

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. As shown in Table 3.3-10.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION at the frequencies shown in Table 4.3-7.

NO CHANGES

SOUTH TEXAS - UNITS 1 & 2

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AMENDMENT NOS. 14 AND 4

TABLE 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. Containment Pressure	4	1	38
2. Reactor Coolant Outlet Temperature - T _{HOT} (Wide Range)	1/loop	1/loop	35
3. Reactor Coolant Inlet Temperature - T _{COLD} (Wide Range)	1/loop	1/loop	35
4. Reactor Coolant Pressure - Wide Range and Extended Range	3	1	37
5. Pressurizer Water Level	4	1	43
6. Steam Line Pressure	4/steam generator	1/steam generator	38
7. Steam Generator Water Level - Narrow Range	4/steam generator	1/steam generator	38-13
8. Steam Generator Water Level - Wide Range	1/steam generator	1/steam generator	35
9. Refueling Water Storage Tank Water Level	3	1	37
10. Auxiliary Feedwater Storage Tank Water Level	3	1	37
11. Auxiliary Feedwater Flow	1/steam generator	1/steam generator	35
12. Reactor Coolant System Subcooling Margin Monitor	2	1	36

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TABLE 3.3-10 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	TOTAL NO. OF CHANNELS	MINIMUM CHANNELS OPERABLE	ACTION
13. Containment Water Level (Narrow Range)	2	1	36
14. Containment Water Level (Wide Range)	3	1	37
15. Core Exit Thermocouples	**	4 thermocouples/core quadrant	42
16. Steam Line Radiation Monitor	1/steam line	1/steam line	40
17. Containment - High Range Radiation Monitor	2	1	39
18. Reactor Vessel Water Level (RWL)	2*	1*	41 ⊗
19. Neutron Flux (Extended Range)	2	1	36
20. Containment Hydrogen Concentration	2	1	36
21. Containment Pressure (Extended Range)	2	1	36
22. Steam Generator Blowdown Radiation Monitor	1/blowdown line	1/blowdown line	40
23. Neutron Flux - Startup Rate (Extended Range)	2	1	36

*A channel is eight sensors in a probe. A channel is OPERABLE if four or more sensors, one or more in the upper section and three or more in the lower section, are OPERABLE.

**A total of 50 thermocouples are provided with 25 thermocouples on each of two trains. Quadrants B and D have 6 thermocouples per train each. Quadrants A and C each have 6 thermocouples on one train and 7 thermocouples on the other train. No ACTION is required as long as each quadrant has 4 thermocouples per train OPERABLE.

NO CHANGES



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TABLE 3.3-10 (Continued)

ACTION STATEMENTS

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- ACTION 35 - With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 36 - a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - b. With the number of OPERABLE channels less than the Minimum Channels Operable requirements, restore at least one inoperable channel to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 37 - a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - b. With the number of OPERABLE channels two less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - c. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 38 - a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 90 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - b. With the number of OPERABLE channels two less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - c. With the number of OPERABLE channels three less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - d. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS (Continued)

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- ACTION 39 - a. With the number of OPERABLE channels one less than the Total Number of Channels requirements, restore one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE channels less than the Minimum Channels Operable requirements, restore at least one inoperable channel to OPERABLE status within 72 hours, or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 40 - With the number of OPERABLE channels less than the Minimum Channels Operable requirements, restore at least one inoperable channel to OPERABLE status within 72 hours, or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 41 - a. With the number of OPERABLE channels one less than the Required Number of Channels, either restore the system to OPERABLE status within 7 days if repairs are feasible without shutting down or prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.
- b. With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE in Table 3.3-10, either restore the inoperable channel(s) to OPERABLE status within 48 hours if repairs are feasible without shutting down or:
1. Initiate an alternate method of monitoring the reactor vessel inventory;
 2. Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status; and
 3. Restore the system to OPERABLE status at the next scheduled refueling.
- ACTION 42 - a. With the number of OPERABLE channels less than 4 thermocouples per quadrant per train, restore these thermocouples to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE channels less than 6 thermocouples per quadrant, restore these thermocouples to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 3.3-10 (Continued)

ACTION STATEMENTS (Continued)

- c. With the number of OPERABLE channels less than 4 thermocouples per quadrant, restore these thermocouples to OPERABLE status within 48 hours, or be in at least HOT SHUTDOWN within the next 12 hours.
- ACTION 43 -
- a. With the number of OPERABLE channels two less than the Total Number of Channels requirements, restore the inoperable channel to OPERABLE status within 31 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - b. With the number of OPERABLE channels three less than the Total Number of Channels requirement, restore at least one inoperable channel to OPERABLE status within 7 days, or be in at least HOT SHUTDOWN within the next 12 hours.
 - c. With the number of OPERABLE channels less than the Minimum Channels Operable requirement, restore at least one inoperable channel to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.