ATTACHMENT 1

Marked-up Technical Specification Pages:

Unit 1

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Unit 2

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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. $\leq L_a$, 0.50 percent by weight of the containment air per 24 hours at P_a, (39.6 psig), or

2. $\leq L_t$, 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 $\leq 0.60\ L_a$ 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 $\leq 0.27\ L_a$ 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. ~~using the methods and provisons of ANSI N45.4-1972.~~ ← DELETE

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

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~~

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.

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, 43.4 psig, or

2. Less than or equal to L_t, 0.35 percent by weight of the containment air per 24 hours at a reduced pressure of P_t, 21.7 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 of than or equal 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_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 0.12 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_t, 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. ~~using the methods and provisions of ANSI N45.4-1972.~~ DELETE

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

with the option of using any NRC-approved method for performing the leak rate testing and calculating the results.

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 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.

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 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.

ATTACHMENT 2

SAFETY EVALUATION

INTRODUCTION

The proposed amendments to the St. Lucie Units 1 and 2 Technical Specifications reflect a newer method for evaluating test data called the Mass Point method. The proposed amendments delete reference to ANSI N45.4-1972 from Section 3/4.6.1.2 of the St. Lucie Units 1 and 2 Technical Specifications.

Since the issuance of ANSI N45.4-1972, a more accurate method of determining the containment leakage rates, the Mass Point method, was developed as described in ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements." A change is also proposed to Bases Section 3/4.6.1.2 to include the provision for use of the Mass Point or other NRC-approved methods for performing leakage rate calculations.

DISCUSSION

The St. Lucie Unit 1 and Unit 2 Technical Specifications each require that containment leakage rates be demonstrated at specified intervals and that they be determined to be in conformance with the criteria specified in Appendix J of 10 CFR 50 using the methods and provisions of ANSI N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors." ANSI N45.4-1972 specifies the practices and test requirements for the quantitative determination of leakage rates for containment structures. The standard provides for one of two acceptable methods for leakage-rate testing: the Total Time method and the Point-to-Point method.

In the Total Time method, a series of leakage rates are calculated on the basis of containment air mass differences between an initial data point and each individual data point thereafter. In the Point-to-Point method the leakage rates are based on the air mass differences between each pair of consecutive data points.

Advances in leakage rate testing subsequent to the issuance of ANSI N45.4-1972 have provided improved test methods, including a newer method of evaluating test data called the Mass Point method. The Mass Point method involves calculation of the air mass at a series of points in time and the plotting of mass against time. A linear regression line plotted through the mass-time points using a least squares fit is used to obtain the calculated leakage rate.

This Mass Point method was incorporated in a newer ANSI standard, ANSI/ANS 56.8-1981, "Containment System Leakage Testing Requirements" (revised 1987) and has been accepted by the NRC staff as an improved alternative method of calculating containment leakage rates. However, it has been recognized by the NRC staff that a strict interpretation of the specific wording of Appendix J, III.A.3, by referencing only the older ANSI standard, would preclude use of the newer improved method.

While the NRC contemplates amending 10 CFR Part 50 Appendix J by a rule change which would endorse the use of the Mass Point method, FPL proposes an exemption to 10 CFR Part 50 Appendix J in accordance with 10 CFR 50.12. This proposed exemption is attached as Attachment 4 to this application. FPL proposes in the exemption, and in the proposed license amendment, the deletion of the reference to ANSI N45.4-1972 in each Units' Technical Specifications in order to allow any NRC-approved leakage rate testing method to be used at St. Lucie Plant.

NRC approval of this proposed license amendment, coupled with the approval of FPL's proposed exemption from 10 CFR Part 50 Appendix J, III.A.3, would permit near term application of the newer Mass Point methodology.

ATTACHMENT 3

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment involves no significant hazards consideration are included in the Commission's regulations, 10 CFR 50.92, which states that no significant hazards considerations are involved if the 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.

Removing the reference to ANSI Standard N45.4-1972 will allow more current methods to be used in determining the manner in which the leakage rate test data are analyzed and evaluated. Since the acceptability of the containment leakage rate data will continue to be analyzed by the use of accepted methodologies, and since no change in acceptance criteria is proposed, the probability or consequences of an accident previously evaluated will not increase.

(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.

No changes to plant operation or surveillance acceptance criteria are requested in this proposed license amendment. The acceptability of leakage rate test data results will remain unchanged. NRC-approved methods of leakage rate testing are satisfactory methods and the Mass Point method is recognized as an improved alternate method of calculating containment leakage rates.

There are no new failure modes associated with this change and therefore, the possibility of a new or different kind of accident will not be created.

(3) Use of the modified specification would not involve a significant reduction in a margin of safety.

This proposed amendment includes Surveillance Requirement methodology changes and there is no impact on the reactor containment or leakage rate acceptability limits. The improved analytical methodology provides an additional method for verifying that containment integrity and containment design leakage rates would be maintained under accident conditions. Therefore, there is no reduction in a margin of safety as a result of this proposed license amendment.

Based on the above, we have determined that the amendment request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the probability of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety; and therefore does not involve a significant hazards consideration.

ATTACHMENT 4

ST. LUCIE UNITS 1 AND 2
REQUEST FOR PARTIAL EXEMPTION FROM THE REQUIREMENTS OF
10 CFR 50, APPENDIX J

DISCUSSION

The Commission's regulations, specifically 10 CFR 50.12(a), provide that exemptions may be granted from the regulations in 10 CFR 50 provided that they are "authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security."

Based on the information provided below, Florida Power & Light Company (FPL) concludes that an exemption from the requirements of 10 CFR 50, Appendix J is justified pursuant to 10 CFR 50.12(a)(1) and 10 CFR 50.12(a)(2)(ii). That is, the exemption:

- Is authorized by law;
- Will not present undue risk to public health and safety; and
- Is consistent with the common defense and security.

Special circumstances are present in this case in that application of the regulation is not necessary to achieve the underlying purpose of the rule. The proposed exemption to allow application of any NRC-approved accepted leakage rate testing methodology, including the Mass Point method, for leakage rate testing will satisfy the accuracy requirements of 10 CFR 50, Appendix J, Paragraph III.A.3 for Type A tests.

EXEMPTION REQUESTED

Section III.A.3(a) of 10 CFR 50, Appendix J requires that:

> "All Type A tests shall be conducted in accordance with the provisions of the American National Standard N45.4-1972, Leakage Rate Testing of Containment Structures for Nuclear Reactors, March 16, 1972. The method chosen for the initial test shall normally be used for the periodic tests." (footnote omitted)

FPL hereby requests an exemption to this provision in order to use the Mass Point method, as described in ANSI/ANS 56.8-1981, the Total Time or Point-to-Point methodologies as described in ANSI N45.4-1972, or any other NRC-approved method for calculating containment leakage rates.

EVALUATION

The Total Time method calculates a series of time-weighted leakage rates, based upon differences between an initial data point and points occurring later in time. The adequacy of this method is sensitive to the initial data point. The Point-to-Point method calculates leakage rates based on the air mass differences between each pair of consecutive data points. Perturbations, such as fluctuations in containment air temperature, ingassing or outgassing, or instrument error, can affect the validity of data points and downstream leakage calculations for either of these methods.

On the other hand, the Mass Point method calculates leakage rates based upon contained air mass. This technique accurately calculates the mass of air inside containment and plots it as a function of time. The slope of the linear least squares fit of the data is used to calculate the leakage rate. The use of this method is well-known and endorsed by ANS, EPRI and the NRC Staff.

While the Mass Point method is considered more accurate, FPL desires the option of using any one of the three acceptable methods for performing containment integrated leakage rate testing. This flexibility in choosing leakage rate testing methodology will allow FPL to tailor outage leakage rate testing to minimize outage critical paths.

JUSTIFICATION FOR EXEMPTION

FPL's exemption request from the requirements of 10 CFR 50, Appendix J (Section III.A.3(a)) will not result in undue risk to the health or safety of the public:

(a) The proposed exemption does not change, modify, or restrict existing plant safety limits, safety settings, systems, or operations. The change does not impact the design bases of containment or modify its response during a DBA.

(b) There are no adverse safety effects associated with this exemption.

(c) The use of the Mass Point, Total Time and Point-to-Point methods represent the best available and proven containment leakage rate calculational and measurement technology.

CONCLUSION

Based on the above information, FPL concludes that the requested exemption is warranted and that the underlying purpose of the regulation would still be met.