

## **NRR-PMDAPem Resource**

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**From:** Buckberg, Perry  
**Sent:** Friday, February 03, 2017 2:20 PM  
**To:** Frehafer, Ken; Snyder, Mike  
**Cc:** Beasley, Benjamin; Alley, David  
**Subject:** 2-3-2017 - Verbal Authorization for Fourth Ten-Year Interval Unit 1 Relief Request No. 14, Rev. 0

Ken / Mike,

In accordance with NRR Office Instruction LIC-102, "Relief Request Reviews," the NRR staff has provided verbal authorization for St. Lucie, Unit 1 Fourth Ten-Year Interval Unit 1 Relief Request No. 14, Rev. 0 as described in your letter to the NRC dated February 2, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17033A151) as supplemented by the February 3, 2017 e-mail responses to the staff 10 questions which will become publicly available in ADAMS.

The script read this afternoon that provides verbal authorization appears below. 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.

Thanks,

**Perry Buckberg**

Senior Project Manager

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U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

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VERBAL AUTHORIZATION BY THE OFFICE NUCLEAR REGULATION  
RELIEF REQUEST NO. 14, REVISION 0  
ALTERNATE REPAIR OF REACTOR COOLANT PUMP SEAL HEAT EXCHANGER  
COOLING TUBE  
ST LUCIE UNIT 1  
FLORIDA POWER & LIGHT  
DOCKET NO. 50-335  
FEBRUARY 3, 2017

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

By letter dated February 2, 2017, with supplements dated February 3, 2017, Florida Power & Light (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, IWA-4000, at the St Lucie Unit 1.

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), the licensee submitted Relief Request No. 14, Revision 0, for the alternate repair of the degraded cooling line tube of the 1B2 reactor coolant pump seal heat exchanger 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 31, 2017, the licensee discovered leakage from the cooling line tube of the 1B2 reactor coolant pump seal heat exchanger. The licensee proposed to remove the flaw and perform a weld repair of the tube base metal in accordance with the ASME Code Section XI, IWA-4000 except that the licensee proposed to perform penetrant testing of the new weld RCP Seal FW-2001 in lieu of radiographic testing as required by the ASME Code, Section III, NB-2539.4.

The NRC staff notes that the licensee is required to follow the requirements in the ASME Code, Section III, NB-2539.4, for the non-destructive examination per the ASME Code, Section XI, IWA-4520. As an alternative, the licensee proposed to apply progressive penetrant testing on the new weld. The licensee stated that it is not possible to perform the radiographic testing on the new weld because of inaccessibility, component configurations, and high radiological dose. The NRC staff finds acceptable that the licensee will examine the new weld using progressive penetrant testing in lieu of radiological testing because progressive penetrant testing is sufficient to detect potential fabrication defect in the new weld in this situation. In addition, the NRC staff finds that the licensee's hardship justification is acceptable.

The NRC staff finds that the flaw will be completely removed and the full thickness of the tube base metal will be restored in accordance with the ASME Code Section XI, and the original design requirements will be met in accordance with the ASME Code, Section III. Therefore, the NRC finds that the proposed alternative will provide reasonable assurance that the structural integrity of the subject tube is acceptable for the life of the plant.

**Authorization read by Benjamin Beasley, Chief of the Plant Licensing Branch II-2, NRR**

As Chief of the Plant Licensing Branch II-2, in the 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 reactor coolant pump seal heat exchanger cooling line tube. The NRC staff finds that complying with the non-destructive examination requirement of IWA-4000 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 3, 2017, the NRC authorizes the use of Relief Request No. 14, Revision 0, at St. Lucie Unit 1 for the fourth 10-Year ISI interval which ends on February 10, 2018. The NRC staff concludes that the weld repair is acceptable for the remaining life of the plant until the end of the period of extended operation which expires on March 1, 2036.

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 Relief Request while subsequently preparing the written safety evaluation.

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**Mail Envelope Properties** (Perry.Buckberg@nrc.gov20170203141900)

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**From:** Buckberg, Perry

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