

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- c. 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 Control Room Emergency Ventilation System satisfies the in-place penetration and bypass leakage testing acceptance criteria; of less than 1% for HEPA filters and 0.05% for charcoal adsorbers 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 2000 cfm  $\pm 10\%$  for the Filtration System and 2200 cfm  $\pm 10\%$  for the Pressurization System with 750 cfm  $\pm 10\%$  going through the Pressurization System filter adsorber unit;
  - 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 methyl iodide penetration of less than 4%;~~ **ASTM D3803-1989 when tested at 30°C and 70% relative humidity, for a methyl iodide penetration of less than 2%, and**
  - 3) Verifying system flow rate of 2000 cfm  $\pm 10\%$  at greater than or equal to 6.6 inches W.G. (dirty filter) for the Filtration System and 2200 cfm  $\pm 10\%$  at greater than or equal to 3.6 inches W.G. (dirty filter) for the Pressurization System with 750 cfm  $\pm 10\%$  going through the Pressurization System filter adsorber unit during system operation when tested in accordance with ANSI N510-1980.
- 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 ~~Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 4%;~~ **ASTM D3803-1989 when tested at 30°C and 70% relative humidity, for a methyl iodide penetration of less than 2%;**
- e. At least once per 18 months by:
  - 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.6 inches Water Gauge while operating the system at a flow rate of 2000 cfm  $\pm 10\%$  for the Filtration System and less than 3.6 inches Water Gauge while operating the system at a flow rate of 750 cfm  $\pm 10\%$  for the Pressurization System filter adsorber unit,
  - 2) Verifying that on a Control Room Ventilation Isolation or High Gaseous Radioactivity test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks,

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- 3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/4 inch Water Gauge relative to the outside atmosphere during system operation, and
  - 4) Verifying that the Pressurization System filter adsorber unit heaters dissipate  $45 \pm 2$   $5 \pm 1$  kW in the Pressurization System when tested in accordance with ANSI N510-1975.
- f. 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 criteria of less than 1% in accordance with ANSI N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a DOP test aerosol while operating the system at a flow rate of 2000 cfm  $\pm 10\%$  for the Filtration System and 750 cfm  $\pm 10\%$  for the Pressurization System filter adsorber unit; and
- g. 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 criteria of less than 0.05% in accordance with ANSI N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 2000 cfm  $\pm 10\%$  for the Filtration System and 750 cfm  $\pm 10\%$  for the Pressurization System filter adsorber unit.

REFUELING OPERATIONS  
SURVEILLANCE REQUIREMENTS (Continued)

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- 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,~~ **ASTM D3803-1989 when tested at 30°C and 70% relative humidity, for a methyl iodide penetration of less than 2%, and**
  - 3) Verifying a system flow rate of 6500 cfm  $\pm 10\%$  at  $\geq 4.7$  inches W.G. (dirty filter) 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,~~ **ASTM D3803-1989 when tested at 30°C and 70% relative humidity, for a methyl iodide penetration of less than 2%, and**
- d. At least once per 18 months by:
- 1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than or equal to 4.7 inches Water Gauge while operating the system at a flow rate of 6500 cfm  $\pm 10\%$ .
  - 2) Verifying that the heaters dissipate  $37 \pm 3$  kW when tested in accordance with ANSI N510-1975.
- 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 N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a DOP test aerosol while operating the system at a flow rate of 6500 cfm  $\pm 10\%$ ; and
- 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 0.05% in accordance with ANSI N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 6500 cfm  $\pm 10\%$ .
- g. At least once per 18 months by:
- 1) Verifying that on a Fuel Building Exhaust Gaseous Radioactivity-High test signal, the system automatically starts (unless already operating) and directs its exhaust flow through the HEPA filters and charcoal adsorber banks and isolates the normal fuel building exhaust flow to the auxiliary/fuel building exhaust fan;

ATTACHMENT V

CALCULATION GK-474