

## **NRR-PMDAPEm Resource**

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**From:** Poole, Justin  
**Sent:** Wednesday, February 08, 2017 5:44 PM  
**To:** Browne, Kenneth  
**Cc:** Thomas, Christine; Koenick, Stephen; Alley, David; Tsao, John  
**Subject:** Verbal Authorization for Seabrook Relief Request RA-17-002  
**Attachments:** Seabrook verbal authorization 2-8-2017.docx

Mr. Browne,

In accordance with NRR Office Instruction LIC-102, "Relief Request Reviews," the NRR staff has provided verbal authorization for Seabrook Station, Unit 1 relief request RA-17-002 as described in your letter to the NRC dated February 6, 2017 (ADAMS Accession No. ML17038A265), as supplemented by letter dated February 8, 2017 (ADAMS Accession No. ML17039A925).

The script read this afternoon that provides verbal authorization is attached. 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 attached verbal authorization will become publicly available in ADAMS.

Justin C. Poole  
Project Manager  
NRR/DORL/LPL1  
U.S. Nuclear Regulatory Commission  
(301)415-2048

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**Email Number:** 3334

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**Subject:** Verbal Authorization for Seabrook Relief Request RA-17-002  
**Sent Date:** 2/8/2017 5:43:34 PM  
**Received Date:** 2/8/2017 5:43:35 PM  
**From:** Poole, Justin

**Created By:** Justin.Poole@nrc.gov

**Recipients:**

"Thomas, Christine" <Christine.Thomas@nexteraenergy.com>

Tracking Status: None

"Koenick, Stephen" <Stephen.Koenick@nrc.gov>

Tracking Status: None

"Alley, David" <David.Alley@nrc.gov>

Tracking Status: None

"Tsao, John" <John.Tsao@nrc.gov>

Tracking Status: None

"Browne, Kenneth" <Kenneth.J.Browne@nexteraenergy.com>

Tracking Status: None

**Post Office:** unknown

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MESSAGE	838	2/8/2017 5:43:35 PM
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**Options**

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**Reply Requested:** No

**Sensitivity:** Normal

**Expiration Date:**

**Recipients Received:**

VERBAL AUTHORIZATION BY THE OFFICE NUCLEAR REGULATION  
FOR RELIEF REQUEST RA-17-002  
TEMPORARY REPAIR OF SERVICE WATER PIPING  
SEABROOK STATION UNIT 1  
NEXTERA ENERGY SEABROOK LLC  
DOCKET NO. 50-443  
FEBRUARY 8, 2017

**Technical Evaluation read by David Alley, Chief of the Component Performance, Non-Destructive Examination, and Testing Branch, NRR**

By letter dated February 6, 2017, with a supplement dated February 8, 2017, NextEra Energy Seabrook LLC (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, IWA-4412, at Seabrook Station Unit 1.

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), the licensee submitted Relief Request RA-17-002 for a temporary repair of leaking service water piping on the basis that complying with the specified ASME Code requirement to repair the degraded piping would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

On January 21, 2017, with Seabrook Station in operation at 100% power, the licensee observed through-wall leakage on the outside diameter of 24-inch pipe line 1-SW-1827-001. The flaw is located in a Belzona-lined spool upstream of the 1-CC-E-17-A inlet isolation valve SWV-14, adjacent to field weld FW-1827-F0905. The leak rate was approximately 12 drops per minute. The licensee initially estimated the wall thinning area to be 1.75 inches axial by 2.5 inches circumferential. The licensee detected 14 additional areas of wall thinning in the subject pipe. The licensee proposed to repair the leaking flaw location.

The licensee proposed to install a 6-inch encapsulation which consists of a weldolet, weld neck flange and blind flange, on the leaking flaw which was caused by seawater corrosion. The licensee demonstrated the structural integrity of the subject pipe in accordance with ASME Code Case N-513-3 "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping, Section XI, Division 1." The licensee also demonstrated that considering the flaw growth rate, the 6-inch encapsulation will maintain the structural integrity of the pipe up to the end of the next refueling outage (OR18) in Spring 2017. In addition, the licensee will perform the daily walkdown and ultrasonic inspection of the affected area at a frequency of no more than 30 days. As a defense-in-depth measure, the licensee stated that the relief request would expire if the ongoing ultrasonic testing identify that the flaw progresses outside the encapsulated area to the point that the ASME Code minimum thickness of 0.077 inches is challenged. The NRC staff finds that the licensee has provided adequate hardship justification.

The NRC staff finds that the proposed encapsulation has sufficient margin with respect to the predicted growth of the flaw at the end of next refueling outage (OR18) in Spring 2017 and is designed to support all the loadings of the pipe. Therefore, the NRC finds that Relief Request RA-17-002 will provide reasonable assurance that the structural integrity of the subject service water piping and its intended safety function will be maintained up to the end of the next refueling outage (OR18) in Spring 2017.

**Authorization read by Stephen Koenick, Acting Chief of the Plant Licensing Branch I, NRR**

As Acting Chief of the Plant Licensing Branch I, Office of Nuclear Reactor Regulation, I agree with the conclusions of the Component Performance, Non-Destructive Examination, and Testing Branch.

The NRC staff concludes that the proposed alternative provides reasonable assurance of structural integrity of the subject service water piping. The NRC staff finds that complying with IWA-4412 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 February 8, 2017, the NRC authorizes the use of Relief Request RA-17-002 at Seabrook Station Unit 1 until the end of the next refueling outage (OR18) in Spring 2017, or until the flaw progresses outside the encapsulated area such that the pipe wall thickness is below 0.077 inches, whichever occurs first.

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 clarifying questions regarding the Relief Request while preparing the subsequent written safety evaluation.