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 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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SURVEILLANCE REQUIREMENTS

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

- a. Deleted
- 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 shows a penetration of less than or equal to 1.0% for radioactive methyl iodide when the sample is tested in accordance with ASTM D3803-1989, 30°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.

SURVEILLANCE REQUIREMENTS (Continued)

- 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 inches Water Gauge while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.
 - 2.
 - a. Verifying that on a Safety Injection Signal from Unit 1, the system automatically operates in the pressurization/cleanup mode.
 - b. Verifying that on a Safety Injection Signal from Unit 2, the system automatically operates in the pressurization/cleanup mode.
 - 3. Verifying that the system maintains the control room envelope/pressure boundary at a positive pressure of greater than or equal to 1/16 inch W. G. relative to the outside atmosphere at a system flow rate of 6000 cfm plus or minus 10% with a makeup air flow rate of \leq 1000 cfm
- 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% 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 plus or minus 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% 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 plus or minus 10%.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS
3/4.7 PLANT SYSTEMS

CONTROL ROOM AIR CONDITIONING SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.5.2 The Control room air conditioning system (CRACS) shall be OPERABLE with two heating and cooling systems.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

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.

SURVEILLANCE REQUIREMENTS

4.7.5.2 The 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 95°F.

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION AND CONTROL ROOM AIR CONDITIONING SYSTEMS

The OPERABILITY of the control room emergency ventilation system (CREVS) ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. In MODES 1-4, the CREVS provides radiological protection to allow operators to take the actions necessary to mitigate the consequences of a design basis accident. The CREVS is also required to be OPERABLE for operations involving the movement of irradiated fuel assemblies to provide protection from a fuel handling accident. The CREVS has two pressurization trains with each pressurization train consisting of a pressurization fan, normal intake air damper, and emergency intake air damper available to align and maintain flow to the control room. The charcoal adsorber/HEPA filter unit consists of the prefilter, charcoal adsorbers, HEPA filter, and filter housing. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to less than or equal to 5 rem Total Effective Dose Equivalent, TEDE. This limitation is consistent with the requirements of General Design Criteria (GDC) 19 of Appendix "A", 10 CFR 50.

The control room envelope/pressure boundary consists of the control room, the control room HVAC equipment room, and the plant process computer room. The Limiting Condition for operation is modified by a Note allowing the control room envelope/pressure boundary to be opened intermittently under administrative controls. For entry and exit through doors to the control room, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for control room envelope/pressure boundary isolation is indicated.

If the control room envelope/pressure boundary is inoperable in MODES 1, 2, 3, and 4, the CREVS trains cannot perform their intended functions. Actions must be taken to restore an OPERABLE control room envelope/pressure boundary within 24 hours. During the period that the control room envelope/pressure boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into the condition. The 24 hour completion time is reasonable based on the low probability of a design basis accident occurring during this time period, and the use of compensatory measures. The 24 hour completion time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the control room envelope/pressure boundary.

The Unit 2 control room emergency ventilation system aligns and operates automatically on a Safety Injection (SI) Signal from either Unit 1 or Unit 2. Both pressurization fans start on the SI signal. Procedures direct realignment of the CREVS to single fan operation within two hours after receiving the SI signal. The automatic start from Unit 1 is normally only available when the Unit 1 ESF actuation system is active in modes 1 through 4 in Unit 1.

The Limiting Condition for Operation requires two independent control room heating and cooling systems. Each cooling system requires a functional air handling unit and associated cooling water supply. Cooling water is provided from a chilled water unit. At the design maximum essential service water (ESW) supply temperature of 86°F, a chilled water unit will maintain the control room temperature below 95°F. Cooling water may also be supplied directly by ESW when ESW supply temperature is $\leq 65^\circ\text{F}$.

3/4 BASES
3/4.7 PLANT SYSTEMS

3/4.7.5 CONTROL ROOM EMERGENCY VENTILATION AND CONTROL ROOM AIR CONDITIONING SYSTEMS (Continued)

The control room air conditioning system (CRACS) normally maintains the control room at temperatures at which control room equipment is qualified for the life of the plant. Continued operation at the Technical Specification limit is permitted since the portion of time the temperature is likely to be elevated is small in comparison to the qualified life of the equipment at the limit.

Each control room cooling system can maintain control room temperature $\leq 102^{\circ}\text{F}$ during accident conditions with the control room isolated. At control room temperatures of $\leq 102^{\circ}\text{F}$, vital control room equipment remains within its manufacturer's recommended operating temperature range.