Florida Power
A Progress Energy Company

Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

Ref: 10 CFR 50.90

March 7, 2001
3F0301-05

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: License Amendment Request #267, Revision 0
Revision to Improved Technical Specification 5.6.2.20, "Containment Leakage Rate Testing Program"

Reference: 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors, Option B

Dear Sir:

Pursuant to 10 CFR 50.90, Florida Power Corporation (FPC) hereby submits an alternate method for complying with the requirements of 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B. Current NRC-approved guidance for implementation of these regulations is contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," (September 1995) and NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50, Appendix J," Revision 0, July 26 1995, referenced therein. FPC proposes to seek approval to allow a one-time interval extension for the Crystal River – Unit 3 (CR-3) Type A, Integrated Leakage Rate Test (ILRT) for no more than six (6) years. As noted in Attachment A to this submittal, risk-informed information supporting this request will be submitted no later than April 26, 2001.

To support the proposed Appendix J leakage test schedule, FPC is providing License Amendment Request (LAR) #267, Revision 0, requesting a change to the CR-3 Facility Operating License No. DPR-72 in accordance with 10 CFR 50.90. LAR #267 revises Improved Technical Specifications (ITS) 5.6.2.20, "Containment Leakage Rate Testing Program," to implement the above alternate method of compliance.

FPC requests NRC approval of LAR #267 by July 31, 2001, with 30 days for implementation. The requested approval date and implementation period will allow sufficient time to reschedule the remaining outage activities to achieve optimum effectiveness of Refueling Outage 12 (R-12), scheduled to begin on September 28, 2001. The reason for this request is to save critical path time in R-12 and move the ILRT to one of the three subsequent refueling outages where it can be performed off critical path. Removing the ILRT from R-12 will reduce the critical path by approximately 44 hours. Considering daily outage support costs and replacement power costs, the savings that can be realized by moving the ILRT off critical path would amount to $1.4 million.

This request is made with a risk-informed basis as described in Regulatory Guide 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications." FPC is currently developing detailed risk-informed information to further support this request. That information will include the change in the predicted person-rem / year frequency and the Large Early Release Frequency (LERF) associated with delaying ILRT performance. This information will be submitted no later than April 26, 2001, and is expected to quantify the low level of risk associated with this change.

CR-3 has determined that this request does not involve a significant hazards consideration pursuant to 10 CFR 50.92. In addition, there is no significant increase in the amounts of any effluents that may be released offsite, and there is no significant increase in individual or cumulative occupational radiation exposure. Consequently, the proposed amendment satisfies the criteria of 10 CFR 51.22(c)(9) for categorical exclusion from the requirement for an environmental assessment.

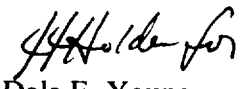
The CR-3 Plant Nuclear Safety Committee has reviewed this request and recommended it for approval.

This letter establishes new regulatory commitments.

The NRC has received a similar risk-informed submittal relating to a one-time extension of a Type A test interval from Entergy's Indian Point 3 (IP3) nuclear power plant. The IP3 request was submitted on September 6, 2000 (IPN-00-062) and supplemented on January 18, 2001 (IPN-01-007).

If you have any questions regarding this submittal, please contact Mr. Sid Powell, Supervisor, Licensing and Regulatory Programs at (352) 563-4883.

Sincerely,



Dale E. Young
Vice President, Crystal River Nuclear Plant

DEY/rmb

Attachments:

A. Description of Proposed Change, Background, Reason for Request, and Evaluation of Request
B. No Significant Hazards Consideration Determination
C. Environmental Impact Evaluation
D. Proposed Revised Improved Technical Specifications Change Pages – Strikeout / Shadowed Format
E. Proposed Revised Improved Technical Specifications Change Pages – Revision Bar Format
F. List of Regulatory Commitments

xc: NRR Project Manager
Regional Administrator, Region II
Senior Resident Inspector

STATE OF FLORIDA

COUNTY OF CITRUS

John J. Holden states that he is the Director, Site Operations at the Crystal River Nuclear Plant for Progress Energy; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information, and belief.

John J. Holden
Director, Site Operations
Crystal River Nuclear Plant

The foregoing document was acknowledged before me this 7th day of March, 2001, by John J. Holden.

LISA A. MORRIS
Notary Public, State of Florida
My Comm. Exp. Oct. 25, 2003
Comm. No. CC 879691

Signature of Notary Public
State of Florida

LISA A MORRIS

(Print, type, or stamp Commissioned
Name of Notary Public)

Personally Known X -OR- Produced Identification _____

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT - 3

DOCKET NUMBER 50-302 / LICENSE NUMBER DPR-72

ATTACHMENT A

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

Description of Proposed Change, Background, Reason for Request, and Evaluation of Request

LICENSE AMENDMENT REQUEST #267, REVISION 0
CONTAINMENT LEAKAGE RATE TESTING PROGRAM

Description of Proposed Change

The purpose of this submittal is to request a one-time deferral of the Type A Containment Integrated Leak Rate Test (ILRT) from fall 2001 to no later than fall 2007. The justification for this request is based on past successful Type A, B, and C tests, containment tendon inspections, and American Society of Mechanical Engineers (ASME) Section XI inspections at Crystal River Unit 3 (CR-3). Further justification is based on research documented in NUREG-1493 that, generically, very few potential containment leakage paths fail to be identified by Type B and C tests. In fact, an analysis of 144 ILRT test results, including 23 failures, found that no failures were due to containment liner breach. The NUREG concluded that reducing the Type A (ILRT) testing frequency to one per twenty years would lead to an imperceptible increase in risk.

CR-3 proposes to revise Improved Technical Specifications (ITS) 5.6.2.20, "Containment Leakage Rate Testing Program," by adding a sentence to the end of the first paragraph:

"Performance of the November 2001 integrated leakage rate (Type A) test has been deferred to no later than November 2007."

References

The following documents were used in the development of this License Amendment Request (LAR):

1. NEI 94-01, "Nuclear Energy Institute Industry Guideline For Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," Revision 0, July 26, 1995 [NEI 94-01].
2. NRC letter to FPC issuing License Amendment 156, dated July 24 1997, to implement the requirements of 10 CFR 50, Appendix J, Option B for performance-based containment leakage rate testing program [LAR 156].
3. Regulatory Guide 1.35.1, "Determining Prestressing Forces For Inspection of Prestressed Concrete Containments" [RG 1.35.1].
4. Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," September 1995 [RG 1.163].
5. American National Standard ANSI/ANS-56.8-1994, "Containment System Leakage Testing Requirements" [ANSI/ANS-56.8-1994].
6. American Society of Mechanical Engineers (ASME) Section XI Subsections IWE and IWL, (Reactor Building Containment Inspections).
7. NUREG-1493, "Performance-Based Containment Leak-Test Program," Final Report, September 1995 [NUREG-1493].
8. EPRI TR-104285, "Risk Impact Assessment of Revised Containment Leak Rate Testing Intervals" [EPRI TR-104285].

Background

Integrated Leak Rate Tests (ILRTs) have been required of operating nuclear power plants to ensure the public health and safety in the case of an accident that would release radioactivity to the containment. Conservative design and construction have led to very few ILRTs exceeding their required leakage. The NRC has extended the allowable ILRT test period from three times in ten years to once in ten years based on past successful tests. NUREG-1493 which supported that change also stated that test periods of up to twenty years would lead to an imperceptible increase in risk.

Reason For Request

The ILRT at CR-3 is currently scheduled during October in the Refuel 12 Outage. With approval of this request, FPC will move the ILRT to one of the three subsequent refueling outages where it can be performed off critical path. Considering daily outage support costs and replacement power costs, the savings by moving the ILRT off critical path would amount to $1.4 million. If the ILRT is deferred, the critical path will be reduced by about 44 hours.

Florida Power Corporation (FPC) is aware of the current discussions between the NRC and NEI concerning the Type A test interval. The basis of these discussions are References 7 and 8, as listed above, which state that a Type A test interval of 20 years would have minimal impact on the public health and safety.

Evaluation Of Request

The satisfactory results from previous integrated leakage rate tests at CR-3, as well as continued satisfactory results of local leak rate tests, containment inspections, and tendon surveillances, support deferral of the Refuel 12 Outage test. The CR-3 reactor containment building will continue to be inspected under the requirements of ASME Section XI Subsections IWE and IWL. The existing Type B and C containment penetration testing program and the existing containment tendon testing program will continue to be performed in accordance with previous regulatory approvals.

FPC has performed four operational Type A tests. All tests passed the as-found acceptance criteria of 0.25 %wt/day (La).

Date of Type A test	Date of Report to NRC	FPC Letter Reference	Type A Test Results [%wt/day]
June 1980	October 30, 1980	3F1080-09	0.142
July 1983	October 11, 1983	3F1083-13	0.148
November 1987	March 21, 1988	3F0388-16	0.107
November 1991	January 19, 1992	3F0192-16	0.101

Structural degradation of containment is a gradual process that occurs due to the effects of pressure, temperature, radiation, chemical, or other such effects. Such effects are identified and corrected when the containment structure is periodically tested and inspected to verify structural integrity under ASME Section XI Subsections IWE and IWL. The most recent visual inspections performed in 1999 included a General Visual of all accessible areas of the liner and

penetrations. Additionally, a VT-3 was performed on all accessible areas of the liner and penetrations up to the dome elevation. These surveillances provide a high degree of assurance that any degradation of the containment structure will be detected and corrected before it can produce a containment leakage path. The following is the history of the IWE and IWL inspections since the last Type A test:

Containment Inspection	1999	1997	1993
Visual	Interior per IWE	Interior and Exterior per IWE / IWL	Interior and Exterior per RG 1.35.1
Tendon	N / A	Per IWL	RG 1.35.1

The tests and inspections conducted to date have not identified degradation that threatens the integrity of the CR-3 containment.

FPC is currently developing risk-informed information to support this request including the change in the predicted person-rem / year frequency and in the Large Early Release Frequency (LERF). This information is similar to that submitted by IP3 in their submittal of January 18, 2001 (IPN-01-007). This information will be submitted no later than April 26, 2001.

FLORIDA POWER CORPORATION

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ATTACHMENT B

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

No Significant Hazards Consideration Determination

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Crystal River Unit 3 (CR-3) proposes to revise Improved Technical Specifications (ITS) 5.6.2.20, "Containment Leakage Rate Testing Program," by adding a sentence to the end of the first paragraph:

"Performance of the November 2001 integrated leakage rate (Type A) test has been deferred to no later than November 2007."

Florida Power Corporation (FPC) has reviewed the proposed revisions to ITS 5.6.2.20, "Containment Leakage Rate Testing Program," and is currently developing risk-informed information to support this request including the change in the predicted person-rem / year frequency and in the Large Early Release Frequency (LERF). This information will be submitted no later than April 26, 2001, and will quantify the low level of risk associated with this change. The proposed change does not involve a significant hazards consideration. In support of this conclusion, the following analysis is provided. The additional risk-informed information will not invalidate this conclusion:

(1) Does not involve a significant increase in the probability or consequences of an accident previously analyzed.

The proposed revision to the CR-3 ITS adds a one-time extension to the current interval for Type A testing. The current test interval of 10 years, would be extended on a one-time basis to 16 years from the last Type A test. The proposed extension to Type A testing cannot increase the probability of an accident previously evaluated since the containment Type A testing extension is not a modification to plant systems, nor a change to plant operation that could initiate an accident. The proposed extension to Type A testing does not involve a significant increase in the consequences of an accident since research documented in NUREG-1493 found that, generically, very few potential containment leakage paths fail to be identified by Type B and C tests. In fact, an analysis of 144 ILRT results, including 23 failures, found that no failures were due to containment liner breach. The NUREG concluded that reducing the Type A (ILRT) testing frequency to one per twenty years would lead to an imperceptible increase in risk. CR-3 provides a high degree of assurance through testing and inspection that the containment will not degrade in a manner detectable only by Type A testing. Inspections required by the Maintenance Rule and American Society of Mechanical Engineers (ASME) code are performed in order to identify indications of containment degradation that could affect leak tightness. Type B and C testing required by the CR-3 ITS will identify any containment opening, such as valves, that would otherwise be detected by the Type A tests. These factors show that a CR-3 Type A test extension will not represent a significant increase in the consequences of an accident.

(2) Does not create the possibility of a new or different kind of accident from any accident previously analyzed.

The proposed extension to Type A testing cannot create the possibility of a new or different type of accident since there are no physical changes being made to the plant. There are no changes to the operation of the plant that could introduce a new failure mode creating the possibility of a new or different kind of accident.

(3) Does not involve a significant reduction in the margin of safety.

The proposed extension to Type A testing will not significantly reduce the margin of safety. The NUREG-1493 generic study of the effects of extending containment leakage testing found that a 20 year extension in Type A leakage testing resulted in an imperceptible increase in risk to the public. NUREG-1493 found that, generically, the design containment leakage rate contributes a very small amount to the individual risk, and that the decrease in Type A testing frequency would have a minimal affect on this risk since most potential leakage paths are detected by Type C testing.

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ATTACHMENT C

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

Environmental Impact Evaluation

ENVIRONMENTAL IMPACT EVALUATION

10 CFR 51.22(c)(9) provides criteria for and identification of licensing and regulatory actions eligible for categorical exclusion from performing an environmental assessment. A proposed amendment to an operating license for a facility requires no environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration, (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (3) result in a significant increase in individual or cumulative occupational radiation exposure.

Florida Power Corporation (FPC) has reviewed this license amendment request and is currently developing risk-informed information to support this request including the change in the predicted person-rem / year frequency and in the Large Early Release Frequency (LERF). This information will be submitted no later than April 26, 2001. FPC has determined that this license amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(c), no environmental impact statement or environmental assessment needs to be prepared in connection with the issuance of the proposed license amendment. The basis for this determination is as follows:

1. The proposed license amendment does not involve a significant hazards consideration as described previously in the no significant hazards evaluation for this license amendment request (Attachment B).

2. The proposed change revises Improved Technical Specifications (ITS) 5.6.2.20, "Containment Leakage Rate Program," which describes the program to implement containment testing as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B. The proposed change will be a one-time test interval extension that will decrease the total number of Type A tests performed for the term of the current operating license. Therefore, the proposed license amendment will not result in a significant change in the types or increase in the amounts of any effluents that may be released off-site.

3. The proposed change involves a one-time test interval extension that will decrease the total number of Type A tests performed for the term of the current operating license. The proposed change does not require operator or other actions that could increase occupational radiation exposure. Therefore, the proposed license amendment will not result in a significant increase to the individual or cumulative occupational radiation exposure.

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ATTACHMENT D

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

Proposed Revised Improved Technical Specifications Change Page

Strikeout / Shadowed Format

~~Strikeout Text~~	Indicates deleted text
Shadowed Text	Indicates added text

5.6 Procedures, Programs and Manuals

5.6.2.19 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) (continued)

c. The reactor vessel pressure and temperature limits, including those for heatup and cooldown rates, shall be determined so that all applicable limits (e.g., heatup limits, cooldown limits, and inservice leak and hydrostatic testing limits) of the analysis are met.

d. The PTLR, including revisions or supplements thereto, shall be provided upon issuance for each reactor vessel fluency period.

5.6.2.20 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. **Performance of the November 2001 integrated leakage rate (Type A) test has been deferred to no later than November 2007.**

The peak calculated containment internal pressure for the design basis loss of coolant accident, Pa, is 54.2 psig. The containment design pressure is 55 psig.

The maximum allowable primary containment leakage rate, L_a, at P_a, shall be 0.25% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

1. 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.

2. Air lock testing acceptance criteria are:

   a. Overall air lock leakage range is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

   b. For each door, leakage rate is $\leq 0.01\ L_a$ when tested at ≥ 8.0 psig.

   The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

   The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

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ATTACHMENT E

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

Proposed Revised Improved Technical Specifications Change Page

Revision Bar Format

5.7 Procedures, Programs and Manuals

5.6.2.19 Reactor Coolant System (RCS) PRESSURE AND TEMPERATURE LIMITS REPORT (PTLR) (continued)

e. The reactor vessel pressure and temperature limits, including those for heatup and cooldown rates, shall be determined so that all applicable limits (e.g., heatup limits, cooldown limits, and inservice leak and hydrostatic testing limits) of the analysis are met.

f. The PTLR, including revisions or supplements thereto, shall be provided upon issuance for each reactor vessel fluency period.

5.6.2.20 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. Performance of the November 2001 integrated leakage rate (Type A) test has been deferred to no later than November 2007.

The peak calculated containment internal pressure for the design basis loss of coolant accident, Pa, is 54.2 psig. The containment design pressure is 55 psig.

The maximum allowable primary containment leakage rate, L_a, at P_a, shall be 0.25% of primary containment air weight per day.

Leakage Rate acceptance criteria are:

1. 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.

2. Air lock testing acceptance criteria are:

   a. Overall air lock leakage range is $\leq 0.05\ L_a$ when tested at $\geq P_a$.

   b. For each door, leakage rate is $\leq 0.01\ L_a$ when tested at ≥ 8.0 psig.

   The provisions of SR 3.0.2 do not apply to the test frequencies specified in the Containment Leakage Rate Testing Program.

   The provisions of SR 3.0.3 are applicable to the Containment Leakage Rate Testing Program.

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ATTACHMENT F

LICENSE AMENDMENT REQUEST #267, REVISION 0
Containment Leakage Rate Testing Program

List of Regulatory Commitments

List of Regulatory Commitments

The following table identifies those actions committed to by Florida Power Corporation in this document. Any other actions discussed in the submittal represent intended or planned actions by Florida Power Corporation. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Supervisor, Licensing and Regulatory Programs of any questions regarding this document or any associated regulatory commitments.

Commitment	Due Date
FPC is currently developing risk-informed information to support this request including the change in the predicted person-rem / year frequency and in the Large Early Release Frequency (LERF).	April 26, 2001