

VERBAL AUTHORIZATION

RELIEF REQUEST RR-04-12

TEMPORARY NON-CODE COMPLIANT CONDITION

EMERGENCY DIESEL GENERATOR SUPPLY PIPING IN THE SERVICE WATER SYSTEM

MILLSTONE POWER STATION, UNIT NO. 2

DOMINION NUCLEAR CONNECTICUT, INC

DOCKET NO. 50-336

By letter dated August 19, 2011, with an email supplement dated August 20, 2011, Dominion Nuclear Connecticut, Inc. (DNC or the licensee) requested relief from certain Section XI requirements of the *American Society of Mechanical Engineers* (ASME) Boiler and Pressure Vessel Code (ASME Code) for Millstone Power Station, Unit No. 2 (MPS2). Relief Request RR-04-12 is based on the hardship of performing required ASME Code repair/replacement activities to a degraded piping flange on spool SK2952 in the 'A' train 10-inch service water (SW) supply line to the emergency diesel generator heat exchangers.

The Nuclear Regulatory Commission (NRC) staff finds that the licensee provided sufficient basis to support the argument that an ASME Code repair performed at this time would cause hardship without a compensating increase in the level of quality and safety.

The degraded piping flange on spool SK2952 in the 'A' train 10-inch SW supply line to the emergency diesel generator heat exchangers cannot be isolated from the SW system. To perform the required ASME Code repair/replacement will take 5 days, which exceeds the 72 hour action statement for one train of SW being unavailable. Therefore, to complete the ASME Code required repair/replacement would require MPS2 to transition to MODE 5 placing a hardship on the licensee. Based on the current degradation and the proposed monitoring criterion, the NRC staff finds that there is a hardship without a compensating increase in the level of quality and safety.

With regard to the structural integrity, the NRC staff finds that the licensee has performed satisfactory stress analyses in accordance with the ASME Code, Section III, to demonstrate that with loss of 33% of the flange material (33% of the inside circumference), the surrounding pipe and flange will maintain their structural integrity. To monitor the structural integrity prior to the ASME Code repair, the licensee will perform ultrasonic examinations approximately every 30 days. The licensee has specified limitations (acceptance criteria) on the minimum wall thickness of 0.04 inches or 33% loss of the flange material, whichever occurs first. If the flange or pipe wall thickness is reduced to less than 0.04 inches, or if 33% of the flange material is lost, the 'A' train SW system will be declared inoperable and Technical Specification (TS) action statement 3.7.4.1 will be entered. The NRC staff notes that because of the flange configuration, the ultrasonic examination is not capable of sizing the defect accurately. However, the ultrasonic examination is capable of measuring thickness which can be monitored to predict degradation. The NRC staff finds that the licensee's proposed ultrasonic examination limits and frequency will provide reasonable assurance of the structural integrity of 'A' train SW system.

With regard to the leakage integrity, the licensee will perform walkdowns every 12-hour shift to observe, measure, and record leakage. The licensee's limit will be (acceptance criterion) 1 gallon per minute (gpm) on the affected flange and/or surrounding pipe. The licensee will also implement administrative control of 0.25 gpm. If the measured leak rate exceeds 0.25 gpm, MPS2 will enter the Technical Requirements Manual (TRM) structural integrity (TRM 3.4.10) action statement. This will prompt increased monitoring and evaluation and may lead to entering the service water (TS 3.7.4.1) action statement. If the leak rate exceeds 1 gpm, the 'A' train SW system will be declared inoperable and TS action statement 3.7.4.1 will be entered. The licensee has demonstrated that the 1 gpm limit provides sufficient margin with respect to the required minimum flow rate in the 'A' train SW system and to the analyzed leak rate in the flood analysis. The NRC staff finds that the licensee has proposed an acceptable leakage monitoring procedures which will provide reasonable assurance of the structural integrity of 'A' train SW system. Shiftly walkdowns to observe, measure, and record leakage at the defect location, with acceptance criteria of 1 gpm, is a condition of the NRC staff's granting of this relief request.

With respect to the extent of condition, the licensee performs operator walkdowns of the Unit 2 SW system piping and has not found other leaking locations. Performing operator walkdowns is how this leak was detected and is considered an effective method for detecting SW leakage. The licensee will continue to perform operator walkdowns to identify future leakage. The licensee has also presented sufficient justification that the identified degraded condition does not extend to the Millstone Power Station, Unit No. 3 (MPS3) SW piping due to the installation of corrosion resistant piping materials at MPS3.

The NRC staff notes that the licensee has revised the duration of the proposed relief request from October 2012 to four (4) months (December 20, 2011). However, if MPS2 should enter MODE 5 prior to the end of the four month duration the flange will be repaired/replaced at that time.

On the basis of information submitted, the NRC staff finds that the licensee has provided an acceptable argument that an ASME Code repair performed at this time would cause hardship without a compensating increase in the level of quality and safety. The licensee has demonstrated that the structural integrity of the 'A' train SW piping at MPS2 will be maintained based on the proposed augmented inspections and the limitations on the leak rate, flange and pipe thickness, and flange metal loss. Therefore, on August 20, 2011, pursuant to 10 CFR 50.55a(a)(3)(ii), the NRC staff verbally authorizes the use of Relief Request RR-04-12 for the period of four months from the date of this verbal authorization or until the limits of 1 gpm leak rate, minimum wall thickness of 0.04 inches, or loss of 33% flange material has been reached whichever occurs first.

All other ASME Code, Section XI requirements for which relief have not been specifically requested and approved remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.