

PP&L

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November 27, 1979

Mr. Robert T. Carlson
Chief FS & ES Branch
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

SUSQUEHANNA STEAM ELECTRIC STATION
NRC INSPECTION OF AUGUST 21-24, 1979
REPORT NO. 50-387/79-30
ER 100450 FILE 840-4
PLA-424

Dear Mr. Carlson:

Reference is to your letter of October 12, 1979 which forwarded IE Inspection Report 50-387/79-30 and Enclosure (1) thereto, "Appendix A, Notice of Violation".

Your letter advised that PP&L was to submit, within thirty (30) days of receipt, a written explanation addressing (1) corrective steps which have been taken and the results achieved, (2) corrective steps which have been taken to avoid further items of noncompliance, and (3) the date when full compliance will be achieved.

The Notice of Violation (Infraction) states as follows:

"10 CFR 50.55a Codes and Standards, paragraph (g) (2), states in part that: "For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued on or after January 1, 1971, but before July 1, 1974, components (including supports) which are classified as ASME Code Class 1 and Class 2 shall be designed and be provided with access to enable the performance of (i) inservice examination of such component (including supports)...."

The Susquehanna FSAR, Section 5, specifies that the inservice program shall comply with the 1974 Edition of Section XI including the Summer 1976 Addenda of the ASME Code. Article IWA-1400 of this Code which defines the rules and requirements for inservice inspection states that the owner's responsibilities for the performance of inservice inspections includes: "The design and arrangement of pipe system components to include allowance for adequate clearances for the conduct of the examinations."

Bechtel procedure M-196, Revision 3, "Design Guidelines for Access for Inservice Inspection", Paragraph 3, states requirements for weld spacing, clearance and access for manual inservice inspection examinations. Earlier revisions of this procedure stipulate that welds joining fittings to components shall be separated by a spool piece that is six inches long.

Contrary to the above, on August 24, 1979, the constructor (Bechtel) has approved the use of a double-weld joint with overlapping welds attaching the recirculation riser pipes to the ring header sweepolets. This weld configuration precludes a satisfactory ultrasonic examination for inservice inspection."

PP&L Nuclear Plant Engineering and Bechtel Project Engineering have given due consideration to the NRC Inspector's finding which was identified in NRC Inspection Report 387/79-30 and do not agree that the condition resulting from the overlapping welds precludes inspection and, as such, is not believed to be an item of noncompliance. The configuration, in question by the inspector, was selected to provide a joint which is immune to IGSCC and we have no evidence that the configuration precludes an ultrasonic examination per the applicable code.

We are aware, however, that the examination does challenge the capability of existing techniques and we are presently pursuing efforts in several ways to improve the inspectability of the joint while maintaining its immunity to IGSCC. We conclude that the following efforts will have a positive effect on our resolution of the question of inspectability:

1. We are supporting an effort by our NDE contractor to facilitate the scanning of the weld volume, HAZ and base metal from each side of the weld joint(s) utilizing the specialized EPRI transducer for IGSCC detection in stainless steel welds.
2. A second NDE expert (consultant) is continuing efforts to tailor a signal discrimination technique to the referenced joint design.
3. Radiography of the joint will be performed during PSI as a supplemental examination.

Bechtel Materials and Quality Services Department has developed an acceptable calibration standard to ASME Section XI requirements and has demonstrated, to its satisfaction, that the double weld configuration can be inspected to meet the requirements of the 1974 Edition of ASME Boiler and Pressure Vessel Code Section XI, including the Summer of 1975 Addenda as modified by Appendix III from the Winter 1975 Addenda and IWA-2232 from the Summer 1976 Addenda, as referenced in the SSES FSAR, Section 5.2.4.

The referenced infraction also cites Bechtel document 8856-M-196, "Design Guidelines for Access for Inservice Inspection" as requiring that welds joining fittings to components shall be separated by a spool piece that is six inches long. The referenced document does so state; however, the Bechtel document 8856-M-196, Rev. 0, dated 11-30-77 is intended for design guidance and is not intended to provide acceptance/rejection criteria for fabrication of piping systems.

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PP&L's decision to replace the Unit #1 recirculation riser safe-ends necessitated cutting out the installed recirculation risers. With the expressed purpose of preserving the integrity of the corrosion resistant clad region which would be wetted by primary coolant, it was determined that a cut and closure weld located approximately 3/4" above the recirculation riser to sweepolet weld would create the least potential for the occurrence of IGSCC in the recirculation riser piping. This consideration had priority over the general guidance provided in Bechtel document 8856-M-196, Rev. 0; therefore, a six inch spool piece was not provided between the welds.

To eliminate the confusion in interpreting Bechtel document 8856-M-196, Revision 0 will be revised by 11-30-79 to clarify its applicability as a design guide as opposed to a technical specification.

We trust that this explanation and the ultrasonic calibration/examination demonstration provided during the October 24, 1979 meeting with the Commission provides convincing evidence that PP&L is proceeding deliberately and judiciously in the interest of constructing nuclear piping systems which are safe, in compliance with applicable codes and inspectable to said codes.

Very truly yours,



A. R. Sabol
Manager-Nuclear Quality Assurance

ARS:mcb

cc: Mr. Robert M. Gallo
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