

St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Proposed License Amendment  
Containment Leakage Surveillance Requirements

ATTACHMENT 1

ST. LUCIE UNIT 1 MARKED-UP TECHNICAL SPECIFICATION PAGES

3/4 6-2  
3/4 6-3  
B 3/4 6-1

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CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of:
  1.  $< L_a$ , 0.50 percent by weight of the containment air per 24 hours at  $P_a$ , (39.6 psig), or
  2.  $< L_t$ , 0.32 percent by weight of the containment air per 24 hours at a reduced pressure of  $P_t$ , (19.8 psig).
- b. A combined leakage rate of  $< 0.60 L_a$  for all penetrations and valves subject to Type B and C tests as identified in Table 3.6-1 when pressurized to  $P_a$ .
- c. A combined leakage rate of  $< 0.27 L_a$  for all penetrations identified in Table 3.6-1 as secondary containment bypass leakage paths when pressurized to  $P_a$ .

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding  $0.75 L_a$  or  $0.75 L_t$ , as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding  $0.60 L_a$ , or (c) with the combined bypass leakage rate exceeding  $0.27 L_a$ , restore the leakage rate(s) to within the limit(s) prior to increasing the 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:

- a. ~~Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 + 10 month intervals during shutdown at either  $P_a$  (39.6 psig) or at  $P_t$  (19.8 psig) during each 10-year.~~

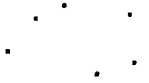
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ST. LUCIE UNIT 1

3/4 6-2

Amendment No. 38, 99

TYPE A TEST SHALL BE PERFORMED IN ACCORDANCE WITH 10 CFR 50 APPENDIX J, AS MODIFIED BY APPROVED EXEMPTIONS.



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## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

~~service period. The third test of each set shall be conducted during the shutdown for the 10-year plant in-service inspection.~~

Delete

- b. If any periodic Type A test fails to meet either  $.75 L_a$  or  $.75 L_t$ , the test schedule for subsequent Type A tests shall be reviewed<sup>a</sup> and approved by the Commission. If two consecutive Type A tests fail to meet either  $.75 L_a$  or  $.75 L_t$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either  $.75 L_a$  or  $.75 L_t$  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 Type A test by verifying that the difference between supplemental and Type A test data is within  $0.25 L_a$  or  $0.25 L_t$ ,
  2. Has a duration sufficient to establish accurately the change in leakage 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 equivalent to at least 25 percent of the total measured leakage rate at  $P_a$  (39.6 psig) or  $P_t$  (19.8 psig).
- d. Type B and C tests shall be conducted with gas at  $P_a$  (39.6 psig) at intervals no greater than 24 months except for tests involving air locks.
- e. The combined bypass leakage rate shall be determined to be  $< 0.27 L_a$  by applicable Type B and C tests at least once per 24 months, except for penetrations which are not individually testable; penetrations not individually testable shall be determined to have no detectable leakage when tested with soap bubbles while the containment is pressurized to  $P_a$  (39.6 psig) during each Type A test.
- f. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.

## 3/4.6 CONTAINMENT SYSTEMS

### BASES

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#### 3/4.6.1 CONTAINMENT VESSEL

##### 3/4.6.1.1 CONTAINMENT VESSEL INTEGRITY

CONTAINMENT VESSEL 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 CONTAINMENT LEAKAGE

The limitations on 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,  $P_a$  (39.6 psig). As an added conservatism, the measured overall integrated leakage rate is further limited to  $\leq 0.75 L_a$  or  $\leq 0.75 L_t$  (as applicable) during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the requirements of Appendix "J" of 10 CFR Part 50, with the option of using any NRC-approved method for performing the leak rate testing and calculating the results.

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS

ADD  
**AS MODIFIED BY APPROVED EXEMPTIONS**

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.

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ATTACHMENT 2

ST. LUCIE UNIT 2 MARKED-UP TECHNICAL SPECIFICATION PAGES

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B 3/4 6-1

CONTAINMENT SYSTEMS

CONTAINMENT LEAKAGE

LIMITING CONDITION FOR OPERATION

3.6.1.2 Containment leakage rates shall be limited to:

- a. An overall integrated leakage rate of:
  1. Less than or equal to  $L_a$ , 0.50 percent by weight of the containment air per 24 hours at  $P_a$ , 41.8 psig, or
  2. Less than or equal to  $L_r$ , 0.35 percent by weight of the containment air per 24 hours at a reduced pressure of  $P_r$ , 20.9 psig.
- b. A combined leakage rate of less than or equal to  $0.60 L_a$  for all penetrations and valves subject to Type B and C tests, when pressurized to  $P_a$ .
- c. A combined bypass leakage rate of less than or equal to  $0.12 L_a$  for all penetrations identified in Table 3.6-1 as secondary containment bypass leakage paths when pressurized to  $P_a$ .

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

ACTION:

With either (a) the measured overall integrated containment leakage rate exceeding  $0.75 L_a$  or  $0.75 L_r$ , as applicable, or (b) with the measured combined leakage rate for all penetrations and valves subject to Types B and C tests exceeding  $0.60 L_a$ , or (c) with the combined bypass leakage rate exceeding  $0.12 L_a$ , restore the overall integrated leakage rate to less than or equal to  $0.75 L_a$  or less than or equal to  $0.75 L_r$ , as applicable, and the combined leakage rate for all penetrations and valves subject to Type B and C tests to less than or equal to  $0.60 L_a$ , and the bypass leakage rate to less than or equal to  $0.12 L_a$ , prior to increasing the 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:

- a. ~~Three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at 40 ± 10 month intervals during~~

TYPE A TEST SHALL BE PERFORMED IN ACCORDANCE WITH  
10 CFR 50 APPENDIX J, AS MODIFIED BY APPROVED EXEMPTIONS

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## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

~~shutdown at either  $P_a$ , 41.8 psig or at  $P_t$ , 20.9 psig during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant in-service inspection.~~

Delete

- b. If any periodic Type A test fails to meet either  $.75 L_a$  or  $.75 L_t$ , 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 either  $.75 L_a$  or  $.75 L_t$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet either  $.75 L_a$  or  $.75 L_t$  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 Type A test by verifying that the difference between supplemental and Type A test data is within  $0.25 L_a$  or  $0.25 L_t$ .
  2. Has a 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 equivalent to at least 25% of the total measured leakage rate at  $P_a$ , 41.8 psig or  $P_t$ , 20.9 psig.
- d. Type B and C tests shall be conducted with gas at  $P_a$ , 41.8 psig at intervals no greater than 24 months except for tests involving:
  1. Air locks,
  2. Purge supply and exhaust isolation valves with resilient material seals.
- e. Purge supply and exhaust isolation valves with resilient material seals shall be tested and demonstrated OPERABLE per Surveillance Requirements 4.6.1.7.3 and 4.6.1.7.4.



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## 3/4.6 . CONTAINMENT SYSTEMS

### BASES

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#### 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 limits of 10 CFR 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 accident 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  $0.75 L_a$  or less than or equal to  $0.75 L_t$ , as applicable during performance of the periodic tests to account for possible degradation of the containment leakage barriers between leakage tests.

The surveillance testing for measuring leakage rates are consistent with the requirements of Appendix J of 10 CFR 50, with the option of using any NRC-approved method for performing the leak rate testing and calculating the results.

##### 3/4.6.1.3 CONTAINMENT AIR LOCKS

As Modified By Approved Exemptions

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 0.7 psi and (2) the containment peak pressure does not exceed the design pressure of 44 psig during steam line break conditions.

The maximum peak pressure expected to be obtained from a steam line break event is 43.4 psig. The limit of 0.4 psig for initial positive containment pressure will limit the total pressure to 43.99 psig which is less than the design pressure and is consistent with the safety analyses.

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ATTACHMENT 3

EVALUATION OF PROPOSED TS CHANGES

Introduction and Description

Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-67 and NPF-16 be amended to revise Surveillance Requirement 4.6.1.2.a. This amendment is consistent with the guidance of NUREG-1432, "Standard Technical Specifications for Combustion Engineering Plants." This Technical Specification change request involves an administrative change to the wording which is used to specify licensee conformance to the periodic retest schedule for Type A Tests which determine the Overall Integrated Containment Leakage Rate in accordance with 10 CFR 50 Appendix J.

St. Lucie Technical Specification 4.6.1.2.a requires that three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at  $40 \pm 10$  month intervals during shutdown during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection. This test frequency is consistent with 10 CFR 50 Appendix J, but does not provide for longer fuel cycle lengths and longer refueling outages in which major plant modifications are implemented.

The wording of the surveillance frequency found in NUREG-1432, "Standard Technical Specifications for Combustion Engineering Plants" provides flexibility in the test frequency. The Standard Technical Specifications allow for changes in test frequencies by means of a NRC approved exemption request to 10 CFR 50 Appendix J. This Technical Specification amendment will prevent unnecessary Technical Specification change requests from being processed when the fuel cycle does not match the  $40 \pm 10$  month frequency as presently required in the St. Lucie Technical Specifications.

Proposed Technical Specification Change

FPL proposes to change the following Technical Specifications for St. Lucie Units 1 and 2:

1. Surveillance Requirement 4.6.1.2.a : Revise the surveillance requirement to read,

"Type A test shall be performed in accordance with 10 CFR 50 Appendix J, as modified by approved exemptions."



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Justification: The proposed change is administrative in nature in that the proposed change will adopt the guidance provided in NUREG 1432, "Standard Technical Specifications for Combustion Engineering Plants" for stating Type A tests will be performed in accordance with 10 CFR 50 Appendix J, as modified by approved exemptions. The periodic retest schedule is specified/codified in Appendix J and any exemptions to these requirements require prior NRC approval. This guidance and wording was approved and issued by the NRC Office of Nuclear Reactor Regulation. NUREG 1432 was developed based on the criteria in the interim Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated February 6, 1987. The proposed Technical Specification change does not involve any change to the configuration or method of operation of any plant equipment that is used to mitigate the consequences of an accident, nor does it affect any assumptions or conditions in any of the accident analysis.

2. Bases Section 3/4.6.1.2: Revise the Bases section to include approved exemptions to Appendix J by adding the words "as modified by approved exemptions."

Justification: The Bases section provides information on how the surveillance interval was developed. The addition of "as modified by approved exemptions" to 10 CFR 50 Appendix J is administrative in nature and provides consistency with the Surveillance Requirement 4.6.1.2.a.

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ATTACHMENT 4

**DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION**

Pursuant to 10CFR50.92, a determination may be made that a proposed license amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed as follows:

(1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed license change is administrative in nature in that the proposed change will adopt the guidance and wording provided in NUREG 1432, "Standard Technical Specifications for Combustion Engineering Plants" for the performance of Type A tests in accordance with 10 CFR 50 Appendix J. This guidance was approved and issued by the NRC Office of Nuclear Reactor Regulation. NUREG 1432 was developed based on the criteria in the interim Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated February 6, 1987. Specifically, the proposed change removes the schedular requirements of  $40 \pm 10$  months for the performance interval for Type A test from the surveillance requirement and would require the test interval to be in accordance with 10 CFR 50 Appendix J and any approved exemptions. Therefore, the probability or consequences of an accident previously evaluated are not affected.

(2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed license change is administrative in nature in that the proposed change will adopt the guidance and wording provided in NUREG 1432, "Standard Technical Specifications for Combustion Engineering Plants" for the performance of Type A tests in accordance with 10 CFR 50 Appendix J. This guidance and wording was approved and issued by the NRC Office of Nuclear Reactor Regulation. NUREG 1432 was developed based on the criteria in the interim Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated February 6, 1987.



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Specifically, the proposed change removes the schedular requirements of  $40 \pm 10$  months for the performance interval for Type A test from the surveillance requirement and would require the test interval to be in accordance with 10 CFR 50 Appendix J and any approved exemptions. The proposed Technical Specification change does not involve any change to the configuration or method of operation of any plant equipment that is used to mitigate the consequences of an accident. Therefore, the possibility of a new or different kind of an accident previously evaluated would not be created.

(3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The proposed license change is administrative in nature in that the proposed change will adopt the guidance and wording provided in NUREG 1432, "Standard Technical Specifications for Combustion Engineering Plants" for the performance of Type A tests in accordance with 10 CFR 50 Appendix J. This guidance and wording was approved and issued by the NRC Office of Nuclear Reactor Regulation. NUREG 1432 was developed based on the criteria in the interim Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated February 6, 1987. Specifically, the proposed change removes the schedular requirements of  $40 \pm 10$  months for the performance interval for Type A test from the surveillance requirement and would require the test interval to be in accordance with 10 CFR 50 Appendix J and any approved exemptions. The proposed Technical Specification change does not involve any change to the configuration or method of operation of any plant equipment that is used to mitigate the consequences of an accident, nor does it affect any assumptions or conditions in any of the accident analysis. Therefore, a significant reduction in a margin of safety would not be involved.

Based on the discussion presented above and on the supporting Evaluation of Proposed TS Changes, FPL has concluded that this proposed license amendment involves no significant hazards consideration.



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