

NRR-PMDAPEm Resource

From: Chawla, Mahesh
Sent: Thursday, March 13, 2014 3:01 PM
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Cc: Lupold, Timothy; Collins, Jay; Carlson, Robert; Duncan, Eric; Hills, David; Sanchez Santiago, Elba; Bilik, Tom
Subject: Palisades Nuclear Plant - Verbal Authorization for Relief Request RR 4-18 - MF3508
Importance: High

A teleconference was held on March 12, 2014, @ 10.00 am between the staff of Nuclear Regulatory Commission and representatives of Entergy Nuclear Operations, Inc., Palisades Nuclear Plant (the licensee). The purpose of this email is to document the verbal authorization provided to Palisades on the subject Relief Request RR 4-18, Proposed Alternative to the Requirements of ASME Code Case N-770-1. Following is the transcript of the verbal authorization provided to Palisades Nuclear Plant, for 10 CFR 50.55a(g)(6)(ii)(F) Proposed Alternative.

“ Technical Branch ”

By letters dated February 25, 2014, as supplemented by letters dated March 1st, 4th, 6th, 9th and 11th, 2014, Entergy Nuclear Operations, Inc. (ENO, the licensee), proposed an alternative to 10 CFR 50.55a(g)(6)(ii)(F) for Palisades Nuclear Plant (Palisades). This regulation defines the inspection requirement for Class 1 piping and nozzle dissimilar metal butt welds in accordance with American Society of Mechanical Engineer's Boiler and Pressure Vessel (ASME) Code Case N-770-1, with NRC conditions. The licensee is requesting an extension of the required baseline volumetric inspection for 9 welds until the next refueling outage based upon hardship under the requirements of 10 CFR 50.55a(a)(3)(ii).

The Nuclear Regulatory Commission (NRC) staff evaluated the licensee's basis for hardship. The NRC staff found that without a readily available qualified volumetric inspection technique for these 9 subject welds, any inspection would not provide reasonable assurance of flaw detection and characterization. Further, the radiological dose for performing any unplanned best effort volumetric examinations of the 9 subject welds would be a hardship in relation to the questionable value of these examinations. Additionally, a mitigation strategy has not been developed or approved for these welds. A delay in the inspection requirement for one operating cycle would allow for the development of tooling, qualification of procedures and personnel, and mockup verification to minimize radiation dose to personnel. Therefore the NRC staff finds the licensee has provided sufficient information to identify the hardship.

The licensee's basis included a structural evaluation of the 9 subject welds. Of significant impact is that each weld was subject to a post weld heat treatment which reduces the residual stress in each weld. The NRC staff evaluated the licensee's flaw evaluations, as part of their structural evaluation, and performed a series of NRC staff and contractor flaw evaluations. While the NRC staff finds reasonable assurance that no flaw will develop in these welds that would challenge the structural integrity of the piping system or branch connection over the next cycle of operation, the NRC staff does find there is a possibility of a leak from a hypothetical axial flaw. Therefore, the NRC staff does not have reasonable assurance of leaktightness over the next operating cycle. As such, the NRC staff evaluated the potential effects of leakage from these welds. The NRC staff determined that a program of enhanced leakage monitoring would provide reasonable assurance of safety such that if a leak were to occur, it could be identified in such a time that any potential effects would be minimized, thus ensuring the NRC goal of public health and safety is maintained.

In a series of NRC requests for additional information and responses from the licensee, the licensee has revised their original proposed alternative to include an enhanced leakage monitoring program. The items of the licensee's proposed alternative are conditions for the authorization of the relief request. As such, if not implemented, the safety evaluation would be invalid and authorization of this relief request would be rescinded. The licensee's final proposed alternative is as follows,

- 1) Perform periodic system leakage tests in accordance with ASME Section XI Examination Category B-P, Table IWB-2500-1.
- 2) Perform visual examinations (per Code Case N-722-1) and dye penetrant surface examinations (per ASME Section XI Examination Category B-J, Table IWB-2500-1) of the welds in accordance with ASME requirements.
- 3) Perform a volumetric examination, using ASME Code, Section XI, Appendix VIII, Supplement 10 qualified procedures, equipment and personnel, on each of the nine subject welds of this alternative during the next scheduled refueling outage (1R24).
- 4) Until the next scheduled refueling outage, if unidentified PCS [Primary Coolant System] leakage increases by 0.15 gpm above the WCAP-16465NP baseline mean, and is sustained for 72 hours, ENO will take action to be in Mode 3 within 6 hours and Mode 5 within 36 hours, and perform bare metal visual examinations of the nine subject welds of this alternative, unless it can be confirmed that the leakage is not from these welds.

Given the licensee's identified hardship, structural evaluation and conditions of relief identified in the proposed alternative, the NRC staff finds the licensee has provided sufficient information to demonstrate reasonable assurance of the structural integrity of the 9 subject welds for one cycle of operation without performing a volumetric examination. Further, while leakage may occur, the licensee's actions will ensure that the leakage will be promptly identified and as such the NRC staff finds the effects of any such leakage would be minimal on other plant components.

Hence, the NRC staff finds that compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Therefore, as Branch Chief of the Component Performance, NDE and Testing Branch, I recommend authorization of the licensee's proposed alternative until the next scheduled refueling outage at Palisades.

Licensing Branch

As set forth above, the NRC staff determines that the licensee provided sufficient technical basis to demonstrate that compliance with the requirements of 10 CFR 50.55a(g)(6)(ii)(F) 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 the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(ii). Therefore, the NRC staff authorizes the licensee's proposed alternative, Relief Request RR-4-18, as supplemented by letters dated March 1st, 4th, 6th, 9th and 11th, 2014, at Palisades, until the next scheduled refueling outage in the fall of 2015.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request 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 proposed relief request while preparing the subsequent written safety evaluation.

List of Participants

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Subject: Palisades Nuclear Plant - Verbal Authorization for Relief Request RR 4-18 - MF3508
Sent Date: 3/13/2014 3:00:55 PM
Received Date: 3/13/2014 3:00:00 PM
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MESSAGE	7727	3/13/2014 3:00:00 PM

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