THE CINCINNATI GAS & ELECTRIC COMPANY

CINCINNATI, OHIO 45201

July 23, 1982
QA-1842

E. A. BORGMANN
SENIOR VICE PRESIDENT

U. S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Attention: C. E. Norelius, Director
Division of Engineering & Technical Programs

RE: WM. H. ZIMMER NUCLEAR POWER STATION UNIT I
I.E. INSPECTION REPORT #81-27 - DOCKET NO. 50-358, CONSTRUCTION PERMIT CPPR-88, W.O. #57300, JOB E-5590, FILE NO. NRC-1

Gentlemen:

This constitutes our response to your letter dated June 2, 1982, regarding your review and comments to our interim letter of February 23, 1982.

We have reviewed your comments to Items 1, 2 and 6 and have taken, or plan to take the following actions:

ITEM 1

NRC Comment

A sample inspection of 18% of all shop and field welds in one system, the RHR system, is not sufficient to indicate an adverse trend in weld reinforcement in excess of ASME Code allowables. Additional sample inspections in other safety related systems are required.

A. ADDITIONAL CORRECTIVE ACTION TO BE TAKEN:

Sample inspections shall be made of field welds in additional safety related systems to determine if the as-welded reinforcement height meets applicable ASME Code allowables. The sample size for these additional systems shall be of sufficient magnitude

to establish whether or not a significant adverse trend existed. The additional systems to be inspected and the sampling plan to be used is currently under review and evaluation. You will be advised no later than July 31, 1982 of the specific systems chosen, the sampling plan used, and the status of our reinspection and trend analysis.

B. CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE:

The results of our sample inspection shall be thoroughly evaluated to determine if; (1), a significant number of field welds fail to meet ASME Code allowables; (2), if the welds exceeding required reinforcement heights can be attributed to a small number of welders; and (3), if the welds with excessive reinforcement can be traced to specific inspectors. Should our analysis indicate an adverse trend in any of these areas of concern, appropriate corrective action(s) shall be taken.

C. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance with ASME Code weld reinforcement allowables has been achieved for on-going work. Visual weld inspection procedure, WIP-27, Revision 2, paragraph 4.2, Step 3(c) and 3(d) identifies the ASME Code allowables for weld reinforcement of vessels, pumps, valves, and piping. As stated above, appropriate corrective actions shall be taken if our inspection and analysis indicates an adverse trend in work accomplished prior to April 8, 1981. Full compliance is targeted to be achieved no later then September 1, 1982.

ITEM 2

NRC Comment

The nonconformance report (CG&E NR #E-7546 and HJK NR #E-3264, Revision 1) referenced in your response documented linear surface indications. The NRC liquid penetrant examination identified these same linear indications. In addition, our examination identified what appeared to be lack of full penetration at the root of the double bevel groove weld inside the ½" x 3" relief cut in the lug. It is our view that the nonconformance report mentioned in your response did not identify this lack of penetration, that this could be a generic problem and further investigation is required on your part.

A. CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED:

The linear indications on the elbow lug for pipe support 1LP-011HV (part of M. W. Kellog spool piece number 1LP-02A12-11) were found during Preservice Inspection (PSI) by NES on Liquid Penetrant Data Sheet No. 1178-172. These indications were subsequently reported on CG&E NR #E-7546 and HJK NR #E-3264, Revision 1, and dispositioned as "Rework". HJK Weld Rework Data Sheet, Form KE-1A, was initiated on 11/19/81 to blend grind the weld per SPPM 3.1.12, Revision 5, perform VT per SPPM 4.6, Revision 9 and PT per SPPM 4.2, Revision 3. The VT and PT were accepted by the HJK QC Inspector on 11/20/81. The final PT was witnessed by Mr. R. Vannier, CG&E Level III NDE, and Mr. P. Gwynn, NRC Resident Inspector. Although the PT data sheet and NR's did not specifically identify the apparent lack of full penetration at the root of the weld as found during the NRC PT examination, surface conditioning of the weld by blend grinding and buffing produced an acceptable PT examination of the entire weld area. It should be noted that a review of the M. W. Kellog data package for spool piece number 1LP-02A12-11 revealed the subject elbow was 100% magnetic particle inspected on 7/28/75 and found acceptable. Our review and evaluation of these indications indicate the apparent defects resulted from lack of proper weld surface preparation prior to the performance of the liquid penetrant examinations.

B. CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE:

A sample of similar elbow lugs shall be identified and liquid penetrant examinations shall be conducted using NES procedure 80A1178, Revision 1, to verify the adequacy of the procedure. The number of lugs to be re-examined are currently being identified and the sampling plan to be used is being developed using MIL-STD-105D criteria. You will be advised of the specific elbow lugs to be re-examined, the sampling plan being used, and the status of our PT examinations and trend analysis no later than July 31, 1982.

C. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance is scheduled for completion by September 1, 1982.

ITEM 6

NRC Comment

The NRC cannot accept the position that CG&E will not specifically identify piping alignment mismatch by radiography. It is the NRC view that the "straight-line" condition on a radiograph could be detrimental to the intended piping system service. As a result, an evaluation of the existing piping should be included in your Quality Confirmation Program, more stringent fitup practices should be employed to reduce the possibility of mismatch, and when a condition that appears as a "straight-line" is observed on the radiographic film it must be identified, documented and evaluated.

A. ADDITIONAL CORRECTIVE ACTION TO BE TAKEN:

A sample of the weld radiographs for ASME Class piping for essential, safety related systems taken prior to April 8, 1981 will be reviewed for "straight-line" conditions which appear to indicate a possible pipe alignment mismatch. Prior to conducting the review of the radiographs, a CG&E procedure will be developed to establish the criteria for identifying a possible mismatch condition, how the condition will be documented, and the process to be used in evaluating the condition. This procedure is currently in a draft form and final review and approval is scheduled for August 13, 1982. Your office will be provided a copy of the final draft for review and comment. The sample size of the radiographs to be examined will be identified using MIL-STD-105D criteria. The essential, safety related systems from which the radiographs will be chosen are also under evaluation to assure an adequate cross-section is identified to achieve a reasonable assurance that any pipe mismatch which exists is not in excess of ASME Code allowables.

B. CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE:

The results of our review of the "straight-line" condition in radiographs will be analyzed to determine if a significant adverse trend existed in either past fitup practices, including the QC verification of such fitups, or in the identification, documentation and evaluation of questionable radiographic film indications. Should our trend analysis indicate an adverse trend in these areas of concern, appropriate corrective action(s) shall be taken.

C. DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance is scheduled for completion by October 1, 1982.

With regard to our responding within thirty days of the receipt of your letter dated June 2, 1982, a 7/1/82 telecon between Mr. D. Keating and Mr. D. Danielson of your office and Mr. R. Taylor, CG&E/QAD, a request to extend the due date of our response to July 16, 1982 was approved by Mr. Danielson. During a 7/19/82 telecon between Mr. K. Ward of your office and Mr. R. Taylor, CG&E/QAD, a further extension of the due date of our response to July 23, 1982 was approved by Mr. Ward.

We trust the above actions will be acceptable in resolving our mutual concerns for items 1, 2 and 6 of the subject inspection report.

Very truly yours,

THE CINCINNATI GAS & ELECTRIC COMPANY

By E. A. Borgmann

E. A. BORGMANN
SENIOR VICE PRESIDENT

RNT:as
cc: Office of Inspection & Enforcement
Washington, D.C. 20555
NRC Resident Inspector
Attn: W. F. Christianson