

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (CONT)

A. Primary Containment (Cont)

With no H₂ analyzer operable, reactor operation is allowed for up to 48 hours. If one of the inoperable analyzers is not made fully operable within 48 hours, the reactor shall be in a least Hot Shutdown within the next 12 hours.

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System

1. Standby Gas Treatment System

- a. Except as specified in 3.7.B.1.c or 3.7.B.1.e below, both trains of the standby gas treatment shall be operable when in the Run, Startup, and Hot Shutdown MODES, during movement of irradiated fuel assemblies in the secondary containment, and during movement of new fuel over the spent fuel pool, and during **CORE ALTERATIONS**, and during operations with a potential for draining the reactor vessel (OPDRVs),

or

the reactor shall be in cold shutdown within the next 36 hours.

- b. 1. The results of the in-place cold DOP tests on HEPA filters shall show $\geq 99\%$ DOP removal. The results of halogenated hydrocarbon tests on charcoal adsorber banks shall show $\geq 99\%$ halogenated hydrocarbon removal.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont)

B. Standby Gas Treatment System and Control Room High Efficiency Air Filtration System

1. Standby Gas Treatment System

- a. 1. At least once per operating cycle, it shall be demonstrated that pressure drop across the combined high efficiency filters and charcoal adsorber banks is less than 8 inches of water at 4000 cfm.
2. At least once per operating cycle, demonstrate that the inlet heaters on each train are operable and are capable of an output of at least 20 kW
3. The tests and analysis of Specification 3.7.B.1.b. shall be performed at least once per operating cycle or following painting, fire or chemical release in any ventilation zone communicating with the system while the system is operating that could contaminate the HEPA filters or charcoal adsorbers.
4. At least once per operating cycle, automatic initiation of

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BASES:

3/4.7 CONTAINMENT SYSTEMS (Cont)

testing of the analyzers using H₂ will be adequate to ensure the system's readiness because of the design. Since the analyzers are normally not in operation there will be little deterioration due to use. In order to determine H₂ concentration, the analyzers must be warmed up 6 hours prior to putting into service. This time frame is acceptable for accident conditions because a 4% H₂ level will not be reached in the drywell until 16 hours following the accident. Due to nitrogen addition, the pressure in the containment after a LOCA will increase with time. Under the worst expected conditions the containment pressure will reach 28 psig in approximately 45 days. If and when that pressure is reached, venting from the containment shall be manually initiated per the requirements of 10CFR50.44. The venting path will be through the Standby Gas Treatment system in order to minimize the off site dose.

B.1 Standby Gas Treatment System

The Standby Gas Treatment System is designed to filter and exhaust the reactor building atmosphere to the stack during secondary containment isolation conditions. Upon containment isolation, both standby gas treatment fans are designed to start to bring the reactor building pressure negative so that all leakage should be in leakage. After a preset time delay, the standby fan automatically shuts down so the reactor building pressure is maintained approximately 1/4 inch of water negative. Should one system fail to start, the redundant system is designed to start automatically. Each of the two trains has 100% capacity.

High Efficiency Particulate Air (HEPA) filters are installed before and after the charcoal adsorbers to minimize potential release of particulates to the environment and to prevent clogging of the iodine adsorbers. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 0.1% bypass leakage for the charcoal adsorbers and a HEPA filter efficiency of at least 99% removal of cold DOP particulates. The laboratory carbon sample test results should indicate a methyl iodide removal efficiency of at least 97.5% for expected accident conditions. The specified efficiencies for the charcoal and particulate filters is sufficient to preclude exceeding 10CFR100 guidelines for the accidents analyzed. The analysis of the loss of coolant accident assumed a charcoal adsorber efficiency of 95% and TID 14844 fission product source terms, hence, installing two banks of adsorbers and filters in each train provides adequate margin. A 20 kW heater maintains relative humidity below 70% in order to ensure the efficient removal of methyl iodide on the impregnated charcoal adsorbers. Considering the relative simplicity of the heating circuit, the test frequency of once/operating cycle is adequate to demonstrate operability.

Air flow through the filters and charcoal adsorbers for 15 minutes each month assures operability of the system. Since the system heaters are automatically controlled, the air flowing through the filters and adsorbers will be $\leq 70\%$ relative humidity and will have the desired drying effect.

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Amendment No. ~~42, 113, 151, 187~~ , 194

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