



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

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October 4, 1985

Mr. James Keppler
 Regional Administrator
 U.S. Nuclear Regulatory Commission
 799 Roosevelt Road
 Glen Ellyn, IL. 60137

Subject: Byron Station Units 1 and 2
 Braidwood Station Units 1 and 2
 10 CFR 50.55(e) Report Nos. 85-04(BY) 85-07(BW)
 Diesel Generator Faulty Tachometer Readings

Dear Mr. Keppler:

On September 5, 1985, Commonwealth Edison Company notified Mr. Robert Lerch of your office of a deficiency reportable pursuant to 10 CR 50.55(e) regarding faulty tachometer readings on emergency diesel generators. This letter provides information to fulfill the thirty-day reporting requirement and is considered a final report.

Description of Deficiency

The speed sensing tachometers associated with the subject diesels have, at times, indicated an rpm reading while the engines were in a standby mode. These erroneous indications were caused by "noise" in the D.C. power supply to the tachometer circuit.

Analysis of Safety Implications

When the speed sensing tachometer indicates greater than 280 rpm, the starting air solenoid valves for the engine become de-energized. With that condition present, the diesel engine-generator set would not start on receipt of an emergency start signal. This could result in the unavailability of the "essential safety-related equipment" on the associated electric bus.

Corrective Action

At the direction of the tachometer manufacturer (Airpax Electronics), with concurrence from the diesel generator and control panel supplier (Cooper/Entronics), the DC to DC regulator supplied with the control panel was replaced with a DC to DC converter manufactured by Airpax. The DC to DC converter provides isolation of the positive and negative leads to the power supply and prevents the "noise" from creating an erroneous reading.

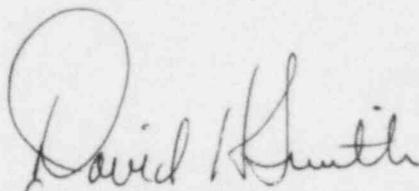
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The revised configuration has been tested and found satisfactory. Design documentation is presently being prepared and all Byron and Braidwood emergency diesel engine-generator sets' tachometer circuits will be revised.

Please address any questions that you or your staff may have concerning this matter to this office.

Very truly yours,


for A. D. Miosi
Nuclear Licensing
Administrator

/klj

cc: NRC Resident Inspector-Byron
NRC Resident Inspector-Braidwood
Director of Inspection & Enforcement
0739K