CP&L

Carolina Power & Light Company
PO Box 165
New Hill NC 27562

James Scarola
Vice President
Harris Nuclear Plant

SERIAL: HNP-00-047
10CFR50.90

APR - 7 2000

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REQUEST FOR LICENSE AMENDMENT
TECHNICAL SPECIFICATIONS 3/4.3.3.1, 3/4.7.6, 3/4.7.7, and 3/4.9.12

Dear Sir or Madam:

In accordance with the Code of Federal Regulations, Title 10, Part 50.90, Carolina Power & Light Company (CP&L) requests a revision to the Technical Specifications (TS) for the Harris Nuclear Plant (HNP). The proposed amendment revises TS 3/4.7.6, "Control Room Emergency Filtration System", 3/4.7.7 "Reactor Auxiliary Building Emergency Exhaust System", 3/4.9.12 "Fuel Handling Building Emergency Exhaust System" and associated Bases. Specifically, HNP proposes to revise these TS to provide an Action when the Control Room Emergency Filtration System or Reactor Auxiliary Building Emergency Exhaust System ventilation boundary is inoperable and a note that allows an applicable ventilation boundary to be open, intermittently under administrative controls. Additionally, HNP proposes to modify TS 3/4.3.3.1 "Radiation Monitoring for Plant Operations" to provide consistency between the applicability of the Control Room Emergency Filtration System and the radiation monitors that initiate a Control Room Isolation signal.

Enclosure 1 provides a description of the proposed changes and the basis for the changes. Enclosure 2 details, in accordance with 10 CFR 50.91(a), the basis for the CP&L's determination that the proposed changes do not involve a significant hazards consideration. Enclosure 3 provides an environmental evaluation which demonstrates that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental assessment is required for approval of this amendment request. Enclosure 4 provides page change instructions for incorporating the proposed revisions. Enclosure 5 provides the proposed Technical Specification pages.

In accordance with 10 CFR 50.91(b), CP&L is providing the State of North Carolina with a copy of the proposed license amendment.

CP&L requests that the proposed amendment be issued such that implementation will occur within 60 days of issuance to allow time for procedure revision and orderly incorporation into copies of the Technical Specifications.

A001

Please refer any questions regarding this submittal to Mr. J. H. Eads at (919) 362-2646.

Sincerely,

James Scarola

James Scarola

MSE/mse

Enclosures:
1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Environmental Considerations
4. Page Change Instructions
5. Technical Specification Pages

James Scarola, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief, and the sources of his information are employees, contractors, and agents of Carolina Power & Light Company.

Darlene S. Yarborough

DARLENE S. YARBOROUGH
NOTARY
***
PUBLIC
HARNETT COUNTY, NC

Notary (Seal)
My commission expires:
2/21/2005

c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Mel Fry, Acting Director, N.C. DEHNR
Mr. R. J. Laufer, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator

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BASIS FOR CHANGE REQUEST

Background

On October 8, 1999, Harris Nuclear Plant (HNP) reported a condition which resulted in exceeding the requirements of Technical Specifications (TS) for the Control Room Emergency Filtration System (CREFS). Specifically, HNP reported blocking open CREFS ventilation boundary doors to perform TS Surveillance Requirement testing (Plant Procedure EST-104, Incore Thermocouple and RTD Cross Calibration Data Compilation). Recently, HNP has discovered additional activities that resulted in breaches of CREFS ventilation boundaries and was reported in LER-00-001.

The Control Room Emergency Filtration System (CREFS) consists of two 100 percent capacity redundant fan and filter subsystems. Normally, the CREFS is in a standby alignment. During an accident, the normal outside air intake for CREFS isolates and both emergency recirculation fans automatically start. Following verification of isolation of control room ventilation, an operator places one of two emergency filtration units in standby. Next, the operator selects and opens one emergency outside air intake to pressurize the control room to 1/8 inwg. at less than or equal to 315 cfm flow.

The Fuel Handling Emergency Exhaust System (FHBEES) consists of two 100 percent capacity redundant fan and filter subsystems. Normally, the FHBEES is in a standby alignment. Radiation monitors, located along the walls of each fuel pool, (a total of 24 area monitors is provided) will alarm on high radiation and initiate isolation of the fuel handling building normal supply and exhaust ventilation. The radiation monitors will also initiate starting the FHBEES. The FHBEES operates to maintain areas around the fuel pools under a negative pressure of 1/8 inwg. relative to outside atmosphere.

The Reactor Auxiliary Building Emergency Exhaust System (RABEES) consists of two 100 percent capacity redundant fan and filter subsystems. Normally, the RABEES is in a standby alignment. A safety injection signal isolates non-essential portions of the ventilation system and energizes the two RABEES units. Negative pressure is established at 1/8 inwg. relative to outside atmosphere by the airflow control system.

The CREFS, FHBEES, and RABEES are provided with redundant fans and filtration subsystems. A TS Limiting Condition for Operation (LCO) is provided for each TS fan and filter subsystem. However, these TS systems service common areas which rely on a ventilation boundary to maintain operability of the applicable system. There is no applicable LCO Action for conditions that breach TS ventilation boundaries that are common to both units in a system. Therefore, any breach of these ventilation boundary common areas currently requires entry into TS 3.0.3 (if in a mode requiring the applicable system to be operable) or requires immediate action to suspend fuel movement.

TSTF-287 (revision 5) was developed by the Westinghouse Owner's Group to provide an allowed out of service time for inoperability of TS emergency exhaust ventilation systems due solely to an inoperable ventilation boundary. Additionally, a note is proposed to allow ventilation boundaries to be open under administrative controls. The justification for this proposed change is that these changes are acceptable based on the low probability of a design basis accident occurring during the 24 hour completion time and compensatory measures available to minimize dose consequences of an event during this time.

On September 13, 1999, McGuire Nuclear Station Unit 1 and 2 submitted a proposed TS change to allow up to 24 hours to restore the Control Room Pressure Boundary (CRPB) to operable status when two Control Room Area Ventilation Systems are inoperable due to an inoperable CRPB in Modes 1-4. Additionally, a Limiting Condition for Operation note was proposed to allow the CPRB to be opened intermittently under Administrative Controls without affecting Control Room Area Ventilation System operability. On September 22, the NRC issued License Amendments 187 and 168 to McGuire Nuclear Station Unit 1 and 2. The NRC specified in the evaluation that these changes were acceptable based on the low probability of a design basis accident occurring during the 24 hour completion time and compensatory measures available to minimize dose consequences of an event during this time.

Proposed Change

Harris Nuclear Plant (HNP) proposes to modify Technical Specifications (TS) 3/4.7.6, "Control Room Emergency Filtration System", 3/4.7.7 "Reactor Auxiliary Building Emergency Exhaust System", 3/4.9.12 "Fuel Handling Building Emergency Exhaust System", and associated Bases. Specifically, HNP proposes to revise the applicable TS to provide an Action when the associated ventilation boundary is inoperable and a note that allows the associated ventilation boundary to be opened, intermittently under administrative controls. Additionally, HNP proposes to add "movement of irradiated fuel and movement of loads over spent fuel pools" to the applicability requirements and associated Action requirements.

HNP proposes to modify TS 3/4.3.3.1 "Radiation Monitoring for Plant Operations" to provide consistency between the applicability of the Control Room Emergency Filtration System and the Radiation Monitors that initiate a Control Room Isolation signal.

Basis

The proposed LCOs are modified by a note allowing the applicable ventilation boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for the applicable isolation is indicated. The administrative controls establish appropriate compensatory measures to minimize the consequences of an event during this time.

The proposed LCO Action, for an inoperable ventilation boundary for CREFS (Modes 1-4), requires action to restore an operable control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into the condition. The 24 hour allowed out of service time is

reasonable based on the low probability of a design basis accident occurring during this time period and the use of compensatory measures. The 24 hour allowed out of service time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the control room boundary.

The proposed LCO Action, for an inoperable ventilation boundary for RABEES, requires action to restore an operable RABEES boundary within 24 hours. During the period that the RABEES boundary is inoperable, appropriate compensatory measures (consistent with GDC 19, 60, 64, and 10 CFR Part 100) should be utilized to protect plant personnel from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns for intentional and unintentional entry into the condition. The 24 hour allowed out of service time is reasonable based on the low probability of a design basis accident occurring during this time period and the use of compensatory measures. The 24 hour allowed out of service time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the RABEES boundary. HNP is not proposing a 24 hour action for FHBEES.

Radiation monitors are located throughout the RABEES ventilation area and adjacent areas in the Reactor Auxiliary Building to identify radiological hazards for the protection of plant personnel. Additionally, radiation monitors are located in the Control Room Area and air intakes for the Control Room Ventilation System. Current plant procedures require evacuation of non-essential personnel in the event of high radiation. Breathing equipment is provided for personnel required to be in plant areas to control fires or to continue vital plant operations.

Self-contained breathing apparatus (SCBA), using full face positive pressure masks, approved by National Institute for Occupational Safety and Health (NIOSH), with a minimum capacity of one half hour, are provided for fire brigade and control room personnel. Current plant procedures require control room personnel to don an SCBA or evacuate to the Auxiliary Control Panel in the event of high airborne radiation in the control room.

An additional hour of air in bottles is located onsite for each self-contained breathing unit, used by fire brigade and control room personnel, with an onsite six hour supply of reserve air and refilling manifolds for recharging air bottles. The six hour reserve supply is provided from storage cylinders, with the ability to recharge from an approved breathing air compressor.

HNP will commit to have written procedures available describing compensatory measures taken in the event of an intentional or unintentional entry into the 24 hour allowed out of service time for an applicable inoperable ventilation boundary.

Additionally, current HNP TS do not restrict movement of irradiated fuel or movement of loads over spent fuel pools during periods when CREFS are inoperable. Therefore, HNP proposes to modify the TS to provide guidance when CREFS are inoperable during fuel movement or movement of loads over fuel pools. This aspect of the proposed change is consistent with NUREG-1431, Revision 1. HNP also proposes changing TS 3.3.4, "Radiation Monitoring", to specify applicability of the Control Room Isolation Radiation Monitors during irradiated fuel movement and movement of loads over spent fuel pools.

Conclusion:

The proposed TS changes are consistent with TSTF-287 (revision 5). Additionally, HNP is proposing a change similar to the McGuire Nuclear Station, Units 1 and 2 for control room ventilation (SER for License Amendment 187 and 168). HNP proposes this change based on the low probability of a design basis accident occurring during the 24 hour completion time and compensatory measures available to minimize dose consequences of an event during this time.

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10 CFR 50.92 EVALUATION

The Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazards consideration exists. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this proposed license amendment request and determined that its adoption would not involve a significant hazards determination. The bases for this determination are as follows:

Proposed Change

Harris Nuclear Plant (HNP) proposes to modify Technical Specifications (TS) 3/4.7.6, "Control Room Emergency Filtration System", 3/4.7.7 "Reactor Auxiliary Building Emergency Exhaust System", 3/4.9.12 "Fuel Handling Building Emergency Exhaust System", and associated Bases. Specifically, HNP proposes to revise the applicable TS to provide an Action when the associated ventilation boundary is inoperable and a note that allows the associated ventilation boundary to be open, intermittently, under administrative controls. Additionally, HNP proposes to add "movement of irradiated fuel and movement of loads over spent fuel pools" to the applicability requirements and associated Action requirements.

HNP proposes to modify TS 3/4.3.3.1 "Radiation Monitoring for Plant Operations" to provide consistency between the applicability of the Control Room Emergency Filtration System and the Radiation Monitors that initiate a Control Room Isolation signal.

Basis

This change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   Ventilation systems are not accident initiating systems as described in the Final Safety Analysis Report. The changes are based on the low probability of a design basis accident occurring during the 24 hour completion time and compensatory measures available to minimize dose consequences of an event during this time. The proposed change does not affect another Structure, System, or Component.

   Current HNP TS do not restrict fuel movement in the fuel handling or loads over spent fuel pools concurrent with an inoperable Control Room Emergency Filtration System. Providing restrictions for fuel movement and loads over spent fuel pools preserves

assumptions made in the fuel handling accident analysis. The addition of applicability requirements for fuel movement and movement of loads over spent fuel pools is consistent with NUREG-1431, Revision 1, and is more restrictive than current HNP TS.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

   Ventilation systems are not accident initiating systems as described in the Final Safety Analysis Report. As such, the failure of the ventilation system to operate properly or a premature actuation of the ventilation system can not initiate an accident.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed amendment does not involve a significant reduction in the margin of safety.

   The proposed change to ventilation systems does not significantly affect any of the parameters that relate to the margin of safety as described in the Bases of the TS or the FSAR. Accordingly, NRC Acceptance Limits are not affected by this change. The changes are based on the low probability of a design basis accident occurring during the 24 hour completion time and compensatory measures available to minimize dose consequences of an event during this time.

   The addition of applicability requirements for Control Room Emergency Filtration System during movement of irradiated fuel assemblies and movement loads over spent fuel pools provide additional margin not currently provided in HNP TS.

   Therefore, the proposed change does not involve a significant reduction in the margin of safety.

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ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) provides criterion for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; (3) result in a significant increase in individual or cumulative occupational radiation exposure. Carolina Power & Light Company has reviewed this request and determined that the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the amendment. The basis for this determination follows:

Proposed Change

Harris Nuclear Plant (HNP) proposes to modify Technical Specifications (TS) 3/4.7.6, "Control Room Emergency Filtration System", 3/4.7.7 "Reactor Auxiliary Building Emergency Exhaust System", 3/4.9.12 "Fuel Handling Building Emergency Exhaust System", and associated Bases. Specifically, HNP proposes to revise the applicable TS to provide an Action when the associated ventilation boundary is inoperable and a note that allows the associated ventilation boundary to be open, intermittently, under administrative controls. Additionally, HNP proposes to add "movement of irradiated fuel and movement of loads over spent fuel pools" to the applicability requirements and associated Action requirements.

HNP proposes to modify TS 3/4.3.3.1 "Radiation Monitoring for Plant Operations" to provide consistency between the applicability of the Control Room Emergency Filtration System and the Radiation Monitors that initiate a Control Room Isolation signal.

Basis

The change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) for the following reasons:

1. As demonstrated in Enclosure 2, the proposed amendment does not involve a significant hazards consideration.

2. The proposed amendment does not result in a significant change in the types or increase in the amounts of any effluents that may be released offsite.

   The change does not introduce any new effluents or significantly increase the quantities of existing effluents. As such, the change cannot significantly affect the types or amounts of any effluents that may be released offsite.

3. The proposed amendment does not result in a significant increase in individual or cumulative occupational radiation exposure.

The proposed change does not result in any physical plant changes or new surveillances which would require additional personnel entry into radiation controlled areas. Therefore, the amendment has no significant affect on either individual or cumulative occupational radiation exposure.

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PAGE CHANGE INSTRUCTIONS

Removed Page	Inserted Page
3/4 3-51	3/4 3-51
3/4 3-52	3/4 3-52
3/4 3-55	3/4 3-55
3/4 7-14	3/4 7-14
3/4 7-15	3/4 7-15
3/4 7-16	3/4 7-16
3/4 7-17	3/4 7-17
3/4 7-18	3/4 7-18
3/4 9-14	3/4 9-14
B3/4 7-3	B3/4 7-3
NA	B3/4 7-3a
B3/4 7-4	B3/4 7-4
B3/4 7-5	B3/4 7-5
B3/4 9-3	B3/4 9-3

ENCLOSURE 5 TO SERIAL: HNP-00-047

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TECHNICAL SPECIFICATION PAGES

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment Radioactivity--					
a. Containment Ventilation Isolation Signal Area Monitors	2	3	1, 2, 3, 4, 6	#	27
b. Airborne Gaseous Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 1.0 \times 10^{-3}$ μCi/ml	26, 27
2) Pre-entry Purge	1	1	##	$\leq 2.0 \times 10^{-3}$ μCi/ml	30
c. Airborne Particulate Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 4.0 \times 10^{-8}$ μCi/ml	26, 27
2) Pre-entry Purge	1	1	##	$\leq 1.5 \times 10^{-8}$ μCi/ml	30
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation					
a. Fuel Handling Building Operating Floor--South Network	1/train***	1/train 2 trains	**	$\leq$ 100 mR/hr	28
b. Fuel Handling Building Operating Floor--North Network	1/train***	1/train 2 trains	*	$\leq$ 100 mR/hr	28
3. Control Room Outside Air Intakes--					
a. Normal Outside Air Intake Isolation	1	2	All	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

Delete

Delete

Add — 1, 2, 3, 4, 5, 6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.

Delete

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
3. Control Room Outside Air Intakes-- (Continued)					
b. Emergency Outside Air Intake Isolation--South Intake	1	2	All	$\leq 4.9 \times 10^{-6}$ μCi/ml	29
c. Emergency Outside Air Intake Isolation--North Intake	1	2	All	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

Delete

Add – 1, 2, 3, 4, 5, 6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.

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TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	DIGITAL CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Control Room Outside Air Intakes				
a. Normal Outside Air Intake Isolation	S	R	Q	All
b. Emergency Outside Air Intake Isolation--South Intake	S	R	Q	All
c. Emergency Outside Air Intake Isolation--North Intake	S	R	Q	All

Delete

Add 1, 2, 3, 4, 5, 6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

\# Whenever pre-entry purge system is to be used.

\#\# Prior to operation of pre-entry purge unless performed within the last 92 days.

Delete 1

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3/4.7.6 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

Delete

LIMITING CONDITION FOR OPERATION

Insert A

3.7.6 Two independent Control Room Emergency Filtration Systems shall be OPERABLE.

APPLICABILITY: All MODES.

ACTION:

MODES 1, 2, 3 and 4:

With one Control Room Emergency Filtration 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:

a. With one Control Room Emergency Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Emergency Filtration System in the recirculation mode.

b. With both Control Room Emergency Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Filtration System, required to be in the recirculation mode by ACTION a., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Room Emergency Filtration 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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.

Add

* The control room boundary may be opened under administrative controls as described in the Bases

Add

Insert A

3.7.6 Two independent Control Room Emergency Filtration Systems shall be OPERABLE. *

APPLICABILITY:
a. MODES 1, 2, 3, and 4
b. MODES 5 and 6
c. During movement of irradiated fuel assemblies and movement of loads over spent fuel pools.

ACTION:

a. MODES 1, 2, 3, and 4

----------Note----------
In addition to the Actions below, perform Action c. if applicable
---

1. With one Control Room Emergency Filtration 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.
2. With two Control Room Emergency Filtration Systems inoperable due to an inoperable control room boundary, restore the control room boundary to OPERABLE status within 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. MODES 5 and 6

----------Note----------
In addition to the Actions below, perform Action c. if applicable
---

1. With one Control Room Emergency Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Emergency Filtration System in the recirculation mode.
2. With both Control Room Emergency Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Filtration System required to be in the recirculation mode by Action b.1., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel.

Insert A (continued)

c. During movement of irradiated fuel assemblies or movement of loads over spent fuel pools.

1. With one Control Room Emergency Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Emergency Filtration System in the recirculation mode.
2. With both Control Room Emergency Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Filtration System required to be in the recirculation mode by Action c.1., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving movement of irradiated fuel assemblies or movement of loads over spent fuel pools.

SURVEILLANCE REQUIREMENTS (Continued)

Revisions 2, March 1978, and the system flow rate is 4000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980; and

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative 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, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

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 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, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

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 5.1 inches water gauge while operating the system at a flow rate of 4000 cfm ± 10%;

2. Verifying that, on either a Safety Injection or a High Radiation test signal, the system automatically switches into an isolation with recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks;

3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch Water Gauge at less than or equal to a pressurization flow of 315 cfm relative to adjacent areas during system operation;

4. Verifying that the heaters dissipate 14 ± 1.4 kW when tested in accordance with ANSI N510-1980; and

5. Deleted.

1

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Add

SURVEILLANCE REQUIREMENTS (Continued)

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the unit 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 4000 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration 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 4000 cfm ± 10%.

3/4.7.7 REACTOR AUXILIARY BUILDING (RAB) EMERGENCY EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent RAB Emergency Exhaust Systems shall be OPERABLE.* Add

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

ACTION:

a. Add With one RAB Emergency Exhaust 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 two RAB Emergency Exhaust Systems inoperable due to an inoperable RAB Emergency Exhaust System boundary, restore the RAB Emergency Exhaust System boundary to OPERABLE status within 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours. Add

SURVEILLANCE REQUIREMENTS

4.7.7 Each RAB Emergency Exhaust 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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 Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the unit flow rate is 6800 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980;

   2. Verifying, within 31 days after removal, that a laboratory analysis of a representative 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, by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

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 Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978

Add

* The RAB Emergency Exhaust Systems boundary may be opened under administrative controls as described in the Bases.

SURVEILLANCE REQUIREMENTS (Continued)

meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber bank is less than 4.1 inches water gauge while operating the unit at a flow rate of 6800 cfm ± 10%,

2. Verifying that the system starts on a Safety Injection test signal,

3. Verifying that the system maintains the areas served by the exhaust system at a negative pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere,

4. Verifying that the filter cooling bypass valve is locked in the balanced position, and

5. Verifying that the heaters dissipate 40 ± 4 kW when tested in accordance with ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the unit satisfies the in-place penetration leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the unit at a flow rate of 6800 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the unit satisfies the in-place penetration 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 unit at a flow rate of 6800 cfm ± 10%.

Add Amendment No. 1

3/4.9.12 FUEL HANDLING BUILDING EMERGENCY EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 Two independent Fuel Handling Building Emergency Exhaust System Trains shall be OPERABLE*. Add

APPLICABILITY: Whenever irradiated fuel is in a storage pool.

ACTION:

a. With one Fuel Handling Building Emergency Exhaust System Train inoperable, fuel movement within the storage pool or crane operation with loads over the storage pool may proceed provided the OPERABLE Fuel Handling Building Emergency Exhaust System Train is capable of being powered from an OPERABLE emergency power source and is in operation and discharging through at least one train of HEPA filters and charcoal adsorber.

b. With no Fuel Handling Building Emergency Exhaust System Trains OPERABLE, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until at least one Fuel Handling Building Emergency Exhaust System Train is restored to OPERABLE status.

c. The provisions of Specification 3.0.3 are not applicable.

Delete 1

SURVEILLANCE REQUIREMENTS

4.9.12 The above required Fuel Handling Building Emergency Exhaust System trains 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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 Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the unit flow rate is 6600 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

Add

*The Fuel Handling Building Emergency Exhaust System boundary may be opened under administrative controls as described in the Bases.

Delete

3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.7.4 EMERGENCY SERVICE WATER SYSTEM

The OPERABILITY of the Emergency Service Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.7.5 ULTIMATE HEAT SINK

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available 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," Rev. 2, January 1976.

3/4.7.6 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

The OPERABILITY of the Control Room Emergency Filtration System ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. Operation of the system with the heaters operating 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 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. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon a removal efficiency of 99% for elemental, particulate and organic forms of radioiodine. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

Insert B

3/4.7.7 REACTOR AUXILIARY BUILDING EMERGENCY EXHAUST SYSTEM

The OPERABILITY of the Reactor Auxiliary Building Emergency Exhaust System ensures that radioactive materials leaking from the ECCS equipment within the

Add

Amendment No.

Insert B

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

If the control room boundary is inoperable in MODES 1,2,3,and 4, the CREFS trains cannot perform their intended functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns. HNP will have written procedures available describing compensatory measures to be taken in the event of an intentional or unintentional entry into this condition. The 24 hour allowed out of service time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the control room boundary.

REACTOR AUXILIARY BUILDING EMERGENCY EXHAUST SYSTEM (Continued)

pump room following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating 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 assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon removal efficiencies of 95% for organic and elemental forms of radioiodine and 99% for particulate forms. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

Insert C

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 Manager-Technical Support. 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 deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

Surveillance to demonstrate OPERABILITY is by performance of an augmented inservice inspection program.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

Add

Insert C

The LCO is modified by a note allowing the Reactor Auxiliary Building Emergency Exhaust System (RABEES) ventilation boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for RABEES isolation is indicated.

If the RABEES boundary is inoperable in MODES 1,2,3,and 4, the RABEES trains cannot perform their intended functions. Actions must be taken to restore an OPERABLE RABEES boundary within 24 hours. During the period that the RABEES boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19, 60, 64, and 10 CFR Part 100) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns. HNP will have written procedures available describing compensatory measures to be taken in the event of an intentional or unintentional entry into this condition. The 24 hour allowed out of service time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the RABEES boundary.

SNUBBERS (Continued)

The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubbers, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

3/4.7.9 SEALED SOURCE CONTAMINATION

The sources requiring leak tests are specified in 10 CFR 31.5(c)(2)(ii). The limitation on removable contamination is required by 10 CFR 31.5(c)5. This limitation will ensure that leakage from Byproduct, Source, and Special Nuclear Material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with Surveillance Requirements commensurate with the probability of damage to a source in that group. Those sources that are frequently handled are required to be tested more often than those that are not. Sealed sources that are continuously enclosed within a shielded mechanism (i.e., sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

3/4.7.10 DELETED

3/4.7.11 DELETED

3/4.7.12 DELETED

Delete 1

3.4.7.13 ESSENTIAL SERVICES CHILLED WATER SYSTEM

The OPERABILITY of the Emergency Service Chilled Water System ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

Delete Add 1

3/4.9.10 AND 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND NEW AND SPENT FUEL POOLS

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 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.

Delete

According to Regulatory Guide 1.25, Revision 0, there is 23 feet of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 feet of water, the assumptions of Regulatory Guide 1.25, Revision 0, can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontal on top of the spent fuel racks; however, there may be <23 feet of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail.

3/4.9.12 FUEL HANDLING BUILDING EMERGENCY EXHAUST SYSTEM

The limitations on the Fuel Handling Building Emergency Exhaust System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating 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. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon removal efficiencies of 95% for organic and elemental forms of radioiodine and 99% for particulate forms. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

Insert D

Delete

Insert D

The LCO is modified by a note allowing the Fuel Handling Building Emergency Exhaust System (FHBEES) ventilation boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for FHBEES isolation is indicated.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
1. Containment Radioactivity--					
a. Containment Ventilation Isolation Signal Area Monitors	2	3	1, 2, 3, 4, 6	#	27
b. Airborne Gaseous Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 1.0 \times 10^{-3}$ μCi/ml	26, 27
2) Pre-entry Purge	1	1	##	$\leq 2.0 \times 10^{-3}$ μCi/ml	30
c. Airborne Particulate Radioactivity					
1) RCS Leakage Detection	1	1	1, 2, 3, 4	$\leq 4.0 \times 10^{-8}$ μCi/ml	26, 27
2) Pre-entry Purge	1	1	##	$\leq 1.5 \times 10^{-8}$ μCi/ml	30
2. Spent Fuel Pool Area-- Fuel Handling Building Emergency Exhaust Actuation					
a. Fuel Handling Building Operating Floor--South Network	1/train***	1/train 2 trains	**	$\leq$ 100 mR/hr	28
b. Fuel Handling Building Operating Floor--North Network	1/train***	1/train 2 trains	*	$\leq$ 100 mR/hr	28
3. Control Room Outside Air Intakes--					
a. Normal Outside Air Intake Isolation	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS

INSTRUMENT	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	ACTION
3. Control Room Outside Air Intakes-- (Continued)					
b. Emergency Outside Air Intake Isolation--South Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29
c. Emergency Outside Air Intake Isolation--North Intake	1	2	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.	$\leq 4.9 \times 10^{-6}$ μCi/ml	29

TABLE 4.3-3 (Continued)

RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	DIGITAL CHANNEL OPERATIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
3. Control Room Outside Air Intakes				
a. Normal Outside Air Intake Isolation	S	R	Q	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
b. Emergency Outside Air Intake Isolation--South Intake	S	R	Q	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.
c. Emergency Outside Air Intake Isolation--North Intake	S	R	Q	1,2,3,4,5,6 and during movement of irradiated fuel assemblies and movement of loads over spent fuel pools.

TABLE NOTATIONS

* With irradiated fuel in the Northend Spent Fuel Pool or transfer of irradiated fuel from or to a spent fuel shipping cask.

** With irradiated fuel in the Southend Spent Fuel Pool or New Fuel Pool.

\# Whenever pre-entry purge system is to be used.

\#\# Prior to operation of pre-entry purge unless performed within the last 92 days.

3/4.7.6 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6 Two independent Control Room Emergency Filtration Systems shall be OPERABLE.*

APPLICABILITY:
a. MODES 1, 2, 3, and 4
b. MODES 5 and 6
c. During movement of irradiated fuel assemblies and movement of loads over spent fuel pools

ACTION:

a. MODES 1, 2, 3 and 4:

----------NOTE----------
In addition to the Actions below, perform Action c. if applicable.
---

1. With one Control Room Emergency Filtration 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.

2. With two Control Room Emergency Filtation Systems inoperable due to an inoperable control room boundary, restore the control room boundary to OPERABLE status within 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. MODES 5 and 6

----------NOTE----------
In addition to the Actions below, perform Action c. if applicable.
---

1. With one Control Room Emergency Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Emergency Filtration System in the recirculation mode.

2. With both Control Room Emergency Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Filtration System required to be in the recirculation mode by ACTION b.1., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel.

* The control room boundary may be opened under administrative controls as described in the Bases.

3/4.7.6 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

c. During movement of irradiated fuel assemblies or movement of loads over spent fuel pools.

   1. With one Control Room Emergency Filtration System inoperable, restore the inoperable system to OPERABLE status within 7 days or initiate and maintain operation of the remaining OPERABLE Control Room Emergency Filtration System in the recirculation mode.

   2. With both Control Room Emergency Filtration Systems inoperable, or with the OPERABLE Control Room Emergency Filtration System required to be in the recirculation mode by Action c.1., not capable of being powered by an OPERABLE emergency power source, suspend all operations involving movement of irradiated fuel assemblies or movement of loads over spent fuel pools.

SURVEILLANCE REQUIREMENTS

4.7.6 Each Control Room Emergency Filtration 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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 4000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980; and

   2. Verifying, within 31 days after removal, that a laboratory analysis of a representative 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, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

SURVEILLANCE REQUIREMENTS (Continued)

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 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, by showing a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

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 5.1 inches water gauge while operating the system at a flow rate of 4000 cfm ± 10%;

2. Verifying that, on either a Safety Injection or a High Radiation test signal, the system automatically switches into an isolation with recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks;

3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/8 inch Water Gauge at less than or equal to a pressurization flow of 315 cfm relative to adjacent areas during system operation;

4. Verifying that the heaters dissipate 14 ± 1.4 kW when tested in accordance with ANSI N510-1980; and

5. Deleted.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the unit 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 4000 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration 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 4000 cfm ± 10%.

3/4.7.7 REACTOR AUXILIARY BUILDING (RAB) EMERGENCY EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 Two independent RAB Emergency Exhaust Systems shall be OPERABLE.*

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

ACTION:

a. With one RAB Emergency Exhaust 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 two RAB Emergency Exhaust Systems inoperable due to an inoperable RAB Emergency Exhaust System boundary, restore the RAB Emergency Exhaust System boundary to OPERABLE status within 24 hours. Otherwise, be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.7 Each RAB Emergency Exhaust 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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 Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the unit flow rate is 6800 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980;

2. Verifying, within 31 days after removal, that a laboratory analysis of a representative 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, by showing a methyl

* The RAB Emergency Exhaust Systems boundary may be opened under administrative controls as described in the Bases.

SURVEILLANCE REQUIREMENTS (Continued)

iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

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 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, by showing a methyl iodide penetration of less than 1.0% when tested at a temperature of 30°C and at a relative humidity of 70% in accordance with ASTM D3803.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber bank is less than 4.1 inches water gauge while operating the unit at a flow rate of 6800 cfm ± 10%,

2. Verifying that the system starts on a Safety Injection test signal,

3. Verifying that the system maintains the areas served by the exhaust system at a negative pressure of greater than or equal to 1/8 inch water gauge relative to the outside atmosphere,

4. Verifying that the filter cooling bypass valve is locked in the balanced position, and

5. Verifying that the heaters dissipate 40 ± 4 kW when tested in accordance with ANSI N510-1980.

e. After each complete or partial replacement of a HEPA filter bank, by verifying that the unit satisfies the in-place penetration leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the unit at a flow rate of 6800 cfm ± 10%; and

f. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the unit satisfies the in-place penetration 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 unit at a flow rate of 6800 cfm ± 10%.

3/4.9.12 FUEL HANDLING BUILDING EMERGENCY EXHAUST SYSTEM

LIMITING CONDITION FOR OPERATION

3.9.12 Two independent Fuel Handling Building Emergency Exhaust System Trains shall be OPERABLE.*

APPLICABILITY: Whenever irradiated fuel is in a storage pool.

ACTION:

a. With one Fuel Handling Building Emergency Exhaust System Train inoperable, fuel movement within the storage pool or crane operation with loads over the storage pool may proceed provided the OPERABLE Fuel Handling Building Emergency Exhaust System Train is capable of being powered from an OPERABLE emergency power source and is in operation and discharging through at least one train of HEPA filters and charcoal adsorber.

b. With no Fuel Handling Building Emergency Exhaust System Trains OPERABLE, suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until at least one Fuel Handling Building Emergency Exhaust System Train is restored to OPERABLE status.

c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.12 The above required Fuel Handling Building Emergency Exhaust System trains 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 charcoal 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 charcoal adsorber housings, or (2) following significant 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 Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the unit flow rate is 6600 cfm ± 10% during system operation when tested in accordance with ANSI N510-1980.

* The Fuel Handling Building Emergency Exhaust System boundary may be opened under administrative controls as described in the Bases.

3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.7.4 EMERGENCY SERVICE WATER SYSTEM

The OPERABILITY of the Emergency Service Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.7.5 ULTIMATE HEAT SINK

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available 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," Rev. 2, January 1976.

3/4.7.6 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

The OPERABILITY of the Control Room Emergency Filtration System ensures that the control room will remain habitable for operations personnel during and following all credible accident conditions. Operation of the system with the heaters operating 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 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. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon a removal efficiency of 99% for elemental, particulate and organic forms of radioiodine. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

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

CONTROL ROOM EMERGENCY FILTRATION SYSTEM (Continued)

If the control room boundary is inoperable in MODES 1, 2, 3, and 4, the CREFS trains cannot perform their intended functions. Actions must be taken to restore an OPERABLE control room boundary within 24 hours. During the period that the control room boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19) should be utilized to protect control room operators from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns. HNP will have written procedures available describing compensatory measures to be taken in the event of an intentional or unintentional entry into this condition. The 24 hour allowed out of service time is a typically resonable time to diagnose, plan and possibly repair, and test most problems with the control room boundary.

3/4.7.7 REACTOR AUXILIARY BUILDING EMERGENCY EXHAUST SYSTEM

The OPERABILITY of the Reactor Auxiliary Building Emergency Exhaust System ensures that radioactive materials leaking from the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. Operation of the system with the heaters operating 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 assumed in the safety analyses. ANSI N510-1980 will be used as a procedural guide for surveillance testing. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon removal efficiencies of 95% for organic and elemental forms of radioiodine and 99% for particulate forms. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

The LCO is modified by a note allowing the Reactor Auxiliary Building Emergency Exhaust System (RABEES) ventilation boundary to be opened intermittently under administrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous conmmunication with the control room. This individual will have a method to rapidly close the opening when a need for RABEES isolation is indicated.

If the RABEES boundary is inoperable in MODES 1, 2, 3, and 4, the RABEES trains cannot perform their intended functions. Actions must be taken to restore an OPERABLE RABEES boundary within 24 hours. During the period that the RABEES boundary is inoperable, appropriate compensatory measures (consistent with the intent of GDC 19, 60, 64, and 10 CFR Part 100) should be utilized to protect plant personnel from potential hazards such as radioactive contamination, toxic chemicals, smoke, temperature and relative humidity, and physical security. Preplanned measures should be available to address these concerns. HNP will have written procedures available describing compensatory measures to be taken in the event of an intentional or unintentional entry into this condition. The 24 hour allowed out of service time is a typically reasonable time to diagnose, plan and possibly repair, and test most problems with the RABEES boundary.

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 Manager-Technical Support. 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 deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

Surveillance to demonstrate OPERABILITY is by performance of an augmented inservice inspection program.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubbers, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

3/4.7.9 SEALED SOURCE CONTAMINATION

The sources requiring leak tests are specified in 10 CFR 31.5(c)(2)(ii). The limitation on removable contamination is required by 10 CFR 31.5(c)5. This limitation will ensure that leakage from Byproduct, Source, and Special Nuclear Material sources will not exceed allowable intake values.

Sealed sources are classified into three groups according to their use, with Surveillance Requirements commensurate with the probability of damage to a source in that group. Those sources that are frequently handled are required to be tested more often than those that are not. Sealed sources that are continuously enclosed within a shielded mechanism (i.e., sealed sources within radiation monitoring or boron measuring devices) are considered to be stored and need not be tested unless they are removed from the shielded mechanism.

3/4.7.10 DELETED

3/4.7.11 DELETED

3/4.7.12 DELETED

3.4.7.13 ESSENTIAL SERVICES CHILLED WATER SYSTEM

The OPERABILITY of the Emergency Service Chilled Water System ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

3/4.9.10 AND 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND NEW AND SPENT FUEL POOLS

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 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.

According to Regulatory Guide 1.25, Revision 0, there is 23 feet of water between the top of the damaged fuel bundle and the fuel pool surface during a fuel handling accident. With 23 feet of water, the assumptions of Regulatory Guide 1.25, Revision 0, can be used directly. In practice, this LCO preserves this assumption for the bulk of the fuel in the storage racks. In the case of a single bundle dropped and lying horizontal on top of the spent fuel racks; however, there may be <23 feet of water above the top of the fuel bundle and the surface, indicated by the width of the bundle. To offset this small nonconservatism, the analysis assumes that all fuel rods fail.

3/4.9.12 FUEL HANDLING BUILDING EMERGENCY EXHAUST SYSTEM

The limitations on the Fuel Handling Building Emergency Exhaust System ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. Operation of the system with the heaters operating 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. Criteria for laboratory testing of charcoal and for in-place testing of HEPA filters and charcoal adsorbers is based upon removal efficiencies of 95% for organic and elemental forms of radioiodine and 99% for particulate forms. The filter pressure drop was chosen to be half-way between the estimated clean and dirty pressure drops for these components. This assures the full functionality of the filters for a prolonged period, even at the Technical Specification limit.

The LCO is modified by a note allowing the Fuel Handling Building Emergency Exhaust System (FHBEES) ventilation boundary to be opened intermittently under adminstrative controls. For entry and exit through doors, the administrative control of opening is performed by the person(s) entering or exiting the area. For other openings, these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when a need for FHBEES isolation is indicated.