

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATION CHANGES  
(MARK-UPS)

## CONTAINMENT SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION (Continued)

- b. The combined leakage rate for all penetrations and all valves<sup>#</sup> subject to Type B and C tests to less than or equal to  $0.60 L_v$ , and
- c. The leakage rate to less than 100 scf per hour for all four main steam lines through the isolation valves, and
- d. The combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment to less than or equal to 1 gpm times the total number of such valves, prior to increasing reactor coolant system temperature above 200°F.

#### 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 50 using the methods and provisions of ANSI N45.4 - 1972:

- a. ~~Three~~ <sup>A</sup> Type A Overall Integrated Containment Leakage Rate tests shall be conducted ~~at 40 ± 10 month intervals~~ during shutdown at  $P_{ss}$ , 11.5 psig, ~~during each 10 year service period~~ <sup>at 10 year intervals</sup>.\*
- b. If any periodic Type A test fails to meet  $0.75 L_v$ , 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  $0.75 L_v$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet  $0.75 L_v$ , 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 containment leakage rate,  $L'_{v1}$ , calculated in accordance with ANSI N-45.4-1972, Appendix C, is within 25 percent of the containment leakage rate,  $L_v$ , measured prior to the introduction of the superimposed leak.
  2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
  3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be between  $0.75 L_v$  and  $1.25 L_v$ .

<sup>#</sup>Except for those that are hydrostatically leak tested.

\*~~The third Type A test within the first 10 year service period shall be conducted prior to startup following the sixth refueling outage.~~ This is an exemption from 10 CFR Part 50, Appendix J Requirements.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- # d. Type B and C tests shall be conducted with gas at  $P_s$ , 11.5 psig,\* at intervals ~~no greater than 24 months except for tests involving:~~  
*Insert A*
1. Air locks,
  2. ~~Main steam line isolation valves, Deleted~~
  3. Penetrations using continuous leakage monitoring systems,
  4. Valves pressurized with fluid from a seal system,
  5. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and
  6. Purge supply and exhaust isolation valves with resilient material seals.
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. ~~Main steam line isolation valves shall be leak tested at least once per 18 months. Deleted~~
- g. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at  $P_s$ , 11.5 psig, at intervals no greater than once per 3 years.
- h. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least 1.10  $P_s$ , 12.65 psig, and the seal system capacity is adequate to maintain system pressure for at least 30 days.  
*at intervals specified in d. above*
- i. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested ~~at least once per 18 months~~, *at intervals specified in d. above*
- j. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.9.2.
- k. The provisions of Specification 4.0.2 are not applicable to Specifications 4.6.1.2.a, 4.6.1.2.b, 4.6.1.2.c, 4.6.1.2.d, 4.6.1.2.e, and 4.6.1.2.g.

\*Unless a hydrostatic test is required.

#### INSERT A

not to exceed the following:

1. 2 years for components that pass 1 test or that have failed the last previous test
2. 5 years for components that have passed 2 consecutive tests
3. 10 years for components that have passed 3 consecutive tests

Test involving the following are exempted from the above requirement.

#### INSERT B

- # This is an exemption from Appendix J requirements. Consecutive tests will be performed in sequence at least 12 months apart with a minimum of 12 months inservice time prior to the test. Exceeding the owner's allowable leakage rate assigned for each component is considered a failure for interval determination only.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. Within 72 hours<sup>#</sup> after each closing, except when the air lock is being used for multiple entries, then at least ~~once per 72 hours~~<sup>every 30 days</sup>, by verifying seal leakage rate less than or equal to 2 scf per hour when the gap between the door seals is pressurized to P<sub>a</sub>, 11.5 psig.\*
- b. By conducting an overall air lock leakage test at P<sub>a</sub>, 11.5 psig, and verifying that the overall air lock leakage rate is within its limit:
  - 1. At least once ~~per 6 months~~<sup>every 24 months</sup>, and
  - 2. Prior to establishing PRIMARY CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.\*
- c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.
- d. By verifying each airlock door inflatable seal system OPERABLE by:
  - 1. Demonstrating each of the two inflatable seal pressure instrumentation channels per airlock door OPERABLE by performance of a:
    - a) CHANNEL FUNCTIONAL TEST at least once per 31 days, and
    - b) CHANNEL CALIBRATION at least once per 18 months,with a low pressure setpoint of  $\geq 60$  psig.
  - 2. At least once per 7 days, verifying seal air flask pressure to be greater than or equal to 90 psig.
  - 3. At least once per 18 months, conducting a seal pneumatic system leak test and verifying that system pressure does not decay more than 2 psig from 90 psig within 48 hours.

<sup>#</sup>The provisions of Specification 4.0.2 are not applicable.

\*Exemption to Appendix J of 10 CFR 50.

Attachment 4

Proposed Technical Specification Changes  
(Revised)



## CONTAINMENT SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION (Continued)

- b. The combined leakage rate for all penetrations and all valves# subject to Type B and C tests to less than or equal to  $0.60 L_a$ , and
- c. The leakage rate to less than 100 scf per hour for all four main steam lines through the isolation valves, and
- d. The combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment to less than or equal to 1 gpm times the total number of such valves, prior to increasing reactor coolant system temperature above 200°F.

#### 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 50 using the methods and provisions of ANSI N45.4 -1972:

- a. A Type A Overall Integrated Containment Leakage Rate tests shall be conducted\* during shutdown at  $P_a$ , 11.5 psig, at 10 year intervals
- 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 containment leakage rate,  $L_v$ , calculated in accordance with ANSI N-45.4-1972, Appendix C, is within 25 percent of the containment leakage rate,  $L_a$ , measured prior to the introduction of the superimposed leak.
  - 2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
  - 3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be between  $0.75 L_a$  and  $1.25 L_a$ .

#Except for those that are hydrostatically leak tested.

\*This is an exemption from 10 CFR Part 50, Appendix J Requirements.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- #d. Type B and C tests shall be conducted with gas at  $P_s$ , 11.5 psig,\* at intervals not to exceed the following:
1. 2 years for components that pass 1 test or that have failed the last previous test
  2. 5 years for components that have passed 2 consecutive tests
  3. 10 years for components that have passed 3 consecutive tests
- Tests involving the following are exempted from the above requirements:
1. Air locks,
  2. Deleted
  3. Penetrations using continuous leakage monitoring systems,
  4. Valves pressurized with fluid from a seal system,
  5. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and
  6. Purge supply and exhaust isolation valves with resilient material seals.
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Deleted
- g. Type B tests for penetrations employing a continuous leakage monitoring system shall be conducted at  $P_s$ , 11.5 psig, at intervals no greater than once per 3 years.
- h. Leakage from isolation valves that are sealed with fluid from a seal system may be excluded, subject to the provisions of Appendix J, Section III.C.3, when determining the combined leakage rate provided the seal system and valves are pressurized to at least 1.10  $P_s$ , 12.65 psig, at intervals specified in d above, and the seal system capacity is adequate to maintain system pressure for at least 30 days.
- i. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested at interval specified in d above.

\*Unless a hydrostatic test is required.

#This is an exemption from Appendix J requirements. Consecutive tests will be performed in sequence at least 12 months apart with a minimum of 12 months inservice time prior to the test. Exceeding the owner's allowable leakage rate assigned for each component is considered a failure.



## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- j. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.9.2.
- k. The provisions of Specification 4.0.2 are not applicable to Specifications 4.6.1.2.a, 4.6.1.2.b, 4.6.1.2.c, 4.6.1.2.d, 4.6.1.2.e, and 4.6.1.2.g.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS

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#### 4.6.1.3 Each containment air lock shall be demonstrated OPERABLE:

- a. Within 72 hours<sup>#</sup> after each closing, except when the air lock is being used for multiple entries, then at least every thirty days<sup>#</sup>, by verifying seal leakage rate less than or equal to 2 scf per hour when the gap between the door seals is pressurized to  $P_o$ , 11.5 psig.\*
- b. By conducting an overall air lock leakage test at  $P_o$ , 11.5 psig, and verifying that the overall air lock leakage rate is within its limit:
  1. At least once every 24 months<sup>#</sup>, and
  2. Prior to establishing PRIMARY CONTAINMENT INTEGRITY when maintenance has been performed on the air lock that could affect the air lock sealing capability.\*
- c. At least once per 6 months by verifying that only one door in each air lock can be opened at a time.
- d. By verifying each airlock door inflatable seal system OPERABLE by:
  1. Demonstrating each of the two inflatable seal pressure instrumentation channels per airlock door OPERABLE by performance of a:
    - a) CHANNEL FUNCTIONAL TEST at least once per 31 days, and
    - b) CHANNEL CALIBRATION at least once per 18 months, with a low pressure setpoint of 60 psig.
  2. At least once per 7 days, verifying seal air flask pressure to be greater than or equal to 90 psig.
  3. At least once per 18 months, conducting a seal pneumatic system leak test and verifying that system pressure does not decay more than 2 psig from 90 psig within 48 hours.

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<sup>#</sup>The provisions of Specification 4.0.2 are not applicable.

\*Exemption to Appendix J of 10 CFR 50.

## CONTAINMENT SYSTEMS

### CONTAINMENT PURGE SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.6.1.9 The containment purge system supply and exhaust isolation valves shall be OPERABLE and either the 20 inch or the 6 inch purge system may be in operation; however, the 20 inch purge system shall not be in operations nor shall the 20 inch valves be open except for containment pressure control, for ALARA and air quality considerations for personnel entry, or for surveillance or special testing on the purge system that requires the isolation valve(s) to be open.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2 and 3.

#### ACTION:

- a. With a containment purge system supply and/or exhaust isolation valve(s) inoperable except for the condition covered in Action C, close the inoperable valve(s) or otherwise isolate the penetration(s) within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. With the 20 inch supply and/or exhaust isolation valve(s) open except as allowed by Specification 3.6.1.9, close the open 20 inch valve(s) or otherwise isolate the penetration(s) within four hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With a containment purge supply and/or exhaust isolation valve(s) with resilient material seals having a measure leakage rate exceeding the limit of Surveillance Requirement 4.6.1.9.2, restore the inoperable valve(s) to OPERABLE status or otherwise isolate the penetration(s) so that the measured leakage rate does not exceed the limit of Specification 4.6.1.9.2 within 24 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

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4.6.1.9.1 At least once per 31 days each 20 inch containment purge system supply and exhaust isolation valve shall be verified closed.

4.6.1.9.2 Each 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<sub>a</sub> when pressurized to P<sub>a</sub> at interval specified in 4.6.1.2d.