

JUN 11 1984

Docket Nos.: STN 50-454/STN 50-455  
and STN 50-456/STN 50-457

Mr. Dennis L. Farrar  
Director of Nuclear Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690

Dear Mr. Farrar:

Subject: Byron/Braidwood Safety-Related D.C. System Request for  
Additional Information

NRR has reviewed the safety-related 125 volt D.C. system for the Byron/  
Braidwood facilities as requested by RIII. The enclosed request for  
additional information is based on the staff's concerns regarding modifica-  
tions to the safety-related battery rooms. The removal of the wall between  
the redundant 125 volt safety-related battery divisions and other equipment  
in the miscellaneous electrical equipment rooms, and its replacement with a  
wire fence, has generated concerns regarding fire protection and safe shut-  
down provisions, ventilation system adequacy, missile protection measures,  
and seismic classification.

Provide your response to the enclosed request for additional information within  
30 days. A timely and complete response to this request is required to facilitate  
the resolution of this issue prior to licensing of Byron Unit 1. For further  
information or clarification, contact the Braidwood Project Manager, Janice A.  
Stevens, at (301) 492-7144.

Sincerely,

*BJ*  
B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing

Enclosure:  
Request for Additional  
Information

cc: See next page

CONCURRENCES:

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BYRON/BRAIDWOOD

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Request for Additional Information

Safety-Related D.C. System

Byron/Braidwood Stations, Units 1 and 2

1. We note that in Amendment 2 to the Fire Protection Report Figure 2.3-8 Sheet 1, the applicant removed the wall between the redundant 125 volt safety-related battery divisions and other equipment in the miscellaneous electrical equipment rooms and replaced the wall with a wire fence. The present ventilation system for the battery area may not be adequate to remove hydrogen accumulation resulting from battery charging because of the much greater area now served by the ventilation exhaust system and because the new area may contain some dead spaces at the ceiling. Therefore, the applicant shall demonstrate through analysis and/or testing that the present ventilation system, including the air supply and exhaust fans in the battery areas, will maintain sufficient continuous ventilation of the battery areas to limit the hydrogen concentration to 2%, as previously stated in the FSAR.
2. The present design and installation of the redundant safety-related 125 volt battery banks does not provide protection against mechanical damage associated with potential internally-generated missiles resulting from three phase electrical faults in the rotating motor generator sets and switchgear adjacent to the battery alcove. Therefore, the applicant shall demonstrate through analysis that the battery room design is adequate to minimize the probability of losing the onsite D.C. electric power supply as a result of internally-generated missiles. This analysis shall verify that missiles from nonsafety-related sources shall not impact safety-related equipment in order to assure safe shutdown concurrent with a single active failure.
3. Provide justification for the installation of nonexplosion-proof lighting fixtures in the battery and miscellaneous electrical equipment room ceilings in accordance with the National Fire Protection Standard 70, National Electrical Code provisions.
4. Pre-planning for fighting a fire in battery room 112 should not include opening the doors in the common wall with battery room 111, since this action will expose redundant systems to the effects of a fire. Verify that all areas of battery room 112 can be reached with not more than 100 feet of 1½ inch hose line from existing standpipe outlets, as required by Section C.6.C of BTP CMEB 9.5-1, or justify any deviation from this criteria.
5. Demonstrate that the wire fence is designed, analyzed, installed, and inspected to seismic category 1 criteria, or that failure or collapse of this fence would not cause the loss of function of the 125 volt batteries and other surrounding equipment.