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April 23, 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
Braidwood Generating Station Units 1 and 2
Mechanical Equipment Qualification
NRC Docket Nos. 50-454, 50-455, 50-456 and 50-457

- References (a): December 30, 1983 letter from T. R. Tramm
to H. R. Denton.
- (b): March 30, 1984 letter from B. J. Youngblood
to D. L. Farrar.
- (c): May 30, 1983 letter from B. J. Youngblood
to D. L. Farrar.
- (d): January 14, 1983 letter from T. R. Tramm
to H. R. Denton.

Dear Mr. Denton:

This letter provides additional information regarding the environmental qualification of mechanical equipment for Byron and Braidwood stations. This information is provided to address concerns expressed by NRC staff members in recent telephone conversations and delineated in reference (b).

In reference (d) we identified three methods which would be used to demonstrate the capability of safety-related active mechanical equipment to survive in harsh environments. In references (b) and (c) the NRC indicated that such qualification demonstrations would be acceptable only if individual organic components were identified and appropriate documentation of material capabilities was assembled for all such components. It is now therefore our intent to obtain that type of qualification information. We will no longer rely upon environmental qualification established by either of the other two methods described in reference (d).

The BOP equipment identified in reference (a) has all been evaluated except for eight valves. Attachment 2 to reference (a) listed the status of the BOP equipment qualification. 72 fans, 4 pumps, and 53 valves which were originally specified to operate in less severe environmental conditions than are now predicted for the plant were reviewed in

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detail. All but eight valves were found to be acceptable after a detailed analysis of the design and materials. These eight valves, solenoid operated reactor head vent valves, are single unit electromechanical devices which were originally listed on both electrical and mechanical qualification lists. The open qualification issues are electrical items and therefore these valves have been removed from the mechanical list. Qualification will proceed in the electrical program and all commitments will be met for both electrical and mechanical concerns.

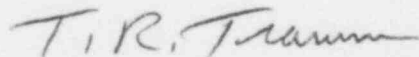
The remaining BOP components had been considered acceptable because the equipment specification included design parameters appropriate for the predicted environmental conditions. Since December 30, 1983, a detailed analysis have been fully documented. All components were found to be qualified for the predicted environmental conditions.

A similar program is being completed for NSSS mechanical equipment. All active safety-related equipment will be qualified by a detailed review of the design and materials or a justification for interim operation will be provided prior to fuel load.

Please contact this office immediately if these revisions to our qualification program are unacceptable. Engineering personnel can be made available on short notice if additional information is needed.

One signed original and fifteen copies of this letter are provided for NRC review.

Very truly yours,



T. R. Tramm
Nuclear Licensing Administrator

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