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Bruce D. Kenyon
Vice President-Nuclear Operations
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JUN 24 1985

Mr. Harry B. Kister, Chief
Projects Branch No. 1
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
NRC INSPECTION REPORT 50-387/85-02
ER 100450 FILE 841-04
PLA-2453

Docket No. 50-387

Dear Mr. Kister:

This letter provides PP&L's response to your letter of March 27, 1985, which forwarded NRC Region I Inspection Report 50-387/85-02 related to configuration control.

Your letter requested that PP&L submit a written reply to the unresolved item within thirty (30) days of the date of the letter; however, PP&L notified your office on April 25, 1985 and May 24, 1985, that the response would be delayed until mid-June 1985. The response to the unresolved item is attached. We trust that the Commission will find the attached response acceptable.

Very truly yours,

B. D. Kenyon
Vice President-Nuclear Operations

Attachment

cc: Mr. R. H. Jacobs - NRC Senior Resident Inspector
Ms. M. J. Campagnone - NRC (NRR Project Manager)

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IE01

RESPONSE TO UNRESOLVED ITEM

Unresolved Item Summary: (387/85-02-01)

Evidence was found of configuration control problems, of which you were previously aware, with Class 2 connection and wiring diagrams for internal cabinet terminations. Although no correlation has been made to any operational problems, we believe that the potential extent and significance of such discrepancies as they relate to both the design process and plant operation should be fully understood.

The modifications for SPDS (DCP 82-174C) and TMS (NCR 83-152) contained evidence of discrepancies between as-built internal cabinet terminations and Class 2 connection/wiring diagrams. SDV (DCP 82-0578) Drawing E-503, Sheet 30 (Rev. 1, 11/29/83), for wiring and terminations within Unit 1 Operating Benchboard Cabinet 1C651, was found to not reflect as-built plant conditions.

Response:

Not all drawing change mechanisms used at PP&L reflect configuration control problems. Two change mechanisms are used in our system to "as-built" drawings. PCNs (Plant Change Notices) are produced as part of the process for installing modifications. DCNs (Drawing Change Notices) are used in situations not related to current modification installations. The basis for initiation of many PCNs, and virtually all DCNs, is stated as, "...to reflect the as-built condition...", or words to that effect. Included in this general description are corrections to the following kinds of situations:

1. The installing organization reporting back data or results as directed by the designer or required by procedures.

2. The installing organization making constructibility changes.

3. Correction of minor design errors.

4. Addition of detail not previously shown on the drawing.

5. Editorial corrections.

6. Addition of omitted details.

7. Correction of incorrectly shown as-built details.

The first six situations do not lead to any credible opportunity for operating, maintenance, or design errors. The seventh situation does have potential to lead to incorrect action or design output, depending on the nature of the erroneous information and how information of that type is used. Therefore, three samples were taken and evaluated to identify and analyze this seventh type of situation.

The first sample consisted of PCNs from seven closed DCPs. Two of these DCPs (82-0578 and 82-174C) were included in the subject inspection. The other five

were selected because they were supposed to have been the source of numerous "as-built problems". This sample yielded 278 PCNs of which ten were found to have incorrectly shown as-built details. Four of the ten were corrections to drawings that would not have led to operating or maintenance errors. This left six PCNs, representing incorrectly shown as-built details.

Note that only two of the thirty PCNs from DCP 82-174C identified in the inspection report as indicative of discrepancies between wiring in the field and the existing termination drawings had incorrectly shown as-built details.

The data from DCP 82-174C was also examined on the basis of the number of terminations involved. About 180 termination changes to existing plant wiring (new terminations in new panels were excluded from the base) were made by this DCP. Two PCNs identified a total of four terminations which were not shown correctly on the drawings.

The second sample consisted of current DCNs against about 3100 electrical drawing sheets which cover the bulk of the A/E and NSSS supplier wiring in the plant. DCNs are written against only one sheet of a drawing, but several DCNs may be written against the same sheet. This sample yielded 425 DCNs written against approximately 400 sheets. Of these 425, 119 were the result of incorrectly shown as-built details. About half of these DCNs (53) are for Unit 2, are attributable to drawing clean-up and turnover activities, and do not reflect operation of the plant with incorrect drawings. An additional number of DCNs (23) are the direct result of utilizing the DCN process to correct a known problem with vendor prints.

The third sample consisted of 225 current DCNs against non-electrical drawings and was intended to determine whether or not it appeared that there is a general configuration control problem. The result was that only one of the 225 DCNs resulted from incorrectly shown as-built detail. This discrepancy is not considered to be indicative of a configuration control problem.

The Transient Monitoring System is considered to be an atypical situation because the system was initially treated as a temporary test facility and the full provisions of our configuration control program were not applied to it. Therefore, as-built discrepancies in this system were not included in the sample or analysis.

Based on a review of the drawing change mechanisms where it initially appeared that there were as-built discrepancies; i.e. the plant configuration shown on the as-built drawings and the actual plant configuration were different, PP&L has concluded that the discrepancies identified are limited to a small subset of termination information on electrical drawings. The significance of these discrepancies, with regard to both the design process and plant operation/maintenance, was evaluated.

As-built discrepancies of the type found may lead to minor errors in design of modifications involving termination changes or additions in existing equipment. The installation, inspection, and testing process identify and correct such errors before the system or equipment is returned to service. The only evident adverse consequence of the identified as-built discrepancies with regard to modification design is some reduction in efficiency.

With respect to plant operation and maintenance activities the known drawing discrepancies will not affect safe plant operation. The reason this can be stated is as follows:

The operation department utilizes plant procedures for the majority of daily work activities. Drawing use is limited to electrical schematics and P&ID's for blocking review and general information. Where operations personnel require a more detailed drawing review a plant engineer is called upon to provide technical input. If a discrepancy is discovered by the plant engineer it is processed for resolution in accordance with Nuclear Department procedures.

The Maintenance and Instrument & Control (I&C/C) departments perform work in two major areas:

1. Procedure governed maintenance and/or calibration activities.

2. Investigation work/trouble shooting.

It is the second area which provides an exposure to the use of drawings with discrepancies. However, by use of personnel such as the maintenance and I&C/C planners and assistant foremen who have an understanding of the plant drawing system, we have alleviated the potential impact of discrepant drawings on safe plant operations. These individuals have guidance to utilize available information when creating a work package for implementation. If in process of preparing the work package a discrepancy is found the individual will initiate the appropriate Nuclear Department procedure to resolve the discrepancy.

Based on the above, PP&L has concluded that the discrepancies identified would have no significant impact with regard to the safe operation/maintenance of the plant or the modification design process, and are not indicative of a configuration control problem. In addition, on-going work processes tend to reduce the number of such discrepancies. We plan to continue monitoring the number of, and reason for, drawing change mechanisms and take action, if appropriate.