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**Subject: Notification of the Potential Existence of Defects Pursuant to 10CFR21**

The following information is provided pursuant to the requirements to 10 CFR 21 to report the potential for the existence of a **SUBSTANTIAL SAFETY HAZARD**. This issue concerns failure of Cutler-Hammer medium voltage circuit breakers to charge. Westinghouse supplied these breakers for safety-related applications at Energy Northwest, Columbia Generating Station.

**Background**

DHP-VR350, 1200A circuit breakers were manufactured by Cutler-Hammer Inc., commercially dedicated for Class 1E applications by Westinghouse and shipped to the Columbia Generating Station. During installation acceptance testing, one breaker charging motor failed to charge. Columbia Generating personal performed a 100% inspection on all 16 breakers with safety-related functions. There was a loose screw associated with this position switch found in seven of these breakers.

**Evaluation**

It is Westinghouse understanding that the direct cause of the failure is the result of a screw on the position switch terminal that had become completely dislodged and the wire was disconnected. This screw is typically removed and reinstalled during "High Pot" testing by Cutler-Hammer in Greensboro. After "High Pot" testing, the breakers were commercially dedicated by Westinghouse RRAS in Greensboro. The dedication process did not include checking the tightness of all screws.

During installation testing, the breaker failed to close and latch on demand. Had the breaker been closed when the wire came loose, the breaker would have opened but would not have closed again. Failure of the circuit breaker to close could be detected by observation of the breaker or monitoring lights.

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**Safety Impact**

Since seven of sixteen breakers had loose screws on the position switch, this condition could result in a common mode failure for redundant breakers in safety applications. If the breaker was closed and then the wire became loose, the breaker would open but would be unable to automatically close again. In the case of Columbia Generating Station, if redundant breakers failed to close, the safety function of the RHR pump circuit breakers to provide "change of state" which is both open and close to provide for RHR system flow as well as low pressure injection, the plant could be in a condition outside the design basis.

**Corrective Action**

Upon discovery of the loose wire, Columbia Generating Station took corrective actions to inspect and retighten all screws on these safety-related breakers prior to placing them in service.

**Plant Applicability**

This notification is applicable to Columbia Generating Station. Since this condition is a result of testing by the manufacturer, any plant using the DHP-VR350 circuit breakers for safety-related applications should verify the tightness of the position switch screws.

**Communications**

Cutler-Hammer and Columbia Generating Station have been notified of the issue. Westinghouse will be issuing a Nuclear Safety Advisory Letter (NSAL) to all PWR and BWR plants informing them of this issue so they can determine applicability to their plant.

Very truly yours,



H. A. Sepp, Manager  
Regulatory and Licensing Engineering

cc: B. Benney