

Part 21 (PAR)

Event # 51296

<b>Rep Org:</b> CRANE NUCLEAR, INC	<b>Notification Date / Time:</b> 08/06/2015 20:00 (EDT)
<b>Supplier:</b> CRANE NUCLEAR, INC	<b>Event Date / Time:</b> 02/20/2015 (CDT)
	<b>Last Modification:</b> 08/06/2015
<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> ANTHONY MASTERS R2DO
<b>HQ Ops Officer:</b> JEFF ROTTON	RAY AZUA R4DO
<b>Emergency Class:</b> NON EMERGENCY	PART 21/50.55 REACTORS EMAIL
<b>10 CFR Section:</b> 21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE	

## PART 21 - CRANE NUCLEAR PRESSURE SEAL VALVE WITH RETAINING RINGS

The following summary was excerpted from a facsimile received from Crane Nuclear:

"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 yokes with integral hubs acting as retaining rings.

"The information required for this notification is provided below:

"Name and address of the individual or individuals informing the Commission: Jason Klein, Sustaining Engineering Manager and Rosalie Nava, Director Safety and Quality, Crane Nuclear, 860 Remington Blvd., Bolingbrook, IL 60440

"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 Yokes with integral hub retaining ring designs.

"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, provides 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, which is ASME B&PV Section III, 2015 Edition, Non-Mandatory Appendix HH 'Rules for Valve Internal and External Items'. 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). However, yokes with integral hubs acting as retaining rings may have been processed to material requirements for a yoke per Procedure 03-

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107 and not a threaded retaining ring resulting in the incorrect material specification and non-destructive examination specified.

"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, three orders were supplied with non-compliant retaining ring material for the valve assemblies. The three orders are as follows:

"CNI SO# 24237-011, 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

"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.

"CNI SO# 39745-01, Southern California Edison, San Onofre, P.O. 4500456451 - Quantity shipped = 1, Aloyco, 4 inch, Figure N5247PSB, Class 900, ASME Class 3, 71 Ed., S73 Add.

"Crane Nuclear is currently investigating sales orders from 1968 to 1992. We require an additional 30-60 days to complete our review.

"Corrective action being taken by Crane Nuclear is to review documentation of the supplied material on the affected orders to determine if the yokes can be recertified as currently supplied, amend Crane Nuclear Procedure 03-107 to add figures reflecting configurations and clarify classifications, and train Engineering personnel by August 24, 2015.

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

"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."

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TELEPHONE (630) 226-4900  
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**NUCLEAR**

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

Date: August 6, 2015

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

Subject: 10 CFR Part 21 Investigation Report  
Notification of Pressure Seal Valve Yoke 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 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*

Pressure Seal Valve orders may potentially have misclassified material and non-destructive examination requirements for Yokes with integral hub retaining ring designs.

*(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.*



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

Crane Nuclear "Classification of Valve Parts", Procedure 03-107, provides 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, which is ASME B&PV Section III, 2015 Edition, Non-Mandatory Appendix HH "Rules for Valve Internal and External Items".

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). However, yokes with integral hubs acting as retaining rings may have been processed to material requirements for a yoke per Procedure 03-107 and not a threaded retaining ring resulting in the incorrect material specification and non-destructive examination specified.

*(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 20<sup>th</sup>, 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, three orders were supplied with non-compliant retaining ring material for the valve assemblies. The three orders are as follows:

1. CNI SO# 24237-01, TVA, Browns Ferry, P.O. 00031943 – Quantity shipped = 1, Chapman, 8", 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", 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, Aloyco, 4", Figure N5247PSB, Class 900, ASME Class 3, 71 Ed., S73 Add.

Crane Nuclear is currently investigating sales orders from 1968 to 1992. We require an additional 30-60 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 to review documentation of the supplied material on the affected orders to determine if the yokes can be recertified as currently supplied, amend Crane Nuclear Procedure 03-107 to add figures reflecting configurations and clarify classifications, and train Engineering personnel by August 24, 2015.



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*(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 customers for the four orders that have been identified to date. Crane will notify the respective 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, Sustaining 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 read "JK", written over the printed name "Jason Klein".

Jason Klein