ATTACHMENT 1

PLANT SYSTEMS

3/4.7.6 CONTROL ROOM AREA VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Room Area Ventilation Systems shall be OPERABLE.

APPLICABILITY: ALL MODES

ACTION: (Units 1 and 2)

MODES 1, 2, 3 and 4:

a. With one Control Room Area Ventilation System inoperable *for reasons other than the heaters tested in 4.7.6.b and 4.7.6.e.4*, 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 the heaters tested in 4.7.6.b and 4.7.6.e.4 inoperable, restore the inoperable heaters to operable status within 7days or file a Special Report in accordance with Specification 6.9.2 within 30days Specifying the reason for inoperability, and the planned actions to return the heaters to operable status.

MODES 5 and 6:

a. With one Control Room Area Ventilation System inoperable *for reasons other than the heaters tested in 4.7.6.b and 4.7.6.e.4*, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Area Ventilation System.

b. With both Control Room Area Ventilation Systems inoperable *for reasons other than the heaters tested in 4.7.6.b and 4.7.6.e.4*, or with the OPERABLE Control Room Area Ventilation System, required to be operating by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

c. The provisions of Specification 3.0.4 are not applicable.

d.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Room Area Ventilation System shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 90°F;

b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and activated carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or activated carbon 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 penetration and bypass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Position C.5.a, C.5.c, and C.5.d* of Regulatory Guide 1.52, Revisions 2, March 1978, and the system flow rate is 6000 cfm ± 10%;

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 [and tested per ASTM D3803-89] ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ [has] a methyl iodide penetration of less than ~~0.175%~~ [0.95%]; and

3) Verifying a system flow rate of 6000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

d. After every 1440 hours of activated carbon adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis** of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978 [and tested per ASTM D3803-89] ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ [has] a methyl iodide penetration of less than ~~0.175%~~ [0.95%];

e. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, activated carbon adsorber banks, and moisture separators is less than 8 inches Water Gauge while operating the system at a flow rate of 6000 cfm ± 10%;

2) Verifying that on a High Radiation-Air Intake, or Smoke Density-High test signal, an alarm is received in the control room;

3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch Water Gauge relative to adjacent areas at less than or equal to pressurization flow of 4000 cfm to the control room during system operation;

4) Verifying that the heaters dissipate 25 ± 2.5 kW [at a nominal voltage of 600 VAC], and

*The requirement for reducing refrigerant concentration to 0.01 ppm may be satisfied by operating the system for 10 hours with heaters on ~~and operating~~.
**Activated carbon adsorber samples are tested at 30 degree C [and 95% RH].

SURVEILLANCE REQUIREMENTS (Continued)

5) Verifying that on a High Chlorine/Toxic Gas test signal, the system automatically isolates the affected intake from outside air with recirculating flow through the HEPA filters and activated carbon adsorbers banks within 10 seconds (plus air travel time between the detectors and the isolation dampers).

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 acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 6000 cfm ± 10%; and

g. After each complete or partial replacement of an activated carbon 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 N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 6000 cfm ± 10%.

3/4.7.5 STANDBY NUCLEAR SERVICE WATER POND

The limitations on the standby nuclear service water pond (SNSWP) level and temperature ensure that sufficient cooling capacity is available to either: (1) provide normal cooldown of the facility, or (2) mitigate the effects of accident conditions within acceptable limits.

The limitations on minimum water level and maximum temperature are based on providing a 30-day cooling water supply to safety-related equipment without exceeding its design basis temperature and is consistent with the recommendations of Regulatory Guide 1.27, "Ultimate Heat Sink for Nuclear Plants," March 1974.

The peak containment pressure analysis assumes that the Nuclear Service Water (RN) flow to the Containment Spray and Component Cooling heat exchangers has a temperature of 86.5°F. This temperature is important in that it, in part, determines the capacity for energy removal from containment. The peak containment pressure occurs when energy addition to containment (core decay heat) is balanced by energy removal from these heat exchangers. This balance is reached far out in time, after the transition from injection to cold leg recirculation and after ice melt. Because of the effectiveness of the ice bed in condensing the steam which passes through it, containment pressure is insensitive to small variations in containment spray temperature prior to ice meltout.

To ensure that the RN temperature assumptions are met, Lake Wylie temperature is monitored. During periods of time while Lake Wylie temperature is greater than 86.5°F, the emergency procedure for transfer of ECCS flow paths to cold leg recirculation directs the operator to align at least one train of containment spray to be cooled by a loop of Nuclear Service Water which is aligned to the SNSWP.

3/4.7.6 CONTROL ROOM AREA VENTILATION SYSTEM

The OPERABILITY of the Control Room Area Ventilation System ensures that: (1) the ambient air temperature does not exceed the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by this system, and (2) the control room will remain habitable for operations personnel during and following all credible accident conditions. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The Control Room Area Ventilation System filter units have no bypass line. Either Control Room Area Ventilation System train must operate in the filtered mode continuously. When a train is in operation, its associated heater also runs continuously, however, heater operation is not required for the system to be operable. 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 5 rems or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

The 18-month surveillance to verify a positive pressure of greater than 1/8 inch water gauge, with less than or equal to 4000 cfm of pressurization flow, is to be conducted using only one intake from outside air open. By testing the capability to pressurize the control room using each intake individually, the design basis which assumes reopening of the two intakes following isolation on chlorine, smoke or radiation, is tested.

3/4.7.7 AUXILIARY BUILDING FILTERED EXHAUST SYSTEM

The OPERABILITY of the Auxiliary Building Filtered Exhaust System ensures that radioactive materials leaking from the ECCS equipment within the auxiliary building following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations was not taken credit for in the safety analyses. However, the operation of this system and the resultant effect on the NRC staff's offsite dose calculations was assumed in the staff's SER, NUREG-0954. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.7.8 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip, and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Catawba Safety Review Group. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.) and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletions of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

a. The equipment hatch closed and held in place by a minimum of four bolts,

b. A minimum of one door in each airlock is closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:

1) Closed by an isolation valve, blind flange, or manual valve, or

2) Exhausting through an OPERABLE Reactor Building Containment Purge System HEPA filters and activated carbon adsorbers.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

a. With the requirements of the above specification not satisfied, for reasons other than the heaters tested per 4.9.4.2.a and 4.9.4.2.d.2, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building.

b. With a heater tested per 4.9.4.2.a and 4.9.4.2.d.2 inoperable, restore the inoperable heater to operable status within 7 days, or file a Special Report in accordance with Specification 6.9.2 within 30 days, specifying the reason for inoperability and the planned actions to return the heater to operable status.

SURVEILLANCE REQUIREMENTS

4.9.4.1 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or exhausting through an OPERABLE Reactor Building Containment Purge System with the capability of being automatically isolated upon heater failure within 72 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

a. Verifying the penetrations are in their closed/isolated condition, or

b. Verifying the upper and lower containment purge supply and exhaust valves close upon a High Relative Humidity test signal.

4.9.4.2 The Reactor Building Containment Purge System shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating flow through the HEPA filters and activated carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or activated carbon 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 penetration and bypass leakage testing acceptance criteria of less than 1% and uses the test procedures 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 25,000 cfm ± 10% (both exhaust fans operating);

2) Verifying within 31 days after removal, that a laboratory analysis** of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and tested per ASTM-D3803-89, ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ has a methyl iodide penetration of less than 6%; and

3) Verifying a system flow rate of 25,000 cfm ± 10% (both exhaust fans operating) during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of activated carbon adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and tested per ASTM-D3803-89, ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ has a methyl iodide penetration of less than 6%;

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, activated carbon adsorber banks, and prefilters is less than 8 inches Water Gauge while operating the system at a flow rate of 25,000 cfm ± 10% (both exhaust fans operating); and

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*The requirement for reducing refrigerant concentration to 0.01 ppm may be satisfied by operating the system for 10 hours with heaters on and operating.

** Activated carbon adsorber samples are tested at 30 degrees C and 95% RH

SURVEILLANCE REQUIREMENTS (Continued)

2) Verifying that the filter train duct heater dissipates 120 ± 12 kW at a nominal voltage of 600 VAC

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 N510-1980 for a DOP test aerosol while operating the system at a flow rate of 25,000 cfm ± 10% (both exhaust fans operating); and

f. After each complete or partial replacement of an activated carbon adsorber bank, by verifying that the cleanup system bank satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 25,000 cfm ± 10% (both exhaust fans operating).

3/4.9.1 BORON CONCENTRATION

The limitations on reactivity conditions during REFUELING ensure that: (1) the reactor will remain subcritical during CORE ALTERATIONS, and (2) a uniform boron concentration is maintained for reactivity control in the water volume having direct access to the reactor vessel. These limitations are consistent with the initial conditions assumed for the boron dilution incident in the safety analyses. The value of 0.95 or less for K_{eff} includes a 1% $\Delta k/k$ conservative allowance for uncertainties. Similarly, the boron concentration value of 2000 ppm or greater includes a conservative uncertainty allowance of 50 ppm boron.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the Boron Dilution Mitigation System ensures that monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short-lived fission products. This decay time is consistent with the assumptions used in the safety analyses.

3/4.9.4 CONTAINMENT BUILDING PENETRATIONS

The requirements on containment building penetration closure and OPERABILITY of the Reactor Building Containment Purge System ensure that a release of radioactive material within containment will be restricted from leakage to the environment or filtered through the HEPA filters and activated carbon adsorbers prior to release to the atmosphere. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE. Operation of the Reactor Building Containment Purge System and the resulting iodine removal capacity are consistent with the assumption of the safety analysis. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

CONTAINMENT SYSTEMS

ANNULUS VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.8 Two independent Annulus Ventilation Systems shall be OPERABLE.

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

ACTION:

for reasons other than the pre-heaters tested in 4.6.1.8.a and 4.6.1.8.d.5

a. With one Annulus Ventilation 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 the pre-heaters tested in 4.6.1.8.a and 4.6.1.8.d.5 inoperable restore the inoperable pre-heaters to operable status within 7 days, or file a Special Report in accordance with Specification 6.9.2 within 30 days specifying the reason for inoperability and the planned actions to return the pre-heaters to operable status.

SURVEILLANCE REQUIREMENTS

4.6.1.8 Each Annulus 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 activated carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the pre-heaters operating;

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or activated carbon 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 penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ 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 9000 cfm ± 10%;

   2) Verifying, within 31 days after removal, that a laboratory analysis of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and tested per ASTM D3803 ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ has a methyl iodide penetration of less than ~~1%~~ 4%; and

   3) Verifying a system flow rate of 9000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

*The requirement for reducing refrigerant concentration to 0.01 ppm may be satisfied by operating the system for 10 hours with heaters on and operating.

SURVEILLANCE REQUIREMENTS (Continued)

c. After every 720 hours of activated carbon adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis*** of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, (and tested per ASTM-D3803-89) ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ (has) a methyl iodide penetration of less than ~~1%;~~

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, activated carbon adsorber banks, and moisture separators is less than 8 inches Water Gauge while operating the system at a flow rate of 9000 cfm ± 10%;

2) Verifying that the system starts automatically on any (Safety Injection) ~~Phase "A" Isolation~~ test signal,**

3) Verifying that the filter cooling electric motor-operated bypass valves can be manually opened,

4) Verifying that each system produces a negative pressure of greater than or equal to 0.5 inch Water Gauge in the annulus within 1 minute after a start signal, and

5) Verifying that the pre-heaters dissipate 45 ± 6.7 kW (At a nominal voltage of 600 VAC.)

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% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 9000 cfm ± 10%; and

f. After each complete or partial replacement of an activated carbon adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 9000 cfm ± 10%.

~~**This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling.~~

*** Activated carbon adsorber samples are tested at 30 degrees C and 95% RH

3/4.6.1.8 ANNULUS VENTILATION SYSTEM

The OPERABILITY of the Annulus Ventilation System ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and activated carbon adsorber trains prior to discharge to the atmosphere. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. ~~This requirement is necessary to meet the assumptions used in the safety analyses and limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during LOCA conditions.~~ ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.6.1.9 CONTAINMENT PURGE SYSTEMS

The containment purge supply and exhaust isolation valves for the lower compartment and the upper compartment (24-inch), and instrument room (12-inch), and the Hydrogen Purge System (4-inch) are required to be sealed closed during plant operation since these valves have not been demonstrated capable of closing during a LOCA. Maintaining these valves sealed closed during plant operations ensures that excessive quantities of radioactive materials will not be released via the Containment Purge System. To provide assurance that these containment valves cannot be inadvertently opened, the valves are sealed closed in accordance with Standard Review Plan 6.2.4 which includes mechanical devices to seal or lock the valve closed, or prevents power from being supplied to the valve operator.

The use of the containment purge lines is restricted to the 4-inch Containment Air Release and Addition System valves since, unlike the lower compartment and the upper compartment, instrument room, and the Hydrogen Purge System valves, these 4-inch valves are capable of closing during a LOCA. Therefore, the SITE BOUNDARY dose guideline values of 10 CFR Part 100 would not be exceeded in the event of an accident during containment purging operation. Operation with the line open will be limited to 3000 hours during a calendar year for the 4-inch valves. The total time the containment purge (vent) system isolation valves may be open during MODES 1, 2, 3, and 4 in a calendar year is a function of anticipated need and operating experience. Only safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities, may be used to justify the opening of these isolation valves.

Leakage integrity tests with a maximum allowable leakage rate for containment purge supply and exhaust valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The 0.60 L_a leakage limit of Specification 3.6.1.2b. shall not be exceeded when the leakage rates determined by the leakage integrity tests of these valves are added to the previously determined total for all valves and penetrations subject to Type B and C tests.

3/4.9.11 FUEL HANDLING VENTILATION EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.11 At least one train of the Fuel Handling Ventilation Exhaust System shall be OPERABLE.

APPLICABILITY: Whenever irradiated fuel is in the storage pool.

ACTION: For reasons other than the heaters specified in 4.9.11.2.a and 4.9.11.2.d.4

a. With both trains of the Fuel Handling Ventilation Exhaust System inoperable, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until the Fuel Handling Ventilation Exhaust System is restored to OPERABLE status.

b. With the heaters tested per 4.9.11.2.a and 4.9.11.2.d.4 inoperable, restore the inoperable heaters to operable status in 7 days, or file a Special Report in accordance with Specification 6.9.2 within 30 days specifying the reason for inoperability and the planned actions to return the heaters to operable status.

~~b.~~ c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.11.1 One train of the Fuel Handling Ventilation Exhaust System shall be determined to be operating and discharging through the HEPA filter and activated carbon adsorbers at least once per 12 hours whenever irradiated fuel is being moved in the storage pool and during crane operation with loads over the storage pool.

4.9.11.2 Both trains of the Fuel Handling Ventilation Exhaust System shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and activated carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or activated carbon 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 penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ 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 16,565 cfm ± 10%;

*The requirement for reducing refrigerant concentration to 0.01 ppm may be satisfied by operating the system for 10 hours with heaters on and operating.

SURVEILLANCE REQUIREMENTS (Continued)

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative activated carbon sample obtained in accordance with Regulatory Positions 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, as supplemented by ASTM D3803-86, Test Method "A"~~*, ~~for~~ has a methyl iodide penetration of less than ~~0.71%~~ 4% and

(and tested per ASTM D3803-89)

3) Verifying a system flow rate of 16,565 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of activated carbon adsorber operation in any train ~~by~~ verifying, within 31 days after removal, that a laboratory analysis* of ~~a~~ representative activated 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, as supplemented by ASTM D3803-86, Test Method "A"~~*, ~~for~~ has a methyl iodide penetration of less than ~~0.71%~~ 4%

(and tested per ASTM D3803-89)

d. At least once per 18 months for each train by:

1) Verifying that the pressure drop across the combined HEPA filters, activated carbon adsorber banks, and moisture separators is less than 8 inches Water Gauge while operating the system at a flow rate of 16,565 cfm ± 10%.

2) Verifying that the system maintains the spent fuel storage pool area at a negative pressure of greater than or equal to ⅛ inch Water Gauge relative to the outside amosphere during system operation,

3) Verifying that the filter cooling bypass valves can be manually opened, and

4) Verifying that the heaters dissipate 80 + 8 kW/-17.3 kW ~~**~~ At a nominal voltage of 600VAC

~~*Use of ASTM D3803-86, Test Method "A" as a supplement applies until August 26, 1991. Thereafter, the surveillance requirement shall read, "...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 1%."~~

~~**80 + 8 kW/-17.3 kW applies until August 26, 1991. Thereafter, the surveillance requirement shall read "Verifying that the heaters dissipate 80 ± 8 kW."~~

* Activated carbon adsorber samples are tested at 30°C and 95% RH

SURVEILLANCE REQUIREMENTS (Continued)

e. After each complete or partial replacement of a HEPA filter bank in any train, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 16,565 cfm ± 10%; and

f. After each complete or partial replacement of an activated carbon adsorber bank in any train, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 16,565 cfm ± 10%.

3/4.9.9 and 3/4.9.10 WATER LEVEL - REACTOR VESSEL and STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the safety analysis.

3/4.9.11 FUEL HANDLING VENTILATION EXHAUST SYSTEM

The limitations on the Fuel Handling Ventilation Exhaust System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and activated carbon adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. ~~ASTM D3803-86, Test Method "A" will be used for surveillance testing (laboratory test) for methyl iodide penetration in lieu of the laboratory test specified in Regulatory Guide 1.52, Rev. 2, March 1978, Regulatory Position C.6.a. The ASTM D3803-86 test method uses a relative humidity of 95% at 30°C. The use of this test and the acceptance criterion of a methyl iodide penetration of less than 0.71% are consistent with assumed decontamination efficiencies of 95%. This change resulted from the lower system heater capacity during degraded voltage conditions. The use of ASTM D3803-86 will apply until August 26, 1991. This date corresponds to the next due date for the 18-month surveillance on Unit 2. The Unit 2 date is used for both units because the next 18-month inspection date for Unit 1, December 13, 1990, will not allow for sufficient time to evaluate ASTM D3803-89.~~

3/4.7.7 AUXILIARY BUILDING FILTERED EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent trains of the Auxiliary Building Filtered Exhaust System shall be OPERABLE.

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

ACTION:

a. With one train of the Auxiliary Building Filtered Exhaust System inoperable for reasons other than the heaters specified in 4.7.7.a and 4.7.7.d5, restore the inoperable train 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 the heaters tested in 4.7.7.a and 4.7.7.d5 inoperable, restore the inoperable heaters to operable status within 7 days, or file a Special Report in accordance with Specification 6.9.2 within 30 days specifying the reason for inoperability and the planned actions to return the heaters to operable status.

SURVEILLANCE REQUIREMENTS

4.7.7 Each train of the Auxiliary Building Filtered Exhaust System shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and activated carbon adsorbers and verifying that the system operates for at least 10 continuous hours with the heaters operating;

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or activated carbon adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the same by:

1) Verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ 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 30,000 cfm ± 10%;

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and tested per ASTM D3803-89 ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ has a methyl iodide penetration of less than ~~1%~~ 4%; and

*The requirement for reducing refrigerant concentration to 0.01 ppm may be satisfied by operating the system for 10 hours with heaters on and operating.

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying a system flow rate of 30,000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

c. After every 720 hours of activated carbon adsorber operation, by verifying, within 31 days after removal, that a laboratory analysis*** of a representative activated carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, and tested per ASTM D3803-89 ~~meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for~~ has a methyl iodide penetration of less than ~~1%~~ 4%.

d. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters, activated carbon adsorber banks, and moisture separators of less than 8 inches Water Gauge while operating the system at a flow rate of 30,000 cfm ± 10%,

2) Verifying that the system starts on a Safety Injection test signal, and directs its exhaust flow through the HEPA filters and activated carbon adsorbers,**

3) Verifying that the system maintains the ECCS pump room at a negative pressure relative to adjacent areas,

4) Verifying that the filter cooling bypass valves can be manually opened, and

5) Verifying that the heaters dissipate 40 ± 4 kW at a nominal voltage of 600VAC.

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% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a DOP test aerosol while operating the system at a flow rate of 30,000 cfm ± 10%; and

f. After each complete or partial replacement of an activated carbon adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 1% ~~(Unit 1), 0.05% (Unit 2)~~ in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 30,000 cfm ± 10%.

**This surveillance need not be performed until prior to entering HOT SHUTDOWN following the Unit 1 first refueling.

*** Activated carbon adsorber samples are tested at 30 degrees C and 95% R

The 18-month surveillance to verify a positive pressure of greater than 1/8 inch water gauge, with less than or equal to 4000 cfm of pressurization flow, is to be conducted using only one intake from outside air open. By testing the capability to pressurize the control room using each intake individually, the design basis which assumes reopening of the two intakes following isolation on chlorine, smoke or radiation, is tested.

3/4.7.7 AUXILIARY BUILDING FILTERED EXHAUST SYSTEM

The OPERABILITY of the Auxiliary Building Filtered Exhaust System ensures that radioactive materials leaking from the ECCS equipment within the auxiliary building following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. The operation of this system and the resultant effect on offsite dosage calculations was not taken credit for in the safety analyses. However, the operation of this system and the resultant effect on the NRC staff's offsite dose calculations was assumed in the staff's SER, NUREG-0954. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

3/4.7.8 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip, and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Catawba Safety Review Group. The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.) and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletions of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

ATTACHMENT 2

CATAWBA NUCLEAR STATION
TECHNICAL SPECIFICATION CHANGE REQUEST

Background

During a review of the HVAC systems at Catawba Nuclear Station it was discovered that the pre-heaters in some ESF filter units were not conservatively sized for all postulated operating modes. The pre-heaters are used to control the relative humidity of the influent air entering the carbon adsorber. These filters were designed in a manner that assumes the heaters maintain the relative humidity (RH) of the air at 70% or less. Duke Power's review revealed that during postulated low voltage conditions with loss of one of the two offsite power sources and all plant auxiliaries of the unit aligned to the other power source through the remaining step-up transformer with a concurrent LOCA, sufficient power may not be supplied to these heaters to enable them to maintain an RH of less than or equal to 70%. The affected systems are the Annulus Ventilation System, the Control Room Area Ventilation System, the Containment Purge System, the Fuel Handling Ventilation Exhaust System, and the Auxiliary Building Filtered Exhaust System.

Five different options were considered for permanently addressing this relative humidity problem. The options were:

1) Increase the minimum voltage available
2) Provide supplemental heaters
3) Restrict upper flow limit
4) Reduce upper and lower flow limits
5) Change carbon test to factor in high humidity (95%)

Option (1) was rejected since this solution would cause over-voltage problems during normal operation. Since the low voltage concern is the result of the unlikely series of events outlined earlier and problems are created during normal operation, increasing the minimum voltage to provide enough heater capacity during a low voltage event is inappropriate.

Option (2) was rejected because the additional heaters and associated controls are costly and would make the system needlessly more complex. This option would also require additional emergency power during loss of preferred power conditions, reducing the spare power margin available on the diesels.

Option (3) would require that the maximum air flow be restricted through the filter units. This would allow the heaters to properly control humidity in a degraded bus situation. This option was rejected because of the increased operator burden caused by the flow restrictions. With the margin between the maximum and minimum allowable air flows reduced, operators would have a very

restrictive flow range in which to operate the systems. This range was judged to be overly restrictive and could lead to system unavailability.

Option (4) would relieve the flow margin restriction of Option (3) by decreasing both the upper and lower flow parameters. Even though there is no increased operator burden with Option (4), it was rejected because of possible increases in dose consequences. This is most apparent in the Annulus Ventilation System. Reducing the flow range would increase the time required to draw the annulus to a negative pressure which significantly increases the Exclusion Area Boundary (EAB) (2 hour) thyroid dose.

Option (5) involved changing the carbon penetration test method to factor in high humidity. This option was chosen even though it requires a change to the TS and will result in more frequent carbon change out. The benefits of this option are: 1) no increased burden on operator due to flow restrictions, 2) no increase or change in the dose consequences. This option will require more frequent carbon change out. However, this is acceptable to the station.

PURPOSE

The purpose of this Technical Specification amendment is to address humidity control associated with the Annulus Ventilation, the Control Room Area Ventilation, the Containment Purge, the Fuel Handling Ventilation Exhaust, and the Auxiliary Building Filtered Exhaust Systems. This proposed change will make the carbon adsorber testing consistent between the different ventilation systems, and will continue to assure that the design bases for the systems continue to be met.

TERMS

The following terms are defined as they apply to this document and to provide clarity to the discussion.

1) bypass leakage - the percentage of flow that passes around a filter without being filtered.

2) penetration - the amount of methyl iodide which will pass through a sample of carbon without being adsorbed. This value can be established by ASTM D3803.

3) decontamination efficiency - the percent of radioactive iodine that will be removed by a filter system. This value is a function of bypass leakage and penetration.

DE : 100% - (BL + PE)

CHANGES TO TECHNICAL SPECIFICATIONS AND TECHNICAL DISCUSSION FOR ANNULUS VENTILATION, CONTROL ROOM AREA VENTILATION, CONTAINMENT PURGE, FUEL HANDLING VENTILATION EXHAUST AND AUXILIARY BUILDING FILTERED EXHAUST SYSTEMS

The similar TS changes for each system will be discussed together, since the technical reasoning for them is the same. This requested TS amendment changes the carbon adsorber test method for Catawba Nuclear Station for the Annulus Ventilation, Control Room Area Ventilation, Containment Purge, Fuel Handling Ventilation Exhaust and Auxiliary Building Filtered Exhaust Systems to ASTM D3803-89. This proposed amendment also makes changes which support using this standard, such as revising the ACTION statements to reflect that the ventilation systems are OPERABLE without heaters, and changing the allowable methyl iodide penetration to reflect the new test. The heater testing requirements are also revised to clarify the heater test method.

1. <u>CHANGES TO TS</u>
The Surveillance Requirements (SR) 4.6.1.8.b.2 and 4.6.1.8.c for the Annulus Ventilation System, 4.7.6.c.2 and 4.7.6.d for the Control Room Area Ventilation System, 4.9.4.2.b.2 and 4.9.4.2.c for the Containment Purge System, 4.9.11.2.b.2 and 4.9.11.2.c for the Fuel Handling Exhaust Ventilation System, and 4.7.7.b.2 and 4.7.7.c for the Auxiliary Building Filtered Exhaust System are changed to indicate that the laboratory testing criteria of ASTM D3803-89 will be used.

<u>TECHNICAL JUSTIFICATION</u>
The proposed carbon adsorber testing standard, ASTM D3803-89, is a stringent procedure for establishing the capability of new and used activated carbon. The following table compares this standard with the original TS required test method and ASTM D3803-86 (temporary TS test method for Fuel Handling Exhaust Ventilation System) for used carbons.

Test Period	Original Test Method	ASTM D3803-86 Test Method A	ASTM D3803-89
Pre-Equilibration	not required	not required	30°C 95%RH 16 hours
Equilibration	not required	not required	30°C 95%RH 2 hours
Challenge (Feed)	30°C 70%RH 2 hours	30°C 95%RH 2 hours	30°C 95%RH 1 hour

The major difference between the ASTM D3803-89 and the other test methods is that the ASTM D3803-89 method requires the carbon beds to be pre-conditioned with 30°C and 95% relative humidity air for eighteen (18) hours before the methyl iodide challenge (feed) period. This approach is intended to make the carbon test repeatable so that results from similar tests can be compared. The pre-conditioning is conservative because it saturates the carbon beyond the conditions expected during Design Basis Events for the Catawba Nuclear Station ventilation systems. The water vapor competes with the methyl iodide for adsorption sites on the carbon, therefore, the higher the relative humidity the harder it is for methyl iodide to be adsorbed. ASTM D3803-89 is a more repeatable test for carbon adsorber, and the pre-equilibration period at 95% relative humidity makes it more stringent than previous standards.

2. <u>CHANGES TO TS</u>

SRs 4.6.1.8.b.2, 4.6.1.8.c, 4.9.11.2.b.2, 4.9.11.2.c, 4.7.7.b.2 and 4.7.7.c are changed to indicate that a methyl iodide penetration of 4% will be used for the Annulus Ventilation System, the Fuel Handling Ventilation Exhaust System and the Auxiliary Building Filtered Exhaust System. SR's 4.7.6.c.2 and 4.7.6.d will be changed to indicate that a methyl iodide penetration of 0.95% will be used for the Control Room Area Ventilation System as the acceptance criteria for the carbon adsorber testing.

The methyl iodide penetration for the Containment Purge System will not be changed. It has been determined that using the current methyl iodide penetration will provide acceptable margin for carbon adsorber change-out.

TECHNICAL JUSTIFICATION

The test acceptance criteria of Regulatory Guide 1.52 will no longer be referenced in the TS because Regulatory Guide 1.52, Revision 2, March 1978, does not address the testing of a system without humidity control which operates outside the primary containment.

Because of the pre-equilibration period, which does not exist in previous carbon adsorber test standards, the carbon is tested at a more conservative point. Using the ASTM D3803-89 testing standard would always be expected to give a more conservative methyl iodide penetration value than current test methods. The ASTM D3803-89 test method is also conservative with respect to the plant conditions expected during an accident. Postulated accident conditions do not subject the carbon to saturated conditions, therefore, the radioactive iodine penetration during an actual accident would be lower than that predicted by the laboratory test. A 4% methyl iodide penetration is acceptable for the Annulus Ventilation System, the Fuel Handling Ventilation Exhaust System, and the Auxiliary Building Filtered Exhaust System, and a 0.95% methyl iodide penetration is acceptable for the Control Room Area Ventilation System since added conservatism is built into the new carbon adsorber test, and current Design Bases decontamination efficiencies are met using these values.

Duke Power believes that this method for defining penetration is conservative for the following reasons:

a) The scope of ASTM D3803-89 describes this standard as "a very stringent procedure" and says that it "is recommended for the quantification of the degradation of used carbons."

b) Limited testing done by Duke Power shows that testing done per the 1989 revision of ASTM D3803 will result in more frequent carbon change out than testing per the 1986 revision. Per this TS change, Duke Power will generally have newer, fresher carbon in its filter systems.

c) The 1989 revision also requires that the carbon be pre-saturated before being tested. Saturating the carbon limits its ability to adsorb iodine. Postulated accident scenarios do not subject the carbon adsorber to saturated air, therefore, testing per the 1989 revision will yield conservative results relative to actual adsorption ability.

d) Design basis dose analyses for Catawba show that the combination of all ESF systems , ie. containment sprays, ice condenser, HEPA and carbon filters and most

importantly the containment itself, serve to keep offsite and onsite doses well below regulatory limits. The relative importance of the carbon adsorbers to mitigate iodine releases is questionable in light of source term studies over the last decade which predict only a small elemental iodine constituent in the release.

3. CHANGES TO TS

The ACTION for TS 3.7.6, Control Room Area Ventilation System, 3.6.1.8, Annulus Ventilation System, 3.9.11, the Fuel Handling Ventilation Exhaust System, 3.9.4, Containment Purge System, and 3.7.7, Auxiliary Building Filtered Exhaust System, are changed to indicate that they apply for reasons other than heaters. New ACTIONS have been added to indicate that if the heaters are inoperable, they will be fixed within 7 days, or a report filed with the NRC.

TECHNICAL JUSTIFICATION

Since the Design Basis decontamination efficiencies can be met for the systems described above using a test that assumes no heaters, operability of the systems will no longer be dependent on heater operability. The heater testing requirements will remain the same as they are currently, and the heaters will be required to be fixed in a timely manner in the event of failure. Even though the heaters will remain in service, no credit will be taken for them. This results in additional margin.

4. CHANGES TO TS

"At a nominal voltage of 600 VAC" has been added to SRs 4.7.6.e.4, Control Room Area Ventilation, 4.9.4.2.d.2, Containment Purge, 4.6.1.8.d.5, Annulus Ventilation, 4.9.11.2.d.4, Fuel Handling Ventilation Exhaust, and 4.7.7.d.5, Auxiliary Building Filtered Exhaust.

TECHNICAL JUSTIFICATION

The statement "at a nominal voltage of 600 VAC" has been added to the heater testing requirements. This clarifies how the heater testing should be done. With the heaters tested at nominal voltage of 600 VAC, a failure of the heater surveillance would be indicative of a heater problem, not a system problem.

5. CHANGES TO TS

The sections of TS 3.9.11, Fuel Handling Exhaust Ventilation System, that apply until August 26, 1991 have been deleted. This change is administrative in nature.

6. CHANGES TO TS

SRs 4.6.1.8.b.1, 4.6.1.8.e, 4.6.1.8.f, 4.9.11.2.b.1, 4.9.11.2.e, 4.9.11.2.f, 4.7.7.b.1, 4.7.7.e, and 4.7.7.f are changed to indicate a bypass leakage criteria of 1% for Unit 2.

TECHNICAL JUSTIFICATION

The 1% bypass leakage criteria is consistent with the requirements for Unit 1. This acceptance value is also specified for a charcoal adsorbor efficiency of 95% in Generic Letter 83-13, "Clarification of Surveillance Requirements for HEPA Filters and Charcoal Adsorber Units in Standard Technical Specifications on ESF Cleanup Systems." The 1% bypass leakage is consistent with the original system design, because, where a 95% filter efficiency is used, a 1% bypass is assumed.

7. CHANGES TO TS

SR 4.6.1.8.d.2 for the Annulus Ventilation System corrects the automatic start signal for the system from "Phase "A" Isolation" to "safety injection" signal.

TECHNICAL JUSTIFICATION

This change corrects an error in the TS. The original SR stated that the Annulus Ventilation System started on a Phase "A" Isolation signal. This has never been true. The system actually starts on a safety injection signal. This error is also found in the Catawba SER Section 6.2.3 which states that "In the event of a LOCA, the Annulus Ventilation System is started by a containment high pressure signal (3 psig)." The Catawba Nuclear Station FSAR was updated in 1989 to reflect the fact that the Annulus Ventilation System is started by a safety injection signal. Table 7.2.1, "Instrumentation and Control System Diagrams - Safeguards Actuation Signals," page 8, has always correctly shown that the Annulus Ventilation System Starts on a safety injection signal.

8. CHANGES TO TS

"And 95% RH" is added to the footnote for the Control Room Area Ventilation System. The entire note "Activated carbon adsorber samples are tested at 30 degrees C and 95% RH", is added to the other carbon adsorber testing specifications.

TECHNICAL JUSTIFICATION

This change adds clarification to the footnote by reflecting the conditions at which the new test will be done.

9. The TS Bases have been marked up to reflect these changes.

NO SIGNIFICANT HAZARDS ANALYSIS

10 CFR 50.92 states that a proposed amendment involves no significant hazards consideration if operation in accordance with the proposed amendment would not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

3) Involve a significant reduction in the margin of safety.

This proposed TS amendment will not increase the probability or consequences of an accident which has been previously evaluated. No physical changes will be made to the plant, therefore, there is no increased probability of an accident. As discussed in the Technical Justification, the decontamination efficiencies of the filters remain unchanged using the new test method and penetration acceptance criteria. The changes in the bypass leakage for the Annulus Ventilation System, the Auxiliary Building Filtered Exhaust System, and the Fuel Handling Ventilation Exhaust System which apply to Unit 2, will have no effect on the decontamination efficiencies, because a 95% decontamination efficiency was assumed originally, and this assumption accounts for a 1% bypass leakage. Because of this, the offsite dose and Control Room dose calculation results are unaffected. In addition to requiring the carbon adsorber to meet Design Basis decontamination efficiencies at 95% relative humidity, additional margin, for which no credit is taken, will be provided by the heaters. For the reasons stated above, there will be no increase in the consequences of an accident previously evaluated.

This proposed amendment to the TS does not create the possibility of a new or different kind of accident from any accident previously evaluated. This proposed TS change will not cause any physical changes to the plant or changes to operating procedures. Because the plant will continue to operate the same way it does now, this proposed amendment does not create the possibility of any new or different accident from any previously evaluated.

This proposed TS change will not cause a significant reduction in the margin of safety. The new test method is more restrictive than the previous test methods, and, based on limited testing, Duke Power expects to have to change out carbon more frequently. The change in the allowed methyl iodide penetration, which was made to support the change in test method, does not represent a significant decrease in the margin of safety. It represents the requirement of the test standard to pre-saturate the carbon adsorber. This pre-saturation causes a higher penetration during testing, and is

conservative with respect to Design Basis Events. The test method D3803-89 is expected to provide a penetration value during testing which is higher than what would be expected during a Design Basis Event. These conservative results reflect the fact that the new test conditions are more harsh than expected plant conditions during a Design Basis Event. As an added conservatism, no credit is taken for the heaters. However the heaters will be tested and maintained, therefore, the relative humidity of air entering the carbon adsorber is never be expected to reach 95%.

The addition of "at a nominal voltage of 600 VAC" to the heater SR is administrative, and clarifies that the purpose of the requirement is to detect heater degradation. This change involves no significant hazards consideration.

Footnotes and statements related to the footnotes in the Fuel Handling Ventilation Exhaust System TS which expire on August 26, 1991 have been removed. This change is administrative, and involves no significant hazards consideration.

The change to SR 4.6.1.8.d.2 for the Annulus Ventilation System corrects an error in the SR. The system actually starts on a safety injection signal. This change does not reflect an actual change to the plant, it reflects a correction to an error in the Specifications. This change involves no significant hazards consideration.

The proposed Technical Specification change has been reviewed against the criteria of 10 CFR 51.22 for environmental considerations. As shown above, the proposed change does not involve significant hazards consideration nor increase individual or cumulative occupational radiation exposure. Based on this, the proposed amendment meets the criteria given in 10 CFR 51.22(c)(9) for categorical exclusion from the requirements for an Environmental Impact Statement.