

Part 21 (PAR)

Event # 51972

<b>Rep Org:</b> AMETEK SOLIDSTATE CONTROLS		<b>Notification Date / Time:</b> 06/02/2016 16:30 (EDT)	
<b>Supplier:</b> SIGNAL TRANSFORMER		<b>Event Date / Time:</b> 06/02/2016 (EDT)	
<b>Last Modification:</b> 06/03/2016			
<b>Region:</b> 3	<b>Docket #:</b>		
<b>City:</b> COLUMBUS	<b>Agreement State:</b>	Yes	
<b>County:</b>	<b>License #:</b>		
<b>State:</b> OH			
<b>NRC Notified by:</b> ETHAN SALSURY	<b>Notifications:</b> DAN SCHROEDER	R1DO	
<b>HQ Ops Officer:</b> DONG HWA PARK	DAVID HILLS	R3DO	
<b>Emergency Class:</b> NON EMERGENCY	PART 21/50.55 REACTORS	EMAIL	
<b>10 CFR Section:</b>			
21.21(d)(3)(i) DEFECTS AND NONCOMPLIANCE			

## PART 21 - NOT APPROVED CURRENT TRANSFORMERS INSTALLED IN SAFETY RELATED EQUIPMENT

The following was excerpted from the Ametek Part 21 Report received via email:

"Ametek inverter manufactured with Signal Transformer R-10607, Ametek part number 80-310879-90 was inadvertently installed in several units from an unapproved supplier. The potential for this situation to occur exists for new equipment delivered between July of 2015 and May of 2016. Affected utilities and equipment serial numbers are identified below.

"Dominion Nuclear Connecticut, Millstone  
96000067-0411, 96000067-0511, 96000067-0611, 96000067-0711

"Krsko Nuclear Power Plant  
96000068-0211, 96000068-0311, 96000068-0411

"Exelon, Byron Station  
96000075-0311, 96000075-0411, 96000075-0511, 96000075-0611

"Ametek Solidstate Controls is submitting the following Report of a Potential Defect in accordance with the requirements of 10CFR Part 21.

"To replace the transformers, Ametek Solidstate Controls will work with you to arrange replacements. Please our Client Services group at 1-614-846-7500. <mailto:eric.phillips@ametek.com>"

The potential problems include:

IE19  
NRR

- Mag wire terminated with improper lug and tooling which may cause loss of feedback to static transfer function.
- Spot welded band around the core which has not been adequately seismically evaluated.
- 180 degree Celsius insulation system provided instead of the approved 200 degree Celsius and unapproved materials used which impacts the aging analysis.

\*\*\* UPDATE FROM ETHAN SALSURY TO VINCE KLCO ON 6/3/2016 AT 1103 EDT \*\*\*

Serial numbers for KRSKO and Millstone are corrected as follows:

Dominion Nuclear Connecticut, Millstone

96000068-0211

96000068-0311

96000068-0411

KRSKO Nuclear Power Plant

96000067-0411

96000067-0511

96000067-0611

96000067-0711

Notified the R1DO (Schroeder), R3DO (Hills) and Part 21 Group via email.

\*\*\*\*\*

**From:** [Ethan Salsbury](#)  
**To:** [HOO Hoc](#)  
**Subject:** [External\_Sender] RE: Ametek Solidstate Controls Part 21 Notification  
**Date:** Friday, June 03, 2016 6:39:48 AM  
**Attachments:** [Signal Current Transformer NRC Notification.pdf](#)

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There was a minor grammar error in the last sentence in the initial version I submitted. I have attached the correct version. I apologize for the inconvenience.

Thanks,

**Ethan Salsbury**  
Quality Supervisor  
Office: 614-410-6293  
Mobile: 419-206-1283  
Ametek Solidstate Controls  
& Prestolite Power

From: HOO Hoc <[HOO.Hoc@nrc.gov](mailto:HOO.Hoc@nrc.gov)>  
To: Ethan Salsbury <[Ethan.Salsbury@ametek.com](mailto:Ethan.Salsbury@ametek.com)>,  
Date: 06/02/2016 04:30 PM  
Subject: RE: Ametek Solidstate Controls Part 21 Notification

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We have received your report.

Thank you,

Headquarters Operations Officer  
U.S. Nuclear Regulatory Commission  
Phone: 301-816-5100  
Fax: 301-816-5151  
email: [hoo.hoc@nrc.gov](mailto:hoo.hoc@nrc.gov)  
secure e-mail: [hoo1@nrc.sgov.gov](mailto:hoo1@nrc.sgov.gov)



**From:** Ethan Salsbury [<mailto:Ethan.Salsbury@ametek.com>]  
**Sent:** Thursday, June 02, 2016 4:30 PM  
**To:** HOO Hoc <[HOO.Hoc@nrc.gov](mailto:HOO.Hoc@nrc.gov)>  
**Subject:** [External\_Sender] Ametek Solidstate Controls Part 21 Notification

Please see the attached concerning a current transformer used in the manufacturing of Ametek Inverters. Feel free to contact me at my office or on my cell phone should you have any questions.

Thanks,

***Ethan Salisbury***

Quality Supervisor

Office: 614-410-6293

Mobile: 419-206-1283

Ametek Solidstate Controls  
& Prestolite Power



**SOLIDSTATE CONTROLS**

**Quality Assurance**

875 Dearborn Drive, Columbus, OH 43085 U.S.A.  
Telephone: 614-846-7500, 1-800-635-7300  
E-mail: ethan.salsbury@ametek.com

June 2, 2016

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

Attention: Document Control Desk  
Subject: Notification of Potential Defect - 10CFR Part 21

Product: Ametek inverter manufactured with Signal Transformer R-10607, Ametek part number 80-310879-90 was inadvertently installed in several units from an unapproved supplier. The potential for this situation to occur exists for new equipment delivered between July of 2015 and May of 2016. Affected utilities and equipment serial numbers are identified below.

**Dominion Nuclear Connecticut, Millstone**

96000067-0411  
96000067-0511  
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96000067-0711

**Krško Nuclear Power Plant**

96000068-0211  
96000068-0311  
96000068-0411

**Exelon, Byron Station**

96000075-0311  
96000075-0411  
96000075-0511  
96000075-0611

Ametek Solidstate Controls is submitting the following Report of a Potential Defect in accordance with the requirements of 10CFR Part 21. Please contact me if you require any further information.

Sincerely,

Ethan Salsbury  
Quality Supervisor  
Ametek Solidstate Controls



**COMPONENT DESCRIPTION:**

10V, 60 Hz Current transformer manufactured by Signal Transformer with Manufacturer Part Number R-10607 and Ametek Part Number 80-310879-90, rev. A.

**PROBLEM YOU COULD SEE:**

Current Transformers manufactured by Signal Transformer, which is not approved as an Ametek nuclear supplier, was installed in safety-related equipment. This was realized after quality issues surfaced with the transformer in question. After further evaluation, the discrepancies below were discovered. Affected transformers can be readily identified by a white label that states "Signal Transformer" with a manufacturer's part number of R-10607.

- Mag wire terminated with improper lug and tooling which may cause loss of feedback to static transfer function
- Spot welded band around the core which has not been adequately seismically evaluated
- 180 °C insulation system provided instead of the approved 200 °C system and unapproved materials used which impacts the aging analysis

**CAUSE:**

The part was manufactured in-house to approved materials and methods prior to outsourcing in July of 2015 to a commercial transformer manufacturer.

**EFFECT ON SYSTEM PERFORMANCE:**

Loss of static switch transfer function on output overload/fault conditions. Unit will attempt to retain load and may default to current limited output with reduced voltage if overload is excessive.

**ACTION REQUIRED:**

Ametek Solidstate Controls will replace all current transformers manufactured by Signal Transformer with transformers manufactured by Ametek Solidstate Controls.

**AMETEK SOLIDSTATE CONTROLS CORRECTIVE ACTION:**

To replace the transformers, Ametek Solidstate Controls will work with you to arrange replacements. Please contact our Client Services group at 1-614-846-7500.

<mailto:eric.phillips@ametek.com>

**From:** [Ethan Salsbury](#)  
**To:** [HOO Hoc](#)  
**Subject:** [External\_Sender] RE: Ametek Solidstate Controls Part 21 Notification  
**Date:** Friday, June 03, 2016 11:02:56 AM  
**Attachments:** [Signal Current Transformer NRC Notification .pdf](#)

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I received a call from Millstone regarding a discrepancy in the serial numbers listed. The serial numbers for KRSKO and Millstone were switched. I have corrected the issue and attached the revised copy. Again, I apologize for the inconvenience. Please call me on my cell phone or email me if you have any questions.

Thanks,

**Ethan Salsbury**  
Quality Supervisor  
Office: 614-410-6293  
Mobile: 419-206-1283  
Ametek Solidstate Controls  
& Prestolite Power

**From:** HOO Hoc <[HOO.Hoc@nrc.gov](mailto:HOO.Hoc@nrc.gov)>  
**To:** Ethan Salsbury <[Ethan.Salsbury@ametek.com](mailto:Ethan.Salsbury@ametek.com)>,  
**Date:** 06/02/2016 04:30 PM  
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**Sent:** Thursday, June 02, 2016 4:30 PM  
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Ethan Salsbury  
Quality Supervisor  
Ametek Solidstate Controls



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