Part 21 (PAR) Event # 51972

Rep Org: AMETEK SOLIDSTATE CONTROLS

Supplier: SIGNAL TRANSFORMER

Notification Date / Time: 06/02/2016 16:30 (EDT)

Event Date / Time: 06/02/2016 (EDT)

Last Modification: 06/02/2016

Region: 3 Docket #:

City: COLUMBUS Agreement State: Yes

County: License #:

State: OH

NRC Notified by: ETHAN SALSBURYNotifications:DAN SCHROEDERR1DOHQ Ops Officer: DONG HWA PARKDAVID HILLSR3DOEmergency Class: NON EMERGENCYPART 21/50.55 REACTORSEMAIL

10 CFR Section:

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 Ammeter Part 21 Report:

"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, 96000075-0511, 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.







#### **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

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#### Krško Nuclear Power Plant

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# **Exelon, Byron Station**

96000075-0311

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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