

August 19, 1987

Docket No. 50-335

Mr. C. O. Woody  
Group Vice President  
Nuclear Energy  
Florida Power & Light Company  
P. O. Box 14000  
Juno Beach, Florida 33408

Dear Mr. Woody:

DISTRIBUTION

Docket File	E. Jordan
NRC PDR	J. Partlow
Local PDR	T. Barnhart (4)
PD22 Rdg.	ACRS (10)
T. Murley/J. Sniezek	
S. Varga	GPA/PA
G. Lainas	ARM/LFMB
D. Miller	Gray File
E. Tourigny	
OGC-Bethesda	

SUBJECT: EXEMPTION REQUEST FOR THE ST. LUCIE PLANT, UNIT NO. 1  
10 CFR PART 50, APPENDIX J, PRIMARY REACTOR CONTAINMENT  
LEAKAGE TESTING FOR WATER-COOLED REACTORS

The Commission has issued the enclosed exemption from certain requirements of Appendix J to 10 CFR Part 50 in response to your letter dated October 10, 1986, supplemented by letter dated January 9, 1987. Your October 10, 1986 letter also contained proposed technical specification changes which will be the subject of separate correspondence.

In our initial review of your October 10, 1986 letter, we noted that proposed surveillance requirement 4.6.1.3.b.2 contained a footnote which stated "This constitutes an exemption to Appendix J of 10 CFR 50." The proposed surveillance requirements to demonstrate containment air lock operability states in part that surveillance shall be performed "Prior to establishing Containment Integrity when maintenance has been performed on the air lock that could affect the air lock sealing capability." Your October 10, 1986 letter did not contain an application for exemption from Appendix J.

By letter dated January 9, 1987, you requested an exemption from the Appendix J requirement that air locks opened during periods when containment integrity is not required by the plant's Technical Specifications be tested at the end of such periods at not less than P. This requirement is contained in paragraph III.D.2(b)(ii) of Appendix J to 10 CFR Part 50. This paragraph is applicable whether or not maintenance was recently performed on the air lock. Your proposal to test the seals of the inner and outer doors prior to returning to a plant operating condition requiring containment integrity, assuming that no maintenance has been performed on the air lock since the last successful six month test, coupled with the required Appendix J testing when containment integrity is being maintained provides adequate justification for the exemption to be granted.

The Commission, pursuant to 10 CFR 50.12(a), hereby grants exemption from this requirement.

In granting the exemption request, the staff determined that this action is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

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PDR ADDCK 05000335  
P PDR

Mr. C. O. Woody

- 2 -

A copy of the exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

/s/

Herbert Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects-I/II

Enclosure:  
As stated

cc: See next page

\*See previous concurrence

*LA:PD22	*PBD#8	*D:PD22	*OGC	*AD:DRP-I/II	*D:SPLB
DMiller	ETouringy	LRubenstein		GLainas	JCraig
5/5/87	5/27/87	5/5/87	5/18/87	5/12/87	5/12/87

D. DRP-I/II  
Svarga  
5/11/87

Mr. C. O. Woody

- 2 -

A copy of the exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

Lester S. Rubenstein, Director  
Project Directorate II-2  
Division of Reactor Projects-I/II

Enclosure:  
As stated

cc: See next page

\*See previous concurrence

\*LA:PD22  
DMiller  
5/5/87

\*PBD#8  
ETouringy  
5/27/87

*copy for 8/13/87*  
\*D:PD22  
LRubenstein  
5/5/87

\*OGC  
5/18/87

*[Signature]*  
AD:DRP-I/II  
GLainas  
5/15/87

\*D:SPLB  
JCraig  
5/12/87

D:DRP-I/II  
SVarga  
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You requested exemption from the Appendix J requirement that air locks opened during periods when containment integrity is not required by the plant's Technical Specifications be tested at the end of such periods at not less than P<sub>a</sub>.

The Commission, pursuant to 10 CFR 50.12(a), hereby grants exemption from this requirement.

In granting the exemption request, the staff determined that this action is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

A copy of the Exemption is being filed with the Office of the Federal Register for publication.

Sincerely,

Lester S. Rubenstein, Director  
Project Directorate II-2  
Division of Reactor Projects-I/II

Enclosure:  
As stated

cc: See next page

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DM Miller  
5/5/87

\*PBD#8  
ETourigny  
5/5/87

  
D:PD22  
LRubenstein  
5/5/87

*My suggested revisions*  
OGC  
M Youm  
5/18/87

AD:DRP-I/II  
GLainas  
/ / 87

  
D:JPartlow  
JPartlow  
5/12/87

D:DRP-I/II  
SVarga  
/ / 87

Mr. C. O. Woody  
Florida Power & Light Company

St. Lucie Plant

cc:

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of

FLORIDA POWER AND LIGHT  
COMPANY

(St. Lucie Plant,  
Unit No. 1)

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)  
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)

Docket No. 50-335

EXEMPTION

I.

Florida Power and Light Company (the licensee) is the holder of Facility Operating License No. DPR-67 that authorizes the operation of the St. Lucie Plant, Unit No. 1 (the facility) at a steady-state power level not in excess of 2700 megawatts thermal. The facility is a pressurized water reactor (PWR) located at the licensee's site in St. Lucie County, Florida. The license provides, among other things, that the facility is subject to all rules, regulations and orders of the Commission now or hereafter in effect.

II.

10 CFR 50.54(o) states that primary reactor containments shall be subject to the requirements set forth in Appendix J to this part. Appendix J to 10 CFR Part 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," sets forth the detailed requirements for containment leakage testing. These test requirements provide for preoperational and periodic verification by tests of the leak-tight integrity of the primary reactor containment and systems and components which penetrate containment of water-cooled power reactors, and establish the acceptance criteria for such tests.

Section III of Appendix J addresses the specific leakage testing requirements.

III.

An exemption request was submitted by the licensee by letter dated January 9, 1987.

IV.

The licensee's proposed leak testing of containment air locks is in compliance with the requirements of Appendix J to 10 CFR Part 50, with one exception. The licensee has requested an exemption from paragraph III.D.2(b)(ii) of Appendix J, which states:

Air locks opened during periods when containment integrity is not required by the plant's Technical Specifications shall be tested at the end of such periods at not less than  $P_a$ .

Whenever the plant is in cold shutdown, containment integrity is not required. However, if an air lock is opened during cold shutdown, paragraph III.D.2(b)(ii) requires that an overall air lock leakage test at not less than  $P_a$  be conducted after it is closed. The existing air lock doors are so designed that a full pressure, i.e.,  $P_a$  (39.6 psig), test can only be performed after strong backs (structural bracing) have been installed on the inner door. Strong backs are needed since the pressure exerted on the inner door during the test is in a direction opposite to that of the accident pressure direction. The strong backs are extremely difficult to install and the outer door must be opened to remove the strong backs. Installing strong backs, performing the test, and removing the strong backs, is a cumbersome process requiring at least 14 hours during which access through the air lock is prohibited.

Alternatively, the licensee proposes to test the seals of the inner and outer doors by pressurizing the area between the seals and verifying an acceptable leakage rate prior to returning to a plant operating condition requiring containment integrity. The licensee contends this proposal will provide adequate assurance of air lock integrity without imposing undue delays on return to power operation.

If the periodic 6-month test of paragraph III.D.2(b)(i) and the test required by paragraph III.D.2(b)(iii) are current, there should be no reason to expect an air lock to leak excessively just because it has been opened during cold shutdown or refueling.

Moreover, if maintenance has been performed on the air lock since the last successful test pursuant to paragraph III.D.2(b)(i), an overall air lock test will be performed by the licensee instead of the seal test described above.

Accordingly, the staff concludes that the licensee's proposed approach, consisting of testing the seals of the inner and outer doors by pressurizing the area between the seals and verifying an acceptable leakage rate prior to returning to a plant operating condition requiring containment integrity, is acceptable. Based upon this alternative testing, an exemption from the requirements paragraph III.D.2(b)(ii) of Appendix J to 10 CFR Part 50 is proper.

V.

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), this exemption as described in Section IV is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances as provided in 10 CFR 50.12(a)(2) are present justifying the exemption.

In a letter dated January 9, 1987, the licensee provided information to the "special circumstances" finding required by revised 10 CFR 50.12(a) (See 50 FR 50764).

The licensee stated that the application of the requirements of 10 CFR 50, Appendix J, Paragraph III.D.2(b)(ii) is not necessary to serve the underlying purpose of these regulations. The basis for this statement is the fact that the alternatives presented limit the postulated accident doses to within the 10 CFR Part 100 guidelines. Therefore, the special circumstances of Section 50.12(a)(2)(ii) apply to these specific exemption requests.

Therefore, the Commission hereby grants the exemption request identified in Section IV above.

Pursuant to 10 CFR 51.32 the Commission has determined that the granting of the Exemption will not result in any significant impact on the environment (52 FR 10273).

This exemption is effective upon issuance.

Dated at Bethesda, Maryland, this 19th day of August, 1987.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Director  
Division of Reactor Projects-I/II  
Office of Nuclear Reactor Regulation