



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

August 24, 2017

LICENSEE: FirstEnergy Nuclear Operating Company  
FACILITY: Perry Nuclear Power Plant, Unit 1  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE ON AUGUST 21, 2017,  
REGARDING VERBAL AUTHORIZATION OF RELIEF REQUEST TO USE  
ALTERNATIVE FOR PERRY NUCLEAR POWER PLANT, UNIT 1  
(CAC NO. MG0130)

On August 21, 2017, a telephone call was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of FirstEnergy Nuclear Operating Company (FENOC, the licensee). The purpose of the call was to discuss FENOC's emergent request, submitted by letter dated August 20, 2017, as supplemented by letter dated August 21, 2017 (Agencywide Documents Access and Management System Accession Nos. ML17232A000 and ML17233A292, respectively), to use American Society of Mechanical Engineers (ASME) Code Case N-513-4, "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping Section XI, Division 1," for the Perry Nuclear Power Plant, Unit 1. Participants in the phone call are listed below.

NRC

David Wrona, Chief, Plant Licensing Branch III, Division of Operating Reactor Licensing (DORL)  
Kim Green, Senior Project Manager, DORL  
David Alley, Chief, Component Performance, Non-Destructive Examination, and Testing Branch (EPNB)  
John Tsao, Senior Materials Engineer, EPNB  
Isaac Anchondo, DORL  
David Hills, Chief, Engineering Branch, Region III  
Donald Krause, Senior Resident Inspector (Acting), Perry  
Joseph Mancuso, Resident Inspector (Acting), Perry

FENOC

Douglas Saltz, Director, Performance Improvement  
Nick Conicella, Manager, Regulatory Compliance  
Ben Huck, Manager, Design Engineering  
Tom Lentz, Manager, Licensing  
Marc Kuntz, Supervisor, Nuclear Rapid Response Engineering  
Phil Lashley, Supervisor, Licensing  
Tony Kledzik, Regulatory Compliance  
Jim Emley, Licensing  
Matt Minniti, Licensing  
Howard Conrad, Nuclear Engineering Programs

The NRC staff reviewed the licensee's submittal and determined that the proposed alternative provides reasonable assurance of structural integrity of the subject piping. During a conference call with the licensee on August 21, 2017, at 11:15 a.m., Eastern Time, the NRC staff granted verbal authorization to the licensee to use ASME Code Case N-513-4 for the subject elbow in accordance with Title 10 of the *Code of Federal Regulations* Section 50.55a(z)(2). The script for the verbal authorization is enclosed.

If you have any questions, please contact me at 301-415-1627 or via e-mail at [Kimberly.Green@nrc.gov](mailto:Kimberly.Green@nrc.gov).



Kimberly J. Green, Senior Project Manager  
Plant Licensing Branch III  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure:  
Verbal Authorization

cc w/encl: Distribution via Listserv

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR 10 CFR 50.55a ALTERNATIVE USING ASME CODE CASE N-513-4

ALTERNATE REPAIR OF EMERGENCY SERVICE WATER PIPING

PERRY NUCLEAR POWER PLANT, UNIT 1

FIRSTENERGY NUCLEAR OPERATING COMPANY

DOCKET NUMBER 50-440

AUGUST 21, 2017

**Technical Evaluation read by David Alley, Chief of the Component Performance, Non-Destructive Examination, and Testing Branch, Office of Nuclear Reactor Regulation**

By letter dated August 20, 2017, FirstEnergy Nuclear Operating Company (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, IWD-3120 regarding the alternate repair of a degraded 14-inch elbow on the outlet of the B emergency closed cooling (ECC) heat exchanger, immediately downstream of valve 1P45F0541B at Perry Nuclear Power Plant, Unit 1.

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), the licensee submitted the alternative on the basis that compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

On August 18, 2017, during normal operation, the licensee detected a 0.02 gallon per minute (gpm) leak from the subject elbow.

In lieu of repairing or replacing the degraded elbow, the licensee proposed to use ASME Code Case N-513-4 to permit the degraded elbow remaining in service until next refueling outage, which is schedule for March 2018 [sic], during which the degraded elbow will be repaired or replaced in accordance with the ASME Code, Section XI. The NRC staff notes that it has not approved Code Case N-513-4.

The NRC staff determines that the licensee has performed a calculation to demonstrate the structural integrity of the 14-inch diameter piping with a pinhole leak in accordance with the requirements of ASME Code Case N-513-4 and ASME Section XI, Appendix C. The NRC staff finds that the licensee calculated a permissible leak rate of 5.625 gpm while the pipe is in operation and 3 gpm while the pipe is in standby mode. These permissible leak rates have sufficient margin as compared to the current leak rate of 0.02 gpm. The licensee also calculated an allowable axial and circumferential flaw of 0.58 inches and 1.35 inches, respectively. The allowable flaw size has sufficient margin as compared to the current pipe area of 0.00011 square inches. The licensee reported a measured minimum wall thickness of 0.28 inches near the pin hole, which has sufficient margin as compared to the minimum required wall thickness of 0.139 inches.

Enclosure

The NRC staff notes that the licensee will walk down the degraded pipe twice daily and perform an ultrasonic testing of the degraded elbow every 30 days. The NRC staff finds that the daily walkdowns and 30-day ultrasonic testing of the degraded pipe is adequate to monitor for degradation.

The NRC staff determines that the licensee has performed adequate flooding analysis and will perform extent of condition inspection.

The NRC staff finds that cycling the plant for an unplanned shutdown to perform the required ASME Code repair is a hardship because cycling of the plant may cause unnecessary loading on components.

Based on the above, the NRC staff finds that the licensee's proposed alternative will provide reasonable assurance of the structural integrity of the subject piping. The NRC staff further finds that requiring the ASME Code repair constitutes a hardship without a compensating increase in the level of quality and safety.

[Note: During the phone call, the licensee clarified that the next refueling outage is scheduled to commence in March 2019.]

**Authorization read by David Wrona, Chief of the Plant Licensing Branch III, Office of Nuclear Reactor Regulation**

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

The NRC staff determines that the proposed alternative provides reasonable assurance of structural integrity of the subject piping. The NRC staff determines that complying with the ASME Code requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. 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). As of August 21, 2017, the NRC authorizes the use of proposed alternative for Perry Nuclear Power Plant, Unit 1 until the end of the next refueling outage, which is scheduled in March 2019, or either the allowable leak rate or allowable flaw size is exceeded, whichever occurs earlier.

All other requirements of ASME BPV Code, Section XI, for which relief was not specifically requested and authorized by the NRC staff remain applicable, including the third party review by the Authorized Nuclear Inservice Inspector. The NRC staff notes that this authorization does not imply or infer NRC's approval of ASME Code Case N-513-4 for generic application.

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding the proposed alternative, while preparing the subsequent written safety evaluation.

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ALTERNATIVE FOR PERRY NUCLEAR POWER PLANT, UNIT 1  
(CAC NO. MG0130) DATED AUGUST 24, 2017

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