

- (3) A channel calibration shall be made of the power level monitoring channels by either nuclear or calorimetric methods annually, but at intervals not to exceed 15 months.
- (4) A channel test of the temperature measuring channel shall be performed semiannually, but at intervals not to exceed 8 months.

Basis: Measurement of the scram time on an annual basis is a check not only of the scram system electronics, but also is an indication of the capability of the control rods to perform properly. The channel tests will ensure that the safety system channels are operable on a daily basis or before an extended run. The power level channel calibration will ensure that the reactor will be operated at the proper power levels.

4.3.3 Radiation Monitoring System

Applicability: This specification applies to the surveillance requirements for the area radiation monitoring equipment and the continuous air monitoring system.

Objectives: The objectives are to ensure that the radiation monitoring equipment is operating and to verify the appropriate alarm settings.

Specification: The area radiation monitoring system and the continuous air monitoring system shall be calibrated biennially and shall be verified to be operable at monthly intervals.

Basis: Experience has shown that monthly verification of area radiation and air-monitoring system setpoints in conjunction with annual calibration is adequate to correct for any variation in the system caused by a change of operating characteristics over a long timespan.

4.3.4 Ventilation System

Applicability: This specification applies to the reactor room ventilation system.

Objective: The objective is to assure that the ventilation system is in operation to mitigate the consequences of the possible release of radioactive materials resulting from reactor operation.

Specification: The reactor shall not be operated unless the reactor room ventilation system is in operation, establishing a negative air pressure within the reactor room, except for periods of time not to exceed 48 hours to permit repair of the system.

Basis: It is shown that during normal operation of the ventilation system the concentration of argon-41 in unrestricted areas is below MPC. In the event of a substantial release of fission products, the ventilation system will be secured automatically. Therefore, operation of the reactor with the ventilation system shutdown for short periods of time to make repairs

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Specification: The reactor shall not be operated unless the reactor room ventilation system is in operation, establishing a negative air pressure within the reactor room, except for periods of time not to exceed 48 hours to permit repair of the system.

Basis: It is shown that during normal operation of the ventilation system the concentration of argon -41 in unrestricted areas is below MPC. In the event of a substantial release of fission products, the ventilation system will be secured automatically. Therefore, operation of the reactor with the ventilation system shutdown for short periods of time to make repairs

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Basis: It is shown that during normal operation of the ventilation system the concentration of argon -41 in unrestricted areas is below MPC. In the event of a substantial release of fission products, the ventilation system will be secured automatically. Therefore, operation of the reactor with the ventilation system shutdown for short periods of time to make repairs

Specifications:

- (1) Function of Area Radiation Monitor (gamma-sensitive instruments): Monitor radiation fields in key locations, alarm and readout at control console.
- (2) Function of Continuous Air Radiation Monitor (beta-, gamma-sensitive detector with particulate collection capability): Monitor concentration of radioactive particulate activity in the pool room, alarm and readout at control console.
- (3) Function of Argon-41 Stack Monitor (gamma-sensitive detector): Monitors the concentration of radioactive gases including argon-41 in the building exhaust, alarm and readout at console.

Basis: The radiation monitoring system is intended to provide information to operating personnel of any impending or existing danger from radiation so that there will be sufficient time to evacuate the facility and take the necessary steps to prevent the spread of radioactivity to the surroundings.

5.5 Fuel Storage

Applicability: This specification applies to the storage of reactor fuel at times when it is not in the reactor core.

Objective: The objective is to ensure that fuel that is being stored will not become critical and will not reach an unsafe temperature.

Specifications:

- (1) All fuel elements shall be stored in a geometrical array where the k_{eff} is less than 0.8 for all conditions of moderation.
- (2) Irradiated fuel elements and fueled devices shall be stored in an array, which will permit sufficient natural convection cooling by water or air, so that the fuel element or fueled device temperature will not exceed design values.

Basis: The limits imposed by Specifications 5.5(1) and 5.5(2) are conservative and ensure safe storage of reactor fuel.

5.6 Reactor Building and Ventilation System

Applicability: This specification applies to the building that houses the reactor.

Objective: The objective is to ensure that provisions are made to restrict the amount of radioactivity released into the environment.

Specifications:

- (1) Function of Area Radiation Monitor (gamma-sensitive instruments): Monitor radiation fields in key locations, alarm and readout at control console.
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