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JUN 28 1984

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

SUSQUEHANNA STEAM ELECTRIC STATION
FINAL REPORT ON A DEFICIENCY INVOLVING
SEPARATION IN JUNCTION AND PULL BOXES
ER 100508 FILE 821-10
PLA-2230 Docket No. 50-388

References: (1) PLA-1798 dated 8/18/83
(2) PLA-1883 dated 9/30/83
(3) PLA-2000 dated 12/27/83
(4) PLA-2074 dated 3/20/84

Dear Dr. Murley:

The references listed above provided the Commission with information regarding a deficiency involving electrical separation inside multiple division junction and pull boxes. This problem was originally reported under 10CFR50.55(e) as potentially reportable by telephone to Mr. E. C. McCabe of NRC Region I by Mr. J. Saranga of PP&L on July 21, 1983. Subsequently, as indicated in References (3) and (4), PP&L determined that the deficiency was reportable on Unit 2 under 10CFR50.55(e). Please see Reference (4) for a description of the problem, its cause, the safety implications, and a summary of the corrective actions. This final report addresses the status of remaining modifications and the actions taken to prevent recurrence of the problem.

All Unit 2 modifications have been completed. On Unit 1, fifteen (15) junction boxes require modification or analysis and justification. These tasks are currently scheduled for completion prior to startup following the Unit 1 first refueling outage (PMR 84-3068). Justifications for interim operation until the first refueling outage are contained in NCRs 83-836 and 84-260.

Actions taken to prevent recurrence of this deficiency are as follows:

(1) Drawings E41, "Numbering System Description"; E47, "Junction Box Schedule and Details"; E49, "Conduit and Cable Tray Notes"; and E60, "Electrical Separation Description" have been revised. These revisions clarify and/or define the separation requirements for use with junction and pull boxes.

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Voltage barrier details were added to drawing E-49 with instructions for their use. A definition of high energy circuit was added to drawing E-41 and separation instructions for non-class 1E and Class 1E junction and pull boxes were added to drawing E-47. Specific separation methods and requirements were added to the text and via a new table in Drawing E-60 (see attachment 2 of reference (4)).

(2) For new junction and pull boxes (installed after 3/12/84), individual boxes instead of barriers will be used to maintain adequate separation.

(3) The FSAR will be revised in the July 1985 annual update. The changes will describe the use of high energy separation barriers in existing junction and pull boxes.

The actions described in (1) thru (3) above will prevent recurrence of this problem by adding clarity and definition to the design documents and the FSAR. Additional actions to prevent recurrence are under evaluation. We expect to complete this evaluation by September 1984 and will amend this report if there are any significant changes or additions to our program for preventing recurrence.

Very truly yours,

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

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