

**From:** [Guzman, Richard](#)  
**To:** ["Walpole, Robert W"](#)  
**Cc:** [Danna, James](#); [Alley, David](#); [Haagensen, Brian](#); [Schroeder, Daniel](#)  
**Subject:** Verbal Authorization for Indian Point, Unit 2 Relief Request IP2-ISI-RR-06  
**Date:** Monday, April 09, 2018 7:48:25 PM

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Mr. Walpole,

In accordance with NRR Office Instruction LIC-102, "Relief Request Reviews," the NRR staff has provided verbal authorization for Indian Point, Unit 2 relief request IP2-ISI-RR-06 as described in your letter to the NRC dated April 4, 2018, as supplemented by letter dated April 6, 2018.

Below is the script for the verbal authorization of relief request IP2-RR-ISI-06 that was provided at approximately 2:10pm EDT on 4/9/2018 by David Alley and James Danna. The NRC staff intends to follow-up this verbal authorization with a written safety evaluation within approximately 150 days.

Please let me know if you have any questions. A copy of this email and verbal authorization will be made publicly available in ADAMS.

Thanks,

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Rich Guzman  
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VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
FOR RELIEF REQUEST IP2-ISI-RR-06  
ALTERNATE REPAIR OF A REACTOR VESSEL HEAD PENETRATION NOZZLE  
ENTERGY NUCLEAR OPERATIONS, INC.  
INDIAN POINT UNIT 2  
DOCKET NO. 50-247  
April 9, 2018

**Technical Evaluation Read by David Alley, Branch Chief, Piping and Head Penetration  
Branch, Division of Material and License Renewal, Office of Nuclear Reactor Regulation**

By letter dated April 4, 2018 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML18094B454) as supplemented by letter dated April 6, 2018 (ADAMS Accession No. ML18098A088), Entergy Nuclear Operations, Inc. (the licensee) submitted Relief Request IP2-ISI-RR-06 for the repair of degraded reactor vessel head penetration nozzle Number 3 at Indian Point Unit 2 (IP2). In order to repair the degraded nozzle, the licensee proposed to use the embedded flaw repair process described in the NRC-approved WCAP-15987-P, Revision 2-P-A report.

The licensee made this request in accordance with 10 CFR 50.55a(z)(1) on the basis that the proposed alternative repair will provide an acceptable level of quality and safety. The licensee requested the alternative for one cycle of operation.

The NRC staff reviewed the following information: (1) proposed repair method and inspections: (2)

flaw evaluation including a conservatively postulated flaw in the nozzle J-groove weld and potential fatigue crack growth into the reactor vessel head; (3) corrosion resistance of repair weld material (Alloy 52/52M) exposed to reactor coolant; and (4) consistency of the repair, inspection and flaw evaluation methods with those described in the NRC-approved WCAP-15987-P, Revision 2-P-A report.

The NRC staff finds that the licensee's repair, inspection and flaw evaluation methods are consistent with the guidance in the NRC-approved WCAP-15987-P, Revision-2-P-A report and the inspection requirements specified in ASME Code Case N-729-4 (as conditioned in 10 CFR Part 50, paragraph (g)(6)(ii)(D)). The NRC staff determines that the proposed repair will restore the primary system pressure boundary and provide reasonable assurance that the structural integrity of the reactor vessel head and repaired nozzle Number 3 will be maintained for the period of the relief request (i.e., Cycle 24 that will end in Spring 2020).

**NRC Staff Conclusion Read by James Danna, Chief of Plant Licensing Branch 1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation**

As Chief of Plant Licensing Branch 1, I concur with the Piping and Head Penetration Branch's determinations.

The NRC staff concludes that Relief Request IP2-ISI-RR-06 will provide an acceptable level of quality and safety for the reactor vessel head and repaired nozzle Number 3. 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) and is in compliance with the requirements of the ASME Code, Section XI, ASME Code Case N-729-4 as mandated and conditioned in 10 CFR Part 50, paragraph (g)(6)(ii)(D). Therefore, as of April 9, 2018, the NRC authorizes Relief Request IP2-ISI-RR-06 for Cycle 24 that will end in Spring 2020.

All other requirements of ASME Code Section XI and 10 CFR 50.55a(g)(6)(ii)(D), for which relief was not specifically requested and authorized by the NRC staff, remain applicable including the third party review by the Authorized Nuclear Inservice Inspector.

This verbal authorization does not preclude the NRC staff from asking additional questions and clarifications regarding Relief Request IP2-ISI-RR-06 while preparing the subsequent written safety evaluation.

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