

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'

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(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)"

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## Fax Cover Sheet

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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

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### 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

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(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.

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(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.


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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

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