

**Attachment 2
North Anna Unit 1 Proposed
Technical Specifications Changes**

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CONTAINMENT SYSTEMS

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 TS 4.6.4.3.g.
3. Verifying a system flow rate of 300 cfm \pm 10% during system operation when tested in accordance with ANSI N 510-1975.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.6.4.3.g.
- d. At least once per 18 months by:
 1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is < 8.5 inches Water Gauge while operating the filter train at a flow rate of 300 cfm \pm 10%.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove \geq 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 300 cfm \pm 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove \geq 99% 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 300 cfm \pm 10%.
- g. Used charcoal shall be tested in accordance with ASTM D3808-1979 (Method B), for a residence time of 0.25 seconds. The measured Methyl Iodide Penetration shall be less than 1%.
- h. New charcoal shall be tested as follows:
 1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 2. A one-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

- 4.7.7.1 Each control room 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 10 hours with the heaters on.
 - 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 $1000 \text{ cfm} \pm 10\%$ (except as shown in Specifications 4.7.7.1.e. and f.).
 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 TS 4.7.7.1.g.
 3. Verifying a system flow rate of $1000 \text{ cfm} \pm 10\%$ during system operation when tested in accordance with ANSI N510-1975.
 - c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.7.7.1.g.
 - d. At least once per 18 months by:
 1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is < 6 inches Water Gauge while operating the filter train at a flow rate of $1000 \text{ cfm} \pm 10\%$.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that the normal air supply and exhaust are automatically shutdown on a Safety Injection Actuation Test Signal.
 3. Verifying that the system maintains the control room at a positive pressure of ≥ 0.04 inch W. G. relative to the outside atmosphere at a system flow rate of 1000 cfm $\pm 10\%$.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove $\geq 99\%$ of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 1000 cfm $\pm 10\%$.
 - f. After each complete or partial replacement of a charcoal adsorber bank by verifying that charcoal adsorbers remove $\geq 99\%$ 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 1000 cfm $\pm 10\%$.
 - g. Used charcoal shall be tested in accordance with ASTM D3808-1979 (Method B, except at 70% RH), for a residence time of 0.25 seconds. The measured Methyl Iodide Penetration shall be less than 1%.
 - h. New charcoal shall be tested as follows:
 1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 2. A one-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.
- 4.7.7.2 The bottled air pressurization system shall be demonstrated OPERABLE:
- a. At least once per 31 days by verifying that the system contains a minimum of 84 bottles of air (shared with Unit 2) each pressurized to at least 2300 psig.
 - b. At least once per 18 months by verifying that the system will supply at least 340 cfm of air to maintain the control room at a positive pressure of ≥ 0.05 inch W.G. relative to the outside atmosphere for at least 60 minutes.
- 4.7.7.3 Each control room air-conditioning system shall be demonstrated OPERABLE at least once per 12 hours by verifying that the control room air temperature is $\leq 120^\circ\text{F}$.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Cont'd)

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 TS 4.7.8.1.g.
 3. Verifying a system flow rate of 6,300 cfm \pm 10% during operation when tested in accordance with ANSI N510-1975.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.7.8.1.g.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is < 6 inches Water Gauge while operating the ventilation system at a flow rate of 6,300 cfm \pm 10%.
 2. Verifying that on a Containment Hi-Hi Test Signal, the system automatically diverts its exhaust flow through the auxiliary building HEPA filter and charcoal adsorber assembly.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove \geq 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 6,300 cfm \pm 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that charcoal adsorbers remove \geq 99% 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 6,300 cfm \pm 10%.
- g. Used charcoal shall be tested in accordance with ASTM D3808-1979 (Method B, except at 70% RH), for a residence time of 0.25 seconds. The measured Methyl Iodide Penetration shall be less than 1%.
- h. New charcoal shall be tested as follows:
1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 2. A one-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.

**Attachment 3
North Anna Unit 2 Proposed
Technical Specifications Changes**

CONTAINMENT SYSTEMS

WASTE GAS CHARCOAL FILTER SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.4.3 A waste gas charcoal filter system (shared with Unit 1) shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With the waste gas charcoal filter system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.3 The waste gas charcoal filter system shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 1. Initiating flow through the HEPA filter and charcoal adsorber train using the process vent blowers and verifying that the purge 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 housing, 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 300 cfm \pm 10% (except as shown in Specifications 4.6.4.3.e. and f.).
 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 TS 4.6.4.3.g.
 3. Verifying a system flow rate of 300 cfm \pm 10% during system operation when tested in accordance with ANSI N510-1975.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.6.4.3.g.
- d. At least once per 18 months by:
 - 1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is less than 8.5 inches Water Gauge while operating the filter train at a flow rate of 300 cfm \pm 10%.
- 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% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 300 cfm \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% 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 300 cfm \pm 10%.
- g. Used charcoal shall be tested in accordance with ASTM D3808-1979 (Method B), for a residence time of 0.25 seconds. The measured Methyl Iodide Penetration shall be less than 1%.
- h. New charcoal shall be tested as follows:
 - 1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 - 2. A care-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

- 4.7.7.1 Each control room 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 10 hours with the heaters on.
 - 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 $1000 \text{ cfm} \pm 10\%$ (except as shown in Specifications 4.7.7.1e. and f.).
 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 TS 4.7.7.1.g.
 3. Verifying a system flow rate of $1000 \text{ cfm} \pm 10\%$ during system operation when tested in accordance with ANSI N510-1975.
 - c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.7.7.1.g.
 - d. At least once per 18 months by:
 1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is less than 6 inches Water Gauge while operating the filter train at a flow rate of $1000 \text{ cfm} \pm 10\%$.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying that the normal air supply and exhaust are automatically shutdown on a Safety Injection Actuation Test Signal.
 3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 0.04 inch W. G. relative to the outside atmosphere at a system flow rate of 1000 cfm \pm 10%.
- 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% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 1000 cfm \pm 10%.
 - f. After each complete or partial replacement of a charcoal adsorber bank by verifying that charcoal adsorbers remove greater than or equal to 99% 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 1000 cfm \pm 10%.
 - g. Used charcoal shall be tested in accordance with ASTM D3803-1979 (Method B, except at 70% RH), for a residence time of 0.25 second. The measured Methyl Iodide Penetration shall be less than 1%.
 - h. New charcoal shall be tested as follows:
 1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 2. A one-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.
- 4.7.7.2 The bottled air pressurization system shall be demonstrated OPERABLE:
- a. At least once per 31 days by verifying that the system contains a minimum of 84 bottles of air (shared with Unit 1) each pressurized to at least 2300 psig.
 - b. At least once per 18 months by verifying that the system will supply at least 340 cfm of air to maintain the control room at a positive pressure of greater than or equal to 0.05 inch W.G. relative to the outside atmosphere for at least 60 minutes.
- 4.7.7.3 Each control room air-conditioning system shall be demonstrated OPERABLE at least once per 12 hours by verifying that the control room air temperature is less than or equal to 120°F.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Cont'd)

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 TS 4.7.8.1.g.
 3. Verifying a system flow rate of 6,300 cfm \pm 10% during operation when tested in accordance with ANSI N510-1975.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of 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 TS 4.7.8.1.g.
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the HEPA filter and charcoal adsorber assembly is less than 6 inches Water Gauge while operating the ventilation system at a flow rate of 6,300 cfm \pm 10%.
 2. Verifying that on a Containment Pressure-High-High Test Signal, the system automatically diverts its exhaust flow through the auxiliary building HEPA filter and charcoal adsorber assembly.
- 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% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the system at a flow rate of 6,300 cfm \pm 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that charcoal adsorbers remove greater than or equal to 99% 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 6,300 cfm \pm 10%.
- g. Used charcoal shall be tested in accordance with ASTM D3808-1979 (Method B, except at 70% RH), for a residence time of 0.25 seconds. The measured Methyl Iodide Penetration shall be less than 1%.
- h. New charcoal shall be tested as follows:
1. Each batch of new charcoal shall be tested as described below:
 - a. ASTM D3803-1979 (Method A) to demonstrate a Methyl Iodide Penetration of less than 1% for a residence time of 0.25 seconds.
 - b. ASTM D3803-1979 (Method E) to demonstrate an Elemental Iodine Retention of greater than 99.5%.
 2. A one-time qualification test shall be performed in accordance with ASTM D3803-1979 Method A, except at 25°C), for a residence time of 0.25 seconds to demonstrate a Methyl Iodide Penetration of less than 1%.