

October 17, 2000

Mr. T. F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT
IMPACT FOR AN EXEMPTION FROM THE REQUIREMENTS OF 10 CFR
PART 50 APPENDIX G, TURKEY POINT UNITS 3 AND 4 (TAC NOS. MA9504
AND MA9505)

Dear Mr. Plunkett:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption dated July 7, 2000, as supplemented October 4, 2000. The proposed exemption would allow you to apply the methodologies of the American Society of Mechanical Engineers Code Cases N-588 and N-641 for the Turkey Point Plant reactor vessel circumferential welds.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES NUCLEAR REGULATORY COMMISSION

FLORIDA POWER AND LIGHT COMPANY

DOCKET NOS. 50-250 AND 50-251

TURKEY POINT PLANT, UNITS 3 AND 4

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix G, for Facility Operating License Nos. DPR-31 and DPR-41, issued to Florida Power and Light Company (FPL, the licensee), for operation of the Turkey Point Plant, Units 3 and 4, located in Dade County, Florida.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed exemption would allow FPL to apply the methodologies of the American Society of Mechanical Engineers (ASME) Code Cases N-588 and N-641 for the Turkey Point Plant reactor vessel circumferential welds.

The proposed action is in accordance with the licensee's application for exemption dated July 7, 2000, as supplemented October 4, 2000.

The Need for the Proposed Action:

10 CFR Part 50, Appendix G, requires that pressure-temperature (P/T) limits be established for reactor pressure vessels (RPVs) during normal operating and hydrostatic pressure or leak-testing conditions. Specifically, 10 CFR Part 50, Appendix G states that “The appropriate requirements on both the pressure-temperature limits and the minimum permissible temperature must be met for all conditions.” Appendix G further specifies that the requirements for these limits are the ASME Code, Section XI, Appendix G Limits.

To address provisions of amendments to the technical specification (TS) P/T limits, low temperature overpressure protection (LTOP) system setpoints and LTOP system effective temperature (T_{enable}), the licensee requested in its submittals that the staff exempt Turkey Point Units 3 and 4 from application of specific requirements of 10 CFR Part 50, Section 50.60(a) and Appendix G, and substitute use of ASME Code Cases N-588 and N-641. Code Case N-588 permits the use of circumferentially-oriented flaws in circumferential welds for development of P/T limits. Code Case N-641 permits the use of an alternate reference fracture toughness (K_{IC} fracture toughness curve instead of K_{Ia} fracture toughness curve) for reactor vessel materials in determining the P/T limits, LTOP setpoints and T_{enable} . Since the K_{IC} fracture toughness curve shown in ASME Section XI, Appendix A, Figure A-2200-1, provides greater allowable fracture toughness than the corresponding K_{Ia} fracture toughness curve of ASME Section XI, Appendix G, Figure G-2210-1 (the K_{Ia} fracture toughness curve), using Code Case N-641 for establishing the P/T limits, LTOP setpoints and T_{enable} would be less conservative than the methodology currently endorsed by 10 CFR Part 50, Appendix G and, therefore, an exemption to apply the Code Case would be required by 10 CFR 50.60. It should be noted that although the use of the K_{IC} fracture toughness curve in Code Case N-641 was recently incorporated into the Appendix G to Section XI of the ASME Code, an exemption is still needed because the

proposed P/T limits, LTOP setpoints and T_{enable} (excluding Code Case N-641) are based on the 1996 edition (and 1997 addenda) of the ASME Code.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that exemption from the requirements of 10 CFR Part 50, Appendix G, to allow utilization of Code Cases N-588 and N-641 would provide an adequate margin of safety against brittle failure of the Turkey Point reactor vessels.

The proposed action will not significantly increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released off site, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does not involve any historic sites. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, there are no significant nonradiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (that is, the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Turkey Point Plant, Units 3 and 4.

Agencies and Persons Consulted:

In accordance with its stated policy, on October 10, 2000, the staff consulted with the Florida State official, William A. Passetti of the Bureau of Radiation Control, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated July 7, 2000, as supplemented October 4, 2000. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the ADAMS Public Library component on the NRC Web site, <http://www.nrc.gov> (the Electronic Reading Room).

Dated at Rockville, Maryland, this 17th day of October 2000.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Mr. T. F. Plunkett
Florida Power and Light Company

TURKEY POINT PLANT

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