

Part 21 (PAR)

Event # 51927

<b>Rep Org:</b> CURTISS-WRIGHT NUCLEAR DIVISION		<b>Notification Date / Time:</b> 05/13/2016 14:35 (EDT)	
<b>Supplier:</b> EMERSON VALVE AUTOMATION/HYTORK		<b>Event Date / Time:</b> 05/11/2016 (CDT)	
<b>Last Modification:</b> 05/13/2016			
<b>Region:</b> 1	<b>Docket #:</b>		
<b>City:</b> HUNTSVILLE	<b>Agreement State:</b> Yes		
<b>County:</b>	<b>License #:</b>		
<b>State:</b> AL			
<b>NRC Notified by:</b> TONY GILL	<b>Notifications:</b> ART BURRITT	R1DO	
<b>HQ Ops Officer:</b> BETHANY CECERE	JAMIE HEISSERER	R2DO	
<b>Emergency Class:</b> NON EMERGENCY	PART 21 MATERIALS	EMAIL	
<b>10 CFR Section:</b>	PART 21/50.55 REACTORS	EMAIL	
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE			

PART 21 NOTIFICATION - POTENTIAL DEFECT APPLICABLE TO HYTORK XL1126 PNEUMATIC ACTUATORS

The following information was provided by Curtiss-Wright Nuclear Division via fax:

"On March 16, 2016, Curtiss-Wright was notified by one of our commercial suppliers that they had received an Important Product Safety Notice (safety notice) from Emerson Valve Automation/Hytork concerning Hytork models XL1371 and XL1126 pneumatic rack and pinion actuators, manufactured after 2005 and before June 2015. Curtiss-Wright began evaluating any possible impact at that time. On May 11, 2016 Curtiss-Wright made the decision that the defect was reportable under 10 CFR Part 21. A total of four (4) Hytork XL1126 pneumatic actuators had been dedicated by Curtiss-Wright and provided as safety-related. Two (2) of the actuators were supplied to the PSEG, Salem Generating Station and the other two (2) were supplied to MOX Services. Both Salem Generating Station and MOX Services have been notified of this potential defect. Curtiss-Wright has not supplied any of the XL 1371 actuators.

"Emerson Valve Automation/Hytork states that there is a small possibility that a crack may develop in the actuator body under normal operation. The Emerson/Hytork investigation determined that a combination of actuator body structural design and material specifications along with manufacturer processes, could lead to material properties that are not within stated specifications. This condition may cause higher than allowable stresses to occur in the actuator body, which could lead to crack initiation. If a crack does develop and the actuator continues to operate, the crack may propagate to the end of the body and the end caps could be forcefully ejected. In addition to operational concerns, this condition may present a personnel safety hazard.

"Based on phone conversations with Hytork it was learned that only one model XL1126 actuator failure has been reported out of approximately 10,000 supplied. Hytork stated that the failed actuator was in a 'severe'

IE19  
NRR

(mechanical, operational) application with very high cycle frequency and likely experienced high impact loading.

"The list below identifies the affected customers, approximate ship dates, applicable purchase orders and actuator details.

PSEG/Salem, approximate date of shipment November, 2011, Customer PO Number 4500606542, Affected Equipment One Hytork EIA-XL1126-S80AH0 Actuator Damper Tag 1CAA14

MOX, approximate date of shipment June, 2014, Customer PO Number 10888-P-6374, Affected Equipment Two Hytork XL1126SR80 Actuators Catalog ID 14306 (HDE\*AOD 0142B) & Catalog ID 14309 (HDE\*AOD 0197B)

PSEG/Salem, approximate date of shipment September 2015, Customer PO Number 4500826720, Affected Equipment One Hytork EIA-XL1126-S80-A00 Actuator Damper Tag 2CAA14

"Hytork ceased production of the XL1126 and XL1371 actuators in June 2015 due to the described problem. Hytork is revising the design to connect the defect and will issue new model numbers for the re-designed actuators.

"Hytork expects to begin production of the new models in June of this year. Although Curtiss-Wright has successfully seismically tested two Hytork model XL1126 actuators under load, providing reasonable assurance that the actuators will survive and operate under normal and seismic loading, it is still recommended that the actuators be replaced as soon as practical. In the interim it is recommended that operating plants perform periodic (recommend weekly or if infrequently operated, following each operation) visual and/or soap-bubble inspections. The recommended actions provided below are considered to provide adequate indication of onset of this potential condition since instantaneous failures have not been identified and are not projected.

- a) For all persons who are or could be in the area where the affected equipment is present, ensure they are warned of the potential danger.
- b) Visually inspect all affected models for cracks, especially underneath the dual stroke adjustment pad and on top of the actuator body in the pinion area.
- c) If you are unsure whether a crack is present, perform a soap bubble test.
- d) If you identify a crack or leak, immediately remove this actuator from service.

"For additional information please contact the following personnel.

"Steve Willard, Engineering: 256-924-7463 (office); swillard@curtisswright.com (e-mail)  
Tony Gill, QA Manager: 256-924-7438 (office); 256-426-4558 (cell); tgill@curtisswright.com (e-mail)"

\*\*\*\*\*



## Fax Cover Sheet

---

To:  
 Fax Number: 301-816-5151  
 Subject: Notification of potential defect applicable to Hytork XL1126 pneumatic actuator

From: "Gill, Tony" <tgill@curtisswright.com>  
 Fax#: 855-305-6216

Date: 05/13/16 02:32:16 PM

Total Pages: 4 including this cover page

---

Memo:

-----Original Message-----

From: Huntsville\_Mfg\_7530@curtisswright.com  
 [mailto:Huntsville\_Mfg\_7530@curtisswright.com]  
 Sent: Friday, May 13, 2016 1:26 PM  
 To: Gill, Tony <tgill@curtisswright.com>  
 Subject: Scanned from a Xerox multifunction device

Please open the attached document. It was scanned and sent to you using a Xerox multifunction device.

Attachment File Type: pdf, Multi-Page

multifunction device Location: machine location not set  
 Device Name: XRX9C934E1DB3DB

For more information on Xerox products and solutions, please visit  
<http://www.xerox.com>

---

This e-mail and any files transmitted with it are proprietary and intended solely for the use of the individual or entity to whom they are addressed. If you have reason to believe that you have received this e-mail in error, please notify the sender and destroy this e-mail and any attached files. Please note that any views or opinions presented in this e-mail are solely those of the author and do not necessarily represent those of the Curtiss-Wright Corporation or any of its subsidiaries. Documents attached hereto may contain technology

subject to government export regulations. Recipient is solely responsible for ensuring that any re-export, transfer or disclosure of this information is in accordance with applicable government export regulations. The recipient should check this e-mail and any attachments for the presence of viruses. Curtiss-Wright Corporation and its subsidiaries accept no liability for any damage caused by any virus transmitted by this e-mail.

---

This electronic communication, including attachments, is for the exclusive use of addressee and may contain proprietary, confidential and/or privileged information. If you are not the intended recipient, any use, copying, disclosure, dissemination or distribution is strictly prohibited. If you are not the intended recipient, please notify sender immediately by phone, destroy this communication and all copies.



Nuclear Division  
120, 125 & 330 West Park Loop  
Huntsville, AL 35806  
T: 256.722.8500 | F 256.722.8533  
[www.curtisswright.com/NuclearDivision](http://www.curtisswright.com/NuclearDivision)

(File No.: CWHuntsville10CFR21-2016-01)

May 13, 2016

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555-0001

Subject: Notification of a potential defect applicable to Hytork XL1126 pneumatic actuators

On March 16, 2016, Curtiss-Wright was notified by one of our commercial suppliers that they had received an Important Product Safety Notice (safety notice) from Emerson Valve Automation/Hytork concerning Hytork models XL1371 and XL1126 pneumatic rack and pinion actuators, manufactured after 2005 and before June 2015. Curtiss-Wright began evaluating any possible impact at that time. On May 11, 2016 Curtiss-Wright made the decision that the defect was reportable under 10CFR Part 21. A total of four (4) Hytork XL1126 pneumatic actuators had been dedicated by Curtiss-Wright and provided as safety-related. Two (2) of the actuators were supplied to the PSEG, Salem Generating Station and the other two (2) were supplied to MOX Services. Both Salem Generating Station and MOX Services have been notified of this potential defect. Curtiss-Wright has not supplied any of the XL1371 actuators.

Emerson Valve Automation/Hytork states that there is a small possibility that a crack may develop in the actuator body under normal operation. The Emerson/Hytork investigation determined that a combination of actuator body structural design and material specifications along with manufacturer processes, could lead to material properties that are not within stated specifications. This condition may cause higher than allowable stresses to occur in the actuator body, which could lead to crack initiation. If a crack does develop, and the actuator continues to operate, the crack may propagate to the end of the body and the end caps could be forcefully ejected. In addition to operational concerns, this condition may present a personnel safety hazard.

Based on phone conversations with Hytork it was learned that only one model XL1126 actuator failure has been reported out of approximately 10,000 supplied. Hytork stated that the failed actuator was in a "severe" (mechanical, operational) application with very high cycle frequency and likely experienced high impact loading.

The table below identifies the affected customers, approximate ship dates, applicable purchase orders and actuator details.



## Nuclear Division

120, 125 &amp; 330 West Park Loop

Huntsville, AL 35806

T: 256.722.8500 | F 256.722.8533

www.curtisswright.com/NuclearDivision

(File No.: CWHuntsville10CFR21-2016-01)

Customer	Approx. Date of Shipment	Customer P.O. Number	Affected Equipment
PSEG/Salem	November, 2011	4500606542	One Hytork EIA-XL1126-S80-AH0 Actuator Damper Tag ICAA14
MOX	June, 2014	10888-P-6374	Two Hytork XL1126SR80 actuators Catalog ID 14306 (HDE*AOD 0142B) & Catalog ID 14309 (HDE*AOD 0197B)
PSEG/Salem	September 2015	4500826720	One Hytork EIA-XL1126-S80-A00 Actuator Damper Tag 2CAA14

Hytork ceased production of the XL1126 and XL1371 actuators in June 2015 due to the described problem. Hytork is revising the design to correct the defect and will issue new model numbers for the re-designed actuators. Hytork expects to begin production of the new models in June of this year.

Although Curtiss-Wright has successfully seismically tested two Hytork model XL1126 actuators under load, providing reasonable assurance that the actuators will survive and operate under normal and seismic loading, it is still recommended that the actuators be replaced as soon as practical. In the interim it is recommended that operating plants perform periodic (recommend weekly or if infrequently operated, following each operation) visual and/or soap-bubble inspections. The recommended actions provided below are considered to provide adequate indication of onset of this potential condition since instantaneous failures have not been identified and are not projected.

- For all persons who are or could be in the area where the affected equipment is present, ensure they are warned of the potential danger.
- Visually inspect all affected models for cracks, especially underneath the dual stroke adjustment pad and on top of the actuator body in the pinion area.
- If you are unsure whether a crack is present, perform a soap bubble test.
- If you identify a crack or leak, immediately remove this actuator from service.

For additional information please contact the following personnel.

Steve Willard, Engineering: 256-924-7463 (office); [swillard@curtisswright.com](mailto:swillard@curtisswright.com) (e-mail)

Tony Gill, QA Manager: 256-924-7438 (office); 256-426-4558 (cell); [tgill@curtisswright.com](mailto:tgill@curtisswright.com) (e-mail)

Sincerely,



Tony Gill  
Quality Assurance Manager, EGS and Trentec

Nuclear Division  
Curtiss-Wright  
125 West Park Loop NW, Huntsville, AL 35806  
T: 256.722.8500 ext. 7438 | M: 256.426.4558  
[tgill@curtisswright.com](mailto:tgill@curtisswright.com) | [www.cwnuclear.com](http://www.cwnuclear.com)