

Commonwealth Edison Company
Braidwood Generating Station
Route #1, Box 84
Braceville, IL 60407-9619
Tel 815-458-2801



November 19, 1996

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Westinghouse Model DS 206 480V Circuit Breaker Action Plan
Braidwood Nuclear Power Station Units 1 and 2
NRC Docket Numbers 50-456 and 50-457

Reference: Conference Call Held on November 12, 1996, between Nuclear
Regulatory Commission Staff and ComEd Personnel

ComEd's Braidwood Nuclear Power Station has experienced the failure of two safety related Westinghouse Model DS 480 Volt Circuit Breakers since September 24, 1996. This letter documents the actions to be taken by the Station in response to these recent failures. In both cases, ComEd has determined the most probable cause of the breaker failures is the result of degraded lubrication. This degradation contributes to direct failures by increasing the friction on the armature of the spring release device (SRD), increasing the friction on the pivot of the close latch or increasing the friction in the stop roller. Indirect failures are a result of degraded SRD coils or motor cutout switches caused by increased operating times.

ComEd has determined that there are twenty-two Westinghouse Model DS 480 Volt Circuit Breakers that may be required to close during accident conditions. The Station tested these breakers to determine closing times. All of the breakers closed as required and the four breakers with the slowest times were identified for additional testing.

Discussions regarding the breaker failures and subsequent testing have been held between ComEd and the United States Nuclear Regulatory Commission (NRC) Staff. During the most recent call (Reference 1), ComEd was asked to provide details on the short-term and long-term corrective actions to be taken to ensure the continued satisfactory performance of the Westinghouse Model DS 480 Volt Circuit Breakers at Braidwood.

The following action is scheduled to be completed by November 27, 1996: Additional lubricant will be applied to all of the twenty-two critical breakers at the following three points: the SRD armature, the stop roller bearing, and the surface of the stop roller. The vendor manual references lubrication of the SRD armature; however, not the other two points. Lubrication of those points has been discussed and agreed upon with the vendor, as

260054

9611260180 961119
PDR ADOCK 05000456
P PDR

A Unicom Company

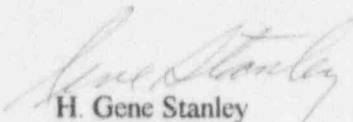
A0001/0

documented in vendor correspondence. During the lubrication process, test data will be taken. Reduced voltage tests will be performed prior to lubrication to determine "as found" data, and after lubrication before the breaker is re-installed. These tests will be performed at 95 volts or the calculated design voltage expected during accident conditions, whichever is less. If a breaker fails to close at the tested voltage, the breaker will be re-tested at the calculated design voltage. Any breaker that fails the degraded voltage test will be repaired and retested prior to re-installation. If a repair is not possible, a spare breaker will be installed.

Long-term, Braidwood has begun a program to refurbish breakers and evaluate maintenance practices on the breakers. As part of this effort, a "pilot" program with Westinghouse has been set up to perform a detailed analysis and refurbishment of 5 Type DS 480 Volt and 5 Type DHP 4.16 KV breakers. This program is currently scheduled to be completed by November 27, 1996. Information from the analysis will be used to evaluate the maintenance program. At the completion of this pilot program, Westinghouse will remain on site to begin refurbishment of the remaining breakers. At that time, an additional 7 Type DS and 7 Type DHP breakers are scheduled to be completed by the end of 1996.

If your staff has any questions or comments concerning this letter, please refer them to Terrence Simpkin, Braidwood Regulatory Assurance Supervisor, at (815) 458-2801, extension 2980.

Sincerely,



H. Gene Stanley
Site Vice President
Braidwood Station

HGS/fb

cc: A.B. Beach, NRC Regional Administrator, Region III
R.R. Assa, Project Manager, NRR
C.J. Phillips, Senior Resident Inspector
F. Niziolek, Division of Engineering, Office of Nuclear Safety, IDNS