



6/29/2024

To: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555  
Fax Number (301)816-5151

**10CFR Part 21 Interim Notification: P21-04162024-INT Update #3**

**Subject: Update #3 to Interim Report Regarding a Potential Defect with Schneider Electric Medium Voltage VR Type Circuit Breaker Part Number V5D4133Y000.**

Pursuant to 10CFR 21.21 (a)(2), Paragon Energy Solutions, LLC is providing this updated interim notification of ongoing analysis for Part 21 reportability of a potential defect with the subject circuit breaker part number V5D4133Y000.

**Potential Affected Plants:**

Plant	Customer PO#	Line #	CatID/Item #	QTY
Duke-Oconee	156762	001	881325	8

Note: Paragon is currently evaluating the extent of condition as it pertains to other plants and equipment that may utilize the same or similar operating mechanisms within their circuit breakers. Other circuit breaker types that may be affected are:

- 5GSB2-250-1200 (uses KVR type element)
- 5GSB2-350-1200 (uses KVR type element)
- 5GSB3-350-1200 (uses KVR type element)
- 5GSB3-350-2000 (uses KVR type element)

**Condition being evaluated:**

On February 15th, 2024, Paragon completed initial documentation of a potential defect with the subject circuit breaker in which Duke-Oconee had identified failure to close on demand or delayed operation to close with extended application of the remote closing signal. Since the primary safety function of the circuit breaker is to close and maintain continuity of power to downstream loads, failure to close could potentially contribute to a substantial safety hazard.

This is the first reported instance of this failure mode, and Paragon suspected the issue to be related to aging of the circuit breaker's lubrication. Paragon performed investigative testing. During this process, the operating mechanism of the circuit breaker was cleaned and relubricated. Upon completion of re-lubrication, the circuit breaker was tested to verify proper operation. The circuit breaker operated per design upon completion of these activities. Paragon then incorporated a 2-week rest period (no breaker cycling). During the first close operation after the rest period, it was observed the circuit breaker again was exhibiting a delayed closure.

Paragon has been working closely with OEM (Schneider Electric) to conduct the failure analysis. After extensive inspection and testing by Schneider Electric, the condition has not been able to be recreated following cleaning and relubrication activities, nor has any non-conformances with breaker parts and materials been identified that would cause delayed closing of the breaker mechanism. Paragon needs additional time to confer with the OEM and

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evaluate their failure analysis received on 6/27/2024 to fully confirm no defect exists which could cause the condition reported by Duke.

Date when evaluation is expected to be complete: 7/28/2024.

Paragon recommends Licensees with the breaker types listed above monitor for failure to close on demand or delayed closure after application of the closure demand signal. It is requested any observation of improper operation be reported to Paragon for evaluation.

Any questions or concerns may be directed to the contact information below.

Regards,

A handwritten signature in black ink, appearing to read 'Richard Knott', written over a horizontal line.

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