

TABLE 3.3-6
RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ALARM SETPOINT</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. AREA MONITORS					
a. Fuel Storage Pool Area	1	*	≤ 15 mR/hr	$10^{-1} - 10^4$ mR/hr	13
b. Containment (CIS)	3	****	≤ 90 mR/hr	$1 - 10^5$ mR/hr	16
c. Containment Area – Hi Range	1	1, 2, 3, & 4	≤ 10 R/hr	$1 - 10^7$ R/hr	15
2. PROCESS MONITORS					
a. Containment					
i. Gaseous Activity RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	$10 - 10^6$ cpm	14
ii. Particulate Activity RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	$10 - 10^6$ cpm	14
b. Fuel Storage Pool Area Ventilation System					
i. Gaseous Activity	1	**	***	$10^{-7} - 10^5$ μ Ci/cc	12
ii. Particulate Activity	1	**	***	$1 - 10^6$ cpm	12

* With fuel in the storage pool or building.

** With recently irradiated fuel in the storage pool.

*** The Alarm Setpoints are determined and set in accordance with requirements of the Offsite Dose Calculation Manual.

**** During movement of recently irradiated fuel assemblies within containment.

REACTOR COOLANT SYSTEM

COLD SHUTDOWN – LOOPS FILLED

LIMITING CONDITION FOR OPERATION

3.4.1.4.1 At least one shutdown cooling loop shall be OPERABLE and in operation* and either:

- a. One additional shutdown cooling loop shall be OPERABLE[#], or
- b. The secondary side water level of at least two steam generators shall be greater than 10% of narrow range indication.

APPLICABILITY: MODE 5 with reactor coolant loops filled^{##}.

ACTION:

- a. With less than the above required loops OPERABLE or with less than the required steam generator level, within one (1) hour initiate corrective action to return the required loops to OPERABLE status or to restore the required level.
- b. With no shutdown cooling loop in operation, suspend operations that would cause introduction into the RCS, coolant with boron concentration less than required to meet SHUTDOWN MARGIN of Technical Specification 3.1.1.2 and within one (1) hour initiate corrective action to return the required shutdown loop to operation.

SURVEILLANCE REQUIREMENTS

4.4.1.4.1.1 The secondary side water level of at least two steam generators when required shall be determined to be within limits at least once per 12 hours.

4.4.1.4.1.2 At least one shutdown cooling loop shall be determined to be in operation and circulating reactor coolant at least once per 12 hours.

* The shutdown cooling pump may be de-energized for up to 1 hour provided 1) no operations are permitted that would cause introduction into the RCS, coolant with boron concentration less than required to meet the SHUTDOWN MARGIN of Technical Specification 3.1.1.2 and 2) core outlet temperature is maintained at least 10°F below saturation temperature.

One shutdown cooling loop may be inoperable for up to 2 hours for surveillance testing provided the other shutdown cooling loop is OPERABLE and in operation.

A reactor coolant pump shall not be started with two idle loops unless the secondary water temperature of each steam generator is less than 30°F above each of the Reactor Coolant System cold leg temperatures.

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 The control room emergency ventilation system shall be OPERABLE with:

- a. Two booster fans,
- b. Two isolation valves in each outside air intake duct,
- c. Two isolation valves in the toilet area air exhaust duct,
- d. One filter train,
- e. At least two air conditioning units, and
- f. Two isolation valves in the kitchen area exhaust duct.

APPLICABILITY: MODES 1, 2, 3, 4, 5 and 6 or during movement of irradiated fuel assemblies. |

ACTION:

MODES 1, 2, 3 and 4: |

- a. With one booster fan inoperable, restore the inoperable fan to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one isolation valve per air duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With the filter train inoperable, restore the filter train to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With only one air conditioning unit OPERABLE, restore at least two air conditioning units to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

PLANT SYSTEMS

ACTION: (continued)

MODES 5 and 6 or during movement of irradiated fuel assemblies:

- a. With one booster fan inoperable, restore the inoperable fan to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE control room emergency ventilation system in the recirculation mode or suspend movement of irradiated fuel assemblies.
- b. With one isolation valve in an air duct inoperable, maintain the other isolation valve in the same air duct closed or suspend movement of irradiated fuel assemblies.
- c. With the filter train inoperable, suspend movement of irradiated fuel assemblies.
- d. With only one air conditioning unit OPERABLE, restore at least two air conditioning units to OPERABLE status within 7 days or suspend movement of irradiated fuel assemblies.

SURVEILLANCE REQUIREMENTS

4.7.7.1 The control room emergency ventilation system shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is $\leq 120^{\circ}\text{F}$.
- b. At least once per 31 days by:
 1. Initiating flow through the HEPA filter and charcoal adsorber train and verifying that each booster fan operates for at least 15 minutes.
 2. Starting (unless already operating) each air conditioning unit and verifying that it operates for at least 8 hours.
- c. By performing required control room emergency ventilation system filter testing in accordance with the Ventilation Filter Testing Program.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

DELETED

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
 - 1. Verifying that on a containment isolation signal the system automatically isolates the control room within 35 seconds and switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.
 - 2. Verifying that the system maintains the control room at a positive pressure $\geq 1/8$ inch W.G. relative to the outside atmosphere during system operation with ≤ 450 cfm outside air intake.

ADMINISTRATIVE CONTROLS

- (2) conform to the guidance of Appendix I to 10 CFR Part 50, and
- (3) include the following:

- 1) Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM.
- 2) A Land Use Census to ensure that changes in the use of areas at and beyond the SITE BOUNDARY are identified and that modifications to the monitoring program are made if required by the results of this census, and
- 3) Participation in a Interlaboratory Comparison Program to ensure that independent checks on the precision and accuracy of the measurements of radioactive materials in environmental sample matrices are performed as part of the quality assurance program for environmental monitoring.

h. Containment Leakage Rate Testing Program

A program to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50 Appendix J, Option B, as modified by approved exemptions. This program is in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," as modified by the following exception(s):

- a) Bechtel Topical Report, BN-TOP-1 or ANS 56.8-1994 (as recommended by R.G. 1.163) will be used for type A testing.
- b) The first Type A test performed after the May 1993 Type A test shall be no later than May 2008.

The peak calculated containment internal pressure for the design basis loss of coolant accident P_a , is 39.6 psig. The containment design pressure is 44 psig.

The maximum allowed containment leakage rate, L_a , at P_a , shall be 0.50% of containment air weight per day.

Leakage rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $< 0.60 L_a$ for the Type B and C tests, $\leq 0.75 L_a$ for Type A tests, and $\leq 0.27 L_a$ for secondary containment bypass leakage paths.
- b. Air lock testing acceptance criteria are:
 - 1) Overall air lock leakage rate is $\leq 0.05 L_a$ when tested at $\geq P_a$.
 - 2) For the personnel air lock door seal, leakage rate is $< 0.01 L_a$ when pressurized to $\geq 1.0 P_a$.
 - 3) For the emergency air lock door seal, leakage rate is $< 0.01 L_a$ when pressurized to ≥ 10 psig.

ADMINISTRATIVE CONTROLS (continued)

k. Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2.

1. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass $\leq 0.05\%$ when tested in accordance with ANSI N510-1975 at the system flowrate specified below.

<u>ESF Ventilation System</u>	<u>Flowrate</u>
Control Room Emergency Ventilation	2000 \pm 200 cfm

2. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass $\leq 0.05\%$ when tested in accordance with ANSI N510-1975 at the system flowrate specified below.

<u>ESF Ventilation System</u>	<u>Flowrate</u>
Control Room Emergency Ventilation	2000 \pm 200 cfm

3. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and the relative humidity specified below.

<u>ESF Ventilation System</u>	<u>Penetration</u>	<u>RH</u>
Control Room Emergency Ventilation	$\leq 2.5\%$	70%

4. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters and charcoal adsorbers is less than the value specified below when tested at the system flowrate specified below.

<u>ESF Ventilation System</u>	<u>Delta P</u>	<u>Flowrate</u>
Control Room Emergency Ventilation	< 4.15" W.G.	2000 \pm 200 cfm

The provisions of SR 4.0.2 and SR 4.0.3 are applicable to the VFTP test frequencies.

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

- 6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the NRC.

STARTUP REPORT

- 6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment of the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal or hydraulic performance of the plant.