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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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DEFINITIONS

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

- 1.7.1 All penetrations required to be closed during accident conditions are either:
 - a. Capable of being closed by an OPERABLE containment automatic isolation valve system, or
 - b. Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions, except for valves that are open under administrative control as permitted by Specification 3.6.3.1.
- 1.7.2 All equipment hatches are closed and sealed,
- 1.7.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3,
- 1.7.4 The containment leakage rates are within the limits of Specification 3.6.1.2, and
- 1.7.5 The sealing mechanism associated with each penetration (e.g., welds, bellows or O-rings) is OPERABLE.

CORE ALTERATION

1.8 CORE ALTERATION shall be the movement of any fuel, sources, or reactivity control components, within the reactor vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATIONS shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.9 The CORE OPERATING LIMITS REPORT (COLR) is the unit-specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.1.9. Unit operation within these operating limits is addressed in individual specifications.

DOSE EQUIVALENT I-131

1.10 DOSE EQUIVALENT I-131 shall be that concentration of I-131 (microcuries per gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134, and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Federal Guidance Report No. 11 (FGR 11), "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion and Ingestion".

DEFINITIONS

E - AVERAGE DISINTEGRATION ENERGY

1.11 \bar{E} shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half-lives greater than 15 minutes, making up at least 95% of the total non-iodine activity in the coolant.

ENGINEERED SAFETY FEATURE RESPONSE TIME

1.12 The ENGINEERED SAFETY FEATURE RESPONSE TIME shall be that time interval from when the monitored parameter exceeds its ESF actuation setpoint at the channel sensor until the ESF equipment is capable of performing its safety function (i.e., the valves travel to their required positions, pump discharge pressures reach their required values, etc.). Times shall include diesel generator starting and sequence loading delays where applicable.

FREQUENCY NOTATION

1.13 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

FULLY WITHDRAWN

1.13a FULLY WITHDRAWN shall be the condition where control and/or shutdown banks are at a position which is within the interval of 222 to 228 steps withdrawn, inclusive. FULLY WITHDRAWN will be specified in the current reload analysis.

GASEOUS RADWASTE TREATMENT SYSTEM

1.14 A GASEOUS RADWASTE TREATMENT SYSTEM is any system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.

IDENTIFIED LEAKAGE

1.15 IDENTIFIED LEAKAGE shall be:

- a. Leakage (except Reactor Coolant Pump Seal Water Injection) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

PLANT SYSTEMS

3/4.7.7 AUXILIARY BUILDING VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7.1 At least two supply fans, and three exhaust fans shall be OPERABLE (*) to maintain the Auxiliary Building at slightly negative pressure.

-----NOTE-----
The intermittent opening of the Auxiliary Building pressure boundary causing a loss of negative pressure may be performed under administrative controls.

APPLICABILITY: At all times

ACTION:

Modes 1 thru 4

- a) With one supply fan and/or one exhaust fan inoperable, restore the fan(s) to OPERABLE status within 14 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b) With two supply and/or two exhaust fans inoperable restore at least one inoperable supply and two exhaust fans to operable status within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c) With the Auxiliary Building pressure not maintained slightly negative, restore the Auxiliary Building to slightly negative pressure within the next 4 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

During CORE ALTERATIONS

- d) With the Auxiliary Building pressure not maintained slightly negative, restore the Auxiliary Building to slightly negative pressure within the next 4 hours or suspend all operations involving CORE ALTERATIONS.

At all times

- e) With the Auxiliary Building pressure not maintained slightly negative, suspend all operations involving radioactive gaseous releases via the Auxiliary Building immediately.

(*) One of the supply fans may be considered OPERABLE with its auto start circuit administratively controlled (removed from service) to prevent more than one supply fan from operating at any time.

PLANT SYSTEMS
SURVEILLANCE REQUIREMENTS

4.7.7.1 The above required Auxiliary Building Ventilation System shall be demonstrated OPERABLE by:

- a. At least once per 12 hours by verifying negative pressure in the Auxiliary Building.
- b. At least once per 31 days by starting each fan, from the control room, and verifying that each fan operates for at least 15 minutes.
- c. At least once per 18 months by verifying that the System starts following a Safety Injection Test Signal.

PLANT SYSTEMS
SURVEILLANCE REQUIREMENTS

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PLANT SYSTEMS
BASES

The OPERABILITY of this system in conjunction with control room design provisions is based on providing adequate radiation protection to permit access to and occupancy of the Salem control room for the entire duration of the postulated accident, with no person in the control room receiving radiation exposure that exceeds 5 rem TEDE. This limitation is consistent with the requirements of Regulatory Guide 1.183.

3/4.7.7 AUXILIARY BUILDING VENTILATION SYSTEM

The Auxiliary Building Ventilation System (ABVS) consists of two major subsystems. They are designed to; control Auxiliary Building temperature during normal and emergency modes of operation, to maintain slightly negative pressure in the building to prevent unmonitored leakage out of the building and, to contain Auxiliary Building airborne contamination during Loss of Coolant Accidents (LOCA).

The two subsystems are:

1. A once through filtration exhaust system, designed to contain particulate and gaseous contamination and prevent it from being released from the building in accordance with 10CFR20 (no credit is taken for post-accident filtration), and
2. A once through air supply system, designed to deliver outside air into the building to maintain building temperatures and negative pressure within acceptable limits. For the purposes of satisfying the Technical Specification LCO, one supply fan must be administratively removed from service such that the fan will not auto-start on an actuation signal; however, the supply fan must be OPERABLE with the exception of this administrative control.

These systems operate during normal and emergency plant modes. Additionally, the system provides a flow path for containment purge supply and exhaust during Modes 5 and 6. Either the Containment Purge system or the Auxiliary Building Ventilation System with suction from the containment atmosphere, with associated radiation monitoring will be available whenever movement of irradiated fuel is in progress in the containment building and the equipment hatch is open. If for any reason, this ventilation requirement can not be met, movement of fuel assemblies within the containment building shall be discontinued until the flow path(s) can be reestablished or close the equipment hatch and personnel airlocks.

Appropriate filtration surveillances are contained in the UFSAR Section 9.4.2.4, Test and Inspections.

The ventilation exhaust consists of three 50% capacity fans that are powered from vital buses. The fans are designed for continuous operation, to control the Auxiliary Building pressure at -0.10" Water Gauge with respect to atmosphere.

The ventilation supply consists of two 100% capacity fans that are powered from vital buses, and distribute outdoor air to the general areas and corridors of the building through associated ductwork.

PLANT SYSTEMS

BASES

AUXILIARY BUILDING VENTILATION ALIGNMENT MATRIX

NORMAL VENTILATION (Normal plant operations)*

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)

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, one of the exhaust fans should be secured.

OPERABILITY of the Auxiliary Building Ventilation System ensures that air, which may contain radioactive materials leaked from ECCS equipment following a LOCA, is monitored prior to release from the plant via the plant vent. Operation of this system and the resultant effect on offsite and control room dose calculations was assumed in the accident analyses. 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.

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DEFINITIONS

CONTAINMENT INTEGRITY

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1.7.1 All penetrations required to be closed during accident conditions are either:

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1.7.2 All equipment hatches are closed and sealed,

1.7.3 Each air lock is OPERABLE pursuant to Specification 3.6.1.3,

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CORE ALTERATION

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a. Leakage (except Reactor Coolant Pump Seal Water Injection) into closed systems, such as pump seal or valve packing leaks that are captured and conducted to a sump or collecting tank, or

PLANT SYSTEMS

3/4.7.7 AUXILIARY BUILDING VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.7 At least two supply fans, and three exhaust fans shall be OPERABLE(*) to maintain the Auxiliary Building at slightly negative pressure.

-----NOTE-----

The intermittent opening of the Auxiliary Building pressure boundary causing a loss of negative pressure may be performed under administrative controls.

APPLICABILITY: At all times.

ACTION:

Modes 1 thru 4

- a) With one supply fan and/or one exhaust fan inoperable, restore the fan(s) to OPERABLE status within 14 days or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
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- c) With the Auxiliary Building pressure not maintained slightly negative, restore the building to slightly negative pressure within the next 4 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

During CORE ALTERATIONS

- d) With the Auxiliary Building pressure not maintained slightly negative, restore the Auxiliary Building to slightly negative pressure within the next 4 hours or suspend all operations involving CORE ALTERATIONS.

At all times

- e) With the Auxiliary Building pressure not maintained slightly negative, suspend all operations involving radioactive gaseous releases via the Auxiliary Building immediately.

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PLANT SYSTEMS
SURVEILLANCE REQUIREMENTS

4.7.7 The above required Auxiliary Building Ventilation System shall be demonstrated OPERABLE:

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- b) At least once per 31 days by starting each fan, from the control room, each fan operates for at least 15 minutes.
- c) At least once per 18 months by verifying that the system starts following a Safety Injection Test Signal.

PLANT SYSTEMS
SURVEILLANCE REQUIREMENTS

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PLANT SYSTEMS
BASES

The OPERABILITY of this system in conjunction with control room design features provides adequate radiation protection to permit access to and occupancy of the Salem control room for the entire duration of the postulated accident with no person in the control room receiving radiation exposure that exceeds 5 rem TEDE. This limitation is consistent with the requirements of Regulatory Guide 1.183.

3/4.7.7 AUXILIARY BUILDING VENTILATION SYSTEM

The Auxiliary Building Ventilation System (ABVS) consists of two major subsystems. They are designed to control Auxiliary Building temperature during normal and emergency modes of operation, to maintain slightly negative pressure in the building to prevent unmonitored leakage out of the building and to contain Auxiliary Building airborne contamination during Loss of Coolant Accidents (LOCA). The two subsystems are:

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Appropriate filtration surveillances are contained in the Updated Final Safety Analysis Report (UFSAR) Section 9.4.2.4, Test and Inspections.

The ventilation exhaust consists of three 50% capacity fans that are powered from vital buses. The fans are designed for continuous operation, to control the Auxiliary Building pressure at -0.10" Water Gauge with respect to atmosphere.

The ventilation supply consists of two 100% capacity fans that are powered from vital buses, and distribute outdoor air to the general areas and corridors of the building through associated ductwork.

PLANT SYSTEMS
BASES

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

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

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)

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, one of the exhaust fans should be secured.

OPERABILITY of the Auxiliary Building Ventilation System ensures that air, which may contain radioactive materials leaked from ECCS equipment following a LOCA, is monitored prior to release from the plant via the plant vent. Operation of this system and the resultant effect on offsite and control room dose calculations was assumed in the accident analyses. ABVS is discussed in UFSAR Section 9.4.2.