

Part 21 (PAR)

Event # 48569

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| <b>Rep Org:</b> EMERSON PROCESS MANAGEMENT | <b>Notification Date / Time:</b> 12/07/2012 09:53 (EDT) |
| <b>Supplier:</b> FISHER DIVISION           | <b>Event Date / Time:</b> 11/09/2012 (CST)              |
|  | <b>Last Modification:</b> 04/30/2013                    |
| <b>Region:</b> 3                           | <b>Docket #:</b>  |
| <b>City:</b> MARSHALLTOWN                  | <b>Agreement State:</b> Yes                             |
| <b>County:</b>                             | <b>License #:</b>                                       |
| <b>State:</b> IA                           |   |
| <b>NRC Notified by:</b> TRISH CROSSER      | <b>Notifications:</b> PATTY PELKE R3DO                  |
| <b>HQ Ops Officer:</b> BILL HUFFMAN        | JAMES DRAKE R4DO  |
| <b>Emergency Class:</b> NON EMERGENCY      | PART 21 GROUP E-MAIL                                    |
| <b>10 CFR Section:</b>                     |   |
| 21.21(a)(2) INTERIM EVAL OF DEVIATION      |   |

## PART 21 - BRACKETS USED PROXIMITY SWITCHES INSTALLED UPSIDE DOWN

"Equipment Affected By This Fisher Information Notice:

"This Fisher Information Notice (FIN) applies to equipment provided to Arizona Public Service Company-Palo Verde Nuclear Generating Station per Fisher Order Number 019-F10051845, Items 0001, 0002, 0004, and 0005 (Arizona Public Service PO# 500559374).

"The affected equipment is:

"4 [inch] CL900 Fisher HPD valve assemblies with TopWorx C8-24521-E3 proximity switches.

"The equipment is identified by Fisher serial numbers 20417605, 20428975, 20428977, and 20428978 respectively and Arizona Public Service Company tag numbers 1JSGEUV0169, 2JSGEUV0169, 1JSGEUV0183, and 2JSGEUV0183.

"Purpose:

"The purpose of this FIN is to alert Arizona Public Service Company that as of 9 November, 2012, Fisher Controls International LLC (Fisher) became aware of a situation which may potentially affect the safety-related performance of the aforementioned equipment.

"Fisher is informing you of this circumstance in accordance with Section 21.21 (b) of 10 CFR 21.

"Applicability:

IE19  
NRK

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Event # 48569

"This FIN applies only to the aforementioned equipment supplied by Fisher to Arizona Public Service Company-Palo Verde Nuclear Generating Station.

"Discussion:

"Arizona Public Service Company has determined that the brackets used to install the TopWorx switches were installed improperly by Fisher.

"Specifically, the mounting brackets for the switches were installed upside down. This orientation makes it impossible for the switches to operate properly and to perform their safety-related function.

"While the design used for these brackets was unique and constituted a first-time installation by Fisher, Fisher is in the process of performing a root cause analysis as well as investigating why the error was not detected prior to shipment. Fisher will implement a corrective action to prevent problems like this from reoccurring in the future.

"Additionally specific arrangements are being made with Arizona Public Service Company to correct the problem on the subject serial numbers, at Fisher's cost.

"Action Required:

"Fisher is currently working with Arizona Public Service Company to resolve the situation, including, the implementation of a bracket redesign and testing program to demonstrate the problem has been satisfactorily corrected.

"10 CFR 21 Implications:

"Fisher requests that the recipient of this notice review it and take appropriate action in accordance with 10 CFR 21.

"If there are any technical questions or concerns, please contact:

"George Baitinger;  
Manager, Quality;  
Fisher Controls International LLC;  
205 South Center Street Marshalltown, IA 50158;  
Fax: (641) 754-2854, Phone: (641) 745-2026."

\*\*\* UPDATE AT 1634 EDT ON 4/30/2013 FROM CHAD ENGLE TO MARK ABRAMOVITZ \*\*\*

The following information was received via fax:

"After the switches were properly reinstalled it was discovered that due to potential rotation of the valve stem connector when operating the hand wheel, the target magnets could, in some cases, rotate beyond the gap required for switch functionality. This additional discovery is the reason for the issue of this supplemental FIN.

"Fisher is currently working with TopWorx and APS/PVNGS [Arizona Public Service / Palo Verde Nuclear Generating Station] to develop a bracket redesign with adequate guiding which will constrain the magnet/switch gap to within acceptable criteria."

Notified the R4DO (Haire), R3DO (Duncan) and Part 21 Group (via e-mail).

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## Facsimile

301 South First Avet  
Marshalltown, IA 50158

T 641-754-3011  
F 641-754-2688

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NRC

To: Attention: NRC Operations Center

Fax: 301-816-5151

From: Emerson Process Management, Fisher Controls

Date: 4/30/2013

Pages: 4  
(Incl cover)

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**SUBJECT:** Fisher Information Notice: FIN 2012-04 Supplement 1

NOTE: If you have any technical questions, please contact George Baitinger (641)754-2026.  
Otherwise, you can give me a call (641)754-2688.

Trish Crosser  
Executive Assistant - Quality  
Emerson Process Management



Fisher Controls International LLC  
 301 South First Ave.  
 P.O. Box 190  
 Marshalltown, Iowa 50158-0190  
 USA  
 T (641) 754-3011  
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**Fisher Information Notice: FIN 2012-04 Supplement 1**

**26 April 2013**

**Subject: Fisher Controls International LLC (Fisher) Order 019-F10051845 for  
 Arizona Public Service Company-Palo Verde Nuclear Generating Station  
 (APS/PVNGS)**

**From:**

Chad Engle  
 Nuclear Business Unit Director  
 Fisher Controls International LLC  
 301 South First Ave.  
 Marshalltown, IA 50158  
 Fax: (641) 754-2854

**Equipment Affected By This Information Notice:**

*Items provided to Arizona Public Service Company-Palo Verde Nuclear Generating Station per Fisher Order Number 019-F10051845, Items 0001, 0002, 0003, 0004, 0005 and 0006 (Arizona Public Service PO# 500559374). This equipment included 4" CL900 Fisher HPD valve assemblies with Type 667NS Size 70 Actuator with Integral Side Mounted Handwheel, Type 67CFSR Pressure Regulator, ASCO NP8318A55E Solenoids, and Topworxs C8-24521-E3 Proximity Switches. The equipment is identified by Fisher Serial Numbers 20417605, 20428975, 20428976, 20428977, 20428978, and 20428979 (Arizona Public Service Company Tag Numbers 1JSGEUV0169, 2JSGEUV0169, 3JSGEUV0169, 1JSGEUV0183, 2JSGEUV0183, and 3JSGEUV0183 ).*

**Purpose:**

The purpose of this Fisher Information Notice (FIN) is to alert APS/PVNGS that as of 26 March 2013, Fisher became aware of the possibility of a situation which may affect the



**Fisher Information Notice: FIN 2012-04 Supplement 1**

performance of the applicable equipment.

We are informing you of this circumstance in accordance with Section 21.21 (b) of 10CFR21.

**Applicability:**

This notice applies only to the subject equipment supplied by Fisher, identified above, that was provided to APS/PVNGS. The issue is isolated to operability of the TopWorx limit switches.

**Discussion:**

As previously communicated by FIN 2012-04 dated 29 November 2012, APS/PVNGS has determined that the subject items were assembled with the brackets for the TopWorx switches installed improperly by Fisher. After the switches were properly re-installed it was discovered that due to potential rotation of the valve stem connector when operating the hand wheel, the target magnets could, in some cases, rotate beyond the gap required for switch functionality. This additional discovery is the reason for the issue of this supplemental FIN.

The following short-term, recommended solution consists of positioning the stem connector block halves in a manner which uses the valve assembly stem anti-rotation feature to minimize the amount of rotational movement allowed by the stem. This, in turn, will keep the TopWorx limit switch/magnet gap within acceptable limits. The method of adjusting the stem connector block halves is documented in the TopWorx Instruction Manual NucPosSensGuide-ES03436-1 R2.

The following list provides the status of each valve assembly:

Unit 1 Valves: 1JSGEUV0169 and 1JSGEUV0183 are currently located in the PVNG warehouse and are slated for installation. The switch brackets on these valves have been evaluated by I&VS and are installed as directed by TopWorx Instruction Manual NucPosSensGuide-ES03436-1 R2.

Unit 2 Valves: 2JSGEUV0169 and 2JSGEUV0183 are currently installed and have been evaluated by Fisher. The evaluation was sent to APS/PVNGS on 3 April 2013.

Unit 3 valves: 3JSGEUV0169 was shipped 6 April 2103 after Fisher personnel installed the limit switch brackets as directed by TopWorx Instruction Manual NucPosSensGuide-ES03436-1 R2. 3JSGEUV0183 is still at the Fisher manufacturing plant and will be equipped with redesigned brackets for the switches prior to shipment.



**Fisher Information Notice: FIN 2012-04 Supplement 1**

**Action Required**

Fisher is currently working with TopWorx and APS/PVNGS to develop a bracket redesign with adequate guiding which will constrain the magnet/switch gap to within acceptable criteria.

**10CFR21 Implications:**

Fisher requests that the recipient of this FIN review it and take appropriate action in accordance with 10CFR21. If there are any technical questions or concerns, please contact:

George Baitinger  
Manager, Quality  
Fisher Controls International LLC  
205 South Center Street  
Marshalltown, IA 50158  
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[George.Baitinger@Emerson.com](mailto:George.Baitinger@Emerson.com)

