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May 10, 1984

MURRAY R. EDELMAN

VICE PRESIDENT

NUCLEAR

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Post Weld Heat Treatment of
Containment Attachment Welds
[RDC 87(83)]

Dear Mr. Keppler:

This letter will serve as the final report pursuant to 10CFR50.55(e) concerning certain attachment welds to the ASME Code containment pressure vessel which required evaluation for Code compliance relative to exemption from post-weld heat treatment requirements. This matter was first reported by Mr. C. Shuster of The Cleveland Electric Illuminating Company to Mr. P. Pelke of your office on November 10, 1983. On December 9, 1983, an interim report was submitted outlining the deficiency and the evaluations that were underway at the time.

Description of Deficiency

Initially, during in-process ANI hold point inspection, it was noted that certain attachment plate to Containment vessel shell fillet welds exceeded the maximum throat thickness (3/4") for exemption from post-weld heat treatment (PWHT). A detailed review by Newport News Industrial Corp. of Ohio (NNICO) QA/QC of all attachment plates in excess of 1-1/2" thickness had identified fourteen plates with fillet welds in this category, seven in Unit 1 and seven in Unit 2.

Further investigation also revealed an inconsistent interpretation of ASME Code requirements for exemptions from PWHT as clarified by ASME Code Interpretation #III-81-49 dated May 12, 1981. Newport News Industrial Corporation of Ohio and Newport News Industrial of Virginia incorrectly defined the method for determining the governing base material thickness for ASME welding as the thinner of the parts being joined.

This misinterpretation resulted in a number of attachment welds to the containment vessel boundary receiving neither PWHT nor adequate preheat to exempt them from PWHT per the ASME Code.

Areas which were found to be deficient included:

1. Attachment plates greater than 1-1/2" thick.
2. Attachment plates welded to shell plates greater than 1-1/2" thick.
3. Shell stiffeners welded to shell plates greater than 1-1/2" thick.

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4. Containment doubler plate welded to shell plates greater than 1-1/2" thick.
5. Ring Stiffener Flanges (2" thick) welded to Ring Stiffener Webs.

Completion of Evaluation and Corrective Action

NNICO has verified the as-built sizes of all fillet welds in material greater than 1-1/2" in thickness and also verified the preheat used in all welding of materials in excess of 1-1/2" in thickness. Nonconformance Reports (NCR) 17-439 (Unit I) and 17-449 (Unit II) have been submitted documenting all cases of ASME Code violations with respect to exemptions from PWHT and the corrective action necessary to bring all subject welds into complete compliance with the ASME Code.

NNICO has revised their program to incorporate the correct ASME Code interpretation relating to exemptions from PWHT.

In Unit I, for all conditions found to be in violation of the ASME Code requirement, where the welds were determined to be necessary, the welds, including heat affected zones, are being physically removed and replaced utilizing appropriate preheat requirements. For those welds which were determined not to be necessary due to design developments of the structure, the welds were physically removed and the base metal repaired where necessary.

In the case of the welds connecting the Ring Stiffener flanges to the webs, modifications were made to the ring stiffeners which eliminated the noncomplying welds from the jurisdictional boundary of the ASME Code.

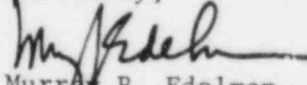
All physical work described above is expected to be complete and the NCR closed by June 30, 1984, for Unit I. Resolution of this condition in Unit II is identical to that described for Unit I but the work has not been completed at this time.

Analysis of Safety Implication

A limited review consisting of documentation for the subject Unit I attachment plate welds was conducted. None of the welds examined exhibited any rejectable surface cracking which could have resulted from failure to preheat/PWHT. It has been determined, therefore, that had this condition gone undetected, there would have been no significant detrimental effect on the designed integrity of the structures.

Please call if there are any questions,

Sincerely,



Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner
NRC Site Office

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