



**Commonwealth Edison**  
One First National Plaza, Chicago, Illinois  
Address Reply to: Post Office Box 767  
Chicago, Illinois 60690

October 17, 1984

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Subject: Dresden Station Units 2 and 3  
Quad Cities Station Units 1 and 2  
Safety Parameter Display System (SPDS)  
Response to Request for Additional  
Information  
NRC Docket Nos. 50-237/249 and 50-254/265

References (a): D. M. Crutchfield letter to D. L. Farrar  
dated June 22, 1984.

(b): J. G. Marshall letter to H. R. Denton  
dated August 30, 1984.

Dear Mr. Denton:

The following is provided in response to reference (a), for section 3.4 of that letter and applies only to Dresden and Quad Cities Stations.

Response to Section 3.4, "Electrical and Electronic Isolation"

1. The SPDS at Dresden and Quad Cities is a software package incorporated into the process computer, a non-safety related system, utilizing computer inputs for data. The computer has been suitably isolated from safety-related process inputs by the use of Acromag, Inc. Series 700 isolation systems.
- 2a, b,c Our design for using this type of isolator is based on the premise that the worst case fault would be where a computer failure occurs in such a way that the maximum power supply output is applied across the output terminals of the isolator. Commonwealth Edison is tabulating these "credible faults" for each application.

Acromag, Inc. has indicated that 1000 Vac dielectric strength tests have been performed on the isolation paths of their 700 Series isolator devices. Acromag has also indicated that the isolator devices tested are standard models manufactured to the same criteria as those devices which were not specifically tested. Therefore, the dielectric strength tests are generic and applicable to the isolator devices in use at Dresden and Quad Cities.

Our evaluation of the "credible faults" identified above will determine if any additional testing is required.

8410230062 841017  
PDR ADOCK 05000237  
P PDR

Acc 1  
/o

- 2d. Acceptance criteria for this application is the maintenance of the electrical isolation function even if the isolator is no longer functional.
- 2e. The Acromag, Inc. 700 Series isolator devices have passed a seismic qualification test documented in the Southwest Research Institute Seismic Test Report dated December 13, 1976. Since the isolators are located in a non-harsh environment, no additional environmental qualification is required.
- 2f. The effects of external interference have been addressed by the use of shielded cables, grounding, conduit, and enclosing the entire isolator card cage in a sheet metal enclosure.

To minimize internally generated interference, the transmitter/ isolator modules are designed with a common mode noise rejection of 130 db at 60 Hz with 100 ohm unbalance.

Should you have any further questions or concerns related to this response, please contact this office.

One signed original and forty (40) copies of this letter are provided for your use.

Very truly yours,



B. Rybak

Nuclear Licensing Administrator

lm

cc: R. Bevan - NRR  
R. Gilbert - NRR  
NRC Resident Inspector - Dresden  
NRC Resident Inspector - Quad Cities