



# Pennsylvania Power & Light Company

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August 18, 1983

Mr. Thomas Murley  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION  
INTERIM REPORT OF A DEFICIENCY INVOLVING SEPARATION  
IN MULTIPLE DIVISION PULL BOXES AND JUNCTION BOXES  
ER 100508 FILE 821-10  
PLA-1798

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Dear Mr. Murley:

This letter serves to provide the Commission with an interim report on a deficiency involving electrical separation inside multiple division junction and pull boxes. This deficiency was originally reported by telephone to Mr. E. C. McCabe of NRC Region I on 7/21/83 by Mr. J. Saranga of PP&L as "potentially" reportable under the requirements of 10CFR50.55(e) for SSES Unit II.

The attachment to this letter contains a description of the deficiency and the corrective action taken and planned. PP&L anticipates providing the Commission with a final report by the end of September, 1983. The final report will include PP&L's conclusion as to safety impact and reportability. This information is furnished for Unit 2 pursuant to the provisions of 10CFR50.55(e).

Since the details of this report provide information relevant to the reporting requirements of 10CFR21 for Unit 2, this correspondence is considered to also discharge any formal responsibility PP&L may have in compliance thereto.

We trust the Commission will find this report to be satisfactory.

Very truly yours,

N. W. Curtis  
Vice President-Engineering & Construction-Nuclear

WLB:mp

Attachment

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Copy to:

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## INTERIM REPORT

### SUBJECT

Separation inside multiple division junction boxes and pull boxes.

### DESCRIPTION OF PROBLEM

The separation criteria for raceway, per current FSAR commitments, requires one-inch air space between enclosed conduits. Inside multiple division junction and pull boxes, this spaced double barrier has been reduced to a single metal barrier. Additionally, gaps between the box covers and the barriers exist. The installation notes and details provide for a non-Q installation of a barrier for voltage separation but does not provide a clear reference to which separation criteria applies. Pull boxes are unscheduled and installed at the discretion of the field construction force. In addition to normal divisional separation requirements, the Architect Engineer was unable to provide assurance that special system separation requirements were followed in these boxes.

### APPROACH TO RESOLUTION

An analysis of five multiple division boxes, which included circuits ranging from 4 kV power to low level instrumentation and RPS, revealed no significant safety hazards, but did indicate that rework is preferred, and additional information is necessary to make a final determination on reportability. Bechtel has been directed to walkdown all Unit 2 Class 1E conduits, locate all multiple division pull boxes and junction boxes, document and analyze the existing separation condition and required rework. Additionally, Bechtel's Unit 2 Construction Force has been directed to stop the practice of installing multiple division unscheduled pull boxes. Bechtel Project Engineering has been directed to develop analysis and suitable barrier configurations for all voltage levels and to provide revisions to documents as required to justify and clarify the criteria to assure that this condition will not recur.

### STATUS OF PROPOSED RESOLUTION

Unit 2 inspection is currently underway and should be completed by the end of August. Establishment of final design basis criteria and barrier configurations is also expected at this time. Control and instrumentation separation problems are being reworked in parallel with the inspection, but rework of separation problems involving power circuits must await establishment of acceptable barrier configurations. Based on the available information, the subject condition is still considered to be potentially reportable under the requirements of 10CFR50.55(e) for Unit 2. Bechtel QAR 8856-F-1025 has been issued by Bechtel NQA to track corrective action on this condition.

CORRECTIVE ACTION PLAN

Analysis of the inspection results will enable both final determination of reportability and identification of rework required. For low energy level separation cases of instrument to instrument, instrument to control, control to control, and non-Class 1E control to Class 1E power, the single metal barrier is considered acceptable by an extrapolation of analysis from Wyle Lab Test Report No. NE 56719 (FSAR 8.1.6.1 (n 7)). For these instances, where it is possible for the cables to be moved to a position where a 6-inch air space over the barrier to cover gap is not maintained, one of the divisions will be covered by an approved nonmetallic separation barrier (FSAR 8.1.6.1 (n 14)). Higher energy circuits will not be reworked until an acceptable barrier configuration is established.