

Part 21 (PAR)

Event # 51206

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|---------------------------------------|---------------------------------------|---|--|
| <b>Rep Org:</b> CRANE NUCLEAR, INC.   |                                       | <b>Notification Date / Time:</b> 07/08/2015 07:49 (EDT) |  |
| <b>Supplier:</b> CRANE NUCLEAR, INC.  |                                       | <b>Event Date / Time:</b> 07/07/2015 (CDT)              |  |
|                                       |                                       | <b>Last Modification:</b> 08/10/2015                    |  |
| <b>Region:</b> 3                      | <b>Docket #:</b>                      |   |  |
| <b>City:</b> BOLINGBROOK              | <b>Agreement State:</b>               | Yes   |  |
| <b>County:</b>                        | <b>License #:</b>                     |   |  |
| <b>State:</b> IL                      |                                       |   |  |
| <b>NRC Notified by:</b> JASON KLEIN   | <b>Notifications:</b> ANN MARIE STONE | R3DO  |  |
| <b>HQ Ops Officer:</b> STEVE SANDIN   | GERALD MCCOY                          | R2DO  |  |
| <b>Emergency Class:</b> NON EMERGENCY | MARK HAIRE                            | R4DO  |  |
| <b>10 CFR Section:</b>                | PART 21/50.55 REACTORS                | EMAIL   |  |
| 21.21(a)(2)                           | INTERIM EVAL OF DEVIATION             |   |  |

## PART 21 INTERIM REPORT - NOTIFICATION OF PRESSURE SEAL VALVE YOKE MATERIAL COMPLIANCE

The following information was received via fax:

"This letter provides interim notification of Crane Nuclear's investigation into ASME Boiler and Pressure Vessel [B&PV] Section III Code design Pressure Seal Valve orders for yokes with integral hubs acting as retaining rings. The information required for this notification is provided below:

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

Jason Klein  
Sustaining Engineering Manager

Rosalie Nava  
Director Safety and Quality  
Crane Nuclear  
860 Remington Blvd  
Bolingbrook, IL 60440

"(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

This is an interim report. Crane Nuclear is currently investigating Pressure Seal Valve orders potentially having misclassified material and non-destructive examination requirements for Yokes with integral hub retaining ring designs. The material requirements are specified per Crane Procedure 03-107 which utilizes ASME B&PV Code

IE19  
NRR

Case N-62-7 as guidance for material classification.

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

Crane Nuclear  
860 Remington Blvd  
Bolingbrook, IL 60440

"(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.

Crane Nuclear 'Classification of Valve Parts', Procedure 03-107, is guidance for appropriate material and NDE requirements for processing valve and valve part orders. The procedure is based on the ASME Code Case N-62-7. A yoke incorporating a threaded hub should be treated in the same manner as a threaded retaining ring requiring the material to be purchased Safety Related, ASME B&PV Section II, Part D materials, and required NDE (reference Category 3 valve items per N-62-7). Yokes with integral hubs acting as retaining rings may have been processed to material requirements without required CNI Classification per Procedure 03-107.

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

Crane Nuclear Engineering initiated investigation correspondence to Crane Nuclear Director of Safety and Quality via email correspondence dated Feb 20th, 2015.

"(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.

Crane has yet to determine the extent of Pressure Seal Valve designs sales order numbers (SO#) affected prior to 2001; the following Utility and Sites were supplied non-compliant CNI Procedure 03-107 Classification yokes for the following valve assemblies:

1. CNI SO# 24237-01, TVA, Browns Ferry, P.O. 00031943 - Quantity shipped = 1, Chapman, 8 [inch], Figure L953, Class 900, ASME Class 2, 95 Ed., 96 Add., no N stamp
2. CNI SO# 39501-01, Georgia Power, Hatch, P.O. SNG10016537 - Quantity shipped = 3, Crane, 3 [inch], Figure 776U, Class 600, ASME Class 3, 71 Ed., W71 Add.
3. CNI SO# 39745-01, Southern California Edison, San Onofre, P.O. 4500456451 - Quantity Shipped = 1, Alloyco, 4 [inch], Figure N5247PSB, Class 900, ASME Class 3, 71 Ed., S73 Add.

"(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.

Crane Nuclear has completed sales orders search of Pressure Seal Valve designs with integral retaining ring hubs from 2001 to present identifying a total of 25 orders where three orders are impacted, as identified in part iv of this report (see above). Crane Nuclear is currently investigating sales orders previous to 2001, which will require an additional 30 days to complete (estimated completion date, August 6th, 2015).

Corrective action by Crane Nuclear is to review documentation of supplied material to determine if yokes can be recertified as currently supplied. A revision to Crane Nuclear Procedure 03-107 to add figures reflecting configurations, and clarify classifications with applicable training, is in-process.

"(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.

Crane Nuclear is notifying sites affected and are developing a plan to address the valve items.

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

Not applicable.

"Should you have any questions regarding this matter, please contact Jason Klein, Sustaining Engineering Manager at (630) 226-4953 or Rosalie Nava, Director of Safety and Quality at (630) 226-4940."

\*\*\* UPDATE FROM JASON KLEIN TO JOHN SHOEMAKER AT 1802 EDT ON 8/10/15 \*\*\*

The following excerpted information was received via fax:

"Crane Nuclear has completed the sales orders search of the ASME Section III Code Pressure Seal Valve designs with retaining rings from 1992 to present. Crane Nuclear identified a total of 112 orders that required review. Of these orders, two orders were supplied with non-compliant retaining ring material for the valve assemblies. The orders are as follows:

1. Walworth's Supplied Order #PP37653, Dominion, Millstone.
2. CNI SO# 32634-01, Dominion, Millstone.

"Corrective action being taken by Crane Nuclear is training held for engineers involved in classification of components, completed 8/10/15. Revise Procedure 03-107 to add figures reflecting configurations and clarify classifications 8/24/15. Revise assembly drawings to correct item identification as pressure retaining material, recertify ASTM material as ASME, and provide corrected documentation 8/28/15.

"Should you have any questions regarding this matter, please contact Jason Klein, Sustaining Engineering Manager at (630) 226-4953 or Rosalie Nava, Director of Safety and Quality at (630) 226-4940."

Notified R1DO (Powell), R2DO (Masters), R3DO (Orlikowski), R4DO (Hagar), and PART 21/50.55 REACTORS via email.

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**NUCLEAR**

TELEPHONE (630) 226-4900  
FAX (630) 226-4646  
www.cranenuclear.com

CRANE NUCLEAR, INC. 860 REMINGTON BOULEVARD BOLINGBROOK, IL. 60440

Date: August 10, 2015

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

Subject: 10 CFR Part 21 Investigation Report  
Notification of Retaining Ring Material Compliance

Dear Sir or Madam:

This letter provides interim notification of Crane Nuclear's investigation into ASME Boiler and Pressure Vessel Section III Code design Pressure Seal Valve orders for retaining rings. The information required for this notification is provided below:

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

Jason Klein  
Engineering Manager

Rosalie Nava  
Director Safety and Quality

Crane Nuclear  
860 Remington Blvd  
Bolingbrook, IL 60440

*(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*

Pressure Seal Valve orders may potentially have misclassified material and non-destructive examination requirements for retaining rings.

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

Crane Nuclear  
860 Remington Blvd  
Bolingbrook, IL 60440

*(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.*



NUCLEAR

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Crane Nuclear "Classification of Valve Parts", Procedure 03-107 provides guidance for appropriate classification of material and NDE requirements for processing valve and valve part orders. The procedure is based on the ASME Code Case N-62, which is ASME B&PV Section III, 2015 Edition, Non-Mandatory Appendix HH "Rules for Valve Internal and External Items".

According to Crane Nuclear Procedure 03-107, an ASME B&PV Section III pressure seal valve with a threaded retaining ring requires the material to be purchased Safety Related, ASME B&PV Section II, Part D materials, and requires NDE (reference Category 3 valve items per N-62). Retaining rings may have been processed to material requirements with incorrect material specification and non-destructive examination specified.

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

July 21, 2015.

*(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.*

Crane Nuclear has completed the sales orders search of the ASME Section III Code Pressure Seal Valve designs with retaining rings from 1992 to present. We identified a total of 112 orders that required review. Of these orders, two orders were supplied with non-compliant retaining ring material for the valve assemblies. The orders are as follows:

1. Walworth's Supplied Order #PP37653, Dominion, Millstone, Stone & Webster P.O. 2362.050-161, Walworth drawing A-12275-M-11D (P.O. 45572185, below, is "Like for Like" replacement for this valve) – Quantity shipped = 1, Walworth, 18", Fig 5247PSB, Class 900, ASME Class 3, 1974 Ed.
2. CNI SO# 32634-01, Dominion, Millstone, P.O. 45572185 – Quantity shipped = 1, Walworth, 18", Fig 5247PSB, Class 900, ASME Class 3, 1974 Ed.

Crane Nuclear is currently investigating the sales orders from 1968 to 1992. We require an additional 30 days to complete our review.

*(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.*

Corrective action being taken by Crane Nuclear is training held for engineers involved in classification of components, completed 8/10/15. Revise Procedure 03-107 to add figures reflecting configurations and clarify classifications 8/24/15. Revise assembly drawings to correct item identification as pressure retaining material, recertify ASTM material as ASME, and provide corrected documentation 8/28/15.

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FAX (630) 226-4646  
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CRANE NUCLEAR, INC. 860 REMINGTON BOULEVARD BOLINGBROOK, IL. 60440

*(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.*

Crane Nuclear has notified the respective customer for the orders that have been identified to date. Crane will notify customers for any additional orders that are identified.

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

Not applicable.

Should you have any questions regarding this matter, please contact Jason Klein, Engineering Manager at (630) 226-4953 or Rosalie Nava, Director of Safety and Quality at (630) 226-4940.

Regards,

A handwritten signature in black ink, appearing to be "Jason Klein", written over the printed name.

Jason Klein