



August 5, 2022

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

Subject: Interim Potential Part 21 on Siemens Medium Voltage Circuit Breakers with 3AF  
Operators sold to Wolf Creek Nuclear Generating Station.

Dear Sirs,

Pursuant to the requirements of 10 CFR Part 21, this letter is hereby provided as notification to the NRC of a potential Part 21 condition.

NTS received a notification from Wolf Creek Nuclear Generating Station on June 8<sup>th</sup> 2022 that a Siemens 5-3AF-GER-350-1200-78 Medium Voltage Circuit Breaker had a failure of its closing spring mounting plate.

Per Wolf Creek contact "Failure of a Siemens vacuum breaker's closing spring mounting plate occurred while electrical maintenance personnel were closing the breaker... The breaker was successfully closed; however, a piece of the closing spring's mounting plate was sheared off during the evolution. Initial investigation also determined the weld associated with the mounting bracket that secures the spring mounting plate was degraded. It appears the closing spring's mounting plate may have been impacting the back of the breaker enclosure during breaker operations..."

This specific breaker is non-safety related and installed in a training cubicle. However, it was delivered in a lot containing an additional fourteen safety-related breakers. Even though the failed breaker is non-safety related, NTS has made the decision to be conservative and proceed with this notification.

Upon consultation with the manufacturer (Siemens) and Wolf Creek Nuclear Generating Station, it was decided to return the breaker to Siemens for evaluation. As of the issuance of this letter, Siemens has not received the failed breaker. This letter is being issued since the evaluation will not be completed within the 60 day period following Wolf Creek notifying NTS.

Siemens has performed multiple 10,000 cycle endurance tests on 3AF mechanisms. Therefore, it is not believed to be a "class" problem at this time. We are limiting this notification to the specific breaker lot provided per Wyle TPQ Test Report 43404R00-2, dated 6/29/2000 and Wolf Creek purchase order 0705394/4 (Rev. 4).

Wolf Creek conducted extent of condition inspections for installed, safety-related breakers. No other breakers exhibited the same level of degradation. Additional guidance may be issued once Siemens' evaluation is complete.

Thank you and if you have any questions, please contact NTS' Senior Director of Nuclear Engineering and Test Services, Gary Dennis at (256) 716-4212 or email at [gary.dennis@ntslabs.com](mailto:gary.dennis@ntslabs.com).

Sincerely,  
Megan Toomey

Sr. Contracts Manager