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

REGION III

Report No. 50-358/79-39

Docket No. 50-358 License No. CPPR-88

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

Facility Name: Wm. H. Zimmer Nuclear Power Station

Inspection At: Zimmer Site, Moscow, Ohio

Inspection Conducted: December 12-14, 1979

Inspectors: T. E. Vandel — Jan 14, 1980

for J. Hughes — Jan 14, 1980

for G. F. Maxwell — Jan 14, 1980

H. M. Wescott — Jan 14, 1980

Other Personnel: R. C. Knop

Approved By: R. C. Knop, Chief — 1-14-80
Projects Section 1

Inspection Summary

Inspection on December 12-14, 1979 (Report 50-358/79-39)
Areas Inspected: Review of previously identified unresolved and noncompliance matters, piping systems record review, instrumentation components and cables inspection and record review, follow up on IE Bulletins and licensee section 50.55(e) reportable deficiencies. The inspection involved a total of 89 inspector hours on site by four NRC inspectors.
Results: Of the eight areas reviewed, two noncompliances were identified in two of the areas. (Infractions, failure to perform independent inspections and failure to provide adequate equipment protection).

DETAILS

Persons Contacted

Cincinnati Gas and Electric Company (CG&E)

*B. K. Culver, Project Manager
*R. P. Ehas, QA&S Engineer
*D. C. Kramer, QA&S Engineer
*W. W. Schwiers, Principal QA&S Engineer
*R. L. Wood, QA&S Engineer
D. Fredericks, Mechanical Engineer

Principal Contractors

*K. R. Baumgarten, Henry J. Kaiser Co. (Kaiser) QA
*R. Marshall, Project Manager, Kaiser
L. L. Aiello, QC Inspector, General Electric

U.S. Nuclear Regulatory Commission

F. T. Daniels, Resident Inspector

*Denotes those present at the exit interview

Licensee Action on Previous Inspection Findings

(Open) Noncompliance Item (358/79-14-08) licensee neither responded to audit findings nor provided corrective action. A licensee audit was performed on July 9-12, 1979 relative to "Review and Acceptance of Quality Assurance Records" (17-QA&S-01) in response to the citation item. This audit included the item in question in addition to other areas of auditing activity with six deficiencies being identified.

(Open) Noncompliance Item (358/79-14-15) audits of calibration not sufficiently comprehensive. Traceability of calibration to national standards had not been required and had not been detected during audits. During review, this inspection, it was learned that the requirement had been added to procedure QAP 13 by revision 4 dated May 8, 1979. Also review of audits done of that procedure, one in November 22, 1978 (report No. 369) and one done in June 29, 1979 (report No. 384), disclosed that new requirement (in Paragraph 2.7) had not been audited. It was further learned that the current audit schedule covering QAP 13 show an audit to be done in February 1980. This item remains open for further review.

(Open) Noncompliance Item (358/79-14-14) Follow up for audit finding identified. It was established again that audit findings in 1977 and 1978 reports have not been followed up on in terms of reaudit and/or reinspection. The Kaiser QA Manager (acting) indicated that this would be done in the next scheduled audits. This remains open for further review.

(Closed) Noncompliance Item (358/79-14-16) Audit checklists were not available for review for seven audits of sixty eight audits reviewed. The licensee response was accepted for this item with the following information provided. Five audits were performed by a QA Engineer who has departed the Zimmer site with the two remaining audits being classified as spontaneous audits of activity found in progress. It was learned however, that training sessions have been reheld and that the need for developing and using checksheets was emphasized. This item is considered closed.

(Closed) Unresolved Matter (358/79-14-17) Specific Quality Assurance program elements appeared to have not been audited as scheduled and committed. The inspector was informed that an additional QA auditor has been added to the Kaiser staff to assure timely auditing activity. Additionally, an audit schedule appropriate for the audit frequency has been developed and is being followed for this activity. This matter is resolved.

(Closed) Noncompliance Item (358/79-14-19) Incomplete Audit tracking system records. Revision to the licensee procedure 18-QA&S-04 "Field Audit Log" to change the log was completed in revision 3 dated August current from the revision date to the latest entry (entries No. 166 through 256). This item is considered complete.

(Open) Unresolved Item (50-358/79-14-20) Furnace strip charts or heat treatment of the Reactor Recirculating Loop Piping System appear to be incorrect, incomplete and not in conformance with Purchase Specification No. 21A9318. The inspector reviewed test results performed by Metcut Research Associates, Inc. dated November 29, 1979, No. 64-28904-1, for Detection of Susceptibility to Intergranular Attack Per ASTM A262, Practice A, for test pieces as follows:

HT-2P4654-2C (761E379-8) base material
HT-2P4654-2C (761E379-8) weldment
HT-2P4654-2C (761E379-27) base material
HT-2P4654-2C (761E379-27) weldment

This item remains open pending the acceptability of the above tests.

(Closed) Unresolved Item (50-358/79-14-21) Test plates used for the Reactor Recirculating Loop Piping System did not appear to be traceable as different material heat numbers were used in this system, Purchase Specification No. 21A9318 Revision 3., defines lot as all pipe or fittings of the same mill heat of material wall thickness which is heat treated in one furnace charge.

A letter from General Electric to the licensee dated October 17, 1979 (CGE-1214) states that DDR No. 5030 has been revised to further clarify the definition of "lot" per A-358 as beingall pipe of the same material and same wad thickness which is heat treated in one furnace charge (may include more than one heat of steel). The twelve (12) pieces involved were of two Heat No.'s (335520 and 344654) and are shown to be in one furnace

charge per G.E.'s attached strip charts (Attachment A). This item is considered closed.

(Closed) Unresolved Item (358/78-01-03) Unqualified terminal blocks supplied by Conax Corporation for electrical penetrations. The RIII inspector reviewed Conax test report IPS 466 titled "Design Qualification Report of Terminal Blocks" dated October 17, 1979. The test was conducted to IEEE 317-1972 and Regulatory Guide 1.63, October, 1973. Tests included temperature, pressure, humidity, radiation, and electrical tests. The inspector has no further questions regarding this item. NOTE: IEEE Standard 317-72 does not include thermal aging.

(Closed) Unresolved Item (358/79-12-03) Re-inspection of modifications is being upgraded to a noncompliance as described in Paragraph 3.b. of Section 1 of this report.

Licensee Action on Bulletins

The RIII inspector verified the licensee's replies to the following NRC Bulletins and Circulars by observing the various electrical panels and other installations.

1. Bulletin 76-05

   Westinghouse Type BFD relays. This type of relay is not being used at the Zimmer plant.

2. Bulletin 79-11

   Westinghouse type DB-50 or 75 circuit breakers. These types of breakers are not being utilized at the Zimmer plant.

3. Bulletin 79-23

   Potential failure of emergency diesel generator (EDG) field exciter transformers. Review of logic drawings and visual inspection of EDG control panels indicates that a generator neutral ground thru a high resistance will limit the flow of circulating currents induced by harmonic voltages.

Section I

Prepared by J. Hughes
G. F. Maxwell

Reviewed by D. W. Hayes, Chief
Engineering Support Section 1

1. Instrumentation - Observation of Work Activities

a. The RIII inspectors selected several cables associated with the Primary Containment, Electrical Penetrations, Reactor Recirculation, and Process Radiation Monitoring systems in order to verify correct lugs used, minimum bending radius not exceeded, cable identification tags installed, and separation criteria maintained. The following cables were inspected: PR746C, PR747C, PR750D, PR751D, PC041, PC042, PC043, PC044, PR01 and PR019.

b. During the inspection, the inspectors observed that the electrical penetration terminal block assemblies had a excessive amount of dust, dirt, etc. accumulated on them. This item is considered to be in noncompliance with the requirements of 10 CFR 50, Appendix B, Criterion XIII, and applicable FSAR commitments, as described in Appendix A of this report. (358/79-39-01)

No items of noncompliance were identified except as noted in Paragraph 1.b.

2. Instrumentation - Review of Quality Records

a. The RIII inspectors reviewed 10 cable and termination records. The following were determined:

(1) Cable installation card revisions and the cable tabulations were complimentary. The inspectors verified that dates and revisions were current.

(2) Maximum pulling tension requirements were documented and met approved procedures.

(3) Cable type, cable class, code and reel numbers were included.

(4) KEI QA stamp provided documented evidence that cables were pulled in accordance with the applicable procedures.

b. The inspectors reviewed CIPs used for inspection of the ten cables and determined that prior to cable installation as evidenced by KEI QA stamp, the following prerequisites were met:

(1) Raceways clean and free from debris, burrs, and sharp edges.

(2) Raceways and supports complete so as to withstand pulling tensions.

(3) Raceways are identified as required by latest approved drawings.

(4) Cable tabulation and installation card complementary.

c. Cable pulling inspection records (CIP) included provisions as evidenced by KEI QA stamp, to verify that:

(1) Proper bending radii was not exceeded and maximum pulling tension recorded.

(2) Proper pulling compound was used where applicable.

(3) Cable was properly identified at each end and at 100' intervals.

(4) Temperature requirements have been complied with.

(5) Proper pulling method used.

(6) Cable routing correct.

(7) Proper cable material used.

d. The RIII inspectors reviewed cable termination records for the aforementioned cables. The following were determined.

(1) Termination drawings were the current revisions;

(2) Calibration records for crimping tools were up to date;

(3) Correct materials were being used.

e. Termination inspection records (CIP) included provisions as evidenced by KEI QA stamp, to verify that:

(1) Current drawing revisions are used;

(2) Component name and location;

(3) Cable number and number of conductors;

(4) Crimping tool calibrated and number of tool used;

(5) Stripping of cable and proper lug being used;

(6) Separation and bundies secured properly;

(7) Cable color codes correct;

(8) Inspector stamp and date of inspection.

No items of noncompliance were identified.

3. Other Areas

a. The RIII inspectors observed two motor operated valves for the RHR and RCIC systems, to verify if they were environmentally qualified for use inside the containment. The inspectors have no further questions on qualification of motor operated valves at this time.

NOTE: Motor operated valves suitable for use inside containment should have class RH motor insulation; all geared limit and torque switch materials should be made of gray or brown melamine. Outside containment, motors have class B insulation and red/black insulator material. All must be qualified for seismic events.

b. During this inspection the inspectors followed up on unresolved item, 358/79-12-03 and determined the following:

(1) Modifications are being installed/supervised by the electrical test group, these installations are not being re-inspected by individuals (QC) other than those who perform or supervise the activity being inspected.

(2) Modifications, repairs and replacements should be inspected in accordance with the original design and inspection requirements.

(3) The inspectors interview two personnel from the test group. Both stated they supervised craft personnel who were performing wiring modifications. This item is considered to be in noncompliance with the requirements of 10 CFR 50, Appendix B, Criterion X as described in Appendix A of this report. (358/79-39-01)

No items of noncompliance were identified except as noted in Paragraph 3.b.

Section II

Prepared by H. M. Wescott

Reviewed by R. C. Knop, Chief
Projects Section 1

1. Safety Related Piping - Review of Quality Records

The inspector reviewed quality assurance records of the Fuel Pool Cleaning and Clean-up System Piping to ascertain whether these records reflect work accomplishment consistent with NRC requirements and SAR commitments.

a. Review of QA records for pipe spools as follows:

(1) Spool No. 1FC-01CB10-5

(2) Spool No. 1FC-01CA10-4

(3) Spool No. 1FC-01CA10-3A

(4) Spool No. 1FC-01CB10-3

(5) Spool No. 1FC-01CB10-1A

(6) Spool No. 1FC-01CB10-1

(7) Spool No. 1FC-01CB10-2

b. The records for these spool pieces contained QA documentation as follows:

(1) Document Checklist - subassembly packages

(2) ASME Form NPP-1 Data Report for Fabricated Nuclear Piping Subassembly Fabricated to the ASME Code, 1972 Winter Edition, Class 3 with QA Level 1.

(3) Shop weld history record

(4) Record of radiographic testing

(5) Radiographic testing report including retest where welds were not acceptable

(6) Cleanliness status record

(7) Final inspection checklist

c. Review of the field weld data sheets as follows:

(1) 1-FC-010B10-2 to 1-FC-002B

(2) 1-FC-01B12-5 to 1-FC-002B

(3) 1-FC-01CA10-4 to 1-FC-0024

(4) 1-FC-01B12-5 to 1-FC-002A

(5) 1-FC-01B12-5 to 1-FC.20B10-88

(6) 1-FC-01B12-5 to 133

(7) 1-FC-14CA8-50 to 51

(8) 1-FC-14CA8-49 to 1-FC029

(9) 1-FC-14CA8-48 to 49

(10) 1-FC-14CA8-47 to 48

(11) 1-FC-17A8-57 to 1-FC-0 36 and 1-FC-037

(12) 1-FC-17A8-56 to 1-FC-036

d. The inspector reviewed five (5) welder qualification records of the welders making the above welds to verify qualification at the time of welding.

e. The inspector reviewed three (3) QC inspectors qualification records of those inspectors whose QC stamp appeared on the weld records.

f. Review of the weld material issue slips

g. Review of the radiographic testing reports

No items of noncompliance or deviations were identified in this area of the inspection.

Unresolved Matters

Unresolved matters are items about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved matters disclosed during this inspection are discussed in Section I of this report.

Exit Interview

The inspectors met with site staff representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on December 14, 1979. The inspectors summarized the scope and findings of the inspection, including the apparent items of noncompliance identified in the Details Section I of this report.

The inspectors also requested that the licensee notify the Region III office when the planned rehydro test of the reactor pressure vessel is to take place and reemphasized the previous requested regarding notification of the placement of quenchers and downcomer piping in the suppression pool and of the containment integrity test.