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DEFINITIONS

per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 15 minutes, making up at least 95% of the total non- iodine activity in the coolant.

STAGGERED TEST BASIS

1.21 A STAGGERED TEST BASIS shall consist of:

a. A test schedule for n systems, subsystems, trains or designated components obtained by dividing the specified test interval into n equal subintervals,

b. The testing of one system, subsystem, train or designated components at the beginning of each subinterval.

FREQUENCY NOTATION

1.22 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

AXIAL POWER IMBALANCE

1.23 AXIAL POWER IMBALANCE shall be the THERMAL POWER in the top half of the core expressed as a percentage of RATED THERMAL POWER minus the THERMAL POWER in the bottom half of the core expressed as a percentage of RATED THERMAL POWER.

~~SHIELD BUILDING INTEGRITY~~

1.24 DELETED ~~SHIELD BUILDING INTEGRITY shall exist when:~~

~~a. The airtight doors and the blowout panels listed in Teble 4.6-1 are closed except the airtight doors may be used for normal transit entry and exit.~~

~~b. The emergency ventilation system is OPERABLE.~~

~~c. The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.~~

REACTOR PROTECTION SYSTEM RESPONSE TIME

1.25 The REACTOR PROTECTION SYSTEM RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its trip setpoint at the channel sensor until power interruption at the control rod drive breakers.

INFORMATION ONLY

CONTAINMENT SYSTEMS

3/4.6.5 SHIELD BUILDING

EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.1 Two independent emergency ventilation systems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one emergency ventilation system inoperable, restore the inoperable system 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.

SURVEILLANCE REQUIREMENTS

4.6.5.1 Each emergency ventilation system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes.

b. At least once each REFUELING INTERVAL or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 8,000 cfm ± 10%;

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a* of Regulatory Guide 1.52, Revision 2, March 1978, for a methyliodide penetration of less than 1%; and

3. Verifying a system flow rate of 8,000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a* of Regulatory Guide 1.52, Revision 2, March 1978, for a methyliodide penetration of less than 1%.

d. At least once each REFUELING INTERVAL by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 8,000 cfm ± 10%;

2. Verifying that the system starts automatically on any containment isolation test signal; and

3. Verifying that the filter cooling bypass valves can be manually opened.; ~~and~~

* The test is performed in accordance with ASTM D 3803-1979 with the following conditions: 1) equilibrate for 16 hours at 30°C/70% relative humidity (RH), 2) challenge for 2 hours at 30°C/70% RH, 3) elution for 2 hours at 30°C/70% RH.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4. Deleted ~~Verifying that each system produces a negative pressure of greater than or equal to 0.25 inches Water Gauge in the annulus within 4 seconds after the fan attains a flow rate of 8000 cfm ± 10%. This test is to be performed with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed.~~

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 8000 cfm ± 10%.

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 8000 cfm ± 10%.

CONTAINMENT SYSTEMS

SHIELD BUILDING INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.2 Shield building integrity ~~SHIELD BUILDING INTEGRITY~~ shall be maintained.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

a. Without shield building integrity ~~SHIELD BUILDING INTEGRITY~~, restore shield building integrity ~~SHIELD BUILDING INTEGRITY~~ within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. The provisions of Specification 3.6.5.1 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.5.2.1 Shield building integrity ~~SHIELD BUILDING INTEGRITY~~ shall be demonstrated at least once per 31 days by verifying that airtight doors and the blowout panels listed in Table 4.6-1 are closed except when the airtight doors are being used for normal transit entry and exit.

4.6.5.2.2 Shield building integrity shall be demonstrated at least once per REFUELING INTERVAL by verifying that each Emergency Ventilation System train produces a negative pressure of greater than or equal to 0.25 inches Water Gauge in the annulus within 4 seconds after the fan attains a flow rate of 8000 cfm ± 10%. This test is to be performed with the flow path established prior to starting the EVS fan, and the other dampers associated with the negative pressure boundary closed.

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TABLE 4.6-1

ACCESS OPENINGS REQUIRED TO BE CLOSED
TO ENSURE SHIELD BUILDING INTEGRITY

I. AIR TIGHT DOORS

DOOR NO.	DESCRIPTION	ELEVATION
100	Access Door from the No. 1 ECCS Pump Room (Room 105) to Pipe Tunnel 101	545'
104A	Access Door from Stair AB-3 to the No. 1 ECCS Pump Room (Room 105)	555'
105	Access Door from Passage 110A to the area above the Decay Heat Coolers	555'
107	Access Door from the No. 2 ECCS Pump Room (Room 115) to the Miscellaneous Waste Monitor Tank and Pump Room (Room 114)	555'
108	Access Door from the No. 2 ECCS Pump Room (Room 115) to the Detergent Waste Drain Tank and Pump Room (Room 125)	555'
201-A	Access Door from Corridor 209 to the No. 1 Mechanical Penetration Room (Room 208)	565'
204	Access Door from Passage 227 to the Makeup Pump Room (Room 225)	565'
205	Access Door from Passage 227 to the No. 2 Mechanical Penetration Room (Room 236)	565'
307	Access Door from Corridor 304 to the No. 3 Mechanical Penetration Room (Room 303-308)	585'
308	Access Door from Corridor 304 to the No. 4 Mechanical Penetration Room (Room 314)	585'

II. BLOWOUT PANELS

TOTAL NO.	LOCATION	ELEVATION
1	No. 2 Mechanical Penetration Room (Room 236)	565'
6	No. 3 Mechanical Penetration Room (Room 303)	585'
6	No. 4 Mechanical Penetration Room (Room 314)	585'

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the Hydrogen Analyzers, Containment Hydrogen Dilution System, and Hydrogen Purge System ensures that this equipment will be available to maintain the maximum hydrogen concentration within the containment vessel at or below three volume percent following a LOCA.

The two redundant Hydrogen Analyzers determine the content of hydrogen within the containment vessel. The Hydrogen Analyzers, although they have their OPERABILITY requirements in this Specification, are considered part of the post-accident monitoring instrumentation of Specification 3/4.3.3.6, Post-Accident Monitoring Instrumentation.

The Containment Hydrogen Dilution (CHD) System consists of two full capacity, redundant, rotary, positive displacement type blowers to supply air to the containment. The CHD System controls the hydrogen concentration by the addition of air to the containment vessel, resulting in a pressurization of the containment and suppression of the hydrogen volume fraction.

The Containment Hydrogen Purge System Filter Unit functions in conjunction with the CHD System and is designed to release air from the containment atmosphere through a HEPA filter and charcoal filter prior to discharge to the station vent.

As a backup to the CHD System and the Containment Hydrogen Purge System, the capability to install an external hydrogen recombination system has been provided.

3/4.6.5 SHIELD BUILDING

3/4.6.5.1 EMERGENCY VENTILATION SYSTEM

The OPERABILITY of the emergency ventilation systems ensures that containment vessel leakage occurring during LOCA conditions into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the safety analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. The proper functioning of the EVS fans, dampers, filters, adsorbers, etc., as a system is verified by the ability of each train to produce the required system flow rate.

3/4.6.5.2 SHIELD BUILDING INTEGRITY

Shield building integrity ~~SHIELDING BUILDING INTEGRITY~~ ensures that the release of radioactive material from the containment vessel will be restricted to those leakage paths and associated leak rates assumed in the safety analysis. The closure of the airtight doors and blowout panels listed in Table 4.6-1 ensure that the Emergency Ventilation System (EVS) can provide a negative pressure between 0.25 and 1.5 inches Water Gauge within the annulus between the shield building and containment vessel and within the interconnecting mechanical penetration rooms after a loss-of-coolant accident (LOCA). This restriction, in conjunction with the operation of the EVS, will limit the site boundary radiation doses to within the limits of 10 CFR 100 during accident conditions.

In the event shield building integrity, including the capability of the EVS to provide a negative pressure of greater than or equal to 0.25 inches Water Gauge, is not maintained, shield building integrity must be restored within 24 hours. Twenty-four hours is a reasonable completion time considering the limited leakage design of the containment and the low probability of a Design Basis Accident occurring during this time period.

3/4.6.5.3 SHIELD BUILDING STRUCTURAL INTEGRITY

Deleted