



SEP 25 2015

L-2015-223  
10 CFR 50.55a

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

RE: Florida Power and Light Company  
Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Fifth Ten-Year Interval Inservice Testing (IST) Program  
Relief Request No. PR-01-Resubmittal

Pursuant to 10 CFR 50.55a (f)(5)(iii), Florida Power & Light (FPL) hereby requests approval of the attached Relief Request No. PR-01 for the Fifth Ten-Year Interval Inservice Testing Program for Turkey Point Units 3 and 4. This letter supersedes the previous submittal of this relief request, which was provided in FPL letter L-2015-098 dated May 12, 2015 (ADAMS accession number ML 15148A536).

FPL requests relief from the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), Section ISTB-5121(c) requirements for the quarterly testing of the boric acid transfer pumps. As an alternative to the code required testing, FPL proposes to test the boric acid transfer pumps by measuring differential pressure and vibration and comparing these values to the reference values on a quarterly basis. During comprehensive pump test when flow can be measured, full spectrum vibration analysis will be performed above the required vibration analysis required by the Code. This relief is requested on the basis that compliance with the specified Code requirement is impractical due to major hardware modifications in order to comply with the code requirements. The details of the 10 CFR 50.55a request are provided in the attached Relief Request PR-01.

If you have any questions or require additional information, please contact Mr. Mitch Guth, Licensing Manager, at (305) 246-6698.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas Summers', is written over a horizontal line.

Thomas Summers  
Site Vice President  
Turkey Point Nuclear Plant

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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**Turkey Point Units 3 and 4**

**Inservice Testing Program**

**Relief Request No. PR-01**

**In Accordance with 10 CFR 50.55a (f)(5)(iii)  
Inservice Testing Impracticality**

**1. ASME Code Component(s) Affected**

3P203A	3A Boric Acid Transfer Pump
3P203B	3B Boric Acid Transfer Pump
4P203A	4A Boric Acid Transfer Pump
4P203B	4B Boric Acid Transfer Pump

**2. Applicable Code Edition and Addenda**

The Fifth Ten-Year Interval commences on February 22, 2015, and on April 15, 2015 for Turkey Point Units 3 and Unit 4, respectively.

The Code of Record for the Turkey Point Units 3 and 4, Fifth Ten-Year Interval Inservice Testing (IST) Program is the 2004 Edition with the 2005 and 2006 Addenda of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code).

**3. Applicable Code Requirement**

ISTB-5121(c) - Where it is not practical to vary system resistance, flow rate and pressure shall be determined and compared to their respective reference values.

**4. Impracticality of Compliance**

The ASME OM Code requires that flow rate be measured during a Group A test and that a Group A inservice test be run on each Group A pump quarterly.

The normal test loop for the boric acid transfer pumps consists of fixed resistance flow paths to limit flow; however, flow measuring instruments are not installed in the flow path. The Turkey Point Units 3 and 4 Boric Acid Transfer Pump Test Diagram is presented in Figure 1. An alternate test circuit is available in which flow rate may be measured, however this flow path requires injection of highly concentrated boric acid solution into the reactor coolant system.

During power operation, conducting this loop test would result in severe power fluctuations, which would lead to a potential transient and subsequent trip of the reactor.

Using the alternate flow path at cold shutdown intervals would also result in excessive boration of the reactor coolant system resulting in potential difficulties and delays in restarting the plant.

Florida Power & Light Company (FPL) is requesting relief from the ISTB-5121(c) requirements since compliance with the code would require system modifications and installation of flow instruments in the fixed resistance flow path or injection of highly borated water into the reactor coolant system, which would lead to a potential plant transient, and is therefore considered impractical.

**5. Burden Caused by Compliance**

Compliance with the requirements of ISTB-5121(c) is impractical since it would require a major modification to install flow instrumentation in the normal test loop.

**6. Proposed Alternative and Basis for Use**

Pursuant to 10 CFR 50.55a (f)(5)(iii), in lieu of the Code required test, FPL proposes to test the boric acid transfer pumps every quarter through a fixed resistance flow path without flow instruments and to measure only differential pressure and vibration. Accordingly, differential pressure will be measured and compared to its reference value. Since the system resistance is fixed and can be assumed to be constant, pump degradation can be detected by comparing successive measurements of pump differential pressure. Additionally, vibration measurements will also be recorded and compared to their reference values.

During the comprehensive pump test when flow can be measured, full spectrum vibration analysis will be performed above the required vibration analysis required by the ASME OM Code. When performing the comprehensive pump test, all required parameters will be measured and compared to their reference values.

Position 9 of Generic Letter (GL 89-04) states that in cases where flow can only be established through a non-instrumented flow path during quarterly pump testing and path exists at cold shutdown or refueling outages to perform a test of the pump under full or substantial flow conditions, the increased interval is an acceptable alternative to the Code requirements provided that pump differential pressure, flow rate, and bearing vibration measurements are taken during this testing and that quarterly testing also measuring at least pump differential pressure and vibration is continued.

These pumps are included in the station preventive maintenance program which requires a pump inspection and oil analysis to be performed periodically. Based on the preventive maintenance inspection results, full spectrum analysis, and continued quarterly and comprehensive testing, an accurate assessment of pump health and operational readiness is determined.

As discussed herein, the proposed alternative testing provides reasonable assurance that the Turkey Point Units 3 and 4 Boric Acid Transfer Pumps are operationally ready.

7. **Duration of Proposed Alternative**

This relief will be used for the Fifth Ten-Year Interval for the Turkey Point Units 3 and 4 IST Program.

8. **Precedents**

A similar request was previously approved for the Turkey Point Units 3 and 4 Fourth Ten-Year Interval IST Program (ML042820470).

**Figure 1**  
**Boric Acid Transfer Pump Test Diagram**

