

CONTAINMENT SYSTEMS

3/4.6.3 PARTICULATE IODINE CLEANUP SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.3 Two independent groups of HEPA filter banks (associated with the OPERABLE reactor building cooling units of Specification 3.6.2.3) with at least one filter bank in each group, shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one group of HEPA filter banks OPERABLE, restore one of the inoperable banks in the other group 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

4.6.3 The two groups of HEPA filter banks shall be demonstrated OPERABLE:

- a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and verifying that the system operates for at least 15 minutes.
- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:
 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a and C.5.c of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 60,270 ACFM \pm 10%.
 2. Verifying a system flow rate of 60,270 ACFM \pm 10% during system operation when tested in accordance with ANSI N510-1975.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months by:
 - 1. Verifying that the pressure drop across the HEPA filters is less than 3 inches Water Gauge while operating the system at a flow rate of 60,270 ACFM \pm 10%.
 - 2. Verifying that the filter bypass damper can be opened by operator action.
 - 3. Verifying that the filter bypass damper closes on a Safety Injection Test Signal.

- d. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ASNI N510-1975 while operating the system at a flow rate of 60,270 ACFM \pm 10%.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of 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 21,270 SCFM \pm 10%.
 2. Verifying, within 31 days after removal, that a laboratory analysis of a representative charcoal 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 ASTM D3803-1989, at a relative humidity of 70% and 30°C with a methyl iodide penetration of <2.5%.
 3. Verifying a system flow rate of 21,270 SCFM \pm 10% during system operation when tested in accordance with ANSI N510-1975.
- d. 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 ASTM D3803-1989, at a relative humidity of 70% and 30°C with a methyl iodide penetration of <2.5%.
- e. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 21,270 SCFM \pm 10%.
 2. Verifying that on a simulated SI or high radiation test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks.
 3. Verifying that on a simulated SI or high radiation test signal the system starts the normal and emergency air handling systems which pressurize the control room to a positive pressure of greater than or equal to 1/8 inch W.G. relative to the outside atmosphere and maintains the 1/8 inch W.G. positive pressure with a maximum of 1000 SCFM of outside air during system operation.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 SCFM \pm 10%.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 21,270 SCFM \pm 10%.

REFUELING OPERATIONS

3/4.9.11 SPENT FUEL POOL VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.11 Two independent spent fuel pool ventilation sub-systems shall be OPERABLE with at least one sub-system in operation.

APPLICABILITY: Whenever irradiated fuel is being moved in the spent fuel pool and during crane operation with loads over the pool.

ACTION:

- a. With one spent fuel pool ventilation sub-system inoperable, fuel movement within the spent fuel pool or crane operation with loads over the spent fuel pool may proceed provided the OPERABLE spent fuel pool ventilation sub-system is capable of being powered from an OPERABLE emergency power source and is in operation and discharging through at least one train of HEPA filters and charcoal adsorbers.
- b. With no spent fuel pool ventilation sub-system OPERABLE, suspend all operations involving movement of fuel within the spent fuel pool or crane operation with loads over the spent fuel pool.
- c. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11 The above required spent fuel pool ventilation sub-systems 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 each sub-system operates for at least 15 minutes.
- b. At least once per 18 months 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:
 1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of 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 30,000 ACFM \pm 10%.

REFUELING OPERATIONS

SURVEILLANCE REQUIREMENTS (Continued)

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 ASTM D3803-1989, at a relative humidity of 95% and 30°C with a methyl iodide penetration of <2.5%.
 3. Verifying a system flow rate of 30,000 ACFM \pm 10% during system operation when tested in accordance with ANSI N510-1975.
- c. Prior to the movement of fuel or crane operation with loads over the pool by verifying 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 ASTM D3803-1989, at a relative humidity of 95% and 30°C with a methyl iodide penetration of <2.5%. Subsequent to each initial analysis (which must be completed prior to fuel movement or crane operation with loads over the pool), during the period of time in which there is to be fuel or crane movement with loads over the pool, verify charcoal adsorber operation every 720 hours by obtaining and analyzing a sample as described above. These subsequent analyses are to be completed within thirty-one (31) days of sample removal.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA and roughing filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the system at a flow rate of 30,000 ACFM \pm 10%.
 2. Verifying that on a loss of offsite power test signal, the system automatically starts.
 3. Verifying that the system maintains the spent fuel pool area at a negative pressure greater than or equal to 1/8 inches Water Gauge relative to the outside atmosphere during system operation.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.95% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 ACFM \pm 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 30,000 ACFM \pm 10%.