

DEFINITIONS

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

- a. All penetrations required to be closed during accident conditions are either:
 - 1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or
 - 2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions.
- b. All equipment hatches are closed and sealed,
- c. Each air lock is in compliance with the requirements of Specification 3.6.1.3, *in accordance with the Containment Leakage Rate Testing Program.*
- d. The containment leakage rates are within the limits of Specification 3.6.1.2, and
- e. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow supplied to the reactor coolant pump seals.

CORE ALTERATION

1.9 CORE ALTERATION shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.10 The CORE OPERATING LIMITS REPORT (COLR) provides core operating limits for the current operating reload cycle. The cycle specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.8.1.6. Plant operation within these operating limits is addressed in individual specifications.

DIGITAL CHANNEL OPERATIONAL TEST

1.11 A DIGITAL CHANNEL OPERATIONAL TEST shall consist of exercising the digital computer hardware using data base manipulation and/or injecting simulated process data to verify OPERABILITY of alarm and/or trip functions. The Digital Channel Operational Test definition is only applicable to the Radiation Monitoring Equipment.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

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

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions except for valves that are open under administrative control as permitted by Specification 3.6.3; and
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3; and
- c. After each closing of each penetration subject to Type B testing, except the containment air locks, if opened following a Type A or B test, by leak rate testing the seal with gas at a pressure not less than P_a , 49.6 psig, and verifying that when the measured leakage rate for these seals is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than $0.60 L_a$.

*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to: *in accordance with the Containment Leakage Rate Testing Program.*

- a. An overall integrated leakage rate of:

Less than or equal to L_a , 0.15% by weight of the containment air per 24 hours at P_a , 49.6 psig;

- b. A combined leakage rate of less than $0.60 L_a$ for all penetrations and valves subject to Type B and C tests, when pressurized to P_a . No individual penetration will be allowed to exceed 5% of the total allowed ($0.05 L_a$); and

- c. A combined leakage rate of less than or equal to $0.60 L_a$ for all penetrations that are secondary containment bypass leakage paths when pressurized to P_a .

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

ACTION:

With (a) the measured overall integrated containment leakage rate exceeding $0.75 L_a$, or (b) the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding $0.60 L_a$, or (c) the combined bypass leakage rate exceeding $0.60 L_a$, restore the overall integrated leakage rate to less than or equal to $0.75 L_a$, the combined leakage rate for all penetrations and valves subject to Type B and C tests to less than $0.60 L_a$, and the combined bypass leakage rate to less than $0.60 L_a$ prior to increasing the Reactor Coolant System temperature above 200°F.

With the overall integrated leakage rate exceeding $1.0 L_a$, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50:

- a. Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at intervals specified in 10 CFR 50, Appendix J, as modified by approved exemptions, during shutdown at a pressure not less than P_a , 49.6 psig.
- b. If any periodic Type A test fails to meet $0.75 L_a$, the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet $0.75 L_a$, a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet $0.75 L_a$ at which time the above test schedule may be resumed;
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
 - 1) Confirms the accuracy of the test by verifying that the supplemental test result, L_c , is in accordance with the following equation:
$$|L_c - (L_{am} + L_o)| \leq 0.25 L_a$$
where L_{am} is the measured Type A test leakage and L_o is the superimposed leak;
 - 2) Has a duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test; and
 - 3) Requires that the rate at which gas is injected into the containment or bled from the containment during the supplemental test is between $0.75 L_a$ and $1.25 L_a$.

↑ is accordance with the Containment Leakage Rate Testing Program.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

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SURVEILLANCE REQUIREMENTS

4.6.1.2 (Continued)

- d. Type B and C tests shall be conducted with gas at a pressure not less than P_s , 49.6 psig, at intervals no greater than 24 months except for tests involving:
 - 1) Air locks, and
 - 2) Purge supply and exhaust isolation valves with resilient material seals.
- e. The combined bypass leakage rate shall be determined to be less than or equal to 0.60 L_a by applicable Type B and C tests at least once per 24 months.
- f. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.7.1.
- g. Air locks shall be tested and demonstrated OPERABLE by the requirements of Specification 4.6.1.3; and
- h. The provisions of Specifications 4.0.2 are not applicable.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE with:

- a. Both doors closed except when the air lock is being used for normal transit entry and exit through the containment, then at least one air lock door shall be closed, and
- b. An overall air lock leakage rate of less than or equal to $0.05 L_a$ at P_a , 49.6 psig.

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

ACTION:

in accordance with the
Containment Leakage Rate
Testing Program.

- a. With one containment air lock door inoperable:
 - 1. Maintain at least the OPERABLE air lock door closed* and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed,
 - 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days,
 - 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
 - 4. The provisions of Specification 3.0.4 are not applicable.
- b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

*Except during entry to repair an inoperable inner door, for a cumulative time not to exceed 1 hour per year.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR LOCKS

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each containment air lock shall be demonstrated OPERABLE:

- a. Within 72 hours following each closing, except when the air lock is being used for multiple entries, then at least once per 72 hours, by verifying that the seal leakage is less than $0.01 L_a$ as determined by precision flow measurements when measured for at least 30 seconds within the volume between the seal at a constant pressure of 49.6 psig;
- b. By conducting overall air lock leakage tests at not less than P_a , 49.6 psig, and verifying the overall air lock leakage rate is within its limit:
 - 1) At least once per 6 months,* and
 - 2) Prior to establishing CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.**

b. *f.* At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

a. With the leakage rate in accordance with the Containment Leakage Rate Testing Program.

*The provisions of Specification 4.0.2 are not applicable.

**This represents an exemption to Appendix J, paragraph III.D.2.(b)(ii), of 10 CFR Part 50.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

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

ACTION:

With the structural integrity of the containment vessel not conforming to the above requirements, restore the structural integrity to within the limits prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.6 The structural integrity of the containment vessel shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the exposed accessible interior and exterior surfaces of the vessel. This inspection shall be performed prior to the Type A containment leakage rate test to verify no apparent changes in appearance of the surfaces or other abnormal degradation. Any abnormal degradation of the containment vessel detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2 within 15 days.

in accordance with the
Containment Leakage Rate
Testing Program.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each 8-inch containment purge supply and exhaust isolation valve shall be OPERABLE and sealed closed except when open for purge system operation for pressure control; for ALARA, respirable, and air quality considerations to facilitate personnel entry; and for surveillance tests that require the valve(s) to be open.

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

ACTION:

- a. With one or more of the 8-inch containment purge supply or exhaust isolation valves open for reasons other than given in Specification 3.6.1.7 above, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more containment purge supply or exhaust isolation valves having a measured leakage rate in excess of the limits of Specification 4.6.1.7.1, restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration(s) so that the measured leakage rate does not exceed the limits of Specification 4.6.1.7.1 within 24 hours and close the purge supply if the affected penetration is the exhaust penetration, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

the Containment Leakage Rate Testing Program

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 ~~At least once per 92 days~~ each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is ~~less than or equal to~~ $0.01 L_a$ when pressurized to P_a .

in accordance with the Containment Leakage Rate Testing Program.

4.6.1.7.2 Each 8-inch containment purge supply and exhaust isolation valve shall be verified to be sealed closed or open in accordance with Specification 3.6.1.7 at least once per 31 days.

CONTAINMENT SYSTEMS

CONTAINMENT ENCLOSURE BUILDING

CONTAINMENT ENCLOSURE BUILDING STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.3 The structural integrity of the containment enclosure building shall be maintained at a level consistent with the ~~acceptance criteria in Specification 4.6.5.3.~~

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

† Containment Leakage Rate Testing Program

ACTION:

With the structural integrity of the containment enclosure building not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3 The structural integrity of the containment enclosure building shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the exposed accessible interior and exterior surfaces of the containment enclosure building and verifying no apparent changes in appearance of the concrete surfaces or other abnormal degradation. Any abnormal degradation of the containment enclosure building detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2 within 15 days.

be determined in accordance with the Containment Leakage Rate Testing Program.

ADMINISTRATIVE CONTROLS

6.15 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program, dated September 1995," as modified by approved exceptions.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 49.6 psig.

The maximum allowable containment leakage rate, L_a , at P_a , shall be 0.15% of primary containment air weight per day.

The provisions of SR 4.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 4.0.3 are applicable to the Containment Leakage Rate Testing Program.

Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the Type B and Type C tests and $\leq 0.75 L_a$ for Type A tests.

Overall air lock leakage rate acceptance criterion is $\leq 0.05 L_a$ when tested at $\geq P_a$.

Each containment 8-inch purge supply and exhaust isolation valve leakage rate acceptance criterion is $\leq 0.01 L_a$ when tested at P_a .

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guidelines of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix J of 10 CFR Part 50.

3/4.6.1.3 CONTAINMENT AIR LOCKS

in accordance with the
Containment Leakage Rate Testing Program

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that: (1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the annulus atmosphere of 3.5 psi and (2) the containment peak pressure does not exceed the design pressure of 52 psig during LOCA conditions.

The maximum peak pressure expected to be obtained from a LOCA event is 49.6 psig. The limit of 16.2 psia for initial positive containment pressure will limit the total pressure to 49.6 psia which is less than the design pressure and is consistent with the safety analyses.

CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT (Continued)

3/4.6.1.5 AIR TEMPERATURE

The limitation in containment average air temperature ensures that the containment average air temperature does not exceed the initial temperature condition assumed in the overall safety analysis for a steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT VESSEL STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment steel vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 52 psig in the event of a LOCA. A visual inspection in ~~conjunction with Type A leakage tests~~ is sufficient to demonstrate this capability. *accordance with the Containment Leakage Rate Testing Program.*

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

The 36-inch containment purge supply and exhaust isolation valves are required to be sealed closed during plant operation since these valves have not been demonstrated capable of closing during a LOCA or steam line break accident. Maintaining these valves closed during plant operations ensures that excessive quantities of radioactive materials will not be released via the Containment Purge System. To provide assurance that these containment valves cannot be inadvertently opened, the 36-inch containment shutdown purge supply and exhaust isolation valves are not utilized during operation on MODES 1-4, and a blind flange is installed establishing a Type "B" penetration. The penetration is surveilled in accordance with Surveillance Requirement 4.6.1.1a in MODES 1, 2, 3, and 4. ~~Surveillance Requirement 4.6.1.2d is also applicable to this penetration.~~

The use of the containment purge lines is restricted to the 8-inch purge supply and exhaust isolation valves since, unlike the 36-inch valves, the 8-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline values of 10 CFR Part 100 would not be exceeded in the event of an accident during containment PURGING operation. The total time the containment purge (vent) system isolation valves may be open during MODES 1, 2, 3, and 4 in a calendar year is determined by the actual need for opening the valves for safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities.

The containment purge supply and exhaust isolation valves are leakage rate tested in accordance with the Containment Leakage Rate Testing Program.

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

CONTAINMENT SYSTEMS

BASES

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.

The Hydrogen Mixing Systems are provided to ensure adequate mixing of the containment atmosphere following a LOCA. This mixing action will prevent localized accumulations of hydrogen from exceeding the flammable limit.

3/4.6.5 CONTAINMENT ENCLOSURE BUILDING

3/4.6.5.1 CONTAINMENT ENCLOSURE EMERGENCY AIR CLEANUP SYSTEM

The OPERABILITY of the Containment Enclosure Emergency Air Cleanup System ensures that during LOCA conditions containment vessel leakage into the annulus, and radioactive materials leaking from engineered safety features equipment, from the electrical penetration areas, and from the mechanical penetration tunnel, will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere.

3/4.6.5.2 CONTAINMENT ENCLOSURE BUILDING INTEGRITY

CONTAINMENT ENCLOSURE BUILDING INTEGRITY ensures that the release of radioactive materials from the primary containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with operation of the Containment Enclosure Emergency Air Cleanup System, will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

3/4.6.5.3 CONTAINMENT ENCLOSURE BUILDING STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment enclosure building will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to provide: (1) protection for the steel vessel from external missiles, (2) radiation shielding in the event of a LOCA, and (3) an annulus surrounding the primary containment that can be maintained at a negative pressure during accident conditions. A visual inspection is sufficient to demonstrate this capability.

is accordance with the Containment Leakage Rate Testing Program

III. Retype of Proposed Changes

See attached retype of proposed changes to Technical Specifications. The attached retype reflects the currently issued version of Technical Specifications. Pending Technical Specification changes or Technical Specification changes issued subsequent to this submittal are not reflected in the enclosed retype. The enclosed retype should be checked for continuity with Technical Specifications prior to issuance.

Revision bars are provided in the right hand margin to designate a change in the text.

DEFINITIONS

CONTAINMENT INTEGRITY

1.7 CONTAINMENT INTEGRITY shall exist when:

- a. All penetrations required to be closed during accident conditions are either:
 - 1) Capable of being closed by an OPERABLE containment automatic isolation valve system, or
 - 2) Closed by manual valves, blind flanges, or deactivated automatic valves secured in their closed positions.
- b. All equipment hatches are closed and sealed.
- c. Each air lock is in compliance with the requirements of Specification 3.6.1.3.
- d. The containment leakage rates are in accordance with the Containment Leakage Rate Testing Program, and
- e. The sealing mechanism associated with each penetration (e.g., welds, bellows, or O-rings) is OPERABLE.

CONTROLLED LEAKAGE

1.8 CONTROLLED LEAKAGE shall be that seal water flow supplied to the reactor coolant pump seals.

CORE ALTERATION

1.9 CORE ALTERATION shall be the movement or manipulation of any component within the reactor pressure vessel with the vessel head removed and fuel in the vessel. Suspension of CORE ALTERATION shall not preclude completion of movement of a component to a safe conservative position.

CORE OPERATING LIMITS REPORT

1.10 The CORE OPERATING LIMITS REPORT (COLR) provides core operating limits for the current operating reload cycle. The cycle specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.8.1.6. Plant operation within these operating limits is addressed in individual specifications.

DIGITAL CHANNEL OPERATIONAL TEST

1.11 A DIGITAL CHANNEL OPERATIONAL TEST shall consist of exercising the digital computer hardware using data base manipulation and/or injecting simulated process data to verify OPERABILITY of alarm and/or trip functions. The Digital Channel Operational Test definition is only applicable to the Radiation Monitoring Equipment.

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

CONTAINMENT INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.1 Primary CONTAINMENT INTEGRITY shall be maintained.

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

ACTION:

Without primary CONTAINMENT INTEGRITY, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.1 Primary CONTAINMENT INTEGRITY shall be demonstrated:

- a. At least once per 31 days by verifying that all penetrations* not capable of being closed by OPERABLE containment automatic isolation valves and required to be closed during accident conditions are closed by valves, blind flanges, or deactivated automatic valves secured in their positions except for valves that are open under administrative control as permitted by Specification 3.6.3; and
- b. By verifying that each containment air lock is in compliance with the requirements of Specification 3.6.1.3.

*Except valves, blind flanges, and deactivated automatic valves which are located inside the containment and are locked, sealed, or otherwise secured in the closed position. These penetrations shall be verified closed during each COLD SHUTDOWN except that such verification need not be performed more often than once per 92 days.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited in accordance with the Containment Leakage Rate Testing Program.

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

ACTION:

With the overall integrated leakage rate exceeding 1.0 La, restore CONTAINMENT INTEGRITY within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.2 The containment leakage rates shall be demonstrated in accordance with the Containment Leakage Rate Testing Program.

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CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

3.6.1.3 Each containment air lock shall be OPERABLE in accordance with the Containment Leakage Rate Testing Program.

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

ACTION:

- a. With one containment air lock door inoperable:
 1. Maintain at least the OPERABLE air lock door closed* and either restore the inoperable air lock door to OPERABLE status within 24 hours or lock the OPERABLE air lock door closed.
 2. Operation may then continue until performance of the next required overall air lock leakage test provided that the OPERABLE air lock door is verified to be locked closed at least once per 31 days.
 3. Otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours, and
 4. The provisions of Specification 3.0.4 are not applicable.
- b. With the containment air lock inoperable, except as the result of an inoperable air lock door, maintain at least one air lock door closed; restore the inoperable air lock to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

*Except during entry to repair an inoperable inner door, for a cumulative time not to exceed 1 hour per year.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT AIR LOCKS

SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. With the leakage rate in accordance with the Containment Leakage Rate Testing Program.
- b. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VESSEL STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.1.6 The structural integrity of the containment vessel shall be maintained at a level consistent with the acceptance criteria in Specification 4.6.1.6.

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

ACTION:

With the structural integrity of the containment vessel not conforming to the above requirements, restore the structural integrity to within the limits prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.1.6 The structural integrity of the containment vessel shall be determined by a visual inspection of the exposed accessible interior and exterior surfaces of the vessel in accordance with the Containment Leakage Rate Testing Program. Any abnormal degradation of the containment vessel detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2 within 15 days.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 Each 8-inch containment purge supply and exhaust isolation valve shall be OPERABLE and sealed closed except when open for purge system operation for pressure control; for ALARA, respirable, and air quality considerations to facilitate personnel entry; and for surveillance tests that require the valve(s) to be open.

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

ACTION:

- a. With one or more of the 8-inch containment purge supply or exhaust isolation valves open for reasons other than given in Specification 3.6.1.7 above, close the open 8-inch valve(s) or isolate the penetration(s) within 4 hours, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.
- b. With one or more containment purge supply or exhaust isolation valves having a measured leakage rate in excess of the limits of the Containment Leakage Rate Testing Program, restore the inoperable valve(s) to OPERABLE status or isolate the affected penetration(s) so that the measured leakage rate does not exceed the limits of the Containment Leakage Rate Testing Program, within 24 hours and close the purge supply if the affected penetration is the exhaust penetration, otherwise be in at least HOT STANDBY within the next 6 hours, and in COLD SHUTDOWN within the following 30 hours.

CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT

CONTAINMENT VENTILATION SYSTEM

SURVEILLANCE REQUIREMENTS

4.6.1.7.1 Each 8-inch containment purge supply and exhaust isolation valve with resilient material seals shall be demonstrated OPERABLE by verifying that the measured leakage rate is in accordance with the Containment Leakage Rate Testing Program.

4.6.1.7.2 Each 8-inch containment purge supply and exhaust isolation valve shall be verified to be sealed closed or open in accordance with Specification 3.6.1.7 at least once per 31 days.

CONTAINMENT SYSTEMS

CONTAINMENT ENCLOSURE BUILDING

CONTAINMENT ENCLOSURE BUILDING STRUCTURAL INTEGRITY

LIMITING CONDITION FOR OPERATION

3.6.5.3 The structural integrity of the containment enclosure building shall be maintained at a level consistent with the Containment Leakage Rate Testing Program.

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

ACTION:

With the structural integrity of the containment enclosure building not conforming to the above requirements, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3 The structural integrity of the containment enclosure building shall be determined in accordance with the Containment Leakage Rate Testing Program. Any abnormal degradation of the containment enclosure building detected during the above required inspections shall be reported to the Commission in a Special Report pursuant to Specification 6.8.2 within 15 days.

6.0 ADMINISTRATIVE CONTROLS

6.15 CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B, as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak Test Program, dated September 1995," as modified by approved exceptions.

The peak calculated containment internal pressure for the design basis loss of coolant accident, P_a , is 49.6 psig.

The maximum allowable containment leakage rate, L_a , at P_a , shall be 0.15% of primary containment air weight per day.

The provisions of SR 4.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

The provisions of SR 4.0.3 are applicable to the Containment Leakage Rate Testing Program.

Containment leakage rate acceptance criterion is $\leq 1.0 L_a$. During the first unit startup following testing in accordance with this program, the leakage rate acceptance criteria are $\leq 0.60 L_a$ for the Type B and Type C tests and $\leq 0.75 L_a$ for Type A tests.

Overall air lock leakage rate acceptance criterion is $\leq 0.05 L_a$ when tested at $\geq P_a$.

Each containment 8-inch purge supply and exhaust isolation valve leakage rate acceptance criterion is $\leq 0.01 L_a$ when tested at P_a .

3/4.6 CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT

3/4.6.1.1 CONTAINMENT INTEGRITY

Primary CONTAINMENT INTEGRITY ensures that the release of radioactive materials from the containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with the leakage rate limitation, will limit the SITE BOUNDARY radiation doses to within the dose guidelines of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 CONTAINMENT LEAKAGE

Primary containment OPERABILITY is maintained by limiting leakage to $\leq 1.0 L_a$, except prior to the first startup after performing a required Primary Containment Leakage Rate Testing Program leakage test. At this time, applicable leakage limits must be met. The limitations on containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the safety analyses at the peak accident pressure, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates is in accordance with the Containment Leakage Rate Testing Program.

3/4.6.1.3 CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on CONTAINMENT INTEGRITY and containment leak rate. Surveillance testing of the air lock seals provides assurance that the overall air lock leakage will not become excessive due to seal damage during the intervals between air lock leakage tests.

3/4.6.1.4 INTERNAL PRESSURE

The limitations on containment internal pressure ensure that: (1) the containment structure is prevented from exceeding its design negative pressure differential with respect to the annulus atmosphere of 3.5 psi and (2) the containment peak pressure does not exceed the design pressure of 52 psig during LOCA conditions.

The maximum peak pressure expected to be obtained from a LOCA event is 49.6 psig. The limit of 16.2 psia for initial positive containment pressure will limit the total pressure to 49.6 psia which is less than the design pressure and is consistent with the safety analyses.

CONTAINMENT SYSTEMS

BASES

3/4.6.1 PRIMARY CONTAINMENT (Continued)

3/4.6.1.5 AIR TEMPERATURE

The limitation in containment average air temperature ensures that the containment average air temperature does not exceed the initial temperature condition assumed in the overall safety analysis for a steam line break accident. Measurements shall be made at all listed locations, whether by fixed or portable instruments, prior to determining the average air temperature.

3/4.6.1.6 CONTAINMENT VESSEL STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment steel vessel will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to ensure that the vessel will withstand the maximum pressure of 52 psig in the event of a LOCA. A visual inspection in accordance with the Containment Leakage Rate Testing Program demonstrates this capability.

3/4.6.1.7 CONTAINMENT VENTILATION SYSTEM

The 36-inch containment purge supply and exhaust isolation valves are required to be sealed closed during plant operation since these valves have not been demonstrated capable of closing during a LOCA or steam line break accident. Maintaining these valves closed during plant operations ensures that excessive quantities of radioactive materials will not be released via the Containment Purge System. To provide assurance that these containment valves cannot be inadvertently opened, the 36-inch containment shutdown purge supply and exhaust isolation valves are not utilized during operation on MODES 1-4, and a blind flange is installed establishing a Type "B" penetration. The penetration is surveilled in accordance with Surveillance Requirement 4.6.1.1a in MODES 1, 2, 3, and 4.

The use of the containment purge lines is restricted to the 8-inch purge supply and exhaust isolation valves since, unlike the 36-inch valves, the 8-inch valves are capable of closing during a LOCA or steam line break accident. Therefore, the SITE BOUNDARY dose guideline values of 10 CFR Part 100 would not be exceeded in the event of an accident during containment PURGING operation. The total time the containment purge (vent) system isolation valves may be open during MODES 1, 2, 3, and 4 in a calendar year is determined by the actual need for opening the valves for safety-related reasons; e.g., containment pressure control or the reduction of airborne radioactivity to facilitate personnel access for surveillance and maintenance activities.

Leakage integrity tests with a maximum allowable leakage rate for containment purge supply and exhaust supply valves will provide early indication of resilient material seal degradation and will allow opportunity for repair before gross leakage failures could develop. The containment purge supply and exhaust isolation valves are leakage rate tested in accordance with the Containment Leakage Rate Testing Program.

CONTAINMENT SYSTEMS

BASES

3/4.6.4 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. Either recombiner unit is capable of controlling the expected hydrogen generation associated with: (1) zirconium-water reactions, (2) radiolytic decomposition of water, and (3) corrosion of metals within containment. These hydrogen control systems are consistent with the recommendations of Regulatory Guide 1.7, "Control of Combustible Gas Concentrations in Containment Following a LOCA," March 1971.

The Hydrogen Mixing Systems are provided to ensure adequate mixing of the containment atmosphere following a LOCA. This mixing action will prevent localized accumulations of hydrogen from exceeding the flammable limit.

3/4.6.5 CONTAINMENT ENCLOSURE BUILDING

3/4.6.5.1 CONTAINMENT ENCLOSURE EMERGENCY AIR CLEANUP SYSTEM

The OPERABILITY of the Containment Enclosure Emergency Air Cleanup System ensures that during LOCA conditions containment vessel leakage into the annulus, and radioactive materials leaking from engineered safety features equipment, from the electrical penetration areas, and from the mechanical penetration tunnel, will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere.

3/4.6.5.2 CONTAINMENT ENCLOSURE BUILDING INTEGRITY

CONTAINMENT ENCLOSURE BUILDING INTEGRITY ensures that the release of radioactive materials from the primary containment atmosphere will be restricted to those leakage paths and associated leak rates assumed in the safety analyses. This restriction, in conjunction with operation of the Containment Enclosure Emergency Air Cleanup System, will limit the SITE BOUNDARY radiation doses to within the dose guideline values of 10 CFR Part 100 during accident conditions.

3/4.6.5.3 CONTAINMENT ENCLOSURE BUILDING STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment enclosure building will be maintained comparable to the original design standards for the life of the facility. Structural integrity is required to provide: (1) protection for the steel vessel from external missiles, (2) radiation shielding in the event of a LOCA, and (3) an annulus surrounding the primary containment that can be maintained at a negative pressure during accident conditions. A visual inspection in accordance with the Containment Leakage Rate Testing Program, is sufficient to demonstrate this capability.

IV. Determination of Significant Hazards for Proposed Changes

In accordance with 10CFR50.92, North Atlantic has reviewed the attached proposed changes and has concluded that they do not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve a SHC because the changes would not:

1. *Involve a significant increase in the probability or consequences of an accident previously evaluated.*

The changes involved in this license amendment request revise the testing criteria for the containment penetrations. The revised criteria will be based on the guidance in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program." This guidance allows for the use of relaxed testing frequencies for containment penetrations that have performed satisfactorily on a historical basis. The Containment Leakage Rate Testing Program considers the type of service, the design of the penetration, and the safety impact of the penetration in determining the testing interval of each penetration. The NRC Staff has reviewed the potential impact of performance based testing frequencies for containment penetrations during the development of the Option B regulation. The NRC Staff review is documented in NUREG-1493 "Performance Based Containment Leakage Test Program." The review concluded that reducing the frequency of Type A tests (Integrated Leak Rate Tests) from three per ten years to one per ten years leads to an imperceptible increase in risk. For Type B and C testing (Local Leak Rate Tests), the change in testing frequency will not have significant impact since this leakage contributes less than 0.1 percent of the overall risk based on the existing regulations. EPRI Research Project Report TR-104285, "Risk Impact Assessment of Revised Containment Leak Rate Testing Intervals," also concluded that a relaxation of the test intervals for Type B and C penetrations results in a negligible increase in total plant risk.

The use of Option B will allow the extension of testing intervals with a minimal impact on the radiological release rates since most penetration leakage is continually well below the specified limits. In the accident risk evaluation, the NRC Staff noted that the accident risk is relatively insensitive to the containment leakage rate because the accident risk is dominated by accident sequences that result in failure of or bypass of the containment. The use of a performance-based testing program will continue to provide assurance that the accident analysis assumptions remain bounding.

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

Changes to the Administrative section describe the containment testing program only and cannot increase the probability or consequences of an accident previously analyzed.

- 2 *Create the possibility of a new or different kind of accident from any previously analyzed.*

The proposed license amendment does not change the operation of the plant. The change in the test frequency is dependent on the establishment of a Containment Leakage Rate Test Program. This test program will ensure the performance history of each penetration is satisfactory prior to the changing of any test frequency. Since the performance history of the penetration will be known, there is no possibility of the implementation of the program creating a new or different kind of accident than previously analyzed. Since there is no change to the equipment or the operation of the plant, there is no possibility of creating a new or different kind of accident than previously analyzed. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously analyzed.

Changes to the Administrative section describe the containment testing program only and cannot create a different accident from any previously analyzed.

- 3 *Involve a significant reduction in the margin of safety.*

During the development of 10CFR50, Appendix J, Option B, the NRC Staff determined the reduction in safety associated with the implementation of the performance-based testing program. The results of this review are documented in NUREG-1493. The review concluded that reducing the frequency of Type A tests (Integrated Leak Rate Tests) from three per ten years to one per ten years leads to an imperceptible increase in risk. For Type B and C testing (Local Leak Rate Tests), the change in testing frequency will not have significant impact since this leakage contributes less than 0.1 percent of the overall risk-based on the existing regulations. The use of Option B will allow the extension of testing intervals with a minimal impact on the radiological release rates since most penetration leakage is continually well below the specified limits. In the accident risk evaluation, the NRC Staff noted that the accident risk is relatively insensitive to the containment leakage rate because the accident risk is dominated by accident sequences that result in failure of or bypass of the containment. The use of a performance based testing program will continue to provide assurance that the accident analysis assumptions remain bounding. Therefore, this change does not involve a significant reduction in the margin of safety.

Changes to the Administrative section describe the containment testing program only and cannot reduce the margin of safety.

V. Proposed Schedule for License Amendment Issuance and Effectiveness

North Atlantic requests issuance of the license amendment by September 1, 1996, with the amendment effective as of the date of issuance, to be implemented within 6 months of the date of issuance.

VI. Environmental Impact Assessment

North Atlantic has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, North Atlantic concludes that the proposed changes meet the criteria delineated in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an environmental impact statement.