

5.7 Procedures, Programs, and Manuals

5.7.2.3 Offsite Dose Calculation Manual (ODCM) (continued)

- c. Shall be submitted to the NRC in the form of a complete, legible copy of the entire ODCM as a part of, or concurrent with, the Radioactive Effluent Release Report for the period of the report in which any change in the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (i.e., month and year) the change was implemented.

5.7.2.4 Primary Coolant Sources Outside Containment

This program provides controls to minimize leakage from those portions of systems outside containment that could contain highly radioactive fluids during a serious transient or accident to levels as low as practicable. The systems include [the Low Pressure Core Flooder, High Pressure Core Flooder, Residual Heat Removal, Reactor Core Isolation Cooling, hydrogen recombiner, process sampling, and Standby Gas Treatment]. The program shall include the following:

Replace
with
attached
insert

- a. Preventive maintenance and periodic visual inspection requirements; and
- b. Integrated leak test requirements for each system at refueling cycle intervals or less.

5.7.2.5 In Plant Radiation Monitoring

This program provides controls to ensure the capability to accurately determine the airborne iodine concentration in vital areas under accident conditions. This program shall include the following:

- a. Training of personnel;
- b. Procedures for monitoring; and
- c. Provisions for maintenance of sampling and analysis equipment.

(continued)

5.7.2.4 Insert:

The systems include the Low Pressure Core Flooder, High Pressure Core Flooder, Residual Heat Removal, Reactor Core Isolation Cooling, Hydrogen Recombiner, Process Sampling, Standby Gas Treatment, Suppression Pool Cleanup, Reactor Water Cleanup, Fuel Pool Cooling and Cleanup, Process Sampling, Containment Atmospheric Monitoring, and Fission Product Monitor(part of LDS),

5.7 Procedures, Programs, and Manuals

5.7.2.7 Radioactive Effluent Controls Program (continued)

- e. Determination of cumulative and projected dose contributions from radioactive effluents for the current calendar quarter and current calendar year in accordance with the methodology and parameters in the ODCM at least every 31 days;
- f. Limitations on the functional capability and use of the liquid and gaseous effluent treatment systems to ensure that appropriate portions of these systems are used to reduce releases of radioactivity when the projected doses in a period of 31 days would exceed 2 percent of the guidelines for the annual dose or dose commitment, conforming to 10 CFR 50, Appendix I;
- g. Limitations on the dose rate resulting from radioactive material released in gaseous effluents to areas at or beyond the site boundary shall be limited to the following:
 - 1. for noble gases: Less than or equal to a dose rate of 500 mrem/yr to the total body and less than or equal to a dose rate of 3000 mrem/yr to the skin, and
 - 2. for iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half-lives greater than 8 days: Less than or equal to a dose rate of 1500 mrem/yr to any organ,
- h. Limitations on the annual and quarterly air doses resulting from noble gases released in gaseous effluents from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I;
- i. Limitations on the annual and quarterly doses to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives greater than 8 days in gaseous effluents released from each unit to areas beyond the site boundary, conforming to 10 CFR 50, Appendix I; and
- j. Limitations on the annual dose or dose commitment to any member of the public due to releases of radioactivity and to radiation from uranium fuel cycle sources, conforming to 40 CFR 190.

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.8 Radiological Environmental Monitoring Program

This program is for monitoring the radiation and radionuclides in the environs of the plant. The program shall provide representative measurements of radioactivity in the highest potential exposure pathways and verification of the accuracy of the effluent monitoring program and modeling of environmental exposure pathways. The program shall be contained in the ODCM, shall conform to the guidance of 10 CFR 50, Appendix I, and shall include the following:

- a. Monitoring, sampling, analysis, and reporting of radiation and radionuclides in the environment in accordance with the methodology and parameters in the ODCM;
- b. 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
- c. Participation in an 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.

5.7.2.9 Component Cyclic or Transient Limit

This program provides controls to track the ⁵FSAR, Section ^{3.9.1.1}[], cyclic and transient occurrences to ensure that components are maintained within the design limits.

5.7.2.10 Inservice Inspection Program

This program provides controls for inservice inspection of ASME Code Class 1, 2, and 3 components, including applicable supports. The program shall include the following:

(continued)

5.7 Procedures, Programs, and Manuals

5.7.2.12 Ventilation Filter Testing Program (VFTP) (continued)

Reviewer's Note: Allowable penetration = [100% - methyl iodide efficiency for charcoal credited in staff safety evaluation]/ (safety factor).

Safety factor = [5] for systems with heaters.

- d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below [$\pm 10\%$]:

ESF Ventilation System	Delta P	Flowrate
Control Room Habitability System	<input type="text"/>	<input type="text"/>
Standby Gas Treatment System	<input type="text"/>	<input type="text"/>

- e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below [$\pm 10\%$] when tested in accordance with ASME N510-1989:

ESF Ventilation System	Wattage
Control Room Habitability System	<input type="text"/>
Standby Gas Treatment System	<input type="text"/>

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

5.7.2.13 Explosive Gas and Storage Tank Radioactivity Monitoring Program

See
Comments
on cover
letter.

This program provides controls for potentially explosive gas mixtures contained in the [Waste Gas Holdup System], [the quantity of radioactivity contained in gas storage tanks or fed into the offgas treatment system, and the quantity of radioactivity contained in unprotected outdoor liquid storage tanks]. The gaseous radioactivity quantities shall be determined following the

(continued)

5.0 ADMINISTRATIVE CONTROLS

5.11 High Radiation Area

5.11 High Radiation Areas

align text
As provided in paragraph 20.1601 (c) of 10 CFR Part 20, the following controls shall be applied to high radiation areas in place of the controls required by paragraph 20.1601 (a) and (b) of 10 CFR Part 20:

5.11.1 High Radiation Areas with Dose Rates not Exceeding 1.0 rem/hour:*

a. Each entryway to such an area shall be barricaded and conspicuously posted as a high radiation area. Such barricades may be breached only during periods of entry or exit.

b. Access to, and activities in, each such area shall be controlled by means of a Radiation Work Permit (RWP) or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures (e.g., health physics technicians) and personnel continuously escorted by such individuals may be exempted from the requirement for an RWP or equivalent while performing their assigned duties provided that they are following plant radiation protection procedures for entry to, exit from, and work in such areas.

align text
d. Each individual (whether alone or in a group) entering such an area shall possess:

1. a radiation monitoring device that continuously displays radiation dose rates in the area ("radiation monitoring and indicating device"), or

2. a radiation monitoring device that continuously integrates the radiation dose rates in the area and alarms when the device's dose alarm setpoint is reached ("alarming dosimeter"), with an appropriate alarm setpoint, or

→ Page Break

High Radiation Area
5.11

5.11 High Radiation Area

(continued)

5.11.1 (continued)

3. a radiation monitoring device that continuously transmits dose rate and cumulative dose to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area, or

4. a self-reading dosimeter and,

(a) be under the surveillance, as specified in the RWP or equivalent, while in the area, of an individual work site, qualified in radiation protection procedures, equipped with a radiation monitoring and indicating device who is responsible for controlling personnel radiation exposure within the area, or

(b) be under the surveillance, as specified in the RWP or equivalent, while in the area, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area.

e. Entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

5.11.2 High Radiation Areas with Dose Rates Greater than 1.0 rem/hour,* but less than 500 rads/hour:**

a. Each entryway to such an area shall be conspicuously posted as a high radiation area and shall be provided with a locked door or gate that prevents unauthorized entry, and in addition:

1. all such door and gate keys shall be maintained under the administrative control of the shift foreman or the health physics supervisor on duty.

2. doors and gates shall remain locked except during periods of personnel entry or exit.

→ Page Break

High Radiation Area
5.11

5.11 High Radiation Areas

5.11.2 (continued)

(continued)

b. Access to, and activities in, each such area shall be controlled by means of an RWP or equivalent that includes specification of radiation dose rates in the immediate work area(s) and other appropriate radiation protection equipment and measures.

c. Individuals qualified in radiation protection procedures may be exempted from the requirement for an RWP or equivalent while performing radiation surveys in such areas provided that they are following plant radiation protection procedures for entry to, exit from, and work in such areas.

d. Each individual entering such an area shall possess:

1. an alarming dosimeter with an appropriate alarm setpoint, or

2. a radiation monitoring device that continuously transmits dose rate and cumulative dose to a remote receiver monitored by radiation protection personnel responsible for controlling personnel radiation exposure within the area with the means to communicate

with and control every individual in the area, or

3. a self-reading dosimeter and,

(a) be under the surveillance, as specified in the RWP or equivalent, of an individual qualified in radiation protection procedures, equipped with a radiation monitoring and indicating device who is responsible for controlling personnel exposure within the area, or

(b) be under the surveillance, as specified in the RWP or equivalent, by means of closed circuit television, of personnel qualified in radiation protection procedures, responsible for controlling personnel radiation exposure in the area, and with the means to communicate with and control every individual in the area.

e. Entry into such areas shall be made only after dose rates in the area have been determined and entry personnel are knowledgeable of them.

→ insert Page Break

High Radiation Area
5.11

5.11 High Radiation Areas

5.11.2 (continued)

(continued)

align text
f. Such individual areas that are within a larger area that is controlled as a high radiation area, where no enclosure exists for the purpose of locking and where no enclosure can reasonably be constructed around the individual area need not be controlled by a locked door or gate, but shall be

barricaded and conspicuously posted as a high radiation area, and a conspicuous, clearly visible flashing light shall be activated at the area as a warning device.

* At 30 centimeters (12 inches) from the radiation source or from any surface penetrated by the radiation.

** At 1 meter from the radiation source or from any surface penetrated by the radiation.

(Delete pages 45 → 48, Comparison of Headers)