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

REGION III

Report No. 50-358/79-27

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 Nuclear Power Plant

Inspection At: Zimmer Site, Moscow, Ohio

Inspection Conducted: August 21-23, 1979

Inspectors: J. Hughes for D. W. Hayes 9/14/79

for J. J. Harrison D. H. Danielson 9/17/79

for H. H. Livermore D. H. Danielson 9/17/79

Accompanied By: J. R. Ortiz, Mexican Government

Approved By: D. W. Hayes, Chief D. W. Hayes 9/14/79
Engineering Support Section 1

Inspection Summary

Inspection on August 21-23, 1979 (Report No. 50-358/79-27)
Areas Inspected: Observation of work of the suppression pool, fuel storage areas, and instrumentation activities; review of previously identified noncompliance and unresolved matters; review of 10 CFR 50.55(e) 10 CFR Part 21 Reports and immediate action letter followup. The inspection involved 60 inspector-hours onsite by three NRC inspectors.
Results: Of the six areas inspected, one apparent item of noncompliance was identified in one area (infraction - failure to provide certification for rigging equipment).

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DETAILS

Persons Contacted

Principal Licensee Employees

*J. R. Schott, CGE Station Superintendent
*B. K. Culver, Site Project Manager
*W. W. Schwiers, Principal Quality Assurance and Standards Engineer
*J. F. Weissenberg, Quality Assurance and Standards Engineer
*J. W. Haff, Quality Assurance and Standards Engineer
*D. C. Kramer, Quality Assurance and Standards Engineer
*J. J. Wald, Operations Quality Manager
T. Busch, Operations Reactor Engineer
W. Craig, Operations Quality Engineer

Other Personnel

*R. Marshall, Project Manager, KEI
*R. E. Turner, Quality Assurance Manager, KEI
M. Franchuk, Quality Assurance Engineer, KEI
*E. V. Knox, Corporate Quality Assurance Manager, KEI

Other personnel of Cincinnati Gas and Electric Company (CG&E), KEI, and construction personnel, were contacted during the inspection.

*Denotes those present at the exit interview.

Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (358/79-15-1): Lack of tool control and positive identification of tools for use on stainless steel material. The inspectors observed that tools were marked to meet the requirements of Kaiser QACMI procedure Number 9. Tools verified were those in storage and in use. All tools observed during this inspection were marked as required.

(Closed) Noncompliance (358/79-15-02): Adequate and documented procedures were not available for tensioning anchor bolts. The inspector reviewed Field Construction Procedure 2-137, Revision 1 dated June 13, 1979, Installation of Suppression Pool Plates and Embedments, addition of section 2.1.7 included reference to stud tensioning in accordance with "Operating Procedures for Stud Tensioner and Pump". Also the "Operating Procedure for Stud Tensioning and Pump" dated May 18, 1979 was reviewed as documented by Sargent & Lundy letter No. S & L 12886, Mr. C. P. Bastidas to Mr. E. A. Borgman stating "acceptable for use. The procedure reviewed and controls in-place appeared to be adequate.

(Closed) Noncompliance (358/79-15-03): Portable weld rod heater boxes were not under control. The inspector reviewed records of the heater box

verification for the past three months, this included operability, heat range, box marking, issuance control and inprocess verification to Kaiser procedure SPPM 3.3 Revision 5. AM controls appeared to be adequate.

(Closed) Noncompliance (358/79-15-04): Base plate material lacked 100% ultrasonic testing material as required. The inspector reviewed letters from Lukens Steel to Carbon Steel (Plate Supplier) dated May 21, 1979 and May 16, 1979 stating that plate was layed out to 24" grids and each grid 100% ultrasonic inspected and that the testing requirements of ASTM A-578-77C Sections L.1 and S.1 requiring 100% ultrasonic search was performed satisfactorily.

(Open) Noncompliance (358/79-15-05): The quality of grout material has not been established. The inspector reviewed the certification for grout that was placed prior and during the inspections of May 8-11 and 17-18, 1979. The certifications were generic, did not relate to a specific lot, nor was this certification dated. Recent shipments of grout was so identified by lot number on the certification, providing required traceability. The licensee was requested to attempt to obtain specific certification (by control number) and for installed grout or revise their response to include in-process test results.

(Closed) Noncompliance (358/79-15-06): Weld filler material traceability was not being properly maintained in issue areas. The inspector observed the filler material storage area including holding ovens for calibration, maps for rod type, size, and heat/lot number. Also the training records for personnel working in this area were reviewed. Actions taken in this area appear to be satiafactory.

(Closed) Noncompliance (358/79-15-07): Liquid penetrant material (penetrant) was contaminated and lot traceability had not been maintained. The inspector observed that the liquid penetrant testing materials in use had traceability maintained and that no material was contaminated. Also procedure SPPM 4.2 had been revised to assure more positive control. All actions by the licensee appear to be adequate.

(Closed) Noncompliance (358/79-15-08): Weld filler material heating/holding ovens were contaminated by cooking lunches. The inspector observed the activities in the issue area and concluded that this type of problem appears to be under control, all ovens were clean during this inspection. In addition , Field Construction Procedure 1-19 dated May 17, 1979, titled "Nuclear Indoctrination and Training" prohibits the use of ovens for cooking lunches. Each rod attendant was so instructed and signed an attesting statement. These actions appear to be adequate.

(Closed) Noncompliance (358/79-15-09): Improper method of preheating being utilized. The inspector reviewed supplementary revisions to Kaiser procedures SSPM 3.1.59, and 3.1.80 that allows the preheating of carbon steel by the gas/oxygen torch method. Observations of welding activities revealed that only proper preheat was being utilized. In addition, the

records were reviewed for training session conducted on May 16-17, 1979, documented by Gerry Adams' memo to file dated July 10, 1979, to incorporate these requirements. Action is considered complete.

(Closed) Noncompliance (358/79-15-10): Welding interpass temperature was not being verified. The inspector reviewed the same training files as noted in 358/79-15-09 above. This file included instructions on how to monitor interpass temperature. Tempil sticks were also observed to be in use in the suppression pool during this inspection. Actions are considered to be satisfactory.

(Closed) Noncompliance (358/79-15-11): Noncomforming weld filler material was not properly controlled, segregated from acceptable material. The inspector observed the quarantine area that had been constructed in the issue area, this area properly utilized should preclude further segregation problems. In addition, the training records for the weld rod disbursement room attendants were reviewed to attest to instruction to the requirements of Kaiser procedure SPPM 3.3.

(Closed) Noncompliance (358/79-15-12): Records were not being maintained as required for in-process (welding) activities. The inspector observed work in-progress and that the required welding fabrication records KEI forms, were in-place. The KEI forms were currently being supplemented by a "Weld Status Control Data Sheet" control by procedure QACMI M-17. This procedure and the status sheet provides for more definitive controls, hold points and sign-offs. All required record sign-offs were commensurate with the status of the job. Action is considered satisfactory.

(Closed) Unresolved Item (358/79-15-13): Personnel not properly trained. The inspector reviewed tha training records for craft personnel and was able to conclude that numerous training sessions were conducted since the May, 1979 inspections. These training sessions included Field Construction Procedure FCP 1-19, Nuclear Indoctrination and Training and FCP 2-137 Suppression Pool Wall Plates and Embedments for 133 individuals. This matter is considered closed.

(Closed) Unresolved Item (358/79-15-14): Inadequate design review. The inspector reviewed the work controlling documents for the work in-process, S & L drawings as follows:

Dwg	Revision	Dated	Outstanding DDC's
S-468	A	3-22-79	20
S-469	A	3-22-79	29

A total of 49 DDC's were outstanding against 2 drawings. These drawings had not been revised since March 22, 1979. Prior to the exit meeting on August 23, 1979 the drawing transmitted was received for the drawings in question, all 49 DDC's were incorporated. The licensee was advised to continue the effort to resolve design review oriented problems and to assure DDC changes are incorporated in a timely manner.

(Open) Unresolved Item (358/79-15-15): Inadequate review and disposition of nonconformances. The inspector reviewed the action taken on the nonconformance reports in question and concluded that additional action is required. The action taken relative to NR-E-1762 however is considered complete and satisfactory. This item remains open.

Other Inspection Areas

1. Immediate Action Letter Follow-up

The inspector reviewed final actions by the licensee to assure that the requirements of the Immediate Action Letter (IAL) dated May 15, 1979 were met. The previous inspection of May 17-18, 1979, report 358/79-15, indicated the status of actions taken at that time. Those actions combined with the resolution of actions taken and denoted in section on "Licensee Action on Previous Inspection Findings" of this report close the actions required by the IAL.

2. 10 CFR 50, Section 50.55(e) Review

(Closed) 10 CFR 50.55(e) Report: 480 volt electric operated circuit breaker type k600S. The RIII inspector reviewed CG&E's nonconformance report 7267 dated February 13, 1979. Secondary latch hanging up on solenoid coil frame causing breaker to close where springs are charged. Gould-Brown Boveric company, manufacturer of the breakers, recommend a shim spacer be added to correct the identified deficiency. CG&E's work request No. 790282 dated May 17, 1979 was written to install shims in 102 electric operated circuit breakers type K600S in accordance with CG & E's maintenance procedure Nos. ME CMP2 and 14. The work was completed on June 5, 1979. The RIII inspector reviewed all pertinent documentation pertaining to this matter and has no further questions at this time.

No items of noncompliance were identified.

3. Licensee Actions Pursuant to 10 CFR 21

(Closed) 10 CFR 21 Report: Jamesbury Corporation, supplies of mounting brackets (four), for certain valve actuators reported pursuant to 10 CFR 21 that brackets did not meet specified seismic requirements.

The RIII inspector had previously questioned the seismic qualification of the modified actuator mounting brackets for 3 g's by testing. Sargent & Lundy's (S & L) specification H-2265, seismic qualification requirements is 5 g's. The inspector reviewed S & L's letter SLC-12812 dated May 15, 1979 addressing the reduced seismic requirements. S & L's piping analysis checked the acceleration to ensure that the actuators (valves) did not exceed the qualified g levels. The A/E determined that the accelerations are substantially less than the 3

g's which the modified actuator mounting brackets were qualified to. Reference IE inspection report No. 79-09 dated April 9, 1979 for addition documentation.

No items of noncompliance were identified.

4. Licensee Action on IE Bulletins

The RIII inspector reviewed the licensee action relative to IE Bulletin Nos. 77-05, 77-05A, 77-07, 78-02 and 78-04 and verified that: licensee management forwarded copies of the bulletins to appropriate onsite management representatives; information discussed in the licensee's response was accurate; and action taken, if any, was as described in the responses.

The inspector determined that the licensee had performed a systematic review of the facility to ensure that no connectors, electrical penetrations, terminal blocks or limit switches of the types identified in the bulletins were installed in safety related systems.

a. Qualification of Electrical Connectors IE Bulletins 77-05 and 77-05A).

(1) Amphenol connectors, of similar type in the bulletin are utilized on the SRM, IRM, and LPRM neutron monitoring circuits. The connectors have no safety significance to the RPS, since failure of the signal will affect logic in the safe direction only.

(2) Safety-related connections to the electrical penetration feed thru conductors (pigtails) utilize terminal blocks.

b. Qualifications of Electrical Penetrations (IE Bulletin 77-07)

The RIII inspector reviewed documentation for Conax type electrical penetrations which is documented in IE inspection report No. 78-16 dated September 14, 1978.

c. Qualification of Terminal Blocks (IE Bulletin 78-02)

This item is being carried by RIII as a unresolved matter (78-01-03).

d. Qualification of Limit Switches (IE Bulletin 78-04)

(1) The limit switches located on the Main Stream Insolation Valves (MSIV's) are being replaced with environmentally (LOCA) qualified ones.

(2) The licensee is reviewing all other limit switches located inside the containment.

No items of noncompliance were identified.

5. Licensee Action on IE Circular 78-08

a. The licensee stated that evaluation of IE Circular 78-08 has not been completed.

b. The Region III inspector reviewed documentation for the following components that have been completed by the licensee:

(1) Limitorque Valve Operators: Franklin Institute Research Laboratories test report F-C3441 dated September 1972 included pressure, temperature, steam and radiation test results. The inspector determined that the results were satisfactory.

(2) Electrical transmitters - The RIII inspector reviewed equipment location drawings and by observation determined that electrical transmitters required to be operable during and after a postulated accident are located outside the drywheel.

(3) Solenoid valves for containment isolation located in the drywell have not been fully evaluated as of this date.

(4) Electrical cables were reviewed by the RIII inspector during this inspection, and the findings were as follows:

Raychem test report EM744A dated July 25, 1973 included test results for vertical and horizontal flame test. Franklin Institute Research Laboratories (FIRL) test report F-C4033-1 dated January 1975 included pressure, temperature, stream aging, and radiation. Raychem Thermofit WCSF-N heat-shrinkable tubing splice material was included in this test. The RIII inspector considered the results satisfactory.

Kerite qualification test dated June 25, 1976 included pressure, temperature, steam aging and radiation. The RIII inspector considered the results satisfactory.

No items of noncompliance were identified.

Section I

Prepared by J. Hughes

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

1. Instrumentation - Observation of Work Activities

The RiII inspector selected several cables associated with the Nuclear Boiler Automatic Depressurization system 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: NB790, NB791, NB792, NB793, and NB794.

No items of noncompliance were identified.

2. Instrumentation - Review of Quality Records

a. The inspector reviewed five cable installation records. The following was determined:

(1) Cable installation card revisions and the cable tabulations were complimentary. The inspector 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 by hand.

b. The inspector reviewed CIP's 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 ter ons.

(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. Records and other documents reviewed include:

(1) Cable Installation (Cable Number)

NB790	NB793
NB791	NB794
NB792	

(2) Raceway Stations

1214K	RK1031
1221K	1037K
SL027	1038K
1084K	1039K
1083K	1040K

(3) Construction Inspection Plan No. CP-8-6-79A

No items of noncompliance were identified.

3. Nonconformance Records

a. The RIII inspector reviewed ten nonconformance Reports (NR) E-1841, E-1896, E-1319, E-1356, E-1356, E-1843, E-1951, E-1760, E-1908 and E-1666R1.

b. All NR's were legible, retrievable, and indicated status i.e., a lack of quality control inspector's signature indicated NR not closed out.

No items of noncompliance were identified.

Section II

Prepared by J. J. Harrison

Reviewed by D. H. Danielson, Chief
Engineering Support
Section 2

1. Observation of Work Activities in the Suppression Pool

The inspector observed the work in progress during this inspection that pertained to wall plate installation. This included fit up, welding, grinding, and inspection activities. These observations also included controls, tools for special weld filler materials, process records liquid penetrant material, and welder qualifications. These observation were also instrumental in clearing the IAL and open items.

No items of noncompliance or deviations were identified during the observations noted above.

2. Review of Quality Procedures and Implementation

The inspector reviewed the following procedures, revision to these procedures, and implementation in specific areas:

- Kaiser Procedure SPPM 3.1 Revision 4, Supplement 6, dated May 19, 1979.
- Kaiser Operating Procedures for Stud Tensions and Pump dated May 18, 1979.
- Kaiser Field Construction Procedure FCP 2-137, Revision 1, Installation of Suppression Pool Wall Plates and Embedments.
- Kaiser Procedure SPPM 3.3, Revision 5, Welding Filler Material Control.
- Kaiser Procedure SPPM 4.2, Revision 2, Liquid Penetrant Examination.
- Kaiser Field Construction Procedure FCP 1-19, dated May 17, 1979, Nuclear Indoctrination and Training.
- Kaiser Welding Procedures SPPM
  3.1.59 Revision "0" and supplements
  3.1.80 Revision "0" and supplements
  3.1.57 Revision "0" and supplements
  3.1.21 Revision "0" and supplements

- Kaiser Procedure WACMI M-17, dated August 6, 1979, Suppression Pool Wall Plate Weld Status Control Data Sheet.

- Kaiser Procedure QACMI-9, Tool Control.

- Kaiser Field Construction Procedure FCP 2-29, dated July 11, 1979.

- Kaiser Procedure SPPM-8.0 including Appendice "B" and "F", Weld Data (KE-1) Form Control Procedure.

No items of noncompliance or deviations were identified during the review noted above.

Section III

Prepared by H. H. Livermore

Reviewed by D. H. Danielson, Chief
Engineering Support
Section 2

1. Observation of New Fuel Storage and Laydown Areas of Reactor Building, Unit 1

The inspector made formal entry into the Radiation Control Area of the 627' elevation of the Reactor Building. Fuel movement activity was not in progress at that time. Forty-two fuel bundles were stored in the vertical fuel storage racks in the dry Fuel Pool. Twenty fuel bundles were in horizontal storage in metal shipping containers in the fuel laydown area. The following handling slings for the containers and fuel bundles were stored in the fuel laydown area:

1-4 strand choker sling (approx. 6')
1-4 strand choker sling (approx. 10')
2-webbing (nylon) slings
1-2 strand sling with spreader bar

A visual inspection of the slings indicated no individual or control identification. There were no tags or information attached to the slings to indicate if any prior proof load tests had been performed on the subject equipment. Load test certification papers were not available on site, and the licensee was unable to obtain same from the supplier. The licensee voluntarily stopped all work in regard to handling and moving new fuel until resolution of load testing certification.

The above conditions are considered to be in noncompliance with Criterion XIII of 10 CFR 50 Appendix B; Zimmer FSAR Volume 9, Appendix C, Revision 24, Page C-34a; ANSI N45.2.2, Section 7.4; CG & E New Fuel Procedure NE.FHP.03, Paragraph 3.3; and CG & E New Fuel Procedure NE.FHP.04 Paragraph 3.3, 3.4 and 3.7.

The inspector performed a followup inspection the next day and witnessed the load testing of the subject slings. The slings were individually marked for identification, load tested, and control/record documentation established. This item is considered to be resolved. (358/79-27-01)

2. Review of the Constructor's (Kaiser) Handling Equipment Load Test and Control Program

The inspector interviewed the Kaiser Quality Engineer in charge of the handling equipment control program. A cursory review was also performed of the Kaiser control records with a CG & E Quality Engineer.

The CG & E QA Manual Section 13.3.3 (in regards to Kaiser procedures) states in part, "On site handling is controlled to prevent damage and retain integrity of the item . . . ." Section 13.1.3 (in regards to CG & E) states in part, QA & S Section audits the on-site handling and storage activities of the constructor . . . ."

CG & E Quality Assurance has taken voluntary action to perform a detailed audit of the constructor's (Kaiser) handling equipment control and load test program (slings, etc.). This is considered an unresolved item (358/79-27-02).

3. Overall Site Inspection

While in containment, the inspector was approached by a craft workman in regards to a rumor of high radiation being present in the vicinity of the new fuel in the Reactor Building. During the previously recorded inspection (item No. 1), the inspector noted that daily radiation postings of readings in the fuel laydown area did not exceed 1 mrem per hour. This information was provided to the workman's foreman (Mr. Johnson) for dissemenation since the workman had left the site. The licensee took voluntary action to provide radiation and safety information to all craft personnel at meetings prior to the start of each shift.

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. Unresolved items disclosed during the inspection are discussed in Section III, Paragraph 2.

Exit Interview

The inspector met with staff representatives (denoted in the Persons Contacted paragraph) at the conclusion of the inspection on August 23, 1979. The inspector summarized the scope and findings of the inspection. The licensee acknowledged the findings as reported.