

April 16, 2014

MEMORANDUM TO: Jessie F. Quichocho, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Audrey L. Klett, Project Manager */RA/*
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NO. 3 – VERBAL
AUTHORIZATION OF RELIEF REQUEST NO. 1 FOR REPAIR OF
PRESSURIZER STAINLESS STEEL HEATER SLEEVE WITHOUT
FLAW REMOVAL – FIFTH 10-YEAR INSERVICE INSPECTION
INTERVAL (TAC NO. MF3834)

By letter dated April 4, 2014, as supplemented by letters dated April 9 and April 14, 2014, Florida Power & Light Company (the licensee) submitted Relief Request No. 1 for the fifth 10-year inservice inspection interval of Turkey Point Nuclear Generating Unit No. 3 (Turkey Point 3). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(a)(3)(ii), the licensee requested the U.S. Nuclear Regulatory Commission (NRC) authorization of an alternative to the requirements of American Society of Mechanical Engineers (ASME) Code, Section XI, 2007 Edition with Addenda through 2008, Subparagraph IWB-3142.3 because compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

During the Turkey Point 3 refueling outage, the licensee observed evidence of leakage in the annulus between the outer surface of one heater sleeve and the pressurizer bottom head bore. The licensee requested NRC authorization of a proposed alternative to the ASME Code, Section XI, 2007 Edition with Addenda through 2008, subparagraph IWB-3142.3, "Acceptance by Corrective Measures or Repair/Replacement Activity," which states that a component containing relevant conditions is acceptable for continued service if the relevant conditions are corrected by a repair/replacement activity or by corrective measures to the extent necessary to meet the acceptance standards of Table IWB-3410-1. The licensee's proposed alternative is to perform a "half-nozzle" repair that relocates the pressure boundary weld to the outside of the pressurizer bottom head shell and, thus, leaves the flaw that caused the leakage in place, which is assumed to exist in the original J-groove weld attaching the heater sleeve to the pressurizer cladding. The licensee requested relief for one 18-month operating cycle. The licensee's relief request is supported by a qualitative assessment of the potential for the growth of an assumed flaw in the original J-groove weld into the pressurizer bottom head shell. In support of its qualitative assessment, the licensee cited experience with previous fatigue flaw growth analyses for Combustion Engineering-design pressurizers.

The licensee requested the NRC to authorize the proposed alternative to support placing the pressurizer back in service for entry into Mode 4 from the current Unit 3 refueling outage. Therefore, the licensee requested verbal approval of Relief Request No. 1 for Turkey Point 3.

By electronic mail dated April 8 and April 10, 2014, the NRC staff requested additional information. By letters dated April 9 and April 14, 2014, the licensee responded to the NRC's request for additional information.

The NRC reviewed the licensee's submittal and determined that complying with the requirements of IWB-3142.3 would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety and that the licensee met the regulatory requirements in 10 CFR 50.55a(a)(3)(ii). Therefore, during a conference call with the licensee on April 15, 2014, the NRC verbally authorized the licensee's use of Relief Request No. 1 for Turkey Point 3 for that unit's next 18-month operating cycle. The script for the verbal authorization is enclosed. The participants on the telephone call consisted of the following:

NRC Participants:

Jessie Quichocho
Carolyn Fairbanks
Audrey Klett
Jeffrey Poehler
Farideh Saba

Licensee Participants:

Mike Kiley
Bob Tomonto
George Vickery
Paul Czaya
Scott Boggs
Tim Sweeney
Bill Cross

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding Relief Request No. 1 while preparing the subsequent written safety evaluation. The NRC staff's goal is to issue the written safety evaluation within 150 days from April 15, 2014 (i.e., the date of the verbal authorization).

Docket No. 50-250

Enclosure:
Verbal Authorization Script

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<p><u>NRC Participants:</u> Jessie Quichocho Carolyn Fairbanks Audrey Klett Jeffrey Poehler Farideh Saba</p>	<p><u>Licensee Participants:</u> Mike Kiley Bob Tomonto George Vickery Paul Czaya</p>	<p>Scott Boggs Tim Sweeney Bill Cross</p>
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Docket No. 50-250

Enclosure:
 Verbal Authorization Script

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OFFICE	LPLII-2/PM	LPLII-2/LA	NRR/DE/EVIB/BC	LPLII-2/BC	LPLII-2/PM
NAME	AKlett	BClayton	SRosenburg (CFairbanks for)	JQuichocho	AKlett
DATE	04/15/14	04/16/14	04/15/14	04/16/14	04/16/14

OFFICIAL RECORD COPY

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR RELIEF REQUEST 1: REPAIR OF PRESSURIZER STAINLESS STEEL HEATER

SLEEVE WITHOUT FLAW REMOVAL

FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL

TURKEY POINT NUCLEAR GENERATING UNIT NO. 3

DOCKET NO. 05000250

1.0 Script read by Carolyn Fairbanks, Acting Chief of the Office of Nuclear Reactor Regulation's Vessels & Internals Integrity Branch, on April 15, 2014, to the staff of Florida Power & Light Company (FPL, the licensee), with attendance coordinated by Audrey Klett from the U.S. Nuclear Regulatory Commission (NRC)

By letter dated April 4, 2014, as supplemented by letters dated April 9 and April 14, 2014, Florida Power & Light Company (the licensee) submitted Relief Request No. 1 for the fifth 10-year inservice inspection interval of Turkey Point Nuclear Generating Unit No. 3 (Turkey Point 3). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(a)(3)(ii), the licensee requested NRC authorization of an alternative to the requirements of the American Society of Mechanical Engineers (ASME) Code, Section XI, 2007 Edition with Addenda through 2008, Subparagraph IWB-3142.3, because compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

During the Turkey Point 3 refueling outage, the licensee observed evidence of leakage in the annulus between the outer surface of one heater sleeve and the pressurizer bottom head bore. The licensee requested NRC authorization of a proposed alternative to the ASME Code, Section XI, Subparagraph IWB-3142.3, "Acceptance by Corrective Measures or Repair/Replacement Activity," which states that a component containing relevant conditions is acceptable for continued service if the relevant conditions are corrected by a repair/replacement activity or by corrective measures to the extent necessary to meet the acceptance standards of Table IWB- 3410-1. The licensee's proposed alternative is to perform a "half-nozzle" repair that relocates the pressure boundary weld to the outside of the pressurizer bottom head shell and, thus, leaves the flaw that caused the leakage in place, which is assumed to exist in the original J-groove weld attaching the heater sleeve to the pressurizer cladding. The licensee requested relief for one 18-month operating cycle. The licensee's relief request is supported by a qualitative assessment of the potential for the growth of an assumed flaw in the original J-groove weld into the pressurizer bottom head shell. In support of its qualitative assessment, the licensee cited experience with previous fatigue flaw growth analyses for Combustion Engineering-design pressurizers.

Based on a comparison of Turkey Point 3 specific operating conditions and material properties with the information in the previous flaw growth analyses cited by the licensee, the NRC staff finds there is reasonable assurance that crack growth over one operating cycle will be minimal

Enclosure

and will not threaten the structural integrity of the pressurizer. The staff also found the likelihood of significant corrosion damage to the pressurizer to be negligible.

The staff also agrees that removing the original weld would result in a hardship to the licensee due to the radiation exposure to personnel, safety and foreign material risk. The benefit to be gained with respect to safety from removing the original J-groove weld does not compensate for the hardship given the low probability of significant flaw growth.

The licensee requested the NRC to authorize the proposed alternative to support placing the pressurizer back in service for entry into Mode 4 from the current Unit 3 refueling outage. Therefore, the licensee requested verbal approval of Relief Request No. 1 for Turkey Point 3.

Based on its review of the information submitted by the licensee, the NRC staff has determined that:

- (1) Complying with the requirements of IWB-3142.3 would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.
- (2) The licensee's proposed alternative will provide reasonable assurance that the structural integrity and leak tightness of the pressurizer and pressurizer heater sleeve will be maintained for one 18-month operating cycle.

Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(ii).

2.0 Script read by Jessie F. Quichocho, Chief of the Office of Nuclear Reactor Regulation's Plant Licensing Branch II-2 during the same conference call to FPL

As Chief of the Office of Nuclear Reactor Regulation's Plant Licensing Branch II-2, I concur with the Vessels & Internals Integrity Branch's conclusions.

Effective April 15, 2014, the NRC staff authorizes the proposed alternative at Turkey Point 3 for the pressurizer and pressurizer heater sleeve, as described in Relief Request No. 1, for one 18-month operating cycle. The NRC determined that the licensee's proposed alternative in Relief Request No. 1 is in accordance with the requirements of 10 CFR 50.55a(a)(3)(ii).

All other requirements of ASME Code, Section XI for which relief or a proposed alternative was not specifically requested and authorized by the NRC remain applicable, including the third party review by the Authorized Nuclear In-service Inspector.

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding Relief Request No. 1 while preparing the subsequent written safety evaluation. The NRC staff's goal is to issue the written safety evaluation within 150 days from today in accordance with the Office of Nuclear Reactor Regulation expectations.