



Flow Control Division
 Anchor/Darling Valves
 BW/IP Valves
 Edward Valves
 Valtek Control Products
 Worcester Valves

September 6th, 2019

US Nuclear Regulatory Commission
 Document Control Desk
 11545 Rockville Pike
 Rockville, MD 20852-2746

Subject: Final Report (Log # 2019-22-00) (Event # EN 54215) - Non-Destructive Examination (Liquid Penetrant) Performance of Components by an Un-Qualified Employee

This final report is being submitted to the US Nuclear Regulatory Commission with regards to (Log # 2019-22-00) (Event # EN 54215), in accordance with the provisions of 10CFR Part 21.

Original Issue Description:

Contrary to the requirements of ASME Section III & ASME NQA-1 Requirement 2, an employee of Flowserve was found to have performed Non-Destructive Examinations (Liquid Penetrant Testing - PT's) without the required certificate in accordance with ASNT SNT-TC-1A, and Flowserve's written practice. Employee was trained and tested in accordance with the written practice and ASNT requirements. Although his individual section scores were found to pass the (70%) minimum, the composite test requirements failed to meet the minimum 80% requirement. Actual composite score achieved was (79.167%).

Initial Valve/Component Scope:

The scope of impacted valves/components is shown in the table below.

Order	Line	Qty	PS Number/Trace Code	Shipment Date	Customer	Part
125076	1	1	97CCT	11/12/2018	EXELON COMPANY	Body
125076	1	1	96CCT	11/12/2018	EXELON COMPANY	Body
122907	1	2	60CCW	1/23/2019	EXELON COMPANY	Stem
123163	1	1	RH122	11/20/2018	PINNACLE WEST CAPITAL CORP	Stem
124473	1	1	BW929	10/29/2018	EXELON COMPANY	Body
119022	1	2	36CCT, 37CCT	1/31/2019	BRUCE POWER	Stem
124135	1	1	43CDA	5/15/2019	XCEL ENERGY	Cover
124144	1	4	38CCU, 39CCU, 40CCU, 41CCU	11/20/2018	ALABAMA POWER	Yoke
124785	5	4	970905/8-11	11/16/2018	ENERGY NUCLEAR OPERATIONS INC	Pin wedge
123982	1	2	N/A	N/A	FIRST ENERGY	Yoke
124796	1	5	40893&45698 SRL 83-87	1/30/2019	PINNACLE WEST CAPITAL CORP	Stem
124931	6	2	N/A	N/A	EXELON COMPANY	Disk

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Corrective Actions Taken:

- 1) Flowserve Raleigh Corrective Action, (CAR-392777) was issued and actions taken internally to preclude recurrence. Communication was submitted to all certified personnel, clarifying the NDE certifying authority and qualification folder location/information.
- 2) Completed a full review of certified Liquid Penetrant - NDE (Non-Destructive Examination) personnel to ensure compliance to Flowserve Raleigh's written practice and ASNT-TC-1A requirements.
- 3) Reviewed impacted components to identify critical components, risk associated, and impact of non-accepted Liquid Penetrant tested components. All components identified to meet the 10CFR Part21 reportable requirements were communicated accordingly.
- 4) Issued RMA's for all product that was capable of return.
- 5) Reviewed conditions and Issued Justification Letters for any outstanding products that were unable to be returned. (See Attached Letters)

Components Returned and Re-Tested:

Order	Line	Qty	RMA NUMBER	PS Number/Trace Code	Shipment Date	Customer	Customer PO	Part
125076	1	1	11145	97CCT	11/12/2018	EXELON COMPANY	N/A	Body
125076	1	1	11145	96CCT	11/12/2018	EXELON COMPANY	N/A	Body
122907	1	2	11140	60CCW	1/23/2019	EXELON COMPANY	00000375 REL 14421	Stem
119022	1	2	11144	36CCT, 37CCT	1/31/2019	BRUCE POWER	00216521	Stem
124135	1	1	11142	43CDA	5/15/2019	XCEL ENERGY	400000507 7	Cover
124144	1	4	11141	38CCU, 39CCU, 40CCU, 41CCU	11/20/2018	ALABAMA POWER	SNA27950- 0501	Yoke

Components Not Returned / Unable for Return and Justification Provided:

Order	Line	Qty	RMA NUMBER	PS Number/Trace Code	Shipment Date	Customer	Customer PO	Part
123163	1	1	N/A	RH122	11/20/2018	PINNACLE WEST CAPITAL CORP	500616087	Stem
124473	1	1	N/A	BW929	10/29/2018	EXELON COMPANY	00000375_1449 8	Body
124785	5	4	N/A	970905/8-11	11/16/2018	ENERGY NUCLEAR OPERATIONS INC	10553241	Pin wedge
124796	1	5	N/A	40893&45698 SRL 83-87	1/30/2019	PINNACLE WEST CAPITAL CORP	N/A	Stem

Components Isolated and Rejected Prior to Shipment

Order	Line	Qty	RMA NUMBER	PS Number/Trace Code	Shipment Date	Customer	Customer PO	Part
123982	1	2	N/A	AHG-9	N/A	FIRST ENERGY	45527546	Yoke
124931	6	2	N/A	S7339	N/A	EXELON COMPANY	N/A	Disk

Conclusion / Status:

- All Components that were issued Justification Letters, have had them submitted back to their respective customers (See Attached Letters).
- After further review, (2) of the (12) orders initially identified were able to be isolated and rejected for this condition internally prior to shipment.
- RMA 11140 issued. Pending material return from customer for re-testing of the component(s).
- RMA 11141 in process of rework / re-testing. Pending shipment back to customer on 9/19/2019.
- RMA 11142 in process of rework / re-testing. Pending shipment back to customer on 9/13/2019.
- RMA 11144 issued. Pending material return from customer for re-testing of the component(s).
- RMA 11145 has been received, and Credit issued to Customer. No Replacement Ordered.

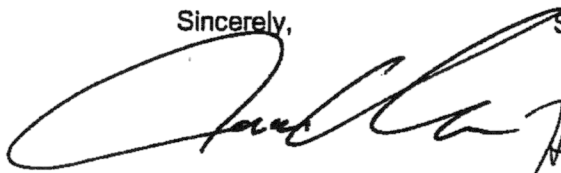
Respectfully Submitted,

Sincerely,



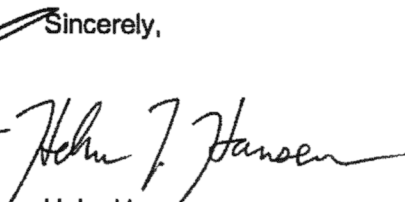
Kevin Worth
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Sincerely,



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Sincerely,



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August 14, 2019

SUBJECT: Response to Indian Point on the 10 CFR Part 21 Notice of the Unqualified NDE Personnel and the Use of Effected Wedge Pins

To Whom It May Concern,

The purpose of this memo is to address the safety concern of the wedge pins that were PT'd by unqualified individuals on Entergy Nuclear P.O. 10553241 (Flowserve Sales Order 124785). Flowserve does not identify this as an immediate risk for safety for the following reasons:

- As a result of the previous Part 21 notification from 2014, most plants are now torquing the stem and upper wedge to a preload higher than the joint would experience during operation. **If** the pins were installed in valves that were appropriately torqued, they should experience no load and only function as a backup.
- Flowserve does not typically PT nor have experience PT'ing wedge pins. We do not see this NDE as a design requirement.
- If there was a crack that was not appropriately identified through the PT process, it would need to be in two precise locations such that it was directly in line with both sides of the wedge, which is in itself is incredibly unlikely.

As a result of the items identified above, Flowserve does not identify the immediate use of the wedge pins as a threat to the valve integrity or safety.

Best Regards,

A handwritten signature in black ink, appearing to read "MHobbs".

Matt Hobbs
Engineering Manager
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August 30, 2019

SUBJECT: Response to La Salle on the 10 CFR Part 21 Notice of the Unqualified NDE Personnel
Purchase Order: 00000375_14498
Sales Order: 124473

To Whom It May Concern,

The purpose of this letter is to address the safety concern of the body of the valve (Heat Number 18233) that was PT'd by an unqualified Flowserve employee on Exelon PO 00000375_14498 (Flowserve Sales Order 124473).

In reference to the above, Flowserve does not identify this as a risk for safety because the area that was PT'd was the internal attachment weld of the seat ring to the body. Per the information received from LaSalle, the application of this valve is for maintenance isolation and is locked open in service. In the open position, failure of this weld would have no impact to the valve's ability to maintain the pressure boundary and to remain in the open position.

Consequently, and since this is a maintenance isolation valve and the non-conformance is only internal to the body of the valve, Flowserve believes that the use of this product does not represent a threat or concern to the integrity or safety of the valve.

Best Regards,

Matt Hobbs

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September 6, 2019

SUBJECT: Response to Palo Verde on the 10 CFR Part 21 Notice of the Unqualified NDE Personnel
Purchase Order(s): 500616087, 5006169901
Sales Order(s): 123163, 124796

To Whom It May Concern,

The purpose of this letter is to address the safety concern of the stems that were PT'd by an unqualified Flowserve employee on the referenced Palo Verde PO 500616087 and 5006169901 (Flowserve Sales Orders 123163, 124796).

In reference to the above, Flowserve does not identify this as a risk for safety. For the valve modification kit on PO 500616087, in accordance with ASME Section III winter '75 addenda paragraph NC-2121(b) stems are not required by the code to have liquid penetrant inspections. For PO 5006169901, in accordance with ASME Section III summer '72 addenda paragraph NC-2121(b) stems are also not required by the code to have liquid penetrant inspections. Additionally, there is no design or purchase order requirement that would require a liquid penetrant test to be performed.

Consequently, Flowserve believes that the use of this product does not represent a threat or concern to the integrity or safety of the valve.

Best Regards,

Matt Hobbs

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