

**From:** [Zachary Rumora](#)  
**To:** [Hoc, HOO X](#)  
**Cc:** [Ethan Salsbury](#)  
**Subject:** [External\_Sender] AMETEK Solidstate Controls Interim Part 21 Notification  
**Date:** Friday, February 9, 2024 4:12:47 PM  
**Attachments:** [Final Interim 10CFR Part 21 Notification 2.9.24.pdf](#)

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Hello,

AMETEK Solidstate Controls is submitting the attached interim report/notification of a potential defect in compliance with 10CFR21. Please confirm receipt and feel free to contact me with any additional questions.

Best,

**Zach Rumora**  
*Quality and EHS Manager*



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**SOLIDSTATE CONTROLS**

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February 9, 2024

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: Oil Filled Capacitors in Aluminum Case Part Number 07-020139-10

AMETEK Solidstate Controls Inc. is submitting the following Interim Report of a Potential Defect discovered on December 13<sup>th</sup>, 2023, in accordance with the requirements of 10CFR Part 21.

Please contact me if you require any further information.

Sincerely,

Zach Rumora  
Quality Manager  
Ametek Solidstate Controls

**COMPONENT DESCRIPTION:**

This component (07-020139-10) is a 13 $\mu$ F AC oil filled capacitor rated for use at 1000V, 50/60Hz, and 90°C case temperature (50°C environmental temperature).

**PROBLEM YOU COULD SEE:**

During operation inside of a piece of equipment (e.g. an inverter) oil may be visible on, around, or dripping from the capacitor or its mounting bracket or tray. If present, the effect of this failure mode will depend on the extent of the leaking experienced. Given sufficient time, enough oil will leak from the capacitor that it will short internally and fail open. "Sufficient time" may be greater than the recommended 10-year preventative maintenance cycle for this part number or it may be less.

**EFFECT ON SYSTEM PERFORMANCE:**

These capacitors are typically used in parallel as part of a larger capacitor bank in most equipment. The failure mode that may present in the equipment as a result of one or more capacitors failing is a decrease in output voltage that is directly related to the number of capacitors in the bank that fail. In all cases, the result of any single capacitor failure would be a less than 3 volt decrease in output voltage.

**CAUSE:**

Ametek Solidstate Controls and the manufacturer of the capacitor are working closely together on assessing all potential causes of failure as part of the evaluation, but at this time a definitive cause is not known.

**ACTION REQUIRED:**

At this time, it is recommended that clients visually inspect any equipment containing the capacitor part number stated above for evidence of an oil leak. In lieu of a visual inspection, a review of the output voltage for the parent equipment for any anomalous activity (i.e. a consistent decrease in voltage of 0-3V) may serve as an indication of capacitor health. If during a visual inspection any oil is identified, please notify your AMETEK Solidstate Controls representative or the contact listed in the header of this report. Any reports of failure will be handled on a case-by-case basis.

**AMETEK SOLIDSTATE CONTROLS CORRECTIVE ACTION:**

At this time, it is estimated that corrective actions will be established by May 2024. This will allow for greater evidence collection, feedback from licensees, and further internal testing and investigation internally and with the capacitor manufacturer.