

3/4.6 CONTAINMENT SYSTEMSBASES3/4.6.1 PRIMARY CONTAINMENT3/4.6.1.1 PRIMARY 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 accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CF Part 100 during accident conditions.

3/4.6.1.2 PRIMARY CONTAINMENT LEAKAGE

The limitations on primary containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure of 49 psig, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ or $0.75 L_t$, as applicable, during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

Operating experience with the main steam line isolation valves has indicated that degradation has occasionally occurred in the leak tightness of the valves; therefore, the special requirement for testing these valves.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix "J" of 10 CFR Part 50 with the exception of exemptions granted for main steam isolation valve leak testing and testing the airlocks after each opening.

3/4.6.1.3 PRIMARY CONTAINMENT AIR LOCKS

The limitations on closure and leak rate for the containment air locks are required to meet the restrictions on PRIMARY CONTAINMENT INTEGRITY and the primary containment leakage rate given in Specifications 3.6.1.1 and 3.6.1.2. The specification makes allowances for the fact that there may be long periods of time when the air locks will be in a closed and secured position during reactor operation. Only one closed door in each air lock is required to maintain the integrity of the containment.

CONTAINMENT SYSTEMSPRIMARY CONTAINMENT AIR LOCKSLIMITING CONDITION FOR OPERATION

3.6.1.3 The primary 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 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3.

ACTION:

- a. With either one primary containment air lock door inoperable or the primary containment air lock door interlock inoperable:
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door interlock 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 SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 4. The provisions of Specification 3.0.4 are not applicable.
- b. With the primary containment air lock inoperable, except as a result of an inoperable air lock door or an inoperable air lock door interlock, 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 SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* See Special Test Exception 3.10.1.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

4.6.1.3 The primary containment air lock shall be demonstrated OPERABLE:

- a. After each opening, except when the air lock is being used for multiple entries, and then at least once per 72 hours, by verifying seal leakage rate less than or equal to 5 scf per hour when the gap between the door seals is pressurized to greater than or equal to 10 psig.*
- b. Prior to establishing PRIMARY CONTAINMENT INTEGRITY, if opened when PRIMARY CONTAINMENT INTEGRITY was not required, and at least once per 6 months# by conducting an overall air lock leakage test at P_a , 49 psig, and by verifying that the overall air lock leakage rate is within its limit.
- c. After each opening, except when the air lock is being used for multiple entries, and then at least once per 72 hours, by verifying that only one door in the air lock can be opened at a time.

The provisions of Specification 4.0.2 are not applicable.

* Exemption to 10 CFR 50, Appendix J.

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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 accident analyses. This restriction, in conjunction with the leakage rate limitation, will limit the site boundary radiation doses to within the limits of 10 CFR Part 100 during accident conditions.

3/4.6.1.2 PRIMARY CONTAINMENT LEAKAGE

The limitations on primary containment leakage rates ensure that the total containment leakage volume will not exceed the value assumed in the accident analyses at the peak accident pressure of 49 psig, P_a . As an added conservatism, the measured overall integrated leakage rate is further limited to less than or equal to $0.75 L_a$ or $0.75 L_c$, as applicable, during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

Operating experience with the main steam line isolation valves has indicated that degradation has occasionally occurred in the leak tightness of the valves; therefore, the special requirement for testing these valves.

The surveillance testing for measuring leakage rates is consistent with the requirements of Appendix "J" of 10 CFR Part 50 with the exception of exemptions granted for main steam isolation valve leak testing and testing the airlocks after each opening.

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CONTAINMENT SYSTEMS

PRIMARY CONTAINMENT AIR LOCKS

LIMITING CONDITION FOR OPERATION

- 3.6.1.3 The primary 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 psig.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2* and 3.

ACTION:

- a. With either one primary containment air lock door inoperable or the primary containment air lock door interlock inoperable:
 1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door interlock 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 SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
 4. The provisions of Specification 3.0.4 are not applicable.
- b. With the primary containment air lock inoperable, except as a result of an inoperable air lock door or an inoperable air lock door interlock, 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 SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* See Special Test Exception 3.10.1.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS

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 - b. Prior to establishing PRIMARY CONTAINMENT INTEGRITY, if opened when PRIMARY CONTAINMENT INTEGRITY was not required, and at least once per 6 months# by conducting an overall air lock leakage test at P_a , 49 psig, and by verifying that the overall air lock leakage rate is within its limit.
 - c. After each opening, except when the air lock is being used for multiple entries, and then at least once per 72 hours, by verifying that only one door in the air lock can be opened at a time.

The provisions of Specification 4.0.2 are not applicable.

* Exemption to 10 CFR 50, Appendix J.