

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ALARM/TRIP SETPOINT</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. AREA MONITORS					
a. Deleted					
b. Containment - Purge & Exhaust Isolation	1/train	1, 2, 3, 4 & **	40 mR/h or ≤ 2x background whichever is Higher	20 - 5x10 ⁵ mR/h	25
2. PROCESS MONITORS					
a. DELETED					
b. Control Room Intake Monitors	1/intake	ALL MODES & ***	≤ 5.45x10 ⁻⁶ μCi/cc	10 ⁻⁸ - 10 ⁻² μCi/cc	26
c. Steam Generator Blowdown Monitor	1	1, 2, 3, & 4	≤ 10 ⁻³ μCi/cc	10 ⁻⁶ - 10 ⁻¹ μCi/cc	28
d. Component Cooling Water Monitors A&B	1/line	ALL MODES	≤ 10 ⁻⁴ μCi/cc	10 ⁻⁷ - 10 ⁻² μCi/cc	28
e. Component Cooling Water Monitor A/B	1	1, 2, 3, & 4	≤ 10 ⁻⁴ μCi/cc	10 ⁻⁷ - 10 ⁻² μCi/cc	28

*Deleted

**During CORE ALTERATIONS or movement of irradiated fuel within the containment.

***During movement of irradiated fuel.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

ACTION 23 - DELETED

ACTION 24 - DELETED

ACTION 25 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.

ACTION 26 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.

ACTION 27 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

1. Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and
2. If the monitor is not restored to OPERABLE status within 7 days after the failure, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 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.

ACTION 28 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirements, operation of the plant may continue for up to 30 days provided grab samples are taken once per 8 hours and these samples are analyzed for gross activity within 24 hours.

If the monitor is not restored to OPERABLE status within 30 days after the failure, continue sampling and prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. AREA MONITORS				
a. Deleted				
b. Containment - Purge & Exhaust Isolation	S	R	Q	1, 2, 3, 4 & **
2. PROCESS MONITORS				
a. DELETED				
b. Control Room Intake Monitors	S	R	Q	ALL MODES & ***
c. Steam Generator Blowdown	S	R	Q	1, 2, 3, & 4
d. Component Cooling Water Monitors A&B	S	R	Q	ALL MODES
e. Component Cooling Water Monitor A/B	S	R	Q	1, 2, 3, & 4

*Deleted

**During CORE ALTERATIONS or movement of irradiated fuel within the containment.

***During movement of irradiated fuel.

REACTOR COOLANT SYSTEM

3/4.4.5 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.4.5.1 The following Reactor Coolant System leakage detection instrumentation shall be OPERABLE:

- a. One containment atmosphere particulate radioactivity monitor,
- b. One containment sump monitor, and
- c. One containment fan cooler condensate flow switch.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

NOTE: TS 3.0.4 is not applicable.

- a. Required containment atmosphere particulate radioactivity monitor inoperable.

NOTE: SR 4.4.5.2.1 is not required until 12 hours after establishment of steady state operation.

Analyze grab samples of the containment atmosphere once per 24 hours or perform SR 4.4.5.2.1 once per 24 hours;

and

Restore required containment atmosphere particulate radioactivity monitor to OPERABLE status within 30 days or verify one containment fan cooler condensate flow switch is OPERABLE within 30 days;

or

Be in MODE 3 in 6 hours and MODE 5 in the following 30 hours.

- b. Required containment sump monitor inoperable.

NOTE: SR 4.4.5.2.1 is not required until 12 hours after establishment of steady state operation.

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

Perform SR 4.4.5.2.1 once per 24 hours and restore the containment sump monitor to OPERABLE status within 30 days;

or

Be in MODE 3 in 6 hours and MODE 5 in the following 30 hours.

- c. Required containment fan cooler condensate flow switch inoperable.

NOTE: SR 4.4.5.2.1 is not required until 12 hours after establishment of steady state operation.

Perform a CHANNEL CHECK on the containment atmosphere particulate radioactivity monitor once per 8 hours or perform SR 4.4.5.2.1 once per 24 hours;

or

Be in MODE 3 in 6 hours and MODE 5 in the following 30 hours.

- d. Required containment atmosphere particulate radioactivity monitor inoperable and required containment fan cooler condensate flow switch inoperable.

Restore the required containment atmosphere particulate radioactivity monitor or the required containment fan cooler condensate flow switch to OPERABLE status within 30 days.

or

Be in MODE 3 in 6 hours and MODE 5 in the following 30 hours.

- e. Required containment sump monitor inoperable and either the required containment atmosphere particulate radioactivity monitor inoperable or the required containment fan cooler condensate flow switch inoperable.

Restore the required containment sump monitor to OPERABLE status within 1 hour.

or

Restore the required containment atmosphere particulate radioactivity monitor or the required containment fan cooler condensate flow switch to OPERABLE status within 1 hour;

or

Be in MODE 3 in 6 hours and MODE 5 in the following 30 hours.

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

- f. All required RCS leakage detection instrumentation inoperable.

Initiate ACTION within 1 hour to be in MODE 3 within the next 6 hours and MODE 5 in the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.4.5.1 The leakage detection systems shall be demonstrated OPERABLE by:

- a. Containment atmosphere particulate monitor system - performance of CHANNEL CHECK at least once per 12 hours, CHANNEL CALIBRATION at least once per 18 months and CHANNEL FUNCTIONAL TEST at least once per 92 days,
- b. Containment sump level and flow monitors - performance of a CHANNEL CHECK (containment sump level monitor only) at least once per 12 hours and a CHANNEL CALIBRATION at least once per 18 months,
- c. Containment fan cooler condensate flow switch - performance of a CHANNEL FUNCTIONAL TEST at least once per 18 months.

REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.5.2 Reactor Coolant System leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE,
- b. 1 gpm UNIDENTIFIED LEAKAGE,
- c. 1 gpm total primary-to-secondary leakage through all steam generators and 720 gallons per day through any one steam generator,
- d. 10 gpm IDENTIFIED LEAKAGE from the Reactor Coolant System, and
- e. 1 gpm leakage at a Reactor Coolant System pressure of 2250 ± 20 psia from any Reactor Coolant System pressure isolation valve specified in Table 3.4-1.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any Reactor Coolant System leakage greater than any one of the limits, excluding PRESSURE BOUNDARY LEAKAGE and leakage from Reactor Coolant System pressure isolation valves, reduce the leakage rate to within limits within 4 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With any Reactor Coolant System pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least one closed manual or deactivated automatic valve, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

NOTE: Not required to be performed until 12 hours after establishment of steady state operation.

4.4.5.2.1 Reactor Coolant System leakages shall be demonstrated to be within each of the above limits by performance of a Reactor Coolant System water inventory balance at least once per 72 hours.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS (Continued)

4.4.5.2.2 Each Reactor Coolant System pressure isolation valve specified in Table 3.4-1, Section A and Section B, shall be demonstrated OPERABLE by verifying leakage to be within its limit:

- a. At least once per 18 months,
- b. Prior to entering MODE 2 whenever the plant has been in COLD SHUTDOWN for 7 days or more and if leakage testing has not been performed in the previous 9 months,
- c. Prior to returning the valve to service following maintenance, repair, or replacement work on the valve,
- d. Following valve actuation for valves in Section B due to automatic or manual action or flow through the valve:
 1. Within 24 hours by verifying valve closure, and
 2. Within 31 days by verifying leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or 4.

4.4.5.2.3 Each Reactor Coolant System pressure isolation valve power-operated valve specified in Table 3.4-1, Section C, shall be demonstrated OPERABLE by verifying leakage to be within its limit:

- a. At least once per 18 months, and
- b. Prior to returning the valve to service following maintenance, repair, or replacement work on the valve.

The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or 4.