

To: NRC Operations Center  
301-816-5151

From: Joyce Hamman, Director, Safety & Quality  
Crane Nuclear, Inc.

Subject: Closure of "potential" Part 21 issue, original  
letter dated 03/04/2021

3 pages to follow



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Date: June 3, 2021

**Attn: Document Control Desk**  
**U.S. Nuclear Regulatory Commission**  
Washington, D.C. 20555-001

Subject: Potential Part 21 Issue **\*\*See update below in bold**

On January 6, 2021, Crane Nuclear, Inc. (CNI) received an email message from a customer identifying that the weld procedures Crane submitted for use on the customer's purchase order were unacceptable, as the procedure did not meet the requirements of ASME Code Section IX.

*(i) Name and address of the individual or individuals informing the Commission.*

Joyce Hamman  
Director, Safety and Quality

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*(ii) Identification of the basic component supplied for such facility or such activity within the United States which may fail to comply or contains a potential defect*

CNI is currently conducting research to determine where the affected weld procedures were used. The scope of supply is Code and safety related valve and valve parts supplied by CNI since 2009.

*(iii) Identification of the firm supplying the basic component which fails to comply or contains a defect.*

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*(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply*

On January 6, 2021, CNI was notified by a customer that a weld procedure to be used on the customer's product did not meet ASME Code Section IX. Specifically, the base metal thickness for the test coupon associated with Procedure Qualification Record (PQR) MAW-06-811-R012-1/21/11 R/0 is identified as T=3/8". The Welding Procedure Specification (WPS) states a qualification range of 3/8" and greater. Per the requirements of ASME Section IX, paragraphs QW-403.23 and Table QW-453 for HF, the thickness range would be T=3/8" up to 1". Qualification for nominal base metal thickness of 1" to unlimited, requires an additional supporting PQR using a coupon of 1" or greater."

CNI immediately began a search for a PQR or coupon for qualification of welding on greater than 1" base metal. During the course of the research, ten other procedures were determined to have the same issue: the PQR identifies qualification for base metal of 3/8" and greater; while the Code specifies that welding on base metal greater than 1" requires a PQR of its own.

*(v) The date on which the information of such defect or failure to comply was obtained.*

CNI was notified on 01/06/2021 that our procedure did not meet ASME Code requirements. We immediately began research and determined the customer to be correct.

*(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.*

CNI is in the process of determining exactly where the potentially unqualified procedures were used.

*(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.*

A coupon for Procedure Qualification Record (PQR) MAW-06-811-R012-1/21/11 R/0 for base metal greater than 1" has been completed and has been tested by a CNI approved testing laboratory. The test results identify the coupon to have passed.

CNI in the process of creating new weld coupons for use with the affected 'WPS' on a base metal of greater than 1". We are awaiting test results for the completed coupons. It is anticipated that all weld coupons and testing will be completed by the end of March, 2021.

If the remainder of the coupons are found acceptable, CNI will revise the PQR's and WPS', as necessary.

If the coupons are found to be unacceptable, CNI will notify affected customers.

*(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.*

None at this time.

CNI believes that weld coupons for the eleven procedures in question will be found to be acceptable upon completion of testing.

*(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.*

Not applicable.

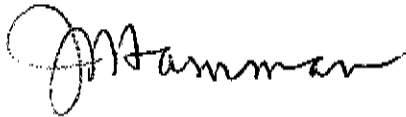
**Update 6/3/21:** Eleven procedures were identified by CNI as not having a supporting PQR for welding on greater than 1" base metal. Of those eleven, three have never been used. Those three procedures are being corrected to identify the procedure applies to base metal of up to 1" only.

**The remaining eight procedures have had a 1" coupon welded and tested. All coupons passed the penetrant test, the hardness tests, and macro testing, as required by table QW-453 of ASME Code Section IX.**

**As a result, CNI is updating the affected procedures. This is a paperwork issue for Crane and not a Part 21 concern for the industry.**

Should you have any questions regarding this matter, please contact me, Joyce Hamman, Director, Safety & Quality at (678) 451-2280.

Regards,



Joyce Hamman  
Director, Safety & Quality  
Crane Nuclear, Inc.