



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

April 30, 2018

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Indian Point Nuclear Generating Unit No. 2

SUBJECT: SUMMARY OF APRIL 3, 2018, MEETING WITH ENTERGY NUCLEAR OPERATIONS, INC. ON PLANNED SUBMITTAL OF PROPOSED ALTERNATIVE FOR REACTOR PRESSURE VESSEL HEAD NOZZLE WELD REPAIR (EPID L-2018-LLR-0050)

On April 3, 2018, from 3:00 p.m. – 4:00 p.m. EDT, a Category 1 public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) and representatives of Entergy Nuclear Operations, Inc. (Entergy, the licensee), via telephone conference. The purpose of the meeting was to discuss the licensee's proposed relief request submittal seeking an alternative weld repair to address a flaw identified in the Indian Point Nuclear Generating Unit No. 2 (IP2), reactor pressure vessel head penetration. The meeting notice and agenda, dated April 3, 2018, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML18093A093. The licensee's draft relief request submittal was provided to the NRC staff via e-mail prior to the teleconference and is available in ADAMS at Accession No. ML18108A183. A list of attendees is provided in the Enclosure.

The meeting began with an introduction, an overview of meeting logistics, and an introduction of the meeting participants. Entergy then presented an overview of its planned relief request submittal which included the reason for its request, a description of the relief request and basis for use of the alternative weld repair, and its current schedule.

Reason for the Proposed Relief Request

The licensee stated that on March 31, 2018, during the current Indian Point Unit 2 refueling outage, with the reactor defueled and the reactor pressure vessel head (RPVH) removed, while performing a scheduled visual examination (VT-2) of the RPVH required by Code Case N-729-4, a white substance was observed on the annulus region of RPVH Penetration No. 3. The visual examinations of the RPVH did not identify any other relevant indications or base material wastage. The licensee performed liquid penetrant and eddy current testing on the J-groove weld of RPVH Penetration No. 3 and determined the indication to be axial; and based on its location and characteristics, the indication was likely the through-weld leakage source. Therefore, as an alternative to the defect removal and weld repair provisions of the applicable American Society of Mechanical Engineers (ASME) Code, the licensee proposed to repair the J-groove weld before IP2 is returned to service using the embedded flaw repair process in described in the Westinghouse Topical Report, WCAP-15987-P-A, "Technical Basis for the Embedded Flaw Process for Repair of Reactor Vessel Head Penetrations." Consistent with Title 10 to the *Code of Federal Regulations* (10 CFR) Section 50.55a(z), the proposed alternative must be submitted and authorized by the NRC prior to implementation.

### Description of the Proposed Alternative Weld Repair

During its presentation, the licensee indicated that the proposed embedded flaw repair process provides an acceptable level of quality and safety. The licensee also stated that all repair requirements, consistent with the Westinghouse topical report will be met and that all nondestructive examinations of the completed seal weld repair on the J-groove weld will be performed in accordance with the 10 CFR 50.55a applicable codes and standards.

The licensee also cited several precedents during the call which they indicated would be referenced in the formal submittal.

The NRC staff requested the following from the licensee:

- Additional details of the as-found indication to illustrate size, location, characteristics, etc., by providing a sketch or diagram
- Additional assessment information on fracture mechanics/fatigue growth and acceptability of using the embedded flaw repair process for the IP2 as-found indication
- Clarification on the basis of the alternative (e.g., an alternative that provides acceptable level of quality and safety or impracticality)

### Action Items/Next Steps:

During the teleconference, the licensee indicated that it would be submitting its formal written request as early as April 4, 2018, as well as supplemental evaluation information prior to entering Mode 5 of its restart. The licensee requested NRC approval by the projected entrance to Mode 5 which they approximated as April 12, 2018.

No regulatory decisions were made during the public teleconference regarding the acceptability of Entergy's proposed submittal.

### Public Comments and Questions

Following the business portion of the meeting, members of the public, local officials, State officials, and members of the media were offered the opportunity to communicate with the NRC regarding the information presented by Entergy during the teleconference. The NRC staff responded to several questions during the question and answer (Q&A) period; topics included clarification of technical terms regarding plant operation and ASME Code repairs, previous operating experience, generic versus plant specific repair methods, and the timing to approve the proposed relief request. Aside from general and administrative follow-up requests from the public (e.g., ADAMS reference nos., copies of the meeting handouts, minutes, etc.), there were no formal follow-up action items as a result of the Q&A period.

To date, no public meeting feedback forms have been submitted through the NRC public meeting feedback system.

Please direct any inquiries to me at (301) 415-1030, or [Richard.Guzman@nrc.gov](mailto:Richard.Guzman@nrc.gov).



Richard V. Guzman, Senior Project Manager  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-247

Enclosure:  
List of Attendees

cc: Listserv

LIST OF ATTENDEES  
APRIL 3, 2018, MEETING WITH ENTERGY NUCLEAR OPERATIONS, INC.,  
REGARDING ITS PLANNED RELIEF REQUEST SUBMITTAL  
CONCERNING REACTOR PRESSURE VESSEL  
HEAD PENETRATION WELD REPAIR  
DOCKET NO. 50-247

<b>ATTENDEE</b>	<b>ORGANIZATION</b>
David Alley	U.S. Nuclear Regulatory Commission (NRC)
Jay Collins	NRC
John Tsao	NRC
Seung Min	NRC
Richard Guzman	NRC
James Danna	NRC
Tara Inverso	NRC
Jenny Weil	NRC
Lynnea Wilkins	NRC
Lawrence Burkhart	NRC
Brian Haagensen	NRC
Andrew Siwy	NRC
Ganesh Cheruvenki	NRC
Daniel Schroeder	NRC
Thomas Setzer	NRC
Mark Henrion	NRC
Niklas Floyd	NRC
Stephen Pindale	NRC
Michael Modes	NRC
Andrew Siwy	NRC
Jonathan Greives	NRC
Doug Tifft	NRC
Diane Screnci	NRC
William Sims	Entergy Nuclear Operations, Inc. (Entergy)
Ed Blackand	Entergy
T.R. Jones	Entergy
Brian McCarty	Entergy
Mark Crosskey	Entergy
Rich Burrani	Entergy
Nelson Azevedo	Entergy
Richard Wright	Entergy
Vincent Andreozzi	Entergy
Bob Walpole	Entergy

Mark Richter	Nuclear Energy Institute
Paul Gunter	Beyond Nuclear
James Ostroff	Platts Nuclear Publications
Marvin Lewis	N/A
Alyse Peterson	State of New York
Bridget Frymire	State of New York
Michael Keegan	Don't Waste Michigan
Cory Hasson	Staffer for Congresswoman Lowey's Office

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**ADAMS Accession Nos.:**

**Package: ML18117A307**

**Meeting Notice: ML18093A093**

**Meeting Summary: ML18117A316**

**Handouts: ML18108A183**

OFFICE	NRR/DORL/LPL1/PM	NRR/DORL/LPL1/LA	NRR/DORL/LPL1/BC	NRR/DORL/LPL1/PM
NAME	RGuzman	lBetts	JDanna	RGuzman
DATE	4/27/18	4/27/18	4/30/18	4/30/18

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