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

September 30, 2015

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Palisades Nuclear Plant

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE ON SEPTEMBER 28, 2015, VERBAL AUTHORIZATION OF RELIEF REQUEST FOR PALISADES NUCLEAR PLANT (TAC NO. MF6755)

INTRODUCTION

By letter dated September 26, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15269A035), as supplemented September 27, 2015 (ADAMS Accession No. ML15270A004), Entergy Nuclear Operations, Inc. (ENO, the licensee) submitted relief request (RR) 4-24, which proposes deferring obtaining full coverage with fully-qualified examinations of eight welds 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 for one refueling outrage. 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.

This memorandum summarizes the telephone discussion on September 28, 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, Pat Russell, Mike Briley, Dave Mannai, Jim Miksa, William Sims, Barb Dotson, Steve Scott, Jake Milliken, and Tom Fouty. Participants for the NRC included: David Pelton, David Alley, Stephen Cumblidge, Jennie Rankin, Jay Collins, David Hills, and Laura Ward.

BACKGROUND

As discussed in the licensee's letter dated September 26, 2015, the licensee is performing volumetric examinations on one hot leg branch connection weld and eight cold leg branch connection welds using an qualified encoded phased array ultrasonic testing examination technique. The required examination coverage is not attainable for eight of the cold leg welds due to the weld profile of the cold leg welds being different than the associated design drawings and due to concrete pipe whip restraint obstructions.

Pursuant to 10 CFR 50.55a(z)(2), the licensee proposes deferring obtaining full volumetric coverage for axial flaws for one refueling outage on the basis that complying with the essentially 100 percent coverage requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

RELIEF REQUEST TELEPHONE CALL

The NRC staff discussed the following during the telephone call with ENO on September 28, 2015, with respect to the proposed relief request:

The licensee performed ultrasonic inspections of nine dissimilar metal butt welds joining branch connections to piping. For the eight cold leg welds, the inspections for axial flaws was not possible due to the presence of a weld taper on the cold leg welds that prevents the search units from examining the required inspection volume. On four of the welds, the inspection coverage for circumferential flaws was restricted to approximately 50 percent by the presence of concrete pipe whip restraints. In total, this provides approximately 75 percent coverage for circumferential flaws of all cold leg weld total inspection volume. No evidence for primary water stress corrosion cracking was found in these inspections. Additionally, a qualified volumetric inspection of a hot leg butt weld joining a branch connection to a pipe was completed with greater than 90 percent coverage and no surface connected flaws were found.

To improve the inspection coverage for axial flaws in the eight cold leg welds, the licensee would need to machine or manually grind the welds flat, to allow the ultrasonic search units to examine the required inspection volume. Obtaining full coverage for the circumferential flaw inspections would require modifying or removing the concrete pipe whip restraints. Modifying the welds to allow full axial scan coverage would take considerable time and an estimated 41 Rem of dose to the workers. Alternately, the licensee proposed that deferral of the inspection for one refueling outage would permit the modification of inspection procedures and/or the development of an automated machining method to reconfigure the welds. The NRC reviewed the hardship claim by the licensee and finds that the amount of dose required to achieve the required coverage during this outage constitutes a hardship.

The NRC staff also assessed the licensee's safety basis to extend the required inspections one cycle of operation. The NRC staff finds the licensee flaw evaluations to be non-conservative in some respects. However, based on both licensee evaluations and independent NRC evaluations the staff finds that the potential for leakage during the next operating cycle cannot be completely excluded. However, the NRC staff also finds that loss of structural integrity of the subject welds will not occur without the occurrence of detectable leakage prior to loss of structural integrity. Given that the licensee's proposed alternative includes enhanced leak monitoring the staff finds that the licensee has demonstrated reasonable assurance that the structural integrity of the subject welds will be maintained during the next cycle of operation.

The NRC staff has determined that the coverage obtained is acceptable and that Relief Request RR 4-24 provides reasonable assurance that the structural integrity of the branch connections to the cold leg piping will be adequately monitored until the next refueling outage. The staff concludes that complying with the essentially 100 percent volumetric coverage requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Accordingly, the staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(z)(2). Therefore, effective September 28, 2015, the NRC authorizes the proposed alternative in RR 4-24 until the end of the next refueling outage planned for spring 2017.

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.

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

Docket Nos. 50-255

cc: Distribution via Listserv

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.

/RA/

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

Docket Nos. 50-255

cc: Distribution via Listserv

DISTRIBUTION:
PUBLIC
LPL3-1 r/f
RidsAcrsAcnw_MailCTR Resource
RidsNrrLAMHenderson Resource
RidsNrrPMPalisades Resource
RidsRgn3MailCenter Resource
RidsNrrDeEpnb Resource
RidsNrrDorlLpl3-1 Resource
SCumblidge, NRR
JJessie, EDO
EDuncan, RIII

ADAMS Accession No.: ML15272A065

OFFICE	LPL3-1/PM	LPL3-1/LA	EPNB/BC	LPL3-1/BC	LPL3-1/PM
NAME	JRankin	MHenderson	DAlley	DPelton	JRankin
DATE	09/29/15	09/29/15	09/29/15	09/29/15	09/30/15

OFFICIAL RECORD COPY