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

September 8, 1983

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

Subject: Byron Generating Station Units 1 and 2
Braidwood Generating Station Units 1 and 2
Barton Instrument Accuracy
NRC Docket Nos. 50-454, 50-455, 50-456, and 50-457

References (a): January 28, 1983, letter from T. R. Tramm to J. G. Keppler.

(b): March 28, 1983 letter from T. R. Tramm to J. G. Keppler.

(c): June 1, 1983, letter from T. R. Tramm to J. G. Keppler.

Dear Mr. Keppler:

References (a), (b), and (c) provided interim reports on a deficiency reportable pursuant to 10 CFR 50.55(e) regarding the accuracy of Barton electronic instrument transmitters being installed at Byron and Braidwood stations. This letter provides a fourth interim report. For NRC tracking purposes this deficiency is numbered 82-11 for Byron and 82-12 for Braidwood.

As described in the previous interim reports on this deficiency, a design change involving the addition of an insulating washer into the transmitter eliminates the majority of the instrument inaccuracy at accident environment temperatures (325°F). However, an accuracy problem still exists when the transmitter is exposed to abnormal environment temperatures (130°F).

Barton has discovered that this remaining accuracy problem was caused by an incorrect manufacturing methodology used during the temperature compensation process. The corrective action is a revised temperature compensation procedure. The effect on transmitters compensated with the incorrect methodology is a possible increase in the temperature coefficient at 130°F and 325°F.

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A final report on this deficiency is expected to be available in 60 days. This report will include a list of transmitters that require the addition of an insulating washer and a list of transmitters that are affected by the improper temperature compensation. Corrective actions being considered to eliminate the temperature compensation problem are transmitter recalibration, instrument setpoint adjustment, or evaluation of the transmitter inaccuracy for its specific application. The final report will also include the corrective action for each transmitter affected by the temperature compensation problem.

Please address questions regarding this matter to this office.

Very truly yours,

T. R Tramm

T. R. Tramm
Nuclear Licensing Administrator

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cc: Director of Inspection and Enforcement

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