

June 2, 2021  
NRC:21:023

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11555 Rockville Pike  
Rockville, MD 20852

## 10 CFR Part 21 Notification of Existence of a Defect

This letter provides notification of a reportable defect in accordance with 10 CFR Part 21. This defect was reported to the NRC Operations Center at 4:36 p.m. EDT on May 28, 2021.

The defect concerns vacuum breakers that were observed to exhibit sporadic failure to close upon both electrical and mechanical closure signal.

Details and actions taken to address the defect are provided in the attachment to this letter.

If you have any questions related to this information, please contact Ms. Gayle Elliott, Deputy Director, Licensing and Regulatory Affairs by telephone at (434) 832-3347, or by e-mail at [Gayle.Elliott@framatome.com](mailto:Gayle.Elliott@framatome.com).

Sincerely,



Gary Peters, Director  
Licensing & Regulatory Affairs  
Framatome Inc.

cc: N. Otto  
Project 728

Attachment:

1. Notification of 10 CFR 21 Defect

IE19  
NRR

Attachment 1

Notice of 10 CFR 21 Defect

**Subject:**

Notification of 10 CFR 21 Defect

**Name and Address of Individual Informing the Commission:**

Gayle Elliott  
Deputy Director, Licensing & Regulatory Affairs  
Framatome Inc.  
3315 Old Forest Road  
Lynchburg, Va. 24501

**Title:**

Breakers Failure to Close

**Identification of Basic Activity:**

Siemens 5kV 1200A Vacuum Breakers - 5-DPU-350-1200-78

**Basic Activity Supplied By:**

Framatome Inc.

**Nature of Defect:**

During dedication testing/inspection of the second Framatome batch of 5-DPU-350-1200-78 MV vacuum breakers, they were observed to exhibit sporadic failure to close upon closure signal: both electrical and mechanical closure signal. An 8D was opened in our Corrective Action Program and troubleshooting and testing was completed at the Siemens manufacturing facility. 8D and troubleshooting with a high speed camera determined the close latch does not have sufficient torsional force to consistently maintain the breaker close latch in the closed position during the closing cycle. As a result, in some sporadic instances the breaker will receive a close signal and the close latch will not maintain the breaker in a closed position and the breaker will fail to close. It has been observed in testing that this condition is sporadic and that subsequent attempts to close the breaker will result in a closed breaker. The identified issue has no impact on the ability for the breakers to open. Likewise, the identified issue has no impact on the breakers staying closed once they have successfully closed.

**Defect Determination Date:**

This issue was determined to be a 10 CFR 21 Defect on May 28, 2021.

**Number and Location of Basic Components:**

The extent of condition determined that the applicability of the reportable defect is similar to design on the 22 breakers delivered and 19 installed in St. Lucie Unit 1, Cycle 30.

**Corrective Actions to Date:**

Preliminary evaluation determined a modification of the breakers is required to increase the torsion spring force acting on the close latch. Framatome is working with Siemens to develop a long-term solution to increase the torsional spring force acting on the close latch. Repair spring and repair time will be determined after the design is complete. Additionally, we have developed an interim solution utilizing a revised spring retaining bracket that could be deployed near-term.

St. Lucie was notified of this 10CFR21 reportable defect on May 28, 2021 by Framatome Inc. via telephone and email.

**Advice related to the Defect:**

Framatome provided a letter, Letter# F.504896-C-02-0117 to the customer, St. Lucie, on May 28, 2021 to advise of this issue. Framatome is responding to technical questions from St. Lucie as requested.