

September 27, 1995

Mr. J. H. Goldberg  
President - Nuclear Division  
Florida Power and Light Company  
P.O. Box 14000  
Juno Beach, Florida 33408-0420

SUBJECT: ISSUANCE OF SCHEDULAR EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, APPENDIX J, FOR TURKEY POINT UNIT 4, REGARDING DELAY OF NEXT REQUIRED TYPE A LEAKAGE RATE TEST (TAC NO. M93234)

Dear Mr. Goldberg:

By letter dated August 8, 1995, as revised by letter dated September 6, 1995, you requested a one-time schedular exemption to delay performance of a Type A test, as required by 10 CFR Part 50, Appendix J, for one refueling outage, a period of approximately 18 months.

The NRC staff has reviewed the information provided in support of your schedular exemption request. On the basis of the submitted information and as discussed in the enclosed Exemption, the NRC staff has concluded that the performance of a Type A test during the 1995 refueling outage is not necessary to achieve the underlying purpose of Appendix J, i.e., an essentially leak-tight containment.

We find that granting the Exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a), is authorized by law, will not present an undue risk to public health and safety, is consistent with the common defense and security, and meets the special circumstances described in 10 CFR 50.12(a)(2)(ii). Accordingly, your request for a schedular exemption to delay performance of the Type A test until the 1997 refueling outage is granted.

A copy of the Exemption is enclosed. The Exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

/s/  
David B. Matthews, Director  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-251  
Enclosure: Exemption  
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Florida Power and Light Company

Turkey Point Plant

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
FLORIDA POWER AND LIGHT COMPANY ) Docket No. 50-251  
(Turkey Point Unit 4) )

EXEMPTION

I.

Florida Power and Light Company (the licensee) is the holder of Facility Operating License No. DPR-41, which authorizes operation of Turkey Point Unit 4 (the facility), at a steady-state reactor power level not in excess of 2200 megawatts thermal. The facility is a pressurized water reactor located at the licensee's site in Dade County, Florida. The license provides among other things, that it is subject to all rules, regulations, and Orders of the U.S. Nuclear Regulatory Commission (the Commission or NRC) now or hereafter in effect.

II.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 requires the performance of three Type A containment integrated leakage rate tests (ILRTs) of the primary containment, at approximately equal intervals during each 10-year service period.

### III.

By letter dated August 8, 1995, and revised by letter dated September 6, 1995, the licensee requested an exemption from the requirements pertaining to the Type A testing interval required by 10 CFR 50 Appendix J. This section requires the performance of three Type A tests of the primary containment at approximately equal intervals during each 10-year service period. The requested exemption would permit a one-time interval extension of the Type A test by one refueling outage (from the March 1996 refueling outage, to the October 1997 refueling outage).

The licensee's request cites the special circumstances of 10 CFR 50.12, paragraph (a)(2)(ii) as the basis for the exemption. The licensee points out that the existing Type B and C testing programs are not being modified by this request and allowing a one-time scheduler exemption will not reduce the current level of safety since the Type A test frequency does not alter the containment leak rates.

### IV.

In the licensee's August 8, 1995, as revised by letter dated September 6, 1995, exemption request, the licensee stated that special circumstance 50.12(a)(2)(ii) is applicable to this situation, i.e., that application of the regulation is not necessary to achieve the underlying purpose of the rule.

Appendix J states that the leakage test requirements provide for periodic verification by tests of the leak tight integrity of the primary reactor containment. Appendix J further states that the purpose of the tests "is to assure that leakage through the primary reactor containment shall not exceed the allowable leakage rate values as specified in the Technical Specifications

or associated bases." Thus, the underlying purpose of the requirement to perform Type A containment leak rate tests at intervals during the 10-year service period is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or becoming unknown.

The NRC staff has reviewed the basis and supporting information provided by the licensee in the exemption request. It has been the experience at Turkey Point Unit 4 during the Type A tests conducted from 1982 to date, that the Type A tests have demonstrated that the reactor containment buildings have acceptable leak rates that are far below the leak rates assumed in the site's offsite dose calculation and the ILRT acceptance criteria. The licensee has reported that the test results are approximately one-third to one-fourth of the leakage assumed in offsite dose rate calculations (0.25%) and approximately one-half to one-third of the acceptance criteria for the ILRT (0.1875%). The leak rate data from these tests do not show an increasing trend, indicating that the containment liner and isolation system are stable and supporting the conclusion that a one-time scheduler exemption will not reduce the current level of safety.

The licensee will perform the general containment inspection although it is only required by Appendix J (Section V.A.) to be performed in conjunction with Type A tests. The NRC staff considers that these inspections, though limited in scope, provide an important added level of confidence in the continued integrity of the containment boundary.

The NRC staff has also made use of a draft staff report, NUREG-1493, which provides the technical justification for the present Appendix J

rulemaking effort which also includes a 10-year test interval for Type A tests. The integrated leakage rate test, or Type A test, measures overall containment leakage. However, operating experience with all types of containments used in this country demonstrates that essentially all containment leakage can be detected by local leakage rate tests (Type B and C). According to results given in NUREG-1493, out of 180 ILRT reports covering 110 individual reactors and approximately 770 years of operating history, only 5 ILRT failures were found which local leakage rate testing could not detect. This is 3% of all failures. This study agrees well with previous NRC staff studies which show that Type B and C testing can detect a very large percentage of containment leaks.

The Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), collected and provided the NRC staff with summaries of data to assist in the Appendix J rulemaking effort. NUMARC collected results of 144 ILRTs from 33 units; 23 ILRTs exceeded  $1.0L_a$ . Of these, only nine were not due to Type B or C leakage penalties. The NEI data also added another perspective. The NEI data show that in about one-third of the cases exceeding allowable leakage, the as-found leakage was less than  $2L_a$ ; in one case the leakage was found to be approximately  $2L_a$ ; in one case the as-found leakage was less than  $3L_a$ ; one case approached  $10L_a$ ; and in one case the leakage was found to be approximately  $21L_a$ . For about half of the failed ILRTs the as-found leakage was not quantified. These data show that, for those ILRTs for which the leakage was quantified, the leakage values are small in comparison to the leakage value at which the risk to the public starts to increase over

the value of risk corresponding to  $L_a$  (approximately  $200L_a$ , as discussed in NUREG-1493). Therefore, based on those considerations, it is unlikely that an extension of one cycle for the performance of the Appendix J, Type A test at Turkey Point Unit 4 would result in significant degradation of the overall containment integrity. As a result, the application of the regulation in these particular circumstances is not needed to achieve the underlying purpose of the rule.

Based on generic and plant-specific data, the NRC staff finds the basis for the licensee's proposed exemption to allow a one-time exemption to permit a schedular extension of one cycle for the performance of the Appendix J Type A test, provided that the general containment inspection is performed, to be acceptable.

Pursuant to 10 CFR 51.32, the Commission has determined that granting this Exemption will not have a significant impact on the environment (60 FR 49926 ).

This Exemption is effective upon issuance and shall expire at the completion of the 1997 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



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

Dated at Rockville, Maryland,  
this 27th day of September 1995

Memorandum Dated September 27, 1995

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