



**Commonwealth Edison**

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October 16, 1984

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

Subject: Byron Generating Station Units 1 and 2  
Seismic Qualification of Equipment  
NRC Docket Nos. 50-454 and 50-455

References (a): May 2, 1984 letter from T. R. Tramm  
to H. R. Denton.

Dear Mr. Denton:

This letter provides a revised justification for interim operation (JIO) of certain instrumentation at Byron Station. NRC concurrence with this JIO is necessary to resolve Outstanding Item 6 of the Byron SER.

Enclosed with this letter is the revised JIO for Westinghouse 7300 series instrumentation used in the NSSS system. This JIO supercedes one provided in reference (a).

Please address further questions regarding this matter to this office.

Very truly yours,

T. R. Tramm  
Nuclear Licensing Administrator

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Byron  
Interim Justification Position for the  
Seismic and Environmental Qualification of the  
7300 Process Protection System  
(ESE-13)

## EQDP-ESE-13 Process Protection System

Byron has previously received the test reports E13A, "Process Protection (Seismic Testing)" and E13B, "Process Protection System (Environmental and Supplemental Seismic Testing)".

Westinghouse has evaluated the results of the supplemental abnormal environment and seismic testing recently completed. This supplemental testing was performed at several seismic levels, the last of which would upgrade the seismic qualification of the 7300 process protection system to a level above that required for Byron and to perform initial testing of some recently developed cards. With the exception of the NPC (Potentiometer), NRC (Relay), NCH (Function Generator), and the NSC (Converter) cards seismic qualification for Byron is documented by the E13A and E13B reports above. During this supplemental testing, the following was observed:

- a. The NRC card demonstrated proper operation during the tests.
- b. The NPC, NCH, and NSC cards exhibited errors which could result in minor changes in system accuracy. The NSC card error due to expected power supply variations, has been evaluated and the anticipated error increase from 0.1% to 0.4% will not affect any safety related circuits at Byron. The NPC and NCH cards, which exhibited potentiometer shifts during seismic testing, have also been evaluated. These cards effect the flux penalty input to the Overtemperature Delta T setpoint calculation which is typically zero under normal conditions. Because of this, no immediate corrective action is required, however, to ensure proper operation if a flux offset is present, card modifications will be implemented to reduce the error which could occur during a seismic event. The power supply test results have been documented in E13D "Process Protection System - Supplemental Testing of Power Supplies and Circuit Breakers".

Although tested previously, the NTC (Temperature Channel Test) card exhibited contact bounce during this recent testing and the result has been evaluated and reported as a 10CFR Part 50.55(e) issue to the NRC on June 1, 1983. Byron has this NTC card in the Overtemperature and Overpower Delta T channels. This intermittent signal may cause saturation of downstream RTD amplifier (NRA)

cards and could possibly prevent a trip from occurring on demand. Until a permanent resolution is prepared, Field Change Notices have been issued which will provide a method of bypassing these relays when in normal operation. Since these relays are only used to ease periodic testing of the channels, this interim modification will not interfere with plant operation.

The 7300 Process Protection System performance has been demonstrated to be acceptable for Byron by previous seismic testing. Anomalies which occurred during recent tests have been resolved.