NRR-DMPSPEm Resource

From: Wengert, Thomas
Sent: Tuesday, November 6, 2018 9:41 AM
To: Shaw, Jim D.
Cc: Forland, Thomas J.; Pascarelli, Robert; Ruffin, Steve; Tsao, John; Vossmar, Patricia
Subject: Cooper Nuclear Station - Verbal Authorization of Relief Request PR5-02
Attachments: Cooper PR5-02 Verbal Authorization 11-5-18.pdf

By telephone on November 5, 2018, the U.S. Nuclear Regulatory Commission (NRC) staff provided a verbal authorization to Nebraska Public Power District (NPPD, the licensee) for the requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, paragraph IWB-5222, at Cooper Nuclear Station (CNS). The licensee had submitted Relief Request PR5-02 for NRC review and approval for use of an alternative system alignment for the system leakage test for portions of ASME Code Class 1 feedwater, main steam, high pressure coolant injection, and reactor core isolation cooling piping at specific valve locations. The NRC staff's evaluation and verbal authorization is repeated in the attachment to this e-mail.

The following NRC and licensee personnel participated in the conference call:

NRC
Steve Ruffin, Chief, Piping and Head Penetrations Branch
Robert Pascarelli, Chief, Plant Licensing Branch 4
John Tsao, Senior Materials Engineer
Patricia Vossmar, Senior Resident Inspector
Tom Wengert, Project Manager

NPPD
Khalil Dia, Director of Engineering
Troy Barker, Engineering Programs and Components Manager
Steve Nelson, Risk/Fire Programs Supervisor, Acting Code Programs Supervisor
Phil Leininger, Code Programs Engineer
Jim Shaw, Licensing Manager
Thomas Forland, Licensing Engineer

Please contact me if you have any questions.

Tom Wengert
Project Manager – Cooper Nuclear Station
U.S. Nuclear Regulatory Commission
Division of Operating Reactor Licensing
Plant Licensing Branch IV
Thomas.Wengert@nrc.gov
Tel: (301) 415-4037

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Recipients:
"Forland, Thomas J." <tjforla@nppd.com>
Tracking Status: None
"Pascarelli, Robert" <Robert.Pascarelli@nrc.gov>
Tracking Status: None
"Ruffin, Steve" <Steve.Ruffin@nrc.gov>
Tracking Status: None
"Tsao, John" <John.Tsao@nrc.gov>
Tracking Status: None
"Vossmar, Patricia" <patricia.vossmar@nrc.gov>
Tracking Status: None
"Shaw, Jim D." <jdshaw@nppd.com>
Tracking Status: None

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VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELIEF REQUEST PR5-02
PROPOSED ALTERNATIVE CONCERNING SYSTEM LEAKAGE TEST
COOPER NUCLEAR STATION
NEBRASKA PUBLIC POWER DISTRICT
DOCKET NO. 50-298
NOVEMBER 5, 2018

Technical Evaluation read by Steve Ruffin, Chief of Piping and Head Penetrations Branch, Division of Materials and License Renewal, NRR

By letter dated November 5, 2018, as supplemented by email dated November 5, 2018, Nebraska Public Power District (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, paragraph IWB-5222, at Cooper Nuclear Station (CNS). The licensee submitted Relief Request PR5-02 for U.S. Nuclear Regulatory Commission (NRC) review and approval for an alternative system alignment for system leakage test for portions of ASME Code Class 1 feedwater, main steam, high pressure coolant injection, and reactor core isolation cooling piping at specific valve locations.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), the licensee submitted Relief Request PR5-02 on the basis that compliance with the specified ASME Code repair would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

In lieu of performing a system leakage test in accordance with IWB-5222(a), the licensee proposed to use (1) the pressure corresponding to 100% rated reactor power, and (2) alternate pressure retaining boundary using various alternate valve alignments for the subject piping instead of that for the normal reactor operation startup.

The NRC staff determines that the alternative pressure retaining boundary will result in a few pipe segments that will not be pressure tested in accordance with IWB-5222(a). However, the NRC staff determines that the licensee's proposal to perform a VT-2 visual examination during the system leakage test at a pressure not less than that associated with 100 percent rated power and with systems in their normal lineup to the extent practical, meets the intent of Section XI. In addition, the NRC finds that the licensee has defense-in-depth measures such as RCS leakage detection system and temperature monitoring that will detect leakage from the subject piping. The NRC staff finds that the proposed pressure used for the system leakage test and the VT-2 visual examination will satisfy the intent of IWB-5222 and will demonstrate structural integrity and leak tightness of the affected piping systems.

The NRC staff finds that performing the system leakage test in accordance with IWB-5222(a) would result in a hardship without a compensating increase in quality and safety because to reach the test pressure with the valves in the position for normal reactor operation startup would require entering the primary containment when the atmosphere is inerted and the radiological dose rates are high.

Based on the above evaluation, the NRC staff finds that the licensee's proposed alternative will provide structural integrity and leak tightness of the subject piping because the licensee will use

sufficient pressure to perform the system leakage test and will perform a VT-2 visual examination.

Authorization read by Robert Pascarelli, Chief of Plant Licensing Branch IV, Division of Operating Reactor Licensing, NRR

As chief of the Plant Licensing Branch IV, Office of Nuclear Reactor Regulation, I concur with the conclusions of the Piping and Head Penetrations Branch.

The NRC staff concludes that the proposed alternative provides a reasonable assurance of the structural integrity and leak tightness of the subject piping. The NRC staff finds that complying with the system leakage testing of the ASME Code, Section XI 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). Therefore, as of November 5, 2018, the NRC authorizes the use of Relief Request PR5-02 until the end of Refueling Outage 30 at Cooper Nuclear Station.

All other requirements in ASME Code, Section XI, 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 alternative while preparing the subsequent written safety evaluation.