

ATTACHMENT NO. 2 TO AEP:NRC:0856A  
DONALD C. COOK NUCLEAR PLANT UNIT NOS. 1 AND 2  
PROPOSED TECHNICAL SPECIFICATIONS

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## ADMINISTRATIVE CONTROLS

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6.8.3 Temporary changes to procedures of 6.8.1 above may be made provided:

- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the PNSRC and approved by the Plant Manager within 14 days of implementation.

6.8.4 Plant procedures for post-accident sampling shall be established, implemented, and maintained which will ensure the capability to obtain and analyze reactor coolant and containment atmosphere samples and radioactive iodines and particulate samples in plant gaseous effluents under accident conditions. The program will include the following:

- a. Training of personnel,
- b. Procedures for sampling and analysis,
- c. Provisions for maintenance of sampling and analysis equipment.

## 6.9 REPORTING REQUIREMENTS

### ROUTINE REPORTS AND REPORTABLE OCCURRENCES

- 6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Director of the Regional Office of Inspection and Enforcement unless otherwise noted.

#### STARTUP REPORT

- 6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (1) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.
- 6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.

## ADMINISTRATIVE CONTROLS

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- a. The intent of the original procedure is not altered.
- b. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.
- c. The change is documented, reviewed by the PNSRC and approved by the Plant Manager within 14 days of implementation.

6.8.4 Plant procedures for post-accident sampling shall be established, implemented, and maintained which will ensure the capability to obtain and analyze reactor coolant and containment atmosphere samples and radioactive iodines and particulate samples in plant gaseous effluents under accident conditions. The program will include the following:

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- 6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured value of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details required in license conditions based on other commitments shall be included in this report.
- 6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, and (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial

TABLE 3.3-6A

POST-ACCIDENT RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. AREA MONITORS				
HIGH RANGE Containment Area	1	1, 2, 3	1 to $10^7$ rad/hr PHOTON	**
2. Noble Gas Effluent Monitors				
a) UNIT VENT				
i Mid Range* (VRS-1507)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**
ii High Range (VRS-1509)	1	1, 2, 3	10 to $10^5$ $\mu$ Ci/cc	**
b) Atmospheric Steam Dump Valves Discharge	1/Loop	1, 2, 3	3 to $10^5$ $\mu$ Ci/cc	**
c) Gland Seal <sup>(1)</sup> Exhaust Mid Range (SRA-1807)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**
d) Condenser Exhaust <sup>(1)</sup> System Mid Range (SRA-1907)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**

\* Automatic Switchover to High Range only Configuration  
(Alarm/Trip Setpoint is  $1 \times 10^{-1}$   $\mu$  Ci/cc)

\*\* Per Requirements of Specification 3.3.3.8

(1) These instruments are under special test operation mode for moisture concern, but are functionally OPERABLE.

TABLE 3.3-6A

POST-ACCIDENT RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. AREA MONITORS				
HIGH RANGE Containment Area	1	1, 2, 3	1 to $10^7$ rad/hr PHOTON	**
2. Noble Gas Effluent Monitors				
a) UNIT VENT				
i. Mid Range* (VRS-2507)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**
ii. High Range (VRS-2509)	1	1, 2, 3	10 to $10^5$ $\mu$ Ci/cc	**
b) Atmospheric Steam Dump Valves Discharge	1/Loop	1, 2, 3	3 to $10^5$ $\mu$ Ci/cc	**
c) Gland Seal <sup>(1)</sup> Exhaust Mid Range (SRA-2807)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**
d) Condenser Exhaust <sup>(1)</sup> System Mid Range (SRA-2907)	1	1, 2, 3	$2.5 \times 10^{-2}$ to $10^3$ $\mu$ Ci/cc	**

\* Automatic Switchover to High Range only Configuration  
(Alarm/Trip Setpoint is  $1 \times 10^1$   $\mu$ Ci/cc)

\*\* Per Requirements of Specification 3.3.3.6

(1) These instruments are under special test operation mode for moisture concern, but are functionally OPERABLE.

TABLE 4.3-3A

POST-ACCIDENT RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. AREA MONITORS				
High Range Containment Area	M	R*	N/A	1, 2, 3
2. Noble Gas Effluent Monitors				
a) Unit Vent				
i. Mid Range (VRS-1507)	M	R	M	1, 2, 3
ii. High Range (VRS-1509)	M	R	N/A	1, 2, 3
b) Atmospheric Steam Dump Valve Discharge	M	R	N/A	1, 2, 3
c) Gland Seal Exhaust <sup>(1)</sup> Mid Range (SRA-1807)	M	R	N/A	1, 2, 3
d) Condenser Exhaust System <sup>(1)</sup> Mid Range (SRA-1907)	M	R	N/A	1, 2, 3

\* Acceptable criteria for calibration are provided in Table II.F.1-3 of NUREG-0737.

(1) These instruments are under special test operation mode for moisture concern, but are functionally OPERABLE.



TABLE 4.3-3A

POST-ACCIDENT RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. AREA MONITORS				
High Range Containment Area	M	R*	N/A	1, 2, 3
2. Noble Gas Effluent Monitors				
a) Unit Vent				
i. Mid Range (VRS-2507)	M	R	M	1, 2, 3
ii. High Range (VRS-2509)	M	R	N/A	1, 2, 3
b) Atmospheric Steam Dump Valve Discharge	M	R	N/A	1, 2, 3
c) Gland Seal Exhaust <sup>(1)</sup> Mid Range (SRA-2807)	M	R	N/A	1, 2, 3
d) Condenser Exhaust System <sup>(1)</sup> Mid Range (SRA-2907)	M	R	N/A	1, 2, 3

\* Acceptable criteria for calibration are provided in Table II.F.1-3 of NUREG-0737.

(1) These instruments are under special test operation mode for moisture concern, but are functionally OPERABLE..

TABLE 3.3-11  
POST-ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2
2. Reactor Coolant Outlet Temperature - T <sub>HOT</sub> (Wide Range)	2
3. Reactor Coolant Inlet Temperature - T <sub>COLD</sub> (Wide Range)	2
4. Reactor Coolant Pressure - Wide Range	2
5. Pressurizer Water Level	2
6. Steam Line Pressure	2/Steam Generator
7. Steam Generator Water Level - Narrow Range	1/Steam Generator
8. Refueling Water Storage Tank Water Level	2
9. Boric Acid Tank Solution Level	1
10. Auxiliary Feedwater Flow Rate	1/Steam Generator*
11. Reactor Coolant System Subcooling Margin Monitor	1**
12. PORV Position Indicator - Limit Switches***	1/Valve
13. PORV Block Valve Position Indicator - Limit Switches	1/Valve
14. Safety Valve Position Indicator - Acoustic Monitor	1/Valve
15. Containment Water Level (Narrow Range)	1
16. Containment Water Level (Wide Range)	1
17. Radiation Monitoring Channels	Per Table 3.3-6A

\*Steam Generator Water Level Channels can be used as a substitute for the corresponding auxiliary feedwater flow rate channel instrument.

\*\*PRODAC 250 subcooling margin readout can be used as a substitute for the subcooling monitor instrument.

\*\*\*Acoustic monitoring of PORV position (1 channel per three valves - headered discharge) can be used as a substitute for the PORV Position Indicator - Limit Switches instruments.

TABLE 3.3-10  
POST-ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Containment Pressure	2
2. Reactor Coolant Outlet Temperature - T <sub>HOT</sub> (Wide Range)	2
3. Reactor Coolant Inlet Temperature - T <sub>COLD</sub> (Wide Range)	2
4. Reactor Coolant Pressure - Wide Range	2
5. Pressurizer Water Level	2
6. Steam Line Pressure	2/Steam Generator
7. Steam Generator Water Level - Narrow Range	1/Steam Generator
8. Refueling Water Storage Tank Water Level	2
9. Boric Acid Tank Solution Level	1
10. Auxiliary Feedwater Flow Rate	1/Steam Generator*
11. Reactor Coolant System Subcooling Margin Monitor	1**
12. PORV Position Indicator - Limit Switches***	1/Valve
13. PORV Block Valve Position Indicator - Limit Switches	1/Valve
14. Safety Valve Position Indicator - Acoustic Monitor	1/Valve
15. Containment Water Level (Narrow Range)	1
16. Containment Water Level (Wide Range)	1
17. Radiation Monitoring Channels	Per Table 3.3-6A

\*Steam Generator Water Level Channels can be used as a substitute for the corresponding auxiliary feedwater flow rate channel instrument.

\*\*PRODAC 250 subcooling margin readout can be used as a substitute for the subcooling monitor instrument.

\*\*\*Acoustic monitoring of PORV position (1 channel per three valves - headered discharge) can be used as a substitute for the PORV Position Indicator - Limit Switches instruments.

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL</u>	<u>CHANNEL</u>
	<u>CHECK</u>	<u>CALIBRATION</u>
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature - T <sub>HOT</sub> (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T <sub>COLD</sub> (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level - Narrow Range	M	R
8. RWST Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator - Limit Switches	M	R
13. PORV Block Valve Position Indicator - Limit Switches	M	R
14. Safety Valve Position Indicator - Acoustic Monitor	M	R
15. Containment Water Level (Narrow Range)	N/A	R
16. Containment Water Level (Wide Range)	N/A	R
17. Radiation Monitoring Channels (Per Table 4.3-3A)	M	R

TABLE 4.3-10POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL</u>	<u>CHANNEL</u>
	<u>CHECK</u>	<u>CALIBRATION</u>
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature - T <sub>HOT</sub> (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T <sub>COLD</sub> (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level - Narrow Range	M	R
8. RWST Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator - Limit Switches	M	R
13. PORV Block Valve Position Indicator - Limit Switches	M	R
14. Safety Valve Position Indicator - Acoustic Monitor	M	R
15. Containment Water Level (Narrow Range)	N/A	R
16. Containment Water Level (Wide Range)	N/A	R
17. Radiation Monitoring Channels (Per Table 4.3-3A)	M	R

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

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3.6.4.1 Two containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2

ACTION:

- a. With one hydrogen analysis device inoperable, restore the inoperable analysis device to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.
- b. With both hydrogen analysis devices inoperable, restore at least one analysis device to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

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- 4.6.4.1 Each hydrogen analysis device shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using a four percent and fifteen percent nominal hydrogen gas, balance nitrogen.

## CONTAINMENT SYSTEMS

### 3/4.6.4 COMBUSTIBLE GAS CONTROL

#### HYDROGEN ANALYZERS

#### LIMITING CONDITION FOR OPERATION

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3.6.4.1 Two containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: Modes 1 and 2.

ACTION:

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#### SURVEILLANCE REQUIREMENTS

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- 4.6.4.1 Each hydrogen analysis device shall be demonstrated OPERABLE at least once per 92 days on a STAGGERED TEST BASIS by performing a CHANNEL CALIBRATION using a four percent and fifteen percent nominal hydrogen gas, balance nitrogen.

## INSTRUMENTATION

### CHLORINE DETECTION SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.3.3.11 The chlorine detection system, with its alarm setpoint adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm, shall be OPERABLE.

APPLICABILITY: All MODES.

#### ACTION:

- a. With the chlorine detection system inoperable, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.
- b. The provisions of Specifications 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.3.3.11 The chlorine detection system shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.



## INSTRUMENTATION

### CHLORINE DETECTION SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

- 3.3.3.11 The chlorine detection system, with its alarm setpoint adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm, shall be OPERABLE.

APPLICABILITY: ALL MODES.

#### ACTION:

- a. With the chlorine detection system inoperable, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.
- b. The provisions of Specification 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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- 4.3.3.11 The chlorine detection system shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.



## INSTRUMENTATION

### BASES

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#### 3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluent during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

#### 3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

#### 3/4.3.3.11 CHLORINE DETECTION SYSTEM

The OPERABILITY of the detection system ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February, 1975.

### 3/4.3 INSTRUMENTATION

#### BASES

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#### 3/4.3.3.8 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

#### 3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

#### 3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

#### 3/4.3.3.11 CHLORINE DETECTION SYSTEM

The OPERABILITY of the detection system ensures that sufficient capability is available to promptly detect and initiate protective action in the event of an accidental chlorine release. This capability is required to protect control room personnel and is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release," February, 1975.

#### 3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety related components, equipment or structures.

## PLANT SYSTEMS

### 3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.5.1 The control room emergency ventilation system shall be OPERABLE with:

- a. Two independent heating and cooling systems,
- b. Two independent pressurization fans, and
- c. One charcoal absorber and HEPA filter train.

APPLICABILITY: ALL MODES.

#### ACTION:

MODES 1, 2, 3, and 4:

- a. With one heating and cooling 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.
- b. With one pressurization fan inoperable, restore the inoperable fan 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.
- c. With the filter train inoperable, restore the filter train to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- d. With one pressurization fan inoperable, do one of the following: (1) restore the inoperable fan to OPERABLE status within 7 days, or (2) initiate and maintain operation of the remaining OPERABLE pressurization fan and the filter train in a recirculation mode, or (3) suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- e. With any of the following (1) both heating and cooling systems; (2) both pressurization fans; (3) the filter train; inoperable, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

#### SURVEILLANCE REQUIREMENTS

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4.7.5.1 The control room emergency ventilation system shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is  $\leq 120^{\circ}\text{F}$ .

## PLANT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- b. At least once per 31 days on a STAGGERED TEST BASIS by initiating flow through the HEPA filter and charcoal adsorber train and verifying that the system operates for at least 15 minutes.
- 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 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 ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ .
  - 2. 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 ventilation system at a flow rate of 6000 cfm  $\pm 10\%$ .
  - 3. Verifying within 31 days after removal that a laboratory analysis of a carbon sample from either at least one test canister or at least two carbon samples removed from one of the charcoal adsorbers demonstrates a removal efficiency of  $\geq 90\%$  for radioactive methyl iodide when the sample is tested in accordance with ANSI N510-1975 ( $130^{\circ}\text{C}$ , 95% R.H.). The carbon samples not obtained from test canisters shall be prepared by either:
    - a) Emptying one entire bed from a removed adsorber tray mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed, or
    - b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.
  - 4. Verifying a system flow rate of 6000 cfm  $\pm 10\%$  during system operation when tested in accordance with ANSI N510-1975.
- d. After every 720 hours of charcoal adsorber operation by either:

## PLANT SYSTEMS

### 3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.7.5.1 The control room emergency ventilation system shall be OPERABLE with:

- a. Two independent heating and cooling systems,
- b. Two independent pressurization fans, and
- c. One charcoal absorber and HEPA filter train.

APPLICABILITY: ALL MODES.

#### ACTION:

MODES 1, 2, 3, and 4:

- a. With one heating and cooling 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.
- b. With one pressurization fan inoperable, restore the inoperable fan 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.
- c. With the filter train inoperable, restore the filter train to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5 and 6:

- d. With one pressurization fan inoperable, do one of the following: (1) restore the inoperable fan to OPERABLE status within 7 days, or (2) initiate and maintain operation of the remaining OPERABLE pressurization fan and the filter train in a recirculation mode, or (3) suspend all operations involving CORE ALTERATIONS or positive reactivity changes.
- e. With any of the following (1) both heating and cooling systems; (2) both pressurization fans; (3) the filter train; inoperable, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

#### SURVEILLANCE REQUIREMENTS

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4.7.5.1 The control room emergency ventilation system shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the control room air temperature is  $\leq 120^{\circ}\text{F}$ .