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October 4, 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
Ventilation System Filtration
NRC Docket Nos. 50-454/455 and 50-456/457

Reference (a): June 21, 1983 letter from B. J. Youngblood
to D. L. Farrar.

Dear Mr. Denton:

This letter provides information to document the basis for excluding moisture separators and heaters from the design of certain ventilation systems at Byron and Braidwood. NRC review of this information is necessary to close Outstanding Item 18 in the Byron SER.

In reference (a) the NRC requested that Commonwealth Edison reexamine the need for moisture separators and heaters in the systems which ventilate the auxiliary building non-accessible areas and the fuel handling building. The enclosed documents contain calculations, diagrams and other information which demonstrate that such equipment is unnecessary to assure satisfactory operation of the HEPA filters and charcoal adsorbers in these ventilation systems.

Part 4 of the response to FSAR question 311.23 documents an analysis of the relative humidity in the air streams treated by the filter systems serving the fuel handling building. For a postulated fuel handling accident under a variety of conditions the relative humidity at the charcoal filter is shown to be less than 70%. FSAR accident analysis assumptions regarding filter efficiency are therefore valid.

Attachment A to this letter contains a similar analysis of moisture entrainment and relative humidity at the filters serving non-accessible areas of the auxiliary building. Responses to NRC Staff questions on this analysis are also included. For a postulated 30 minute 50 gpm leak of an RHR pump seal, it is shown that

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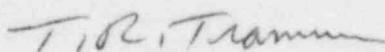
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moisture entrainment will not be a problem and that the relative humidity will be well below 70% for outside air temperatures ranging from 40 - 95% at 90 percent relative humidity. This analysis provides further validation of the assumptions made in the FSAR analyses.

Please address further questions regarding this matter to this office.

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

Very truly yours,



T. R. Tramm
Nuclear Licensing Administrator

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