



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

September 21, 2015

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Palisades Nuclear Plant

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE ON SEPTEMBER 17, 2015,
VERBAL AUTHORIZATION OF RELIEF REQUEST FOR PALISADES
NUCLEAR PLANT (TAC NO. MF6727)

INTRODUCTION

By letter dated September 16, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15260A371), Entergy Nuclear Operations, Inc. (ENO, the licensee) submitted relief request (RR) 4-23, which proposes to use an alternative inspection procedure to perform inspections required by Title 10 of the *Code of Federal Regulations*, Part 50 (10 CFR 50), Paragraph 55a(g)(6)(ii)(F) at the Palisades Nuclear Plant. These inspections are related to the ultrasonic examination of nickel-based Alloy 82/182 dissimilar metal butt welds joining Alloy 600 branch connections to one hot leg and eight cold leg pipes. The proposed alternative inspection procedure does not meet the 0.125 inch root mean square (RMS) error depth sizing requirements of American Society of Mechanical Engineers (ASME) Code Case N-695 and ASME Code Section XI, Appendix VIII, Supplement 10.

This memorandum summarizes the telephone discussion on September 17, 2015, between the U.S. Nuclear Regulatory Commission (NRC) staff and ENO regarding the relief request. During this telephone call, the NRC staff provided verbal authorization of the relief request as described below. Participants in the discussion from ENO included: Jeff Erickson, Jeff Hardy, Mike Briley, Steve Davis, and Mike Bratton. Participants for the NRC included: David Pelton, David Alley, Stephen Cumblidge, Jennie Rankin, Mel Holmberg, David Hills, Laura Ward, and Eric Duncan.

BACKGROUND

As discussed in the licensee's letter dated September 16, 2015, the licensee will be performing volumetric examinations of nine dissimilar metal piping welds during the current refueling outage and will implement the requirements of ASME Section XI, Code Case N-695. This Code Case requires that qualified procedures, equipment, and personnel shall demonstrate a flaw depth-sizing error less than or equal to 0.125 inch RMS. The ENO vendor has attempted, but not been able to qualify personnel, equipment, and procedures for depth sizing error less than or equal to 0.125 inch RMS. The licensee is qualified for detection and length sizing on the subject welds.

Pursuant to 10 CFR 50.55a(z)(1), the licensee proposes using an inspection procedure with an alternative depth sizing RMS error of 0.242 inches on the basis that the proposed inspection procedure provides an acceptable level of quality and safety.

RELIEF REQUEST TELEPHONE CALL

The NRC staff discussed the following during the telephone call with Entergy on September 17, 2015, with respect to the proposed relief request:

The Electric Power Research Institute has contended that nondestructive examination inspectors are able to accurately depth size flaws if they can achieve an RMS error of less than 10 percent of the weld wall thickness. The licensee stated that the 0.242 inch RMS error achieved by the proposed inspection procedure is less than 10 percent of the wall thicknesses of each weld (i.e. each weld is greater than 2.42 inches thick). While the NRC staff has not endorsed the use of the 10 percent wall thickness as an acceptance value, the NRC staff has been working with members of ASME, the Performance Demonstration Initiative, and the Electric Power Research Institute to evaluate the appropriate RMS error for the ultrasonic examination of dissimilar metal welds. The collaborative work culminated in the development of ASME Code Case N-695-1 which allows the use of an RMS error of 0.25 inches for inspections from the inner surface of a dissimilar metal weld of 2.1 inches thick or greater. The NRC staff is currently reviewing ASME Code Case N-695-1 for inclusion in the next revision of Regulatory Guide 1.147. While this review is not complete, the NRC staff has performed sufficient review of the use of a 0.25 inch RMS error or less for depth sizing and finds the use of a 0.25 inch RMS error or less to be acceptable under these circumstances at the Palisades Nuclear Plant.

The NRC staff finds that the proposed inspection procedure is acceptable because the proposed RMS error is consistent with ASME Code Case N-695-1 given that each of the nine welds is greater than 2.1 inches thick and the proposed RMS error is less than 0.25 inches.

The NRC staff has determined that the proposed RMS error in the inspection procedure is acceptable and that RR 4-23 provides reasonable assurance that the structural integrity of the branch connections to the hot leg and cold leg piping will be adequately monitored to the end of the fourth inservice inspection (ISI) interval. The NRC staff finds that RR 4-23 provides an acceptable 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)(1). Therefore, effective September 17, 2015, the NRC authorizes the use of RR 4-23 for the remainder of the fourth 10-year ISI interval at PNP, which began on December 13, 2006, and is scheduled to end on December 12, 2015.

The NRC staff notes that all other ASME Code, Section XI and 10 CFR 55a(g)(6)(ii)(F) requirements for which relief was not specifically requested and approved in the subject request for relief remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

This verbal authorization does not preclude the NRC staff from asking additional clarification questions regarding the subject relief request while preparing the subsequent written safety evaluation. The NRC staff's written safety evaluation will be provided by separate correspondence.

The verbal relief was authorized with the concurrence of David Pelton, Chief of the Plant Licensing Branch III-1, Office of Nuclear Reactor Regulation (NRR), and David Alley, Chief of the Component Performance, Non-Destructive Examination, and Testing Branch, NRR.

If you have any questions, please contact me at (301) 415-1530 or by e-mail at Jennivine.Rankin@nrc.gov.

A handwritten signature in black ink, appearing to read 'Jen Rankin', with a long horizontal flourish extending to the right.

Jennivine Rankin, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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/RA/

Jennivine Rankin, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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