

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

REGION III

Report No. 50-358/79-11

Docket No. 50-358

License No. CPPR-88

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

Facility Name: Wm H. Zimmer Power Station

Inspection At: Zimmer Site, Moscow, Ohio

Inspection Conducted: April 18-19, 1979

Inspector: I. T. Yin *I. T. Yin*

4/30/79

Approved By: *D. H. Danielson*
D. H. Danielson, Chief
Engineering Support Section 2

4/30/79

Inspection Summary

Inspection on April 18-19, 1979 (Report No. 50-358/79-11)

Areas Inspected: Followup inspection of previous findings relative to safety related hangers, restraints, and snubbers. The inspection involved a total of 12 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

2318 201

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DETAILS

Persons Contacted

Cincinnati Gas and Electric Company (CG&E)

- *W. W. Schwiers, Principal QA and Standards Engineer
- *J. F. Weissenberg, QA and Standards Engineer
- *J. R. Schott, Station Superintendent
- *J. B. Vorderbrueggen, Hanger Engineer

*Denotes those personnel attending the exit interview.

Licensee Action on Previously Identified Items

(Open) Unresolved Item (358/79-10-01): Lack of procedures for design of pipe whip restraints and verification of calculations. A draft copy of S&L Instruction PI-ZI-15.1, "Verification of Final Pipe Whip Restraint Design," Rev. 0, dated March 26, 1979, was presented by the licensee. The inspector reviewed the content and had no adverse comments. The closure of this item will depend on the formal issuance of the procedure and the subsequent procedure implementation by the involved departments.

(Closed) Noncompliance Item (358/78-18-02; 358/78-18-03; 358/78-32-01): Use of Inter-Office Memorandum (IOM) to deviate from CG&E QA Manual requirements; uncontrolled use of IOM; and failure to rescind those IOM's. The inspector reviewed: (1) HJK letter, KC-12610-Q, subject, "Response to NRC Inspection Reports 50-358/78-32, Item 02 and 50-358/78-18, Item 02," dated February 26, 1979, and (2) CG&E Inter-Department Correspondance, subject, "Unit 1 - Procedure Change - W.O. No. 57300-957, Job E-5590," dated March 1, 1979, and considered the corrective actions adequate. These three noncompliance items are considered closed.

(Closed) Noncompliance Item (358/78-10-04): Installation of INC Mechanical snubbers without adequate installation and inspection procedure. A Stop Work Order (SWO) No. 79-01, dated February 2, 1979, was issued by CG&E site QA. The reason for the issuance of SWO No. 79-01 was that "Operational problems with the use of INC mechanical snubbers at other sites have forced us to reconsider their use on the Zimmer Project." The licensee is presently considering replacing INC snubbers with mechanical snubbers manufactured by Pacific Scientific Company. Prior to the lifting of SWO No. 79-01 and the installation of any new mechanical snubbers, work instructions will be prepared based on the vendor's recommendations. This item is considered closed.

2318 202

(Closed) Unresolved Item (358/78-10-03): Snubber installation procedure without referencing manufacturers' instructions. The inspector reviewed the HJK QA - Construction Methods Instruction (QACMI) No. M-12, Rev. 1, "Inspection Instructions for Pipe Hangers and Support Installation" dated February 21, 1979, where Paragraph 3 had referenced the various snubber vendors' instruction manuals. The inspector had no further questions.

(Closed) Noncompliance Item (358/78-27-01): Inadequate weld control including material traceability on lugs welded to safety related pipes. The inspector reviewed the HJK Nonconformance Report (NR) No. E-1493 issued on November 20, 1978, and closed on April 16, 1979, and considered the measures taken adequate. The final hanger, restraints, and snubber installation inspections are an on-going activity. The adequacy of welding including necessary material and operator traceability will be a part of the overall inspection program. This item is considered closed.

(Open) Unresolved Item (358/78-27-02): Improper hanger component outdoor storage and excessive time to resolve the NR written on similar problems. The inspector reviewed the following documents relative to the subject matter:

1. CG&E NR No. 7229 issued on December 29, 1978.
2. HJK Field Construction Procedure No. 2-210, "On Site Material Laydown East of Reactor Building," Rev. 1, dated February 12, 1979.
3. CG&E Field Audit Report No. 230, "On site material laydown last of reactor building," dated April 16, 1979.

The inspector stated that he had no adverse comments on Items 2 and 3 above. In regard to Item 1, he was in disagreement with the NR disposition instructions which stated: (1) remove rust, (2) assure functional capability of ball bushings, and (3) apply approved lubricant to ball bushings. The inspector stated, based on his experience, (1) the spherical bushing unit should be replaced if rusting has prevented free rotational movement, (2) light surface rusting can be corrected by careful sanding, and (3) no lubricant should be applied to this type spherical ball bushing.

Functional or Program Areas Inspected

1. Re-evaluation of Pipe Systems

The S&L and licensee engineers recently re-evaluated the need for mechanical snubbers on pipe systems. Presently 148 (previously reported 50, and later changed to 142) INC mechanical snubbers

2318 203

and hundreds of hydraulic snubbers were considered to be needed for protection against seismic events, however, after the plant observation and analysis, (1) eight INC's were deleted from the systems, (2) 35 INC's were replaced by rigid type restraints, (3) 6 INC's were replaced by 3 kips hydraulic snubbers, (4) CG&E requested S&L to reconsider the need for 18 existing mechanical snubbers with design loads less than 50 lbs., (5) CG&E verbally ordered 81 PSC mechanical snubbers, through Bergen-Patterson, to replace the INC's (the size range for 350 lbs. unit to 6 kips unit), and (6) 10 PSC snubbers of various sizes were also ordered as spares. The inspector stated that the status of procurement of PSC snubbers, their replacement and installation will be reviewed during future inspections.

2. S&L Hanger Calculations

The absence of calculations for the design of suspension systems was reported to NRC, per 50.55(e) requirements, by the licensee. It was estimated that calculations will be made for approximately 4,200 safety related hangers, restraints, and snubbers. To the date of April 2, 1979, 742 calculations had been completed, among which, (1) for 363 the original design was determined to be acceptable, (2) 11 supports were voided, (3) 70 new supports were added (4) 176 required major redesign, and (5) 122 required minor redesign. The licensee stated that the original calculation completion date of June, 1979, will be moved to the end of July, 1979. The inspector stated that the status of hanger calculations and modification of hanger installation will be reviewed during future inspections.

3. Hanger Installation After Completion of Final Design Analysis

A HJK Field Construction Procedure No. 2-135, "Essential Pipe Support Installation After Sargent and Lundy Final Design Analysis," dated April 1, 1979, was prepared for the subject task at the site. The licensee representative stated that approximately 200 final hanger installation drawings had been received at the site and 50 of these hangers, involving both major and minor modifications, were in the process of being installed. The inspector questioned the adequacy of this work since Procedure 2-135 had not yet been approved by management, reviewed by HJK QA, and concurred with by CG&E QA. This is an unresolved item. (358/79-11-01).

2318 204

Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. One unresolved item disclosed during the inspection is discussed in Paragraph 3.

Exit Interview

The inspector met with licensee representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on April 19, 1979. The inspector summarized the purpose and findings of the inspection. The licensee acknowledged the findings reported herein.

2318 205