

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/84-30(DRP)

Docket No. 50-461

License No. CPPR-137

Licensee: Illinois Power Company
500 South 27th Street
Decatur, IL 62525

Facility Name: Clinton Power Station

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: October 3 through November 21, 1984

Inspectors: T. P. Gwynn

P. L. Hiland

Approved By: *J. J. Gallagher for*
R. C. Knop, Chief
Reactor Projects Section 1C

12/4/84
Date

Inspection Summary

Inspection on October 3 through November 21, 1984 (Report No. 50-461/84-30(DRP))

Areas Inspected: Routine, safety inspection by resident inspectors of construction and pre-operational testing activities including previously identified items, allegations, employee concerns, independent inspection effort, functional or program areas, and site activities of interest. The inspection involved a total of 183 inspector-hours onsite by two resident inspectors, including 21 inspector-hours onsite during off-shifts.

Results: Of the six areas inspected, one item of noncompliance was identified (failure to follow procedures - paragraph 3.b) and one deviation was identified (failure to implement commitments contained in the CPS FSAR - paragraph 5.b).

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DETAILS

1. Personnel Contacted

Illinois Power Company (IP)

- *G. Bell, Director Construction & Procurement QA
- *J. Brownell, QA Specialist
- R. Campbell, Director - Quality Systems and Audits
- W. Connell, Manager - Quality Assurance
- *J. Cook, Assistant Plant Manager
- H. Daniels, Project Manager
- F. Edler, Startup Support Group Coordinator
- L. Floyd, Supervisor - Quality Systems
- W. Gerstner, Executive Vice-President
- D. Glenn, Director - Safeteam
- J. Greene, Manager - Startup
- *D. Hall, Vice President, Nuclear
- M. Hassebrock, Director - Quality Engineering and Verification
- H. Lane, Director - Construction and Startup Engineering
- *J. Loomis, Construction Manager
- J. Palchak, Supervisor - Plant Protection
- J. Patten, Director - Nuclear Training
- *C. Pegg, Technical Advisor
- *J. Perry, Manager - Nuclear Program Coordination
- R. Richey, Assistant Power Plant Manager - Maintenance
- F. Spangenberg, Director - Nuclear Licensing and Configuration
- *J. Sprague, QA Specialist
- L. Tucker, Director - Startup Testing
- *D. Wilson, Licensing Supervisor (Acting)
- R. Wyatt, Director - Planning, Programming, and Scheduling

Baldwin Associates (BA)

- *R. Greer, Assistant Manager of Q&TS
- A. King, Project Manager
- S. Lyons, Resident Engineer
- L. Osborne, Manager - Quality and Technical Services
- *D. Schlatka, Sr. Superintendent

*Denotes those attending the monthly exit meeting.

The inspectors also contacted others of the construction project and operations staffs.

2. Previously Identified Items

(Open) Open Item (461/84-25-02): Review of Safeteam responses to employee identified concerns.

The inspector reviewed a sample of Safeteam responses to employee identified concerns. The review was conducted in order to determine that Safeteam had investigated, documented, and responded to employee identified concerns in accordance with the program described to the inspector by the Safeteam director (see Inspection Report 50-461/84-25).

As a result of this review, the inspector identified the following concerns which were discussed with the director of the Clinton Safeteam:

- (1) Safeteam review committee comments had not been incorporated or justification provided for non-incorporation. The Safeteam director stated that the review committee comments had been considered in each response and that consideration would be given to specifically addressing these comments in future response packages.
- (2) Two of the responses reviewed were based on documents which had not been finalized at the time of the response. The documents used included an audit finding report and a Clinton Power Station (CPS) condition report. The Safeteam director identified that each investigator maintained a track of locations where this type of unresolved document was used in a response, and stated that when substantive changes were made in the processing of those documents, a revised response would be provided to the concerned individual.
- (3) The response to concern No. 10024-A was not complete. Review of the matter documented in that concern indicated that additional action had been taken by the applicant to resolve the identified concern which was not reflected in the Safeteam response. The Safeteam director stated that he would consider issuing a revised response.

The results of this review indicated a need for further NRC overview in this area. This item will remain open pending review of future Safeteam responses in order to determine the adequacy of corrective actions taken to the concerns identified above.

No items of noncompliance or deviation were identified.

3. Followup On Allegations

- a. (Closed) Allegation (RIII-84-A-0147) (#104): On October 9, 1984, an individual contacted the NRC resident inspector and stated that QC inspectors were being forced to work excessive amounts of overtime; that the overtime sometimes involved work in areas where the inspector had not been recently working, resulting in a lower than standard level of productivity; and that a quota system presently in effect for each type of inspection activity would result in the quality of inspections being less than required in order to meet the production schedule. The individual suggested that the NRC conduct random interviews of personnel in order to bring this and similar problems to the surface.

The NRC does not regulate the hours of work and conditions of employment for construction personnel at nuclear facilities; however, because an excessive amount of overtime can affect the ability of workers to perform safety-related activities properly, a review of this matter was conducted.

In order to assess the substance of this allegation, random interviews of a sample of Baldwin Associates (BA) QC inspectors were performed. The results of those interviews revealed that most QC inspectors interviewed were working mandatory overtime. All inspectors interviewed were certified in the activities they were assigned to perform. Most inspectors interviewed indicated that they were working 8 hours per day, 5 days per week, with 8 to 10 hours overtime on Saturday. None of the inspectors interviewed were working on Sunday and none of the inspectors interviewed indicated that the overtime was having an adverse effect on his inspection activities. Most inspectors interviewed expressed a desire to work additional overtime hours. None of the inspectors interviewed raised quality concerns to the inspector during the interview.

The inspector then interviewed a BA QC inspection supervisor to determine the overtime policy established for BA QC inspectors. According to the supervisor, that policy (for the electrical discipline) required that inspectors work overtime when necessary to meet project goals. However, the policy in effect also guaranteed 1 full weekend off every fifth week for each inspector. In addition, the QC supervisor stated that if a man was obviously not functioning well due to working overtime hours, he would be sent home.

The QC inspection supervisor further stated that there was no strict quota system in effect for electrical QC inspections; that the quantity of work an inspector performs must be reasonable under the circumstances surrounding each job. He stated that the primary standard for performance evaluation, other than the strenuous QC training program, was generally based on the quality of the inspection documentation an inspector produced (i.e., inspection reports are legible and accurately reflect inspection requirements, NCRs initiated are concise and exhibit a clear understanding of the problem identified, etc.).

Based on the above, the inspector was unable to substantiate the concern. This matter is closed.

- b. (Open) Allegation (RIII-84-A-0152) (#105): On October 10, 1984, the NRC Resident Inspectors' Office at the Clinton Power Station received an anonymous letter from a concerned individual. The concern identified dealt with compliance to site procedures during the installation of a safety related pipe hanger.

The NRC inspector identified a specific example to review through discussions with QC personnel involved in hanger installation activities. Traveler H-DO-751-I, supplement 3, R/6 was inspected for compliance with site procedures. Traveler package H-DO-751-I supplement 3 had satisfactorily completed the BA QA Final Review on 9/30/84.

Review of traveler H-DO-751-I with respect to the requirements of Baldwin Associates Procedures (BAP) 2.1.1, Verification of BA Records; BAP 2.16, Concrete Expansion Anchor Work; and BAP 3.2.5, Piping Component Supports, indicated numerous examples of procedural violations as follows:

- (1) BAP 2.1.1, Para. 5.3.2.i states in part: "Document on the DEL (Document Exception List), Form JV-935, any checklist item that is incomplete, missing or indeterminate..."

Contrary to the above requirement, the JV-550 dated 9/24/84 did not document the test torque for the four anchors installed (PAF checklist item 10); there was no "Phase I Hanger Inspection Checklist" for work performed on 9/25/84 (PAF checklist item 19); and the Superintendent's signature was subsequent to Phase I inspections (PAF checklist item 20).

- (2) BAP 2.16, Para. 5.7.1 states in part: "Discrepancies which are not corrected in accordance with this procedure shall be documented on a NCR in accordance with BAP 1.0."

Contrary to the above requirement, the North East anchor was found to be unacceptable and was not corrected in accordance with the procedure; a NCR was not issued.

- (3) BAP 2.16, Para. 5.9 states in part: "Retorquing of anchors shall be ... witnessed by Quality Control and documented on a JV-550."

Contrary to the above requirement, documentation of the three anchors retorqued on 9/25/84 (installed 9/24/84) did not appear in the traveler package.

- (4) BAP 3.2.5, Para. 5.5.3.c.2, Note 1 states: "This inspection shall be subsequent to the Superintendent's signing and dating the orientation/location block on Form JV-597."

Contrary to the above, the Superintendent's signature was applied after the Phase I inspection on Form JV-597.

- (5) BAP 3.2.5, Para. 5.5.3.c.6 states in part: "When the Phase I inspection is complete and all items are acceptable, ...sign and date the Inspection Complete section of Form JV-726, ..."

Contrary to the above requirement, an acceptable JV-726 did not exist for work performed on 9/25/84.

- (6) BAP 3.2.5, Para. 5.5.3.c.7 states in part: "When unacceptable conditions are noted during the Phase I Inspection, the conditions will be documented on a NCR per BAP 1.0..."

Contrary to the above requirement, unacceptable conditions were noted, as evidenced by addendum #5; a NCR was not issued.

The above procedural violations, which were not identified by the applicant's contractor during quality reviews, are considered to be in noncompliance with 10 CFR 50, Appendix B, Criterion V (461/84-30-01).

This allegation will remain open pending a satisfactory response to the Notice of Violation as set forth in Appendix A of this report.

4. Employee Concerns

The resident inspectors reviewed concerns expressed by site personnel from time to time throughout the inspection period. Those concerns related to regulated activities were documented by the inspectors and submitted to Region III. Six concerns were transmitted to the regional office during this report period.

5. Independent Inspection Effort

a. Soil Erosion

The inspector toured the Clinton lake dam area in order to observe the present condition of the dam structure with respect to soil erosion. Seven photographs were forwarded to the NRC Licensing Project Manager, Clinton, for information. The inspector found that, with the exception of minor gullies, no significant erosion of the dam was observed. The inspector did observe ongoing applicant activities related to stabilization of the dam area.

No items of noncompliance or deviation were identified.

b. Review of Use As Is (Type B) Dispositioned NCRs

The inspector performed a limited review of the processing of nonconformance reports (NCRs) under Baldwin Associates Project Procedure (BAP)-1.0, Nonconformances. The review was intended to assure that NCRs dispositioned "use-as-is" were processed in accordance with the applicant's quality program.

ANSI N45.2.10-1973, Quality Assurance Terms and Definitions, defines the term "use-as-is" as follows:

A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse conditions and that the item under consideration will continue to meet all engineering functional requirements including performance, maintainability, fit, and safety.

The determination that an item will continue to meet all engineering functional requirements is clearly a design engineering function.

The inspector reviewed a sample of NCRs dispositioned "use-as-is" and designated "Type B" (e.g. - NCRs No. 021121, 021122, 021123, 021828, 021834). The designers signature (block 19, Form JV-143) was marked "N/A" for each of the NCRs reviewed.

The CPS FSAR, Chapter 1, paragraph 1.4.1 states in part that Illinois Power Company does not maintain engineering and construction staffs for the design and construction of generating stations but rather engages reputable engineering and construction firms for these purposes. IP has a staff of engineers on the site for safety and operational support. Sargent & Lundy (S&L) has been retained as the architect-engineer for the Clinton Power Station.

The CPS Construction QA Manual, Chapter 3, Division of Responsibility, paragraph 3.1 states that Sargent and Lundy is responsible for employing design control measures to assure design intent is achieved in Balance of Plant design documents; paragraph C.1 states that General Electric is responsible for employing design control measures assuring that design intent is achieved in NSSS and nuclear fuel design documents.

The Clinton Power Station (CPS) Final Safety Analysis Report (FSAR), Chapter 17.1 identifies the Illinois Power (IP) Company Construction Quality Assurance (QA) Manual as the governing document for QA during construction. Chapter 15 of the IP QA Manual, paragraph 15.B.1 states in part that Sargent & Lundy is responsible for engineering justification for construction related NCRs which are dispositioned use-as-is.

The inspector reviewed IP Nuclear Station Engineering Department (NSED) procedure D.7, Handling Clinton Power Station Nonconformance Reports. Paragraph 13 of that procedure did not require forwarding NCRs designated type B with a use-as-is disposition to the responsible design organization for justification of the disposition. This is considered to be a deviation from the above stated FSAR/QA manual commitments (461/84-30-02).

c. 10 CFR 50.55(e) Reports

During review of applicant reports to the Commission per 10 CFR 50.55(e), the inspector noted that the applicant's reports did not identify a date by which corrective action for reportable

deficiencies would be completed, and that the applicant's final reports to the Commission under 10 CFR 50.55(e) often were supplied before corrective actions were complete.

Discussion with applicant personnel resulted in a commitment to include a date by which corrective actions would be complete in the applicant's final reports. The matter of final reports being submitted prior to corrective actions being complete is an open item requiring review by Region III (461/84-30-03).

d. Hexcel Energy Absorbing Material (EAM)

The inspector received a preliminary notification (PN) which indicated a potential deficiency was identified involving EAM manufactured by Hexcel. This matter was brought to the attention of the applicant who subsequently identified that some Hexcel EAM had been purchased for use on the Clinton Project. The applicability of the deficiency to the Clinton Project and its safety significance is under investigation by the applicant. This is an unresolved item (50-461/84-30-04).

No items of noncompliance or deviation were identified.

6. Functional or Program Areas Inspected

a. Preoperational Test Program Implementation Verification

At periodic intervals during the report period, surveillance tours of areas of the site were performed. These surveillances were intended to assess: cleanliness of the site; storage and maintenance conditions of equipment and materials being used in site construction; potential for fire or other hazards which might have a deleterious effect on personnel or equipment; and to witness construction, testing, and maintenance activities in progress. Only limited testing activities were observed during the report period.

Several minor deficiencies were brought to the applicant's attention during the report period as a result of surveillance tours. Each of those items were corrected as follows:

- (1) Two instances of broken flex conduit on components in the standby liquid control system (a turned over system) were noted. The applicant wrote the required deficiency report.
- (2) A code data plate on a piping spool in the low pressure core spray system suction line had been painted over. The applicant removed the paint.
- (3) Dirt and debris had accumulated on safety-related components in the Division III diesel generator room. Of particular concern were relays in the diesel control panel. The

applicant's representative agreed to review this situation and take appropriate action to prevent recurrence. This item was identified late in the inspection period. The inspectors will continue to follow the applicant's actions in this area.

- (4) A safety related Division-1 cable (after exiting conduit C62253) was coiled and stored on the floor in the South East corner of the RHR-A pump room. An accumulation of approximately 1/2" of water on the floor in this area was brought to the attention of an electrical foreman who took immediate corrective action.
- (5) Several instances of missing protective covers on mechanical shock arrestors were noted and brought to the attention of the applicant (e.g. IRH09087S, IRH09065S, IRH07094S). The applicant's representative agreed to review this situation and take appropriate action to prevent recurrence. The inspectors will continue to follow the applicant's action in this area.

No items of noncompliance or deviations were identified.

b. Cable Installation

During the reporting period, the inspector observed cable pull activities in the Auxillary, Containment and Control Buildings (cable nos. 1W094E, 1RE06D, 1RE06B, 1RT12B, 1IS07B, 1IS03B and 1IS05B). For each of the cable pulls examined, one or more of the following attributes was observed: Cable pull card/procedures were the latest approved; cable size and type were per design; identification was maintained; pull compound was applied, when required; minimum bending radius was observed; and protection from damage.

The QC inspectors responsible for monitoring the cable pull activities were certified Level II for cable installation.

No items of noncompliance or deviations were identified.

c. Containment Penetrations

During the reporting period, the inspector observed fabrication of instrument penetrations in the field. The fabrication activities in process included cutting of instrument piping, welding of piping to the penetration head fitting and the welding of a penetration assembly to a drywell sleeve.

The cutting of instrument piping was in accordance with approved procedures and proper transfer of identification markings was performed. The welding was conducted in accordance with traveler sequencing. The NDE performed on the head to sleeve weld for penetration 1MD-204 was accomplished in accordance with approved procedure by a certified "PT" inspector.

No items of noncompliance or deviation were identified.

d. Welding Activities

During the report period, the inspector observed general welding activities associated with the Rod Drive control system. These activities were being performed by Reactor Control Inc. (RCI) within Containment. For the welding examined, one or more of the following activities was observed. Electrode control and handling was satisfactory. The Weld Process Specification was appropriate. The QC inspections/hold points were performed.

No items of noncompliance or deviation were identified.

e. Safety Related Pipe Support

During the report period, the inspector observed installation and testing of concrete expansion anchors for support 1AB15069G. For the installation examined, one or more of the following activities was observed. The type and diameter of expansion anchor used was per design. The embedment length met the minimum requirements. The South East anchor failed installation testing and was reworked in accordance with approved procedures.

No items of noncompliance or deviation were identified.

7. Site Activities Of Interest

a. Meetings

The inspectors attended several significant meetings during the report period as follows:

- (1) Weekly applicant meetings concerning construction progress were attended for information purposes.
- (2) The second corporate management meeting between NRC and the applicant was attended. That meeting was documented in NRC Inspection Report 50-461/84-33.
- (3) A meeting between the applicant and Region III concerning the IP Overinspection Program was attended on October 25, 1984. That meeting was documented in NRC Inspection Report 50-461/84-37.
- (4) A meeting between the applicant, the Assistant Attorney General Of The State Of Illinois, and the NRC concerning Contention III (Control Room Design and Instrumentation For Post Accident Monitoring) was attended on November 9, 1984 for information. That meeting will be documented by the NRC headquarters staff.

(5) Additional site meetings of lesser significance were also attended throughout the report period.

b. NRC Mobile Nondestructive Examination (NDE) Inspection

The NRC Region I Mobile NDE van arrived at the Clinton Site on November 5, 1984 to begin an NRC inspection of NDE previously performed by site contractors. Onsite inspection activity was completed on November 16, 1984, and will be the subject of Inspection Report 50-461/84-35. The NRC resident inspectors selected approximately 45 welds for possible review by the mobile NDE van and assisted Region I in the preparations for that inspection.

c. IP Management Change

During this report period, one significant management change occurred within the applicant's organization: the new position of Manager - Nuclear Program Coordination was established and filled by Mr. J. S. Perry. This position is a new line position reporting directly to the Vice President, Nuclear.

The applicant is still seeking a qualified person to fill the Plant Manager vacancy.

No items of noncompliance or deviation were identified.

8. 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 this inspection is discussed in paragraph 5.d.

9. Open Items

Open items are matters which have been discussed with the applicant, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or applicant or both. An open item disclosed during this inspection is discussed in paragraph 5.c.

10. Exit Meetings

The inspectors met with applicant representatives (denoted in paragraph 1) throughout the inspection and at the conclusion of the inspection on November 21, 1984. The inspectors summarized the scope and findings of the inspection activities.

The inspectors attended exit meetings held between Region based inspectors and the applicant as follows:

| <u>Inspector(s)</u> | <u>Date</u> |
|--|-------------|
| Ward, Jacobson, Love, Kaufman, Tani | 10-5-84 |
| Pirtle | 10-19-84 |
| Love | 10-26-84 |
| Kaufman | 11-9-84 |
| Kerch, Campbell | 11-16-84 |