

December 22, 1987

Docket No. 50-237

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
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Dear. Mr. Butterfield:

SUBJECT: IPSAR TOPIC VI-10.B SHARED ENGINEERED SAFETY FEATURES (TAC 65628)

Re: Dresden Nuclear Power Station, Unit No. 2.

By letter dated June 9, 1987, Commonwealth Edison requested the review of information regarding the Systematic Evaluation Program IPSAR Topic VI-10.B related to paralleling of the shared 125V and 250V DC system. The licensee was requested in NUREG-0823 to provide assurance that paralleling be prohibited during power operation. We have reviewed the licensee's request to allow paralleling of the shared 125V and 250V DC systems during power operation and, based on our review, we find that the licensee's request is not in accordance with GDC 17 and IEEE-308 and should, therefore, be denied. The staff's Safety Evaluation is enclosed.

Sincerely,

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Marshall Grotenhuis, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosure:
As stated

PDIII-2
MGrotenhuis/ww
12/22/87

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LLuther
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DMiller
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Commonwealth Edison Company

Dresden Nuclear Power Station
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cc:

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO IPSAR TOPIC VI-10.B, SHARED ENGINEERED SAFETY FEATURES

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION, UNIT NO. 2

DOCKET NO. 50-237

1.0 INTRODUCTION

Systematic Evaluation Program (SEP) IPSAR Topic VI-10.B raised a concern regarding paralleling of the 125V and 250V dc systems as part of the ground-fault detection during power operation. By letter dated June 9, 1987, Commonwealth Edison responded to the aforementioned concern.

2.0 EVALUATION

Commonwealth Edison responded to the concern of SEP IPSAR Topic VI-10.B regarding paralleling of the 125V and 250V dc systems during power operation. The licensee states that paralleling is performed for a few minutes during 125V dc ground detection procedure and 125V dc station battery capacity test and is controlled by procedures and should, therefore, be allowed.

The dc power system of each of Dresden 2 and 3 units consists of one 125V dc battery and utilizes the battery of the other unit as the second source of 125V power. If paralleled during power operation, the independence and redundancy of dc power systems of both units will be lost. This is not in accordance with GDC 17 of Appendix A to 10 CFR Part 50. Also IEEE Std. 308 prohibits paralleling of the redundant dc sources.

3.0 CONCLUSION

The staff has reviewed the response to SEP, IPSAR Topic VI-10.B and has concluded that the licensee's request to allow paralleling of the shared 125V and 250V dc systems during power operation is not in accordance with GDC 17 of Appendix A to 10 CFR 50 and IEEE-308 and should, therefore, be denied.

Principal Contributor: N. Trehan