

General Information or Other (PAR)

Event # 45105

<b>Rep Org:</b> ASCO VALVE INCORPORATED	<b>Notification Date / Time:</b> 05/29/2009 11:54 (EDT)
<b>Supplier:</b> ASCO VALVE INCORPORATED	<b>Event Date / Time:</b> 04/29/2009 (EDT)
	<b>Last Modification:</b> 05/29/2009
<b>Region:</b> 1	<b>Docket #:</b>
<b>City:</b> FLORHAM PARK	<b>Agreement State:</b> No
<b>County:</b>	<b>License #:</b>
<b>State:</b> NJ	
<b>NRC Notified by:</b> KAREN BOLIO	<b>Notifications:</b> GEORGE HOPPER R2DO
<b>HQ Ops Officer:</b> HOWIE CROUCH	TOM HERRITY (email) NRR
<b>Emergency Class:</b> NON EMERGENCY	OMID TABATAI (email) NRO
<b>10 CFR Section:</b>	
21.21 UNSPECIFIED PARAGRAPH	

PART 21 FOR MISSING PARTS ON ASCO SOLENOID VALVES

The following information was obtained from ASCO Valve QA Engineering via facsimile:

On 4/24/09 ASCO Engineering was made aware of a non-conformance in the valve assembly area. During the assembly of a solenoid valve, part number NPEFKX8300141EG 10688 125/DC, the valve assembler noticed that the valve was missing an insulating barrier and a wiring label used with screw terminal coils. Neither item was included on the valve Bill of Materials.

Purchase orders were reviewed and it was determined that North Anna Nuclear Power Station had purchased two of the subject valves. ASCO notified North Anna on April 27, 2009.

ASCO has taken measures to prevent future occurrences.

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JE19  
NRR

# ASCO Valve Inc.

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Florham Park, NJ 07932  
Tel: 973-966-2000  
Fax: 973-966-2628  
WEBSITE: [www.ascovalve.com](http://www.ascovalve.com)

**Karen Bolio**  
Valve QA Engineering  
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Pages Including Cover Page: 6

TO: NRC

FAX: 301-816-5151

COMPANY: \_\_\_\_\_

DATE: May 29, 2009

SUBJECT: \_\_\_\_\_

TIME: 11:49

Please see attached Part 21 notification.  
Thank you  
Karen Bolio  
QA Secretary

CC:



ASCO Valve, Inc.  
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F (973) 966-2626  
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May 28, 2009

NRC Documents Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

Subject – Missing insulating barrier and label on two (2) ASCO NPEFKX8300141EG  
10688 125/DC solenoid valves

Ref A - AREVA letter to Dominion Virginia Power – North Anna dated 4/27/09  
Ref B- ASCO letter to Chris Marsh – AREVA dated 5/7/09

Gentlemen:

We enclose information relating to a missing component and label on two valves shipped by ASCO. The customer has been notified.

ASCO does not have adequate knowledge of the actual installation and operating conditions of these valves to determine whether their malfunction could create a “substantial safety hazard” as defined in 10CFR21.3. We furnish this information to inform you of our investigation results, corrective action to date and customer notification.

**Background-** On 4/24/09 ASCO Engineering was made aware of a non-conformance in the valve assembly area. During the assembly of a solenoid valve, part number NPEFKX8300141EG 10688 125/DC, the valve assembler noticed that the valve was missing an insulating barrier. Ref Fig 1. Engineering reviewed the bill of materials (BOM) for the valve and confirmed that the insulating barrier (p/n 032818-004) was not listed on the BOM. In addition a wiring label (p/n 230195-001) used with screw terminal coils was also not included in the BOM.

**ASCO Investigation Results –** ASCO conducted a review of bills of material for all nuclear products with screw terminal coils. Based on the results of this search it was determined that this non-conformance was limited to this one catalog number valve. ASCO reviewed the sales history for this catalog number and determined that the valve had previously been supplied on 1 order of 2 valves. Serial #'s F767468-1 & 2

**Interim Action**

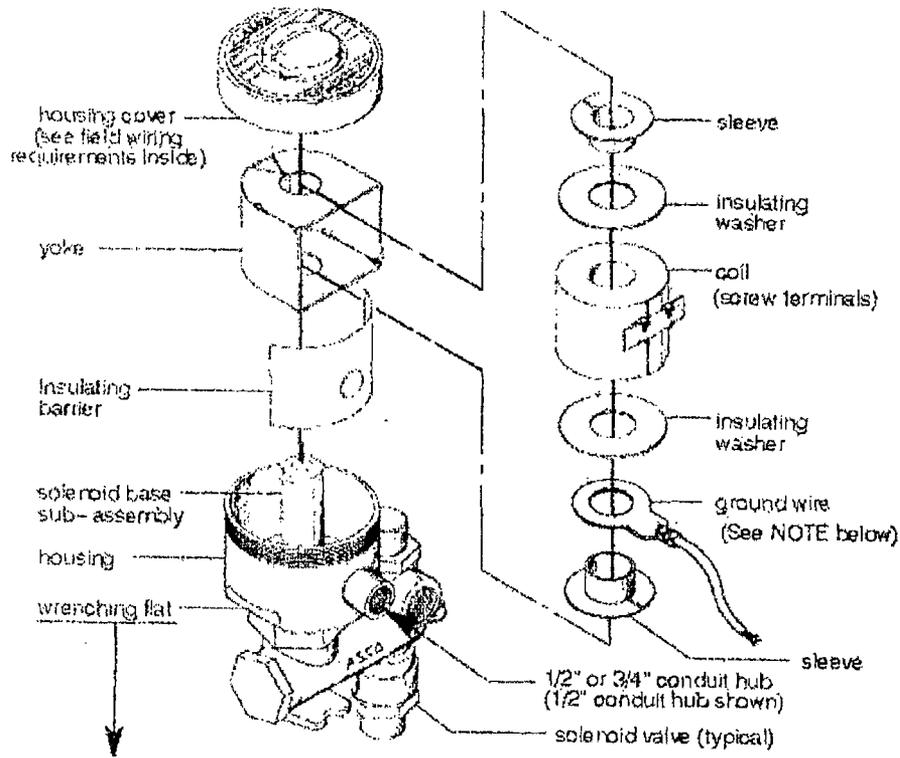
These valves were supplied to AREVA on 9/23/08. Areva was verbally notified on 4/27/09 of the non-conformance. Areva reviewed their sales history of this product and identified that the valves had been shipped to Dominion Virginia Power – North Anna. Areva notified the customer on 4/27/2009. ref A. ASCO provided Areva with a written notification on 5/7/09. ref B.

**Impact on Performance** – The insulating barrier is used on ASCO valves supplied with screw terminal coils. The barrier provides an electrical insulation between the screw terminals of the coil and the metallic solenoid housing. The screw terminals of the coil are intended to serve as junction point for the field wire and the coil. If the screw terminals were to come in contact with the housing while the valve was energized there would be an electrical short resulting in a breaker / fuse trip. This would interrupt power being supplied to the valve and the valve would shift to the de-energized position.

**Corrective Action** – Dominion Virginia Power – North Anna advised that one of the valves had been installed and one was still in their stock room area. The valve in the stock room was evaluated and confirmed to be missing the barrier. This valve is being returned and will be repaired at ASCO. Dominion Virginia Power – North Anna indicated that the installed valve will be evaluated during an upcoming outage. ASCO has recommended that a repair kit be installed at which time the barrier and wire label can be properly installed.

ASCO determined that the barrier was missing from the valve because it was not listed on the BOM and not supplied with the valve during assembly. Further investigation identified that when the valve components were being selected, the engineer modeled the BOM based on a design that does not use the barrier and label. In order to prevent future occurrences, ASCO has added a secondary verification whenever BOMs for new valves are created in order to verify that the correct parts have been selected.

Figure 1.



Label is affixed to housing assembly

USE FIELD WIRE THAT IS RATED 150°C OR GREATER FOR CONTINUOUS DUTY AND THAT IS QUALIFIED FOR ALL EXPECTED SERVICE CONDITIONS INCLUDING POSTULATED ACCIDENT CONDITIONS

Should you wish to discuss this further or obtain any additional information please let us know. Should any additional information become available we will forward it to you.

Very truly yours,  
ASCO Valve Inc.

*Edward J. Fox*  
Edward J. Fox  
Vice President Quality



# Exhibit A

Nuclear Parts Center  
3315-A Old Forest Road  
P.O. Box 10935  
Lynchburg, VA, 24506-0935  
Telephone (434) 832-2998  
Fax (434) 832-2953

an AREVA and Siemens company

Stocking Distributors of: ASCO Hydramotors® -- ASCO Solenoid Valves -- RGP Seal and Motor Parts -- Filter Cartridges -- Limitorque Actuators, Parts & Motors -- Valan Valves -- Anderson Greenwood Crosby (Yarway) Valves and Parts -- Cutler-Hammer Electrical Products -- Fluid Sealing Products -- EMPATH -- UltraCheck Diagnostic Systems -- Stearns-Roger -- Reliance & Siemens Electric Motors -- Pressurizer Heaters -- Meggitt Containment

April 27, 2009  
09-009 CWM

Ms. Linda S. Anderson  
Dominion Virginia Power -- North Anna  
PO Box 25459  
Richmond, VA. 23260-5459

REF: Dominion Purchase Order: 45598428  
Item 1: Material Number 42124089  
ASCO P/N NPEFKX8300141EG 10688, 125/dc  
Qty. 2 each Serial Numbers F767468-1 & 2  
AREVA SO#58004494

Dear Ms. Anderson:

AREVA NP Inc. has been advised by the manufacturer, Automatic Switch Co., that the above 2 valves may have been provided without installation of an insulating barrier in the solenoid housing. Depending upon the wiring connections with in the solenoid enclosure this condition could result in a short (ground) between a lead wire and the metal enclosure.

AREVA is requesting Dominion/North Anna to verify if the valves are installed or are still in the warehouse. If the valves are not installed we would request they be returned to AREVA/NPC to verify and correct the problem. If the valves are installed we can provide replacement valves or could also provide the insulating barrier for Dominion to install in the field. Please see the attached Installation and Maintenance Sheet V6630R1 that shows the insulating barrier and its location. ASCO has determined this is an isolated incident as the 2 valves provided were the first time this particular part number was configured. The potential condition was found when building additional valves of this part number and it was discovered that the insulating barrier and a warning label for the wire type used to connect were left off of the valve bill of material. This has been corrected.

AREVA and ASCO are continuing to investigate this condition but wanted to get this information to you as soon possible.

AREVA and ASCO are available to answer any further questions regarding this issue and apologize for any inconvenience this causes.

Please call me if you have any questions on this matter at 434-832-2930.

Sincerely,

A handwritten signature in black ink, appearing to read 'Chris Marsh'.

Chris Marsh  
Product Service Engineer  
Nuclear Parts Center



ASCO Valve, Inc.  
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Florham Park, NJ 07932  
USA

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## Exhibit B

Areva NP  
3315-A Old Forest Road  
Lynchburg, VA 24506-0935  
ATTN: Chris Marsh  
May 7, 2009

REF: Notification of Valves missing insulation and a field wiring warning label inside housing.  
SUB: MODEL: NPEFKX8300141EG10688 125/DC

Dear Mr. Marsh,

On 6/4/08 Areva purchase order 1008013035 was entered for two (2) valves model NPEFKX8300141EG10688 125/DC. This was the first time this model was configured for sale. ASCO inadvertently used a bill of material that did not include a solenoid insulator part and a field wire warning label. The insulator part is used for screw terminal coils. Its function is to prevent the field wire terminals from touching bare metal (solenoid housing); if the coil was to rotate in the housing during installation. If properly wired (no exposed or loose wiring), we would not expect a problem. The field wire warning label is to identify the proper temperature rated recommended field wire to use for the coil.

These valves were built and shipped on 9/23/08. Since the bill of materials did not include the two missing parts, ASCO QC did not flag the order for incorrect items when reviewing the order (i.e. parts matched bill of material).

The error was picked up on 4/27/09 on the second order for three (3) valves of the same construction, Areva PO 1008029891. An ASCO valve assembler noticed that the insulator and label were missing from the shop order when he compared the parts to a similar valve that uses the same housing and screw terminal coil. The order was immediately brought to engineering's attention. The bill of material was corrected and the missing insulator and label were added. PO 1008029891 was then shipped on 4/27/09.

ASCO confirms that the shipment of the two valves on PO 1008013035 was an isolated incident since only two orders of this construction were built as noted above; the second being corrected prior to shipment. As an additional corrective action, engineering has added a final approval sign off to the valve structure procedures for new configurations prior to releasing the bill of material onto the shop floor.

If you have any questions, please contact me in at 973 966-5724. Thank you.

Jeffrey Loprete  
Sr. Product Engineer  
Nuclear Products

**ASCO**  
**NUMATICS**