

General Information or Other (PAR)

Event # 42551

<b>Rep Org:</b> AMETEK SOLIDSTATE CONTROLS	<b>Notification Date / Time:</b> 05/04/2006 13:23 (EDT)
<b>Supplier:</b> AMETEK SOLIDSTATE CONTROLS	<b>Event Date / Time:</b> 05/04/2006 (EDT)
	<b>Last Modification:</b> 05/04/2006
<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> ROBERT GEORGE	<b>Notifications:</b> RONALD BELLAMY R1
<b>HQ Ops Officer:</b> STEVE SANDIN	JOEL MUNDAY R2
<b>Emergency Class:</b> NON EMERGENCY	RICHARD SKOKOWSKI R3
<b>10 CFR Section:</b>	RUSSELL BYWATER R4
21.21 UNSPECIFIED PARAGRAPH	OMID TABATABAI NRR

## PART 21 NOTIFICATION INVOLVING POTENTIAL DEFECT IN AEROVOX CAPACITOR

The following information was provided via email:

## "COMPONENT DESCRIPTION:

"13uF X 1000V AC capacitors, SCI P/N 07-020139-00, Aerovox P/N H94S1013A0BA, manufactured between January 2004 and December 2004.

"Capacitors can be either installed in Ametek Solidstate Controls UPS equipment or provided as a spare part. The components are schematically identified as C805, C815, or C705.

## "PROBLEM YOU COULD SEE:

"The capacitor failures due to this defect will occur early in the operating life of the device. There are no warning signs that a failure is imminent, or detection method for predicting an approaching failure.

## "CAUSE:

"The investigation has revealed that the capacitor failures (date codes 0408 and 0436) were due to manufacturing defects. A failure analysis by Aerovox revealed that a foil tab connecting the capacitor winding to the internal terminal became pinched between the lid and the can during the seaming operation. Within the first year of operation, the insulation covering the connecting tab was cut through. This resulted in terminal to case short.

## "EFFECT ON SYSTEM PERFORMANCE:

IE19

General Information or Other (PAR)

Event # 42551

"The failures described above, could result in loss of output voltage and transfer of the static switch to the bypass source. The resulting failure could result in a potential damage to the load.

"ACTION REQUIRED:

"The observed failure rate of this component is very low at 0.06% (2 out of 3336 units manufactured between 1/1/04 and 12/31/04.) Aerovox has implemented corrective actions to preclude further failures.

"Based upon the Aerovox evaluation, Ametek Solidstate Controls believes if a defect was present in a capacitor, the likelihood of a failure should occur early in the operating life. We feel the failure rate has been extremely low and the risk is minimal. Each operating facility will need to evaluate the potential risk to their operation.

"AMETEK SOLIDSTATE CONTROLS CORRECTIVE ACTION:

"If you wish to replace the capacitors Ametek Solidstate Controls will work with you to arrange replacements. Please contact Mrs. Jean Falor of our Client Services group at 1-800-222-9079 or 1-614-846-7500 ext. 6230. jean.falor@ametek.com."

Rudimentary listing of stations that received this component installed in equipment or as a spare part:

- Installed in equipment: Oconee, McGuire, Watts Bar, Browns Ferry, STP, Beaver Valley, San Onofre, Nine Mile Point and TMI.
- Spare part: St. Lucie, Palo Verde, Surry, Turkey Point, Diablo Canyon, Harris, Crystal River, Robinson and Comanche Peak.
- International: Korea Hydro, Nuklearna Elec Vrbina, China Nuclear, Laguna Verde and Electrobras.

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**AMETEK**

**SOLIDSTATE CONTROLS**

**Quality Assurance**

875 Dearborn Drive, Columbus, OH 43085 U.S.A.  
Telephone: 614-846-7500 1-800-635-7300 Fax: 614-885-3990  
E-mail: bob.george@ametek.com

Robert E. George  
*Director of Quality*

May 4, 2006

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

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

Subject: 13uF, 1000V AC capacitors, SCI P/N 07-020139-00, Aerovox P/N H94S1013A0BA

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,

Robert E. George  
Director of Quality  
Ametek Solidstate Controls





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13uF X 1000V AC capacitors, SCI P/N 07-020139-00, Aerovox P/N H94S1013A0BA, manufactured between January 2004 and December 2004.

Capacitors can be either installed in Ametek Solidstate Controls UPS equipment or provided as a spare part. The components are schematically identified as C805, C815, or C705.

**PROBLEM YOU COULD SEE:**

The capacitor failures due to this defect will occur early in the operating life of the device. There are no warning signs that a failure is imminent, or detection method for predicting an approaching failure.

**CAUSE:**

The investigation has revealed that the capacitor failures (date codes 0408 and 0436) were due to manufacturing defects. A failure analysis by Aerovox revealed that a foil tab connecting the capacitor winding to the internal terminal became pinched between the lid and the can during the seaming operation. Within the first year of operation, the insulation covering the connecting tab was cut through. This resulted in terminal to case short.

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The failures described above, could result in loss of output voltage and transfer of the static switch to the bypass source. The resulting failure could result in a potential damage to the load.

**ACTION REQUIRED:**

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Equipment = 9

Oconee  
McGuire  
Watts Bar  
Browns Ferry  
STP  
Beaver Valley  
San Onofre  
Nine Mile Point  
TMI

Parts = 9

St. Lucie  
Palo Verde  
Surry  
Turkey Point  
Diablo Canyon  
Harris  
Crystal River  
Robinson  
Comanche Peak

International = 5

Korea Hydro  
Nuklearna Elec Vrbina  
China Nuclear  
Laguna Verde  
Electrobras