ENCLOSURE 3

Joseph M. Farley Nuclear Plant
Request to Revise Technical Specifications
Control Room Emergency Ventilation System

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Unit 2

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3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, 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.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each CREFS train 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 pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for implementation of control room cooling design changes.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release that could have contaminated the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:

(a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

(b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

(c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

SURVEILLANCE REQUIREMENTS (Continued)

d. 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 system at a flow rate indicated in Note 1.

2. Verifying that the filter train starts on a Safety Injection Actuation test signal.#

3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere during system operation.

4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.	a.	Control Room Recirculation Filter Unit	2000 cfm ± 10%
	b.	Control Room Filter Unit	1000 cfm ± 10%
	c.	Control Room Pressurization Filter Unit	300 cfm ± 10%
Note 2.	a.	Control Room Recirculation Filter Unit	≥ 99%
	b.	Control Room Filter Unit	≥ 99%
	c.	Control Room Pressurization	≥ 99.825%

Surveillance Requirement 4.7.7.1.d.2 does not apply in MODES 5 and 6.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to 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 the design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this period of time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (continued)

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency 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.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies and during and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, 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.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each CREFS train 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 pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for the purpose of implementation of control room cooling design changes.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release that could have contaminated the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:

   (a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

   (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

   (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

SURVEILLANCE REQUIREMENTS (Continued)

d. 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 system at a flow rate indicated in Note 1.

2. Verifying that the filter train starts on a Safety Injection Actuation test signal.#

3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere during system operation.

4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.	a.	Control Room Recirculation Filter Unit	2000 cfm ± 10%
	b.	Control Room Filter Unit	1000 cfm ± 10%
	c.	Control Room Pressurization Filter Unit	300 cfm ± 10%
Note 2.	a.	Control Room Recirculation Filter Unit	≥ 99%
	b.	Control Room Filter Unit	≥ 99%
	c.	Control Room Pressurization	≥ 99.825%

Surveillance Requirement 4.7.7.1.d.2 does not apply in MODES 5 and 6.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to 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 their design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this period of time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM (continued)

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency 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.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

ENCLOSURE 4

Joseph M. Farley Nuclear Plant
Request to Revise Technical Specifications
Control Room Emergency Ventilation System

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3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency air cleanup systems shall be OPERABLE.

APPLICABILITY: ALL MODES.

ACTION:

MODES 1, 2, 3 and 4:

With one control room emergency air cleanup 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.

MODES 5 and 6 (during irradiated fuel movement, or movement of loads over irradiated fuel):

a. With one control room emergency air cleanup system inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the control room emergency ventilation system in the recirculation mode.

b. With both control room emergency air cleanup systems inoperable, suspend all operations involving the movement of irradiated fuel or movement of loads over irradiated fuel.

c. The provisions of Specification 3.0.3 are not applicable in MODE 6.

SURVEILLANCE REQUIREMENTS

4.7.7.1 ~~4.7.7~~ Each 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 less than or equal to 120°F.~~

a b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

b 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 that could have contaminated the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:

INSERT A

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, 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.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for implementation of control room cooling design changes.

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:

   (a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

   (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

   (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

d. 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 system at a flow rate indicated in Note 1.

2. Verifying that the filter train starts on a Safety Injection Actuation test signal.#

Surveillance Requirement ~~4.7.7.e.2~~ 4.7.7.1.d.2 does not apply in MODES 5 and 6.

SURVEILLANCE REQUIREMENTS (Continued)

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 the outside atmosphere during system operation.

4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.	a.	Control Room Recirculation Filter Unit	2000 cfm ± 10%
	b.	Control Room Filter Unit	1000 cfm ± 10%
	c.	Control Room Pressurization Filter Unit	300 cfm ± 10%
Note 2.	a.	Control Room Recirculation Filter Unit	≥ 99%
	b.	Control Room Filter Unit	≥ 99%
	c.	Control Room Pressurization	≥ 99.825%

INSERT B

INSERT B

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6 during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to 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 their design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

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The OPERABILITY of the control room 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. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

INSERT C

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency 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.

insert A

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent control room emergency air cleanup systems shall be OPERABLE.

APPLICABILITY: ALL MODES.

ACTION:

MODES 1, 2, 3 and 4:

With one control room emergency air cleanup 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.

MODES 5 and 6 (during irradiated fuel movement, or movement of loads over irradiated fuel):

a. With one control room emergency air cleanup system inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the control room emergency ventilation system in the recirculation mode.

b. With both control room emergency air cleanup systems inoperable, suspend all operations involving the movement of irradiated fuel or movement of loads over irradiated fuel.

c. The provisions of Specification 3.0.3 are not applicable in MODE 6.

SURVEILLANCE REQUIREMENTS

4.7.7.1 ~~a. Each~~ Each 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 less than or equal to 120°F.~~

a b. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the pressurization and recirculation system HEPA filters and charcoal adsorbers and verifying that the pressurization system has operated for at least 10 hours with the heater on during the past 31 days.

b 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 that could have contaminated the charcoal adsorbers or HEPA filters in any ventilation zone communicating with the system by:

INSERT A

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM EMERGENCY FILTRATION/PRESSURIZATION SYSTEM (CREFS)

LIMITING CONDITION FOR OPERATION

3.7.7.1 Two Control Room Emergency Filtration/Pressurization System (CREFS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CREFS train inoperable, 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.

MODES 5, 6, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CREFS train inoperable, restore the inoperable system to OPERABLE status within 7 days or immediately place the OPERABLE CREFS train in the emergency recirculation mode or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With both CREFS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

* A one-time extension to 30 days for each train of the recirculation filtration function of CREFS is granted for implementation of control room cooling design changes.

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria of greater than or equal to 99.5% filter efficiency while operating the system at a flow rate indicated in Note 1 and using the following test procedures:

   (a) A visual inspection of the control room emergency air cleanup system shall be made before each DOP test or activated carbon adsorber section leak test in accordance with Section 5 of ANSI N510-1980.

   (b) An in-place DOP test for the HEPA filters shall be performed in accordance with Section 10 of ANSI N510-1980.

   (c) A charcoal adsorber section leak test with a gaseous halogenated hydrocarbon refrigerant shall be performed in accordance with Section 12 of ANSI N510-1980.

2. Verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

3. Verifying a system flow rate as indicated in Note 1 during system operation when tested in accordance with Section 8 of ANSI N510-1980.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of a representative carbon sample obtained in accordance with Section 13 of ANSI N510-1980 meets the laboratory testing efficiencies criteria given in Note 2 when tested with methyl iodide at 80°C and 70% relative humidity.

d. 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 system at a flow rate indicated in Note 1.

2. Verifying that the filter train starts on a Safety Injection Actuation test signal.#

Surveillance Requirement ~~4.7.7.e.2~~ does not apply in MODES 5 and 6.

4.7.7.d.2

SURVEILLANCE REQUIREMENTS (Continued)

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 the outside atmosphere during system operation.

4. Verifying that the pressurization system heater dissipates 7.5 ± 0.8 kw when tested in accordance with Section 14 of ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99.5% of the DOP when they are tested in-place in accordance with Section 10 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99.5% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with Section 12 of ANSI N510-1980 while operating the system at a flow rate indicated in Note 1.

Note 1.

a.	Control Room Recirculation Filter Unit	2000 cfm ± 10%
b.	Control Room Filter Unit	1000 cfm ± 10%
c.	Control Room Pressurization Filter Unit	300 cfm ± 10%

Note 2.

a.	Control Room Recirculation Filter Unit	≥ 99%
b.	Control Room Filter Unit	≥ 99%
c.	Control Room Pressurization	≥ 99.825%

Insert B

INSERT B

PLANT SYSTEMS

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

CONTROL ROOM AIR CONDITIONING SYSTEM (CRACS)

LIMITING CONDITION FOR OPERATION

3.7.7.2 Two Control Room Air Conditioning System (CRACS) trains shall be OPERABLE.

APPLICABILITY: ALL MODES, during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel.

ACTION:

MODES 1, 2, 3 and 4:

With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

MODES 5, 6 during movement of irradiated fuel assemblies, and during movement of loads over irradiated fuel:

a. With one CRACS train inoperable, restore the inoperable system to OPERABLE status within 30 days or immediately place the OPERABLE CRACS train in operation or immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

b. With two CRACS trains inoperable, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

SURVEILLANCE REQUIREMENTS

4.7.7.2 At least once per 18 months verify that each CRACS train has the capability to remove the assumed heat loads.

3/4 7.6.1 ULTIMATE HEAT SINK (RIVER)

This specification deleted.

3/4 7.6.2 ULTIMATE HEAT SINK (POND)

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available to either 1) provide normal cooldown of the facility, or 2) to 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 their design basis temperature. The measurement of the ground water seepage at least once per 5 years will provide assurance that the 30 day supply of water is available.

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

Insert C

The OPERABILITY of the control room 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. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

3/4.7.8 ECCS PUMP ROOM EXHAUST AIR FILTRATION SYSTEM (PENETRATION ROOM AIR FILTRATION SYSTEM)

The OPERABILITY of the penetration room air filtration system ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the accident analyses.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

INSERT C

3/4.7.7 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The control room emergency filtration/pressurization system (CREFS) consists of two independent, redundant trains that recirculate and filter the control room air, and two independent, redundant trains that pressurize the control room. 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 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criteria 19 of Appendix "A", 10CFR50.

When one CREFS train is inoperable, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

Cumulative operation of the system with the heaters on for at least 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filter.

The control room air conditioning system (CRACS) consists of two independent, redundant trains that provide cooling of recirculated control room air. Each control room air conditioning (CRAC) train is inoperable if it is not capable of removing the required heat load for plant conditions. The actual heat load and the heat removal capability needed to adequately cool the control room is dependent upon factors such as outdoor air temperature.

With one CRAC train inoperable, the inoperable train must be returned to OPERABLE status within 30 days. This Allowed Outage Time is based on the low probability of complete loss of control room cooling due to the redundancy of the support systems, the capability of the OPERABLE train to provide the required cooling, the potential that plant staff actions can restore or mitigate the effects of component failures, and the time available to respond as loss of control room cooling does not have an immediate, irreversible impact.

While in MODES 5 and 6 during movement of irradiated fuel assemblies or movement of loads over irradiated fuel, if both trains of CRAC cannot be restored to OPERABLE status within 30 days, an OPERABLE CRAC train must be placed in operation immediately; otherwise, immediately suspend movement of irradiated fuel assemblies and movement of loads over irradiated fuel.

The OPERABILITY of the control room emergency 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.