




UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 6, 2017.

MEMORANDUM TO: Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NO. 4 – VERBAL
AUTHORIZATION OF RELIEF REQUEST NO. 5 FOR REPAIR OF
HIGH HEAD SAFETY INJECTION RECIRCULATION TEST LINE –
FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL
(CAC NO. MF9459)

By letter L-2017-050 dated March 22, 2017 (Agencywide Documents Access and Management System Accession No. ML17093A457), Florida Power & Light Company (the licensee) submitted Relief Request No. 5 for the fifth 10-year inservice inspection interval at Turkey Point Nuclear Generating Unit No. 4 (Turkey Point 4). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Paragraph 50.55a(z)(2), the licensee requested the U.S. Nuclear Regulatory Commission (NRC) to authorize an alternative to the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, 2007 Edition with Addenda through 2008, Subsection IWC-3130, subparagraph IWC-3132.2, because compliance with the specified requirements would result in hardship or unusual difficulty, without a compensating increase in the level of quality and safety.

On March 17, 2017, during a boric acid walkdown, the licensee observed evidence of leakage from an ASME Class 2, 3/4-inch pipe located on the Turkey Point 4 high head safety injection pump recirculation test line. The licensee observed a through-wall 3/4-inch flaw in the piping that was leaking one to two drops per minute. The licensee requested NRC authorization of a proposed alternative to the ASME Code, Section XI, 2007 Edition with Addenda through 2008, subparagraph IWC-3132.2, "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 IWC-3410-1. The licensee's proposed alternative is to temporarily delay ASME Code repair/replacement activities and apply the evaluation methods of ASME Code Case N-513-3, "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping, Section XI, Division 1," to a Class 2 safety injection system recirculation test line, with exceptions. The licensee requested to use the proposed alternative until as soon as practical after the Turkey Point 3 refueling outage, up to 90 days from the date of the request.

The licensee requested the NRC to authorize the proposed alternative to prevent a shutdown of Turkey Point 4 while a Turkey Point 3 high head safety injection pump is unavailable. Therefore, the licensee requested verbal approval of Relief Request No. 5 for Turkey Point 4.

The NRC reviewed the licensee's submittal and determined that complying with the requirements of subparagraph IWC-3132.2 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(z)(2). Therefore, during a conference call with the licensee on March 22, 2017, the NRC verbally authorized the licensee's use of Relief Request No. 5 for Turkey Point 4 for up to 90 days from the date of the verbal authorization. The script for the verbal authorization is enclosed. The participants on the telephone call consisted of the following:

NRC Participants

Benjamin Beasley
David Alley
Audrey Klett
John Tsao
LaDonna Suggs
Lundy Pressley

Licensee Participants

Mitch Guth
Stavroula Mihalakea
Steve Catron
Edward Neville
Sergio Chaviano

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding Relief Request No. 5 while preparing the subsequent written safety evaluation. The NRC staff's goal is to issue the written safety evaluation within 150 days from the date of the verbal authorization.

Docket No. 50-251

Enclosure:

Verbal Authorization Script

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR RELIEF REQUEST NO. 5

ALTERNATE REPAIR OF HIGH HEAD SAFETY INJECTION RECIRCULATION TEST LINE

FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL

FLORIDA POWER & LIGHT COMPANY

TURKEY POINT NUCLEAR GENERATING UNIT NO. 4

DOCKET NO. 50-251

1.0 Script read by David Alley, Chief of the Office of Nuclear Reactor Regulation's Component Performance, Non-Destructive Examination, and Testing Branch, on March 22, 2017, 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 March 22, 2017, Florida Power & Light Company (the licensee) requested relief from certain requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code), Section XI, 2007 Edition through 2008 Addenda, IWC-3132.2 at Turkey Point Nuclear Generating Unit No. 4 (Turkey Point 4).

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(z)(2), the licensee submitted Relief Request No. 5 to utilize ASME Code Case N-513-3 to demonstrate structural integrity and accept a flaw by analysis in a nonmoderate energy system on the basis that compliance with the specified ASME requirements would result in hardship or unusual difficulty, without a compensating increase in the level of quality and safety.

On March 17, 2017, the licensee observed leakage from the 3/4-inch diameter, stainless steel high head safety injection recirculation test line. The licensee proposed to use ASME Code Case N-513-3 to disposition the circumferential through wall flaw in the subject pipe. The licensee's proposed alternative is to leave the flaw that caused the leakage in place having demonstrated the structural integrity of the piping and proposing periodic monitoring in accordance with Code Case N-513-3.

To demonstrate the structural integrity of the subject pipe, the licensee performed a flaw evaluation using the method in the ASME Code, Section XI, Appendix C, as specified in Code Case N-513-3. The licensee calculated an allowable flaw length of approximately 1.4 inches. The current through wall flaw length is 3/4 inches. The licensee will perform daily visual walkdowns and penetrant tests every 30 days to monitor the crack growth in accordance with Code Case N-513-3. The licensee stated that if the monthly measurement increases from the present by 1/16-inch in either direction (allowing 1/16-inch for measurement uncertainty), then the growth rate will be reexamined to verify the structural analysis conclusions.

The NRC staff finds that the licensee has used the appropriate loading, considering various pressure and temperature conditions in its flaw evaluation. The NRC staff determines that the

current flaw length has sufficient margin before reaching the allowable flaw length. The NRC staff notes that the licensee will perform required periodic monitoring of the flaw and has implemented a threshold of 1/16-inch to initiate corrective actions.

The NRC staff finds that the licensee's proposed flaw evaluation and periodic monitoring provide reasonable assurance of the structural integrity of the subject pipe for the duration of the request.

2.0 Script read by Benjamin G. Beasley, Chief of the Office of Nuclear Reactor Regulation's Plant Licensing Branch II-2

As Chief of the Plant Licensing Branch II-2 in the Office of Nuclear Reactor Regulation, I concur with the Component Performance, Non-Destructive Examination, and Testing Branch's conclusions.

The NRC staff has determined that complying with the ASME Code requirement would result in a hardship or unusual difficulty, without a compensating increase in the level of quality and safety. Furthermore, the NRC staff has determined that the proposed Relief Request No. 5 provides reasonable assurance of structural integrity of the subject piping. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2). Effective March 22, 2017, the NRC staff authorizes the use of Relief Request No. 5 at Turkey Point Unit 4 for up to 90 days from the date of this authorization.

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 Inservice Inspector.

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding Relief Request No. 5 while preparing the subsequent written safety evaluation. The NRC staff's goal is to issue the written safety evaluation within 150 days from the date of this verbal authorization.

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NO. 4 – VERBAL
AUTHORIZATION OF RELIEF REQUEST NO. 5 FOR REPAIR OF HIGH HEAD
SAFETY INJECTION RECIRCULATION TEST LINE – FIFTH 10-YEAR
INSERVICE INSPECTION INTERVAL (CAC NO. MF9459)
DATED APRIL 3, 2017

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***by email**

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