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# THE CINCINNATI GAS & ELECTRIC COMPANY

E. A. BORGMANN  
VICE PRESIDENT - ENGINEERING

November 3, 1978  
QA-1031

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

Attention: Mr. James G. Keppler,  
Director

RE: WM. H. ZIMMER NUCLEAR POWER STATION - UNIT I  
IE INSPECTION REPORT NO. 78-18, DOCKET NO.  
50-358, LICENSE NO. CPPR-88, W.O. #57300-957,  
JOB E-5590

Gentlemen:

This letter constitutes our formal reply to the subject Inspection Report. It is our opinion that nothing in your report or in this reply constitutes any information of a proprietary nature.

Our response to the items of noncompliance identified in Appendix "A" of the report is as follows:

Item 1 - Instructions, Procedures and Drawings

Corrective Action Taken and Results Achieved

The eight (8) cases cited in your Inspection Report, in which anchor bolt installations were not made in accordance with design drawings, will be reviewed and corrected as part of the overall hanger inspection program described elsewhere in this letter. Under Items 3 and 4, procedures have been prepared for installation and inspection of the expansion anchors and personnel have been trained to comply with these requirements.

Corrective Action Taken to Avoid Further Noncompliance

All future installations and inspections will be performed in accordance with the approved procedures and design drawings. In those cases where design drawings do not provide sufficient detail, Sargent & Lundy will be requested to supply additional information. Inspection by QC personnel will verify compliance to such requirements.

Date When Full Compliance will be Achieved

We consider that full compliance has been achieved for new installations. For previous installations, full compliance will be achieved upon completion

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of final inspection and acceptance.

Item 2 - Procurement Documents for Concrete Expansion Anchor Bolts

Corrective Action Taken and Results Achieved

The Sargent & Lundy specification permits the use of concrete expansion anchor bolts which meet the standard requirements, as stated in the manufacturer's catalog.

In accordance with this specification, Hilti is established as an acceptable and qualified supplier of concrete expansion anchor bolts. In addition, Hilti has furnished a Certificate of Compliance that all fasteners supplied to the project have been manufactured in accordance with Hilti's standard specifications and will, if used in accordance with manufacturer's installation instructions, provide results as stated in their catalog.

Similar actions are being taken with other suppliers of expansion anchors.

Corrective Action Taken to Avoid Further Noncompliance

All future purchase orders will be placed with qualified suppliers with requirements that Certificates of Compliance be provided for each purchase order.

Date When Full Compliance will be Achieved

This item will be in full compliance by December 1, 1978.

Item 3 - Inspection Program for Concrete Expansion Anchor Bolts and Hanger and Snubber Installations

(a) Concrete Expansion Anchor Bolts

Corrective Action Taken and Results Achieved

The CG&E Quality Assurance and Standards Section issued Stop Work Order No. 78-02 on August 14, 1978, suspending work on installation of concrete expansion anchor bolts. Subsequently, Field Construction Procedure 2-128 was issued by Kaiser Engineers, Inc., and craft personnel were instructed as to the procedure requirements. All wedge anchors now being used are coded as to length. This action provides visible identification of length both before and after installation. Additionally, QACMI M-12 was revised and reissued by KEI to reflect the requirements of Design Document Changes SLS-266 and SLS-315, and FCP 2-128. Subsequent to these actions, Stop Work Order 78-02 was lifted on September 7, 1978.

For previously installed wedge anchor reinspection, KEI QA has

purchased Nortek Model NDT 123 Mini Digital Thickness Gauges to measure the length of embedded anchors. QACMI M-15 has been prepared and issued to provide reinspection requirements. We consider that corrective action has been initiated and QACMI M-15 is available for your review.

Corrective Action Taken to Avoid Further Noncompliance

Based on the actions described above, we consider that corrective action has been taken to avoid noncompliance in expansion anchor bolt installations.

Date When Full Compliance will be Achieved

We consider that full compliance has been achieved for new installations. For previous installations, full compliance will be achieved on a system by system basis when final acceptance is provided for all hangers, snubbers, etc., prior to fuel loading.

(b) Hangers, Snubbers, and Restraints

Corrective Action Taken and Results Achieved

A program for in-process inspection of hangers has been implemented by KEI. The reproducible copy of each seismic hanger drawing has welding requirements and weld inspection requirements identified on the S&L hanger drawing by KEI. The "Inspection Record Copy" of each drawing has the verification that weld inspection has been performed and accepted. On October 10, 1978, KEI QA issued a Construction Inspection Plan "Daily Work Sheet" to the field for in-process inspection of hangers. Inspections which are performed are recorded on the work sheet which is attached to and becomes part of the Inspection Record.

On September 26, 1978, the responsibility for hanger final inspection and acceptance was delegated to the CG&E Construction Section which has established a group of specialists to assure all details of hangers are complete and conform to approved drawings. This effort is being implemented on a system basis keyed to turnover schedule for Preoperational Testing. The procedure for accomplishing this inspection activity is CG&E Pipe Support Final Inspection Procedure No. MC-5.

Corrective Action Taken to Avoid Further Noncompliance

Based on the actions described above, we consider that corrective action has been taken to avoid further noncompliance.

Date When Full Compliance will be Achieved

We consider that full compliance has been achieved for new installa-

tions. For previous installations, full compliance will be achieved and final acceptance will be provided for all hangers, snubbers, etc., prior to fuel loading.

Item 4 - Design Basis for Structures, Systems and Components

(a) Concrete Expansion Anchor Bolts

Corrective Action Taken and Results Achieved

Design drawings will be revised by S&L to include an overall individual bolt length. The minimum embedment length is determined by the bolt diameter per manufacturer's specifications. If the embedded length is acceptable, as determined by inspection, to manufacturer's minimum embedment requirements, deviations to the S&L design drawings will not require documentation.

Action Taken to Avoid Further Noncompliance

For future installations, the procedure will be revised to provide that if the bolt length is not identified on the drawing, the installer will select the overall length which will assure the minimum embedment depth for that bolt size.

Date When Full Compliance will be Achieved

Full compliance will be achieved on a system by system basis at final inspection acceptance.

(b) Concrete Block Walls

Corrective Action Taken and Results Achieved

Sargent & Lundy has designed the concrete block walls in accordance with seismic design criteria. S&L will review the design calculations for the block walls to verify that seismic criteria are met. CG&E will perform independent audits of these design calculations.

Procedures are being prepared to qualify block walls to support safety-related systems. Sargent & Lundy will issue a Recommended Testing Procedure for Demonstrating Capability of Masonry Walls for Supporting Category I Systems. This document will outline a testing program for demonstrating that the walls were constructed in accordance with design requirements and are capable of supporting safety-related systems.

Corrective Action Taken to Avoid Future Noncompliance

Sargent & Lundy will revise drawings to indicate those block walls which are safety-related.

Future construction of safety-related block walls will be performed

using qualified materials which will have the demonstrated capability to support safety-related components.

Date When Full Compliance will be Achieved

Full compliance will be achieved prior to January 1, 1979.

(c) Installation of Hangers and Snubbers

Corrective Action Taken and Results Achieved

As the result of the identification of this item of noncompliance, the following actions have been taken:

- (1) A directive to the Project Manager was issued by CG&E on September 6, 1978 requiring that installations performed prior to that date which are not in compliance with the design drawings shall be documented and submitted to S&L for approval.
- (2) CG&E Construction Section has established an inspection program for final acceptance which will assure that all details of hangers are complete and conform to approved drawings.

Corrective Action Taken to Avoid Further Noncompliance

The September 6, 1978 directive requires that field changes to approved design drawings, subsequent to that date, may be accomplished by a DDC; however, they must be approved by S&L prior to installation in the field.

Date When Full Compliance will be Achieved

Full compliance will be achieved upon completion of final inspection and acceptance prior to fuel loading.

Item 5 - Use of Inter-Office Memorandum

Corrective Action Taken and Results Achieved

Inter-Office Memorandum, dated September 22, 1977, which allowed work to proceed with unapproved DDC's on the provision the inspection acceptance be withheld until the DDC was fully approved has been rescinded by CG&E directive, dated September 6, 1978, which states "Field changes may be accomplished by a DDC, provided they are approved by S&L prior to the implementation of the change".

Corrective Action Taken to Avoid Further Noncompliance

All inspection personnel were instructed as to the cancellation of the

practice described in the September 22, 1977 IOM. To prevent further noncompliances of this nature, the KEI QA Department will review the subject nature of all Inter-Office Memorandums to assure none are issued which would cause a deviation from established approved procedures.

Date When Full Compliance will be Achieved

Based on the actions described above, we consider that full compliance has been achieved on this item.

Item 6 - Protective Covers for Hydraulic Snubbers

Corrective Action Taken and Results Achieved

All areas of the plant containing Bergen-Paterson hydraulic snubbers have been evaluated and accumulators found to have missing protective covers have had protection applied.

Corrective Action Taken to Avoid Further Noncompliance

QA Inspectors have been instructed to provide continuing surveillance of the need for protection and identify any snubber which becomes uncovered. In the past month, several covers have been noted as missing and construction has immediately made the necessary corrections. A memorandum has been issued by the Construction Superintendent alerting all field personnel that protection is required for hydraulic snubbers and that any observed noncompliances be corrected immediately.

Date When Full Compliance will be Achieved

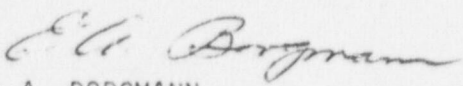
Based on the actions described above, we consider that full compliance has been achieved on this item.

We trust that the contents of this letter will serve as an acceptable response to your Inspection Report No. 78-18.

Very truly yours,

THE CINCINNATI GAS & ELECTRIC COMPANY

By

  
E. A. BORGMANN  
Vice President, Engineering Services  
and Electric Production