cycle each testable valve in the flow path through at least one complete cycle of full travel.	12 months
TRSR 3.12.3.3	----------NOTE---------- The ventilation room manual flooding system is exempt from the automatic actuation. --- Perform a system functional test, which includes the simulated automatic actuation of each system by opening the inspectors test valve and verifying the water flow alarm annunciator.	24 months
TRSR 3.12.3.4	Perform a visual inspection of the sprinkler header to verify its integrity.	24 months

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
TRSR 3.12.8.1	Verify that each unlocked fire door without electrical supervision is closed.	24 hours
TRSR 3.12.8.2	Verify the position of each locked-closed fire door.	7 days
TRSR 3.12.8.3	Perform a CHANNEL FUNCTIONAL TEST of each fire door supervision system for each electrically supervised fire door.	31 days
TRSR 3.12.8.4	Inspect the automatic hold-open, release and closing mechanism and latches.	184 days
TRSR 3.12.8.5	Visually inspect the exposed surfaces of each fire rated assembly.	24 months
TRSR 3.12.8.6	Visually inspect each fire damper and associated hardware.	24 months
TRSR 3.12.8.7	----------NOTE---------- Penetration seals inside electrical conduits need not be inspected under this TRSR if they meet the requirements of UFSAR Section 9A.2.3.1.1 for not requiring seals to prevent the passage of heat and fire. ----------	------NOTE------- Samples shall be selected such that each penetration seal is inspected at least once per 20 years. ----------
	Visually inspect 10% of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10% of each type of sealed penetration shall be made. This inspection process shall continue until a 10% sample with no apparent changes in appearance or abnormal degradation is found.	24 months

TR B3.12 FIRE PROTECTION

TR B3.12.2 Fire Suppression Water System

BASES

The OPERABILITY of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety-related equipment is located. The fire suppression systems consists of the water system, spray and/or sprinkler systems, CO_2 systems, Halon systems, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety-related equipment and is a major element in the facility fire protection program.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurances that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon in the Halon storage tanks by verifying the weight and pressure of the tanks.

An exception is made to TRSR 3.12.2.6 and TRSR 3.12.2.11 for valves not accessible during unit operation. The valve that meets this criterion is T8000F037.

The pressure and flow rate requirements for TRLCO 3.12.2, as verified in TRSR 3.12.2.13, are derived from the base fire pump information in DC-5713.

In the event the fire suppression water system becomes inoperable, immediate compensatory measures must be taken since this system provides the major fire suppression capability of the plant.

It may be necessary to perform a fire protection engineering evaluation to determine the extent of inoperability of the fire suppression water system. The evaluation would also determine which conditions in TRLCO 3.12.3, TRLCO 3.12.6, and TRLCO 3.12.7 are applicable based on the fire suppression water system inoperability. The evaluation may determine that required actions in these other TRLCOs are adequate compensatory measures. If the evaluation determines there are no adequate compensatory measures and no backup fire suppression water system can be established within the allowed time, then entry into Action C is required.