

From: [Ethan Salisbury](#)
To: [Hoc, HOO X](#)
Cc: [Mark Shreve](#)
Subject: [External_Sender] Ametek Solidstate Controls Part 21 Notification
Date: Monday, October 30, 2017 12:36:11 PM
Attachments: [image002.png](#)
[image003.png](#)
[image005.png](#)
[10CFR 21 Notification - NRC .pdf](#)

Hello,

Ametek Solidstate Controls is submitting the attached report as notification of a potential defect in compliance with 10CFR21. A copy will also be provided to the affected licensees – Ameren, TVA, Southern Nuclear, Duke, and Krsko. Please confirm receipt and feel free to contact me with any additional questions.

Thanks,

Ethan Salisbury
Quality Manager

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October 30, 2017

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: Eaton Auxiliary Switch Installed EG Frame Molded Case Circuit Breakers

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 Manager
Ametek Solidstate Controls





COMPONENT DESCRIPTION:

Eaton auxiliary switches, catalog number AUX2A2BPK installed in EG Frame Molded Case Circuit Breakers (30A – 125A).

PROBLEM YOU COULD SEE:

Eaton auxiliary switches manufactured after May 2015 and installed in EG Frame Breakers (30A – 125A) could experience intermittent operation of the auxiliary switch due to a design defect of the auxiliary switch. The design defect of the auxiliary switch can result in the auxiliary switch to fail to change state during breaker operation.

CAUSE:

Ametek Solidstate Controls identified intermittent auxiliary switch operation during testing. Eaton confirmed a problem with the auxiliary switches used in EG Frame Breakers manufactured since May of 2015. The auxiliary switch in the EG frame breakers may not operate reliably, resulting in the auxiliary switch returning to, or staying in, its shelf state. The auxiliary switch is being redesigned to improve the mechanical interface reliability between the breaker mechanism and the auxiliary switch.

EFFECT ON SYSTEM PERFORMANCE:

The breaker overcurrent protection and shunt trip function are not affected by this defect. If the auxiliary switch defect occurs in the DC Input breaker (B1) while the system is operating, the static switch will transfer the load to Bypass (alternate Source) and the Inverter will shut down. If the defect occurs during startup, the Inverter will not start. If the auxiliary switch defect is present in any other breaker, it will result in a failure to annunciate a breaker closed indicator. A list of affected equipment with the breaker locations is provided below.

ACTION REQUIRED:

Replacement auxiliary switches from Eaton are expected to be available sometime in the second quarter of 2018. An immediate solution is not available. For circuit breakers in the B1 position, Ametek Solidstate Controls recommends replacing the auxiliary switch as soon as a redesigned auxiliary switch is available.

For all other breakers, the state of the breaker should be verified prior to performing any maintenance until the auxiliary switch can be replaced. In this situation, the auxiliary switch should be replaced at the earliest convenience.

AMETEK SOLIDSTATE CONTROLS CORRECTIVE ACTION:

If you wish to replace the auxiliary switches, Ametek Solidstate Controls will work with you to arrange replacements. Please contact Mr. Mark Shreve of our Client Services group at 1-800-222-9079 or 1-614-846-7500 ext. 6332. mark.shreve@ametek.com



AMETEK

| Eaton EG Frame Part Number | Ametek Part Number | Serial Number | Equipment Part No. | Customer | Breaker Location | Total |
|----------------------------|--------------------|---|--------------------|------------------|------------------|-------|
| EGH3125FFGA2 | 80-903636-90 | 96000109-0111, 0211, 0311, 0411, 0511, 0611, 0711 | 85-VC0075-39,40 | *Ameren | B1 | 7 |
| EGK3125KSGA2 | 80-903635-90 | | | | B2 | 7 |
| EGS3080FFGA2 | 80-903633-90 | | | | B4 | 7 |
| EGS3030FFGA2 | 80-903634-90 | | | | B701 | 7 |
| EGS3040FFGA1S81112 | 80-903578-90 | 96000104-0112, 0212, 0312, 0412 | 85-CC0500-77 | *Curtiss Wright | B301 | 4 |
| EGS3080FFGA11112 | 80-903579-90 | | | | B302 | 4 |
| EGEDC3070FFWA1 | 80-903214-90 | 94000959-0111 | 85-VC0075-36 | Duke | B1 | 1 |
| EGS3035FFGS8 | 80-903356-90 | | | | B301 | 1 |
| EGS3040FFGA1S5 | 80-903176-90 | 96000083-0112, 0212, 0312, 0412, 0512, 0612, 0712, 0812 | 85-CC1000-64 | Southern Nuclear | B300 | 8 |
| EGH3125FFGA1S5 | 80-903222-90 | 96000066-0112, 0212, 0312, 0412, 0512, 0612 | 85-CC4000-102 | Southern Nuclear | B301 | 6 |
| EGS3050FFGB21112 | 80-903336-90 | N/A | Spare Parts | Southern Nuclear | N/A | 1 |
| EGH3125FFGA1 | 80-903236-90 | 96000067-0111, 0211, 0311, 0411, 0511, 0611, 0711 | 55-VC0075-06 | *Krsko | B1 | 7 |
| EGS3050FFGB2 | 80-903336-90 | 94001049-0111, 0211 | 85-VC0100-49 | Southern Nuclear | B301 | 2 |
| EGH3125FFGA2S5 | 80-903337-90 | 96000078-0112, 0212, 0312 | 85-CC200-123 | TVA | B301 | 3 |

* Seismic test performed and passed without failure