

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-358/81-16

Docket No. 50-358

Licensee: Cincinnati Gas and Electric Company
139 East 4th Street
Cincinnati, OH 45201

Facility Name: Wm. H. Zimmer Nuclear Power Station

Meeting Location: Region III Office in Glen Ellyn, IL

Meeting Date: April 30, 1981

Prepared By: *P. A. Barrett*
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R. F. Warnick
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Approved By: *G. Fiorelli*
G. Fiorelli, Chief
Reactor Projects Branch 2

May 27, 1981

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Meeting Summary

Meeting on April 30, 1981 (Report No. 50-358/81-16)

Meeting Subject: Discussion of CG&E's proposed corrective action program for deficiencies identified to date in the current NRC investigation of the Zimmer project and the measures to be taken to assure acceptable quality of future activities.

DETAILS

1. Persons In Attendance

Cincinnati Gas and Electric Company

W. D. Waymire, Manager, General Engineering
W. W. Schweirs, Manager, Quality Assurance
B. K. Culver, Manager, Generation Construction
M. F. Rulli, Nuclear Engineer
D. J. Frederick, Mechanical Engineer

Kaiser Engineers, Inc.

*E. V. Knox, Manager of Corporate Quality Assurance

Pullman Power Products

*E. F. Gerwin, Vice President, Quality Assurance
*T. Daniels, Director, Quality Assurance
*A. Bair, Manager, Quality Assurance

Sargent and Lundy

*M. E. Schuster, Assistant Head, Quality Control Division
*J. D. Rudins, Quality Control Engineer (Level III)

Nuclear Engineering Services

*G. T. Hamilton, Jr. Vice President
*R. L. Burns, General Manager, Construction Services
*L. Ludwig, Level III Certified Inspector

NUTECH

*R. F. Reedy, Chief Consultant
*D. Pitcairn, Chief Consultant

Hartford Steam Boiler Inspection

*R. H. Wertz, Manager, Authorized Nuclear Inspectors
*D. R. Young, Manager, Authorized Nuclear Inspectors

National Board of Boiler and Pressure Vessel Inspectors

*R. E. Jagger, Assistant Director of Inspection

State of Ohio

*D. M. Milan, Division Chief, Department of Industrial Relations

Nuclear Regulatory Commission

- *H. W. Roberds, Vendor Inspector, RIV
- *A. B. Davis, Deputy Director, RIII
 - R. F. Warnick, Chief, Reactor Projects Section 2B
- *D. H. Danielson, Chief, Materials and Processes Section
 - P. A. Barrett, Principal Inspector, Zimmer
- *K. D. Ward, Reactor Inspector
- *J. F. Schapker, Reactor Inspector
 - F. T. Daniels, Senior Resident Inspector, Zimmer
- *C. C. Williams, Chief, Plant Systems Section

*Attended only the first part of the meeting - a discussion of radiographs of welds when the penetrameter was not shimmed.

2. General

The meeting was held in the NRC Region III office in Glen Ellyn, Illinois, to discuss Cincinnati Gas and Electric Company's proposed corrective action program for the deficiencies identified to date in the current NRC investigation, and the additional measures to be taken to assure acceptable quality of future activities.

Deficiencies had been identified in the following areas: Structural welds, contractor QA program, traceability of materials, cable and weld inspections, nonconformances, FSAR commitments, design control of cable systems, corrective actions, audits, and design change control.

3. Discussion of Radiographs

The meeting began with a discussion of Paragraph IX-3334.4 of the ASME Code, Section III-1971, regarding the use of shims under the penetrameter when making weld radiographs. Following the discussion, the licensee indicated additional time would be needed to define CG&E's program for confirming quality of the welds documented on the radiographs in question.

4. Measures For Confirming Quality of Completed Work

The licensee presented a second draft of their proposed Quality Confirmation Program. The program requires extensive and timely inspections of plant hardware and complete detailed reviews of quality documentation. The inspection and review efforts will be performed by qualified personnel and closely monitored by CG&E's upper management. The efforts will be documented to show the root causes for the deficiencies; the extent and significance of the deficiencies considering the basic causes; and the corrective actions taken with regard to both the causes and the effects.

The proposed program was discussed in detail. NRC comments were given and they are to be factored into another draft that will be provided to the NRC for detailed review.

5. Immediate Action Letter

Licensee representatives discussed the status of the implementation of CG&E's program to assure the quality of ongoing and future work. The corrective measures are described in the NRC's Immediate Action Letter dated April 8, 1981 (copy attached). The status of each item is summarized below:

a. Concerning QA Staffing

It has increased their site QA staff by employing 18 contract personnel on a temporary basis and by adding eight technicians or engineers from within the company. These are in addition to the existing staff of ten. Recruiting of permanent CG&E employees is continuing. The increased QA staff has or will have experience in non-destructive testing, metallurgy, welding, documentation, procedure reviews, quality assurance, and other technical areas.

b. Concerning Independence and Separation Between Kaiser Construction and Kaiser QA/QC

Kaiser Engineers, Inc. restructured its Corporate Organization April 1, 1981. The Manager of Corporate Quality Assurance now reports directly to the President. This change was made to reinforce the independence and separation of QA/QC from construction. This action was not a result of the NRC investigation or the Immediate Action Letter.

The site QA/QC organization is being restructured to strengthen the management and supervision of QA/QC activities. A Manager of Documentation position has been added to manage all quality related documents. He will be supported by three Document Engineers. Each of these engineers will be supported by a staff of engineers, technicians and clerks as required to review adequacy and accuracy of past documents and assemble required documents to confirm that the actual installation of equipment and materials conforms to the engineers drawings and specifications and NRC requirements. The Document Engineers will also be responsible for review and adequacy of documents covering ongoing construction activities prior to entry into the central document center.

The QA/QC Site Manager will be supported by an outside management consultant specialized in QA/QC.

QA/QC procedures are presently being reviewed to ensure that QA/QC requirements are clearly indicated. All Field Construction Procedures (FCP) presently included in Quality Assurance-Construction Methods Instruction (QACMI) are being removed and specific QA/QC requirements are being substituted for these FCPs.

c. Concerning QC Inspections

CG&E is conducting 100% reinspection of QC inspections conducted by Kaiser and other contractors by utilizing the increased QA

staff described in Item a. above. It was necessary for CG&E to stop some construction activities while inspection procedures were reviewed and CG&E inspectors were trained.

d. Concerning QC Inspection Procedures

The licensee has identified 106 procedures that are applicable to QC inspections. They have completed both the technical and the quality reviews of 17 of the 106 quality control procedures. Based on feedback received from CG&E and Kaiser QC inspectors who have used the 17 procedures, the licensee has made additional changes to some of the inspection procedures.

The construction activities controlled by the QC inspection procedures are not being performed until the QC inspection procedures are reviewed and approved.

e. Concerning Training

QA/QC personnel are receiving training on new procedures and practices resulting from the actions taken to fulfill the provisions of the Immediate Action Letter prior to implementation of the procedures. In addition, the procedures governing non-conformances, deficiencies, and problems are being revised to inform the identifying individuals of the resolution and the avenue of appeal should the identifying individual disagree with the adequacy of the resolution. The licensee indicated these procedures will be revised and approved, and training given prior to June 1, 1981.

f. Concerning Deviations From Codes And FSAR Statements

The utility reviewed their Project Procedures such as the design document change procedure and the nonconformance reporting procedure to make sure they contained adequate provisions for the identification and disposition of deviations from codes and FSAR statements. QC inspection procedures are being reviewed as described in Item d. and part of the review is to assure that deviations from codes and FSAR statements are identified and acted upon.

Organizations responsible for design of safety-related equipment will be audited to assure that they have sufficient procedures and training to identify deviations from codes and FSAR statements.

The FSAR is being re-reviewed for correctness and consistency with respect to the design. The review is scheduled for completion by July 1981.

A new project procedure will be written by Sargent and Lundy establishing the requirement to submit corrections to the FSAR as changes are identified. Formal submittal of the FSAR changes will be made at least semiannually.

Sargent and Lundy will revise their project instructions to include a requirement to identify changes or deviations from industry codes and standards when applied categorically in the design.

Sargent and Lundy is reviewing on a company generic basis the adequacy of the procedure which assures that design calculations are performed to control design deviations. This review is scheduled for completion by June 1, 1981.

g. Concerning the Voiding of Nonconformance Reports

The licensee has reviewed Quality Assurance-Construction Methods Instruction G-4, Nonconforming Material Control, governing non-conformance reporting. Action has been taken to change the procedure to assure the proper closeout and dispositioning of each nonconformance report. They will no longer be "Voided." CG&E must be in the review cycle regardless of how a nonconformance report is dispositioned.

The licensee has also spent approximately 100 man hours reviewing 739 voided nonconformance reports. The licensee estimates an additional four man months of efforts will be required to resolve or properly disposition each of these voided documents.

h. Concerning QA/QC Records

The transcribing of information from the KEI-2 form to the KEI-1 form has been stopped.

All Kaiser QC records were moved to a protected, centralized location at the Zimmer Site on April 7, 1981. These records will remain under the care, custody, and control of CG&E Quality Assurance Department.

A program has been established to provide more effective and efficient management of QA/QC records. The program will include the following:

- (1) Improve the physical facilities for record handling and storage.
- (2) Establish procedures that provide for improved receipt, control and maintenance of QA documentation.
- (3) Involve CG&E and HJK interactively for improved communication, surveillance, audit and control of records.
- (4) Develop commitment control program to effectively "Close the loop."
- (5) Staff this activity sufficiently to allow orderly progress in a well controlled environment.

i. Concerning Conditions Adverse to Quality

CG&E took action on April 7, 1981 to assure receipt of a copy of each nonconformance report and each surveillance report prepared. A procedure requiring CG&E management to perform a 100% review of nonconformance reports and surveillance reports will be developed.

j. Concerning the Audit Program

The audit schedule has been reviewed and revised to include technical audits. The number of audits scheduled per month is a minimum of five and a maximum of six. The new audit schedule has been increased in numbers by approximately 50%. The licensee plans to have a minimum of six qualified auditors.

Under development is another audit schedule that will address required audits for suppliers who are still supplying essential materials for the Zimmer project.

On May 4, 1981, a review shall be started of audits conducted at Sargent and Lundy, CG&E Electrical Production Department, CG&E Electric Operating Test Department General Electric, and Kaiser to determine if all QA program aspects were covered.

Enclosure: Immediate Action
Ltr dtd 4/8/81, to CG&E from
J. G. Keppler