

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

REGION III

Report No. 50-358/81-18

Docket No. 50-358

License No. CPPR-88

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

Facility Name: W. H. Zimmer Nuclear Power Station

Inspection At: W. H. Zimmer, Moscow, Ohio

Inspection Conducted: June 1-5, 8-12, 15-19, 22-26, 1981

Inspectors: *RFW for* F. T. Daniels 7-22-81  
*RFW for* T. P. Gwynn 7-22-81  
*RF Warnick*  
Approved By: R. F. Warnick, Chief 7-22-81  
Reactor Projects Section 2B

Inspection Summary

Inspection on June 1-5, 8-12, 15-19, 22-26, 1981 (Report No. 50-358/81-18)

Areas Inspected: Routine resident inspection of Previously Identified Items, Followup on IE Bulletins and Circulars, Followup Immediate Action Letter, Preoperational Testing Quality Assurance, Preoperational Test Records, Preoperational Test Procedure Review, Fire Prevention/Protection, Maintenance Procedures, Operations Staff Training, and Plant Tours. This inspection involved a total of 185 inspector-hours onsite by two NRC inspectors, including 24 inspector-hours onsite during offshifts.

Results: Of the eleven areas inspected, ten were found to be satisfactory and one item of noncompliance was identified in the area of Preoperational Testing Quality Assurance (Violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, Severity Level IV).

1. Personnel Contacted

\*J. R. Schott, Plant Manager  
\*H. R. Sager, Quality Assurance Manager  
\*S. C. Swain, CG&E Construction Project Manager  
\*J. J. Wald, Station Quality Engineer  
M. F. Rulli, CG&E Quality Engineer  
W. T. Gott, Training Coordinator  
J. C. Buck, CG&E Lead QA Auditor  
P. I. Adkins, CG&E Lead QA Auditor  
J. F. Schaeffer, GED  
W. D. Waymire, Manager GED  
S. E. Martin, Professional Engineer  
B. Varchol, KEI QA Training Coordinator  
P. Kyner, KEI QA Manager  
C. Schroeder, KEI Turnover Coordinator  
M. B. Hill, EPD Office & Document Control Supervisor  
R. Ballow, GE System Engineer  
D. M. Outcalt, EPD Tech Staff Engineer  
R. E. Donnellon, EPD Maintenance Supervisor  
and others of the station staff.

\*Denotes those attending monthly exit interview.

2. Licensee Action on Previously Identified Items

(Closed) 10 CFR 50.50(e) Reportable Item, M-17, Diesel Generator Oil Cooler Failure.

The water box was repaired, hydrostatically tested and the diesel was successful load tested for eight hours with no evidence of oil or water contamination.

(Open) Unresolved Item (50-358/80-21-01): Reevaluation of Fire Preplans.

The inspector verified that the licensee is taking action to resolve identified problems with these preplans, however that action is not complete. This item will be the subject of a future inspection.

(Closed) Unresolved Item 50-358/81-07-01): Comprehensive QA Audit similar to the requirements of the Startup Manual for Preoperational turnover packages.

This item has been upgraded to Noncompliance (50-358/81-18-01).

(Open) Unresolved Item 50-358/79-38-03): Responsibilities Not Assigned For Establishing Retention Periods For Records.

The inspector determined that the licensee is attempting to develop the required administrative controls. This item will be followed up in a future inspection.

(Closed) Unresolved Item (50/358/81-15-03): Lack of guidelines for CG&E Review of HJK Surveillance Report as per Item 9 of 8 April 1981 Immediate Action Letter.

The inspector verified that guidelines have been established for above said review by CG&E QA Group procedure, Review and Disposition of HJK Surveillance Reports. (10-QA-06, revision 00)

3. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presentation in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

(Closed) IE Bulletin 80-05: Vacuum Condition Resulting in Damage to Chemical Volume Control System (CVCS) Holdup Tanks.

4. IE Circular Followup

For the IE Circulars listed below, the inspector verified that the Circular was received by the licensee management, that a review for applicability was performed, and that if the circular was applicable to the facility, appropriate corrective actions were taken or were scheduled to be taken.

(Closed) IE Circular 79-05: Moisture Leakage in Stranded Wire Conductors.

(Closed) IE Circular 80-11: Emergency Diesel Generator Lube Oil Cooler Failure.

5. Followup on Immediate Action Letter (IAL) Dated April 8, 1981.

The inspectors reviewed the licensees progress in the implementation of the various requirements imposed by the IAL. The results of the inspection were:

a. Item 1 - Concerning QA Staffing

The CG&E QA staff was still being increased and as of June 29, 1981 it was still 7 individuals short of the projected necessary staffing level. The work load of the QA engineers is still quite great, but as the last few individuals are acquired and some of the requirements imposed by the IAL are completed, this work load will become less. The majority of the new personnel are contract individuals and only three are new CG&E employees. These individuals are recent college graduates, therefore it will take at least a year for them to become qualified Quality Engineers.

b. Item 3 - Concerning QC Inspections

The QC inspection staff was only four individuals short of the new projected staffing level of 32. All but three inspectors are contract individuals, but the licensee intends to acquire eight qualified inspectors to become part of the CG&E staff.

There still was sufficient inspectors on site to perform the required reinspections of ongoing construction activities.

c. Item 4 - Concerning QC Inspection Procedures

The administrative review of all QC inspection procedures has been completed by CG&E and HJK Company. The next phase will be the technical review (i.e. code compliance, inspection criteria, etc...).

The Region III USNRC Technical staff will continue to provide a further review of some of the procedures.

d. Item 5 - Concerning Training

The inspector verified that both KEL and CG&E QC Inspectors were receiving necessary training, as inspection procedures were revised, that inspection supervisors were being kept abreast of the status of inspector qualification, and that training records were being maintained current for QC inspectors. One discrepancy noted in the qualification requirements for a CG&E QC (electrical) inspector was corrected immediately.

e. Item 8 - Concerning QA/QC Records

There has been no significant progress made since the last inspection of this area (refer to IE Inspection Report 50-358/81-15).

f. Item 9 - Concerning Condition Adverse to Quality

The guidelines have been established and procedures written for the CG&E QA Group to insure Nonconformance (NR) and Surveillance (SR) reports issued by HJK Group are reviewed, evaluated and dispositioned properly. These actions were considered adequate to closeout unresolved item 50-358/81-15-03.

g. Item 10 - Concerning the Audit Program

The licensee was in the process of developing a new revised audit schedule and implementing procedures for a new comprehensive audit program. Also, the surveillance program to audit ongoing construction activities is still in the developmental stages. During the interim, since 8 April 1981 Immediate Action Item, 100% reinspection has been and will continue to be performed by the CG&E QC inspection group. Therefore, unresolved item 50-358/81-15-04 is still considered open and the development of the surveillance program will be followed up in subsequent inspections.

6. Preoperational Testing Quality Assurance

The inspector verified that the licensee's program for QA/QC surveillance and audit of preoperational testing activities has continued to be implemented as described in previous IE inspection reports (refer to 50-358/80-14, 80-21, 80-26, and 81-07). In particular, the inspector verified that revision made to a previously reviewed procedure conformed to applicable standards and regulatory guidance; that selected audits and surveillance activities performed since the last inspection of this area were performed in accordance with approved procedures as designated by surveillance schedules; that deficiencies identified during the performance of preoperational testing activities were being controlled via the nonconformance reporting system; and that nonconformance reports were being dispositioned by the station material review board. In addition, the inspector attempted to verify that the licensee's surveillance and audit of preoperational turnover activities from construction to the Electric Production Department were being conducted in accordance with established procedures or checklists, and that corrective actions for any discrepancies identified were being taken in an appropriate and timely fashion.

a. Documentation Reviewed

- (1) QA.SAD.07, Revision 03, Operational QC Inspection Program dated April 11, 1981
- (2) Station Audit EC-ME-06, Work Requests dated May 29, 1981 and response
- (3) Station Audit RP-RC-02, Radiation Protection dated March 12, 1981
- (4) Nonconformance Report 81-74-E dated May 28, 1981
- (5) CG&E Startup Manual, Revision 05 dated July 25, 1979
- (6) QA&S Field Audit Report #322 dated July 17-18, 1980
- (7) QA&S Field Audit Report #351 dated April 24, 1981
- (8) System Index Test Matrix for PT-VC-02
- (9) System Index Test Matrix for PT-VG-01
- (10) QA&S Field Audit Report #354 dated June 22, 1981

b. Findings

- (1) During the last inspection of this area, an unresolved item was disclosed (50-358/81-07-01) concerning Startup Manual requirements which were not reflected in the implementing procedures. Of particular concern to the inspector were the QA requirements of Section 6.3.2 and 6.3.3 which had been deleted from the implementing procedures. In response to



this concern, the CG&E QA Manager committed to performing a comprehensive audit similar to that required by the Startup Manual for preoperational turnover packages. The audit was to include a representative sample of both turned over systems and systems being readied for turnover, and was to be completed by April 8, 1981. Reference a.(7) above is the audit report. Reply to these audit findings was requested by May 25, 1981 but had not been received by June 12. Four of the audit checklist items were not completed "due to priorities which occurred during the conduct of the audit." This audit report did not address the concerns expressed in unresolved item 81-07-01. This was brought to the attention of the CG&E QA Manager several times, including a followup report on unresolved item 81-07-01 in IE Inspection Report #81-15, but no action was taken. Therefore, the inspector audited two system index test matrices; one for the VG System (compiled before deletion of the implementation of the Startup Manual QA requirements), and one for the VC System (compiled after deletion of the implementation of the Startup Manual QA requirements).

The inspector found that construction test documentation contained in the VG turnover package was complete and certified complete by H. J. Kaiser QA. One discrepancy was found in the documentation for construction test HVAC-5 performed on filter package 1VG05SB; the maximum allowable leakage was identified as 2.25 CFM and the measured leakage was identified as 3.30 CFM. This discrepancy was brought to the attention of the cognizant construction engineer who identified nonconformance report #7451. (This nonconformance report, dispositioned accept as is, has been included in the PT-VG-01 turnover package for completeness.)

The construction test documentation contained in the VC turnover package was incomplete. In particular, the following test documentation was not included:

(a) EC-1 forms were not included for the following cables:

VC-231#, 311#, 312\*, 313, 335\*, 397, 400, 401, 710  
VR-060 thru VR-139 inclusive\*  
VT-115 thru 117, 120 thru 148, and 150 thru 167 inclusive\*  
VW-085 thru 089 inclusive\*  
VX-128 thru 148, and 156 thru 205 inclusive\*  
VY-070 thru 075 inclusive\*

(b) Various test documentation was missing pertaining to verification of the following S&L E1010 electrical design drawings:

<u>Drawing</u>			<u>Missing Documentation</u>
E1010	Pg.	VC 12	EC-12#
"	"	VC 15	EC-12
"	"	VC 16	EC-11, 12, 13
"	"	VC 17	EC-11, 12#, i3
"	"	VC 24	EC-12
"	"	VC 25	EC-12, 13
"	"	VT 17	EC-12, 13
"	"	VR 11	EC-12, 13
"	"	VC 28	EC-12, 13
"	"	VC 27	EC-12
"	"	VC 26	EC-12, 13
"	"	VC 23	EC-12, 13
"	"	VW 06	EC-12, 13
"	"	VX 12	EC-12, 13
"	"	V 03	EC-12, 13

The turnover coordination group (TCG) was initially unable to produce any of the aforementioned documentation, however, items marked with an asterisk (\*) were subsequently located misfiled in their area.

Inspection at the Electrical Operating and Test Department (EOTD) revealed that the items marked with a pound (#) had completed test documentation on file (only a cross-sectional sample of the missing documentation was checked by the inspector). However, it was determined that an annunciator verification test (EC-11) had not been performed for E1010 Pg. VC-17. This may also be the case with other tests which were not included in the sample. These outstanding test requirements were not identified on the system punchlist prior to turnover for preoperational testing as required by SU.PRP.01.

The results of this NRC audit were immediately brought to the attention of licensee personnel and were subsequently the subject of a meeting between the NRC resident inspectors and the CG&E Managers of GED and QA. A CG&E Audit (CG&E QA Audit Report #354 dated June 22, 1981) conducted subsequent to this meeting as a result of the NRC findings failed to identify any problem with construction test documentation in package PT-VC-02.

The inability of CG&E QA&S to take appropriate action, to identify, and to correct this problem which has been repeatedly brought to the attention of the CG&E QA Manager by NRC inspectors is in noncompliance with 10 CFR 50, Appendix B, Criterion XVI and the Wm. H. Zimmer Quality Assurance Manual, Section 16.1 which states in part that the QA Division of CG&E is responsible for evaluating QA program deficiencies identified by project participants and that the corrective action required to eliminate the deficiencies, assurance that corrective action is taken and appropriately documented, and reporting such deficiencies and corrective actions to appropriate levels of management is the responsibility of QA. (50-358/81-18-01)

- (2) The TCG did not have the latest revision of SU.ACP.14 and SU.ACP.19 in their controlled copy of the startup administrative and project procedures. This was brought to the attention of EPD Document Control. Also, this controlled copy manual contained copies of SU.ACP.06, 09, 11, 12, and 15, all of which had been previously cancelled. This was corrected immediately by the turnover coordinator.
- (3) The cognizant system engineers signature did not appear on the first page of the VC SITM as required by SU.PRP.06, Section 5.4. This finding is similar to CG&E AFR #351, item #2 for the VV and RR Systems.

#### 7. Preoperational Test Records

The inspector verified that administrative controls have been established and implemented for maintaining records of preoperational activities, for records storage, and for records retention as required by the Wm. H. Zimmer FSAR, ANSI N45.2.9 - 1974, and applicable regulatory guidance.

##### (a) Documentation Reviewed

- (1) RM.SAD.01, Revision 00, Records Management dated July 3, 1978
- (2) MM.SAD.01, Revision 01, Station Maintenance dated May 14, 1979
- (3) MM.SAD.02, Revision 02, Preventive Maintenance dated February 8, 1980
- (4) SU.ACP.04, Revision 04, Preparation, Review, Approval, and Revisions to Preoperational Test Procedures dated April 19, 1979
- (5) SU.ACP.05, Revision 10, Conduct of Preoperational Tests dated April 2, 1981
- (6) SU.ACP.07, Revision 06, Qualifications of Preoperational Test Personnel dated April 2, 1981
- (7) US.ACP.13, Revision 05, Processing of Engineering Change Requests dated January 16, 1981
- (8) SU.PRP.01, Revision 13, System Release and Turnover dated November 11, 1980
- (9) SU.PRP.04, Revision 05, Punchlist Item Completion and Maintenance In Turned Over and Non-Turned Over Areas dated July 22, 1980
- (10) SU.PRP.06, Revision 00, Generation and Control of the System Index Test Matrix dated December 4, 1980
- (11) SU.PRP.09, Revision 00, Turnover Group Records dated August 27, 1980
- (12) TR.SAD.01, Revision 00, Station Training Program dated May 11, 1978



- (13) QD.QAI.15, Revision 00, Disposition of QA/QC Group Quality Assurance Records dated January 7, 1981
- (14) RC.RPP. 1.211, Revision 07, Radiation Exposure Records and Reports dated February 5, 1981
- (15) DC.DCP.02, Revision 02, Transmittal of Documents and Records dated March 21, 1980
- (16) DC.DCP.03, Revision 02, Operation of the Central File dated September 14, 1979
- (17) DC.DCP.05, Revision 00, Destruction of Documents, Records, and Reports dated September 14, 1979
- (18) DC.DCP.06, Revision 02, Procedure Control dated September 14, 1979
- (19) DC.RIC.05, Revision 00, Hard Copy File Maintenance dated October 23, 1980
- (20) DC.RIC. 06, Revision 00, Document Disposition dated October 23, 1980

(b) Findings

- (1) DC.DCP.03, Section 3.7.1 described acceptable present practice for controlling DDC's at the station while the station document control center is acting as a satellite of the construction document control center. However, if the station becomes the central location for controlling DDC's (ie: upon completion of construction), then the practice of Section 3.7.1 would not be acceptable for control of lifetime records. Also, Section 3.7.2 refers to "VOIDED" nonconformance reports (NR's). Reference to QA.SAD.06, Nonconformance Reporting, reveals that there is no provision for voiding NR's. These items were brought to the attention of the Office and Document Control Supervisor for his information and possible action.
- (2) DC.DCP.05 fulfills the requirement of Regulatory Guide 1.33, Appendix A, as the general administrative procedure for record retention and is classified by Regulatory Guide 1.33 as "safety-related". However, this procedure was prepared in accordance with the requirements of SA.SAD.06, Review, Approval, Issue, Revision, and Usage of Implementing Procedures, as a nonsafety-related procedure (no independent review, no SRB approval, etc.) This was brought to the attention of the Office and Document Control Supervisor and the Station Quality Engineer who stated that their final action on unresolved item (50-358/79-38-03) would address this concern.

- (3) The records storage facility is under construction as part of the service building addition. The records storage facility and controlled environment conditions of ANSI N45.2.9-1974 should be satisfied upon completion of construction.
- (4) The inspector selected three types of records (preventive maintenance, corrective maintenance, and turnover system index test matrices) and verified that these records are being maintained and are retrievable as described in the implementing procedures.

No items of noncompliance or deviations were noted.

8. Preoperational Test Procedure Review

The inspector reviewed the Reactor Core Isolation Cooling System pre-operational test procedure PO.RI.01, Revision 01 dated May 11, 1981. This included a review for proper management review and approval, procedure format, test objectives, prerequisites, acceptance criteria, initial test conditions, references, proper administrative test controls, and a sample check for technical adequacy of the detailed step-by-step procedure. Several minor comments were discussed with the cognizant system engineer.

No items of noncompliance or deviations were noted.

9. Fire Prevention/Protection

The inspector verified that fire protection system surveillances were being conducted in accordance with a schedule; that fire fighting equipment was in place in the control room, cable spreading room, on the refueling floor, and in selected areas of the reactor building, and had been recently tested; that control room panel interiors and the cable spreading room were free of combustible materials; and that no obvious fire hazards existed in selected areas of the reactor building. No independent fire inspections have been performed since the last inspection in this area.

a. Documentation Reviewed

- (1) Surveillance results for the following surveillance procedures:
  - (a) ME.SFP.721, FP Diesel Weekly Battery Check
  - (b) ME.SFP.722, FP Diesel Quarterly Battery Check
  - (c) OP.SFP.714, FP Electric Pump Operability Test
  - (d) OP.SFP.718, FP Diesel Operability Test
  - (e) OP.SFP.736, FP System Valve Lineup Check

b. Findings

- (1) The inspector noted that cable tray 2080K in the cable spreading room contained lumber (a 1" x 12" x 6' plank) and foam rubber padding. This material was removed by the licensee.
- (2) The inspector observed that the fire hose in station 1FP-33M on the 575 foot elevation of the reactor building was disconnected from the fire header. This was re-attached immediately by operations personnel.
- (3) Although control room panels were free of combustible materials, the inspector noted the accumulation of dust in the cabinet interiors. This was of particular concern since several multi-layer switches provided with dust covers were missing their dust covers and are therefore susceptible to contact fouling. This was brought to the attention of EPD management.

No items of noncompliance or deviations were noted.

10. Maintenance Procedures

The inspector reviewed maintenance procedures to determine their adequacy for control of maintenance on safety-related systems and components. This included a detailed review for procedure scope, technical content, and appropriate format.

a. Documentation Reviewed

- (1) ME.RFP.3.04, preliminary draft, Steam Separator Removal and Installation
- (2) ME.RFP.4.01, preliminary draft, Drywell Head Removal
- (3) ME.RFP.3.03, preliminary draft, Steam Dryer Removal and Installation
- (4) ME.CMP.4.04, preliminary draft, Diesel Main Bearing Replacement.

b. Findings

- (1) The draft maintenance procedures, although incomplete, generally reflect the minimum format requirements imposed by the station administrative directives.
- (2) Two of the draft maintenance procedures do not have QC hold or witness points specified. This will be rectified in the review process.

- (3) The Wm. H. Zimmer Master Procedures Index does not reflect all outstanding maintenance procedures to be written. In particular, surveillance procedures required to satisfy technical specifications requirements were not included on the list. The maintenance supervisor stated that this omission will be corrected.

No items of noncompliance or deviations were noted.

11. Operations Staff Training

The inspectors verified that the operating staff was being trained utilizing a continuing training program, although, some facets of various programs aren't being conducted until just prior to fuel load, that the on-the-job training requirements have been established for the various categories of personnel assigned at the station, and that responsibilities for evaluation of the various training programs has been assigned.

a. Material Reviewed

(1) Documents

- (a) Wm. H. Zimmer FSAR, Chapter 13.2, Training Program
- (b) ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel.

(2) Training Records

- (a) Two Preoperational/Startup Engineers
- (b) Two Staff Supervisors

(3) Procedures

- (a) TR.SAD.06, Revision 00, Rad/Chem Technician Training
- (b) QA.SAD.08, Revision 01, QA/QC Personnel Qualifications Requirements

b. Findings

- (1) Some clerical errors were noted in personnel training records. These were either already being corrected or were corrected immediately by the Training Coordinator.
- (2) The previously identified unresolved items in the area of training (#80-17-01, #80-21-03 and #81-01-01) are still considered open and will be reinspected during subsequent inspections.

No items of noncompliance or deviation were noted.

12. Plant Tours

The inspector noted burnt and partially charred paper trash lying in the area of the fourth level, RHR Heat Exchanger Room 'B' in the reactor building. This appeared to be the scene of an unreported fire. The area continued to be a fire hazard. This was brought to the attention of the licensee and was cleaned up immediately.

The inspector noted a heavy accumulation of paper trash in the area of the water reservoirs for the 'B' and 'C' Diesel Generators. This potential fire hazard was brought to the attention of the licensee and was cleaned up immediately.

13. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on June 26, 1981. The inspectors summarized the scope and findings of the inspection.