SURVEILLANCE REQUIREMENTS

4.7.6.1 Each control room emergency air conditioning system filtration train shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating flow through the HEPA filter and charcoal adsorber train(s) and verifying that the train(s) operates with each fan operating for at least 15 minutes.

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

1. Verifying that the charcoal adsorbers remove ≥99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

2. Verifying that the HEPA filter banks remove ≥99% of the DOP when they are tested in-place while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

3. Verifying within 31 days after removal from the CREACS unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the CREACS unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filter and charcoal adsorber bank is ≤ 3.5 inches water gauge while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

2.* Verifying that on a safety injection test signal or control room intake high radiation test signal, the system automatically actuates in the pressurization mode by opening the outside air supply and diverting air flow through the HEPA filter and charcoal adsorber bank.

3. Verifying that the system can maintain the control room at a positive pressure ≥ 1/8" water gauge relative to the adjacent areas during system operation with makeup air being supplied through the HEPA filters and charcoal adsorbers at the design makeup flow rate of ≤ 2200 cfm.

* A one time extension to this surveillance requirement which is satisfied by performance of the Manual SI test is granted during fuel cycle thirteen allowing Unit 1 operations to continue to the thirteenth refueling outage (1R13). The surveillance testing is to be completed at the appropriate time during the 1R13 outage, prior to the unit returning to Mode 4 upon outage completion.

SURVEILLANCE REQUIREMENTS (Continued)

1. Verifying that with the system operating at a flow rate of 21,400 cfm ± 10 % and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is ≤ 1% when the system is tested by admitting cold DOP at the system intake.

2. Verifying that the charcoal adsorbers remove ≥ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at a flow rate of 21,400 cfm ± 10%.

3. Verifying that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place while operating the ventilation system at a flow rate of 21,400 cfm ± 10%.

4. Verifying within 31 days after removal from the ABV unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 15.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, at a nominal face velocity of 74 ft/min, and a relative humidity of 95%.

5. Verifying a system flow rate of 21,400 cfm ± 10% during system operation.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the ABV unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 15.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, at a nominal face velocity of 74 ft/min, and a relative humidity of 95%.

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 < 4 inches Water Gauge while operating the ventilation system at a flow rate of 21,400 cfm ± 10%.

1. Verifying that with the ventilation system operating at a flow rate of 19,490 cfm ± 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is ≤ 1% when the ventilation system is tested by admitting cold DOP at the storage pool ventilation system intake.

2. Verifying that the charcoal adsorbers remove ≥ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at a flow rate of 19,490 cfm ± 10%.

3. Verifying that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place while operating the ventilation system at a flow rate of 19,490 cfm ± 10%.

4. Verifying within 31 days after removal from the FHV unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 5.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

5. Verifying a system flow rate of 19,490 cfm, ± 10% during system operation.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the FHV unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 5.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is ≤ 4 inches Water Gauge while operating the ventilation system at a flow rate of 19,490 cfm ± 10%.

2. Verifying that the air flow distribution is uniform within 20% across HEPA filters and charcoal adsorbers.

3. Deleted.

4. Verifying that the ventilation system maintains the spent fuel storage pool area at a negative pressure of ≥ 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place while operating the filter train at a flow rate of 19,490 cfm ± 10%.

f. After each complete or partial replacement of a charcoal absorber bank by verifying that the charcoal absorbers remove ≥ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the filter train at a flow rate of 19,490 cfm ± 10%.

CAACS and CREACS interface isolation dampers: 1(2)CAA14 and 1(2)CAA20

These two dampers are normally open and do not have associated redundant dampers. These dampers serve a boundary function by isolating the CREACS from the CAACS during emergency operation of the CREACS.

Note: Dampers 1(2)CAA5, CAACS recirculation damper will receive an accident alignment signal to ensure proper accident configuration of CAACS. This damper, however, is not required for the OPERABILITY of CREACS as defined in the LCO.

The control room envelope is considered intact and able to support operation of the CREACS when the emergency air conditioning system is capable of maintaining a 1/8" water gauge positive pressure with the control room boundary door(s) closed.

Filter testing will be in accordance with the applicable sections of ANSI N510 (1975) with the exception that laboratory testing of activated carbon will be in accordance with ASTM D3803 (1989). The acceptance criteria for the laboratory testing of the carbon adsorber is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02.

TS Surveillance Requirement verifies that each fan is capable of operating for at least 15 minutes by initiating flow through the HEPA filter and charcoal adsorbers train(s) to ensure that the system is available in a standby mode.

Each CAACS normal air intake ductwork will have an additional radiation detector channel installed for a total of two detectors per intake. The two detector channels from Unit 1 and Unit 2 CAACS air intake provide input to common radiation monitor processors. Each radiation monitor processor (one for 1R1B-1/1R1B-2 and one for 2R1B-1/2R1B-2) provides a signal to initiate CREACS in the pressurization mode should high radiation be detected. A minimum of one out of two detectors in either intake will initiate the pressurization mode. With two detector channels inoperable on a Unit, operation may continue as long as CREACS is placed inservice in the pressurization or recirculation mode. Pressurization mode will be initiated after 7 days with one inoperable detector. Radiological releases during a fuel handling accident while operating in the recirculation mode could result in unacceptable radiation levels in the CRE since the automatic initiation capability has been defeated for high radiation due to isolation of the detectors. Therefore, movement of irradiated fuel assemblies or Core Alterations at either Unit will not be permitted when in the recirculation mode.

Immediate action(s), in accordance with the LCO Action Statements, means that the required action should be pursued without delay and in a controlled manner.

3/4.7.7 AUXILIARY BUILDING EXHAUST AIR FILTRATION SYSTEM (cont'd)

NORMAL VENTILATION (Normal plant operations)*

Unit 11 from ECCS HEPA only, with
Unit 13 from Aux. Normal HEPA only; or

Unit 12 from ECCS HEPA only, with
Unit 13 from Aux. Normal HEPA only; and

Any two of the three exhaust fans;and

Either of the two supply fans.

* The normal alignment is two exhaust fans and one supply fan. During cooler seasons, and with the absence of the system heating coils, it may be required to limit the amount of colder outside air entering the building. In this case, it is acceptable to secure both supply fans from operation and reduce the number of operating exhaust fans to one. There is sufficient capacity with the single exhaust fan to maintain the negative pressure within the auxiliary building boundary.

EMERGENCY VENTILATION (Emergency plant operations)

Unit 11 from ECCS HEPA + Unit 14, with
Unit 12 from Aux. Normal HEPA only; or

Unit 11 from ECCS HEPA + Unit 14, with
Unit 13 from Aux. Normal HEPA only; or

Unit 12 from ECCS HEPA + Unit 14, with
Unit 13 from Aux. Normal HEPA only; and

At least two of the three exhaust fans; and

Either one of the two supply fans.

Note: During a Safety Injection (SI) all three exhaust fans and one of the supply fans will start. This is acceptable and will maintain the boundary pressure while supplying the required cooling to the building. Should access/egress become difficult with the three exhaust fans running, then one of the exhaust fans should be secured.

OPERABILITY of the Auxiliary Building exhaust air filtration system ensures that air, which may contain radioactive materials leaked from ECCS equipment following a LOCA, is filtered and monitored prior to release from the plant. Operation of this system and the resultant effect on off site dosage calculations was assumed in the accident analyses. Laboratory testing of the carbon adsorber is performed in accordance with ASTM D3803-1989 with an acceptance criteria that is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02. ABVS is discussed in Updated Final Safety Analysis Report (UFSAR) Section 9.4.2.

3/4.7.8 SEALED SOURCE CONTAMINATION

The limitations on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and special nuclear material sources will not exceed allowable intake values.

- A listing of the active (air/motor operated) valves in the affected flow path to be locked open or disabled.

Note that four filled reactor coolant loops, with at least two steam generators with at least their secondary side water level greater than or equal to 5% (narrow range), may be substituted for one residual heat removal loop. This ensures that a single failure does not cause a loss of decay heat removal.

With the reactor vessel head removed and 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

3/4.9.9 CONTAINMENT PURGE AND PRESSURE-VACUUM RELIEF ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4/9/11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

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

3/4.9.12 FUEL HANDLING AREA VENTILATION SYSTEM

The limitations on the fuel handling area ventilation 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. The OPERABILITY of this system is consistent with the assumptions of the accident analyses. Laboratory testing of the carbon adsorber is performed in accordance with ASTM D3803-1989 with an acceptance criteria that is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02.

SURVEILLANCE REQUIREMENTS

4.7.6.1 The control room emergency air conditioning system shall be demonstrated OPERABLE:

a. At least once per 31 days by initiating flow through the HEPA filter and charcoal adsorber train(s) and verifying that the train(s) operates with each fan operating for at least 15 minutes.

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

1. Verifying that the charcoal adsorbers remove $\geq$ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

2. Verifying that the HEPA filter banks remove $\geq$ 99% of the DOP when they are tested in-place while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

3. Verifying within 31 days after removal from the CREACS unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the CREACS unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 2.5% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filter and charcoal adsorber bank is $\leq$ 3.5 inches Water Gauge while operating the ventilation system at a flow rate of 8000 cfm ± 10%.

2. Verifying that on a safety injection test signal or control room intake high radiation test signal, the system automatically actuates in the pressurization mode by opening the outside air supply and diverting air flow through the HEPA filter and charcoal adsorber bank.

3. Verifying that the system can maintain the control room at a positive pressure $\geq$ 1/8" water gauge relative to the adjacent areas during system operation with makeup air being supplied through the HEPA filters and charcoal adsorbers at the design makeup flow rate of $\leq$ 2200 cfm.

1. Verifying that with the system operating at a flow rate of 21,400 cfm ± 10 % and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is less than or equal to 1% when the system is tested by admitting cold DOP at the system intake.

2. Verifying that the charcoal adsorbers remove ≥ 99% of a halogenated hydrocarbon refrigerant test gas and that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place using the test procedure guidance of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978 (except for the provisions of ANSI N510 Sections 8 and 9), and the system flow rate is 21,400 cfm ± 10%.

3. Verifying within 31 days after removal from the ABV unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 15.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, at a nominal face velocity of 74 ft/min, and a relative humidity of 95%.

4. Verify that the system flowrate does not exceed the design limit of 23,540 cfm (21,400 cfm + 10%) when the HEPA + Charcoal adsorber filter train is aligned to the ECCS equipment areas.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the ABV unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 15.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C, at a nominal face velocity of 74 ft/min, and a relative humidity of 95%.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks of less than 4 inches Water Gauge while operating the system at a flow rate of 21,400 cfm ± 10%.

2. Verifying that the system starts on a Safety Injection Test Signal.

1. Verifying that with the ventilation system operating at a flow rate of 19,490 cfm ± 10% and exhausting through the HEPA filters and charcoal adsorbers, the total bypass flow of the ventilation system to the facility vent, including leakage through the ventilation system diverting valves, is ≤ 1% when the ventilation system is tested by admitting cold DOP at the storage pool ventilation system intake.

2. Verifying that the charcoal adsorbers remove ≥ 99% of a halogenated hydrocarbon refrigerant test gas and that the HEPA filter banks remove ≥ 99% of the DOP when they are tested in-place using the test procedure guidance of Regulatory Positions C.5.a, C.5.c and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978 (except for the provisions of ANSI N510 Sections 8 and 9), and the system flow rate is 19,490 cfm ± 10%.

3. Verifying within 31 days after removal from the FHV unit, that a laboratory test of a sample of the charcoal adsorber, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows the methyl iodide penetration less than 5.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

4. Verifying a system flow rate of 19,490 cfm ± 10% during system operation.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal from the FHV unit, that a laboratory analysis of a representative carbon sample, when obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, shows a methyl iodide penetration less than 5.0% when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and a relative humidity of 95%.

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 or equal to 4 inches Water Gauge while operating the system at a flow rate of 19,490 cfm ± 10%.

2. Deleted.

3. Verifying that the system maintains the spent fuel storage pool area at a negative pressure of greater than or equal to 1/8 inches Water Gauge relative to the outside atmosphere during system operation.

CAACS and CREACS interface isolation dampers: 1(2)CAA14 and 1(2)CAA20

These two dampers are normally open and do not have associated redundant dampers. These dampers serve a boundary function by isolating the CREACS from the CAACS during emergency operation of the CREACS.

Note: Dampers 1(2)CAA5, CAACS recirculation damper will receive an accident alignment signal to ensure proper accident configuration of CAACS. This damper, however, is not required for the OPERABILITY of CREACS as defined in the LCO.

The control room envelope is considered intact and able to support operation of the CREACS when the emergency air conditioning system is capable of maintaining a 1/8" water gauge positive pressure with the control room boundary door(s) closed.

Filter testing will be in accordance with the applicable sections of ANSI N510 (1975) with the exception that laboratory testing of activated carbon will be in accordance with ASTM D3803 (1989). The acceptance criteria for the laboratory testing of the carbon adsorber is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02.

TS Surveillance Requirement verifies that each fan is capable of operating for at least 15 minutes by initiating flow through the HEPA filter and charcoal adsorber train(s) to ensure that the system is available in a standby mode.

Each CAACS normal air intake ductwork will have an additional radiation detector channel installed for a total of two detectors per intake. The two detector channels from Unit 1 and Unit 2 CAACS air intake provide input to common radiation monitor processors. Each radiation monitor processor (one for 1R1B-1/1R1B-2 and one for 2R1B-1/2R1B-2) provides a signal to initiate CREACS in the pressurization mode should high radiation be detected. A minimum of one out of two detectors in either intake will initiate the pressurization mode. With two detector channels inoperable on a Unit, operation may continue as long as CREACS is placed inservice in the pressurization or recirculation mode. Pressurization mode will be initiated after 7 days with one inoperable detector. Radiological releases during a fuel handling accident while operating in the recirculation mode could result in unacceptable radiation levels in the CRE since the automatic initiation capability has been defeated for high radiation due to isolation of the detectors. Therefore, movement of irradiated fuel assemblies or Core Alterations at either Unit will not be permitted when in the recirculation mode.

Immediate action(s), in accordance with the LCO Action Statements, means that the required action should be pursued without delay and in a controlled manner.

3/4.7.7 AUXILIARY BUILDING EXHAUST AIR FILTRATION SYSTEM (cont'd)

AUXILIARY BUILDING VENTILATION ALIGNMENT MATRIX
NORMAL VENTILATION (Normal plant operations)*

Unit 21 from ECCS HEPA only, with
Unit 22 from Aux. Normal HEPA only; or

Unit 21 from ECCS HEPA only, with
Unit 23 from Aux. Normal HEPA only; or

Unit 22 from ECCS HEPA only, with
Unit 23 from Aux. Normal HEPA only; and

Any two of the three exhaust fans; and

Either of the two supply fans.

* The normal alignment is two exhaust fans and one supply fan. During cooler seasons, and with the absence of the system heating coils, it may be required to limit the amount of colder outside air entering the building. In this case, it is acceptable to secure both supply fans from operation and reduce the number of operating exhaust fans to one. There is sufficient capacity with the single exhaust fan to maintain the negative pressure within the auxiliary building boundary.

EMERGENCY VENTILATION (Emergency plant operations)

Unit 21 from ECCS HEPA + Unit 24, with
Unit 22 from Aux. Normal HEPA only; or

Unit 21 from ECCS HEPA + Unit 24, with
Unit 23 from Aux. Normal HEPA only; or

Unit 22 from ECCS HEPA + Unit 24, with
Unit 23 from Aux. Normal HEPA only; and

At least two of the three exhaust fans; and

Either one of the two supply fans.

Note: During a Safety Injection (SI) all three exhaust fans and one of the supply fans will start. This is acceptable and will maintain the boundary pressure while supplying the required cooling to the building. Should access/egress become difficult with the three exhaust fans running, then one of the exhaust fans should be secured.

OPERABILITY of the Auxiliary Building exhaust air filtration system ensures that air, which may contain radioactive materials leaked from ECCS equipment following a LOCA, is filtered and monitored prior to release from the plant. Operation of this system and the resultant effect on off site dosage calculations was assumed in the accident analyses. Laboratory testing of the carbon adsorber is performed in accordance with ASTM D3803-1989 with an acceptance criteria that is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02. ABVS is discussed in Updated Final Safety Analysis Report (UFSAR) Section 9.4.2.

- A listing of the active (air/motor operated) valves in the affected flow path to be locked open or disable.

Note that four filled reactor coolant loops, with at least two steam generators with at least their secondary side water level greater than or equal to 5% (narrow range), may be substituted for one residual heat removal loop. This ensures that single failure does not cause a loss of decay heat removal.

With the reactor vessel head removed and 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

3/4.9.9 CONTAINMENT PURGE AND PRESSURE-VACUUM RELIEF ISOLATION SYSTEM

The OPERABILITY of this system ensures that the containment vent and purge penetrations will be automatically isolated upon detection of high radiation levels within the containment. The OPERABILITY of this system is required to restrict the release of radioactive material from the containment atmosphere to the environment.

3/4.9.10 and 3/4/9/11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

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

3/4.9.12 FUEL HANDLING AREA VENTILATION SYSTEM

The limitations on the fuel handling area ventilation system ensure that all radioactive material released from a dropped irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system is consistent with the assumptions of the accident analyses. Laboratory testing of the carbon adsorber is performed in accordance with ASTM D3803-1989 with an acceptance criteria that is determined by applying a minimum safety factor of 2 to the charcoal filter removal efficiency credited in the design basis dose analysis as specified in Generic Letter 99-02.

The operability of the Fuel Handling Area Ventilation System during movement of irradiated fuel ensures all building exhaust flow is processed through the HEPA/charcoal filter train whenever a Fuel Handling Accident is possible. This will minimize offsite doses following the postulated Fuel Handling Accident.