

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

REGION III

Report No. 50-461/80-23

Docket No. 50-461

License No. CPPR-137

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

Facility Name: Clinton Power Station, Unit 1

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: October 1 - November 1, 1980

Inspector: H. H. Livermore *RC Knop for*

11/10/80

Approved By: R. G. Knop, Chief *RC Knop*
Projects Section 1

11/10/80

Inspection Summary

Inspection on October 1 - November 1, 1980 (Report No. 50-461/80-23)

Areas Inspected: Routine inspection by the IE Regional Resident Inspector (SRI) of safety related construction activities including concrete placements, material laydown and storage areas, fire prevention/protection.

This inspection involved 88 inspector hours by one NRC resident inspector.
Results: Of the areas inspected, one item of noncompliance was identified.

8101 100197

DETAILS

Persons Contacted

Principal Licensee Employees

G. M. Brashear, Site Manager, Clinton
*R. J. Canfield, Director-Construction
*A. J. Budnick, Director-QA
*E. E. Cannon, Assistant Director-Construction
*L. W. Dozier, Assistant Director-Construction
*D. E. Korneman, Construction
*J. F. Hampton, Supervisor-QA
*R. W. Folck, QA Specialist
*J. S. Spencer, Director-Engineering
R. Backen, QA Specialist
R. Weber, QA Engineer
R. Becker, QA Consultant
*J. M. King, Assistant Director-Construction
L. J. Koch, Vice President
*J. McHood, Vice President
J. Geier, Manager-General Engineering
W. L. Calhoun-Electrical Construction
R. Campbell-QA Consultant
B. Spicer-QA Consultant
*W. M. Berry- Supervisor Construction
*F. Schwarz-Civil Engineer

Baldwin Associates

*J. W. Smart, QA Manager
*R. Selva, Manager, Quality and Technical Services
*J. Linehan, QC Manager
W. H. Harrington, Project Manager
*J. E. Findley, Project Engineer
*R. D. Bennett, Manager, Technical Services
*G. Lane, Electrical, QC
*T. G. Yearick, Assistant to Manager
C. E. Winfrey, QC Civil
W. O'Brien, QC Piping
H. R. Swift, Assistant Project Engr.
*D. N. Smither, Assistant Project Manager

General Electric Company

S. G. Hall, Quality Control

ANI

M. J. King

Other staff and personnel were contacted during the reporting period.

* Denotes those attending at least one of the exit meetings.

Licensee Action on Previously Identified Items

(Closed) Unresolved Item (80-17-02) - Possible Damage to Control Building Structural Beam. The Licensee was notified that four structural beams in the Control Building may have been damaged by welding during HVAC hanger installation. Inspections were performed and distortion measurements taken. The Architect Engineer Sargent & Lundy Structural Project Engineer provided the Licensee with a letter stating that the distortions involved were acceptable and well within the limits of applicable AWS D1.1 Structural Welding Code. The inspector has no further questions in this area.

(Closed) Noncompliance Infraction (80-08-02) - HVAC Nonconforming Material Control. The inspector has reviewed the subcontractor's (Zack) nonconforming control system. The reject material hold area is satisfactory. Nonconforming material location is designated on the NCR log and the Inspection Rejection (IR) log. Corrective actions by Zack Co. are acceptable and appear to be sufficient.

(Closed) Unresolved Item (80-08-03) - Traceability of HVAC Welding Electrodes. Zack QC was unable to completely verify material received complied with the purchase Order. This function was performed by the Zack Chicago office. Site QC now performs this function satisfactorily. Receiving Inspection information is also cross referenced on the Purchase Order. The inclusion of additional information is also planned. Zack QC has also improved their operation to insure that all electrode certifications are dated and include the signature and title of the person attesting to validity. The inspector has no further questions in this area.

Functional or Program Areas Inspected

1. Site Tours

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

Item of noncompliance is discussed in paragraph 4.

2. Concrete Placement

The resident inspector performed surveillances of the following concrete placement:

10/6/80	CTW - 23	Traveler 1430	367 yards
	DWG CLI-00-S-006	Sheet 40, Rev. 4	

The concrete pour was for the outer containment wall; a 10' pour of the circumference at approximately the 858' line. The following conditions were noted:

- a. Preplacement and preinspection checklists were completed by QC.
- b. Roving surveillance was performed by the Contractor QC personnel and performance was adequate.
- c. Concrete test personnel performed air, temperature, and slump test correctly. Results checked were in specification limits.
- d. The resident inspector noted that the placement area was clear and free of water and debris prior to concrete placement. Rebar cross tie fastenings were tight, and form to rebar edge distance appeared satisfactory.
- e. Placement crews were adequate and consolidation technique was correct. Concrete delivery and placement were satisfactory.

No items of noncompliance or deviation were identified.

3. Inspection of Material/Component Storage Areas

The resident inspector toured storage areas in the outside laydown yard and within the power block several times during the month. The areas were randomly selected. The inspection was in relation to the requirements of ANSI N45.2.2; material protected and stored off the ground, caps on pipe ends, and segregation of safety and non-safety material. Storage and maintenance were adequate.

4. Inclined Fuel Transfer Tube Installation

The resident inspector performed a surveillance of the rigging, handling, and installation of the inclined fuel transfer tube in the containment and fuel buildings. The following unsatisfactory conditions were and are noted:

- (a) The first step of the work traveler F42-001 has not been signed off by the Superintendent or the QC Inspector. This step requires reading and understanding the basic GE installation instructions of the transfer tube prior to beginning the installation operation. This step is prior to the traveler step that notes that other operations may not be in sequential order.
- (b) There are no records of a visual inspection performed on the rigging as required by procedures BAP 2.11 Section 5.2 and MO02 Section 2.2.
- (c) The rigging geometry and detail was not that shown on detail layout Procedure MO02 Sheet 16 or Traveler Fig. 5.13A. Additional chainfalls, nylon chokers and dead-man restraints were added to the rigging geometry.

- (d) The inspector notes that carbon steel chains were dragged across the stainless steel fuel transfer tube outside surface in continuous motion many times during chainfall operation while shifting fuel tube position and location. Contact areas were obvious by the visible shiny paths on the light grey fuel tube surface. Carbon steel contact with stainless steel surfaces is prohibited by notes on the traveler and in the GE installation instruction document (22A4945). The inspector noted that no effort was made to improve the situation during chainfall operation.
- (e) The addition of a wire rope (dead-man) restraint from the overhead polar crane beam to the transfer tube was used throughout the installation. The use of this load-carrying device was not noted on the traveler; in fact, the traveler (F42-001) step 5.1.14 notes that throughout load transfer the overhead crane (Ringer) shall be manipulated to prevent the fuel transfer tube from sliding down the pipe. The inspector notes that there were times during the installation that the full load of the transfer tube was being restrained by this additional rigging to the containment polar crane beam. The cable rig from the transfer tube load to the polar crane beam was approximately 30° from vertical. The inspector notes that the polar crane installation in the containment is not complete; for example, welding of rail support plates and spacer blocks to the containment wall is in process.

Baldwin Project Procedure BAP 2.11, Rigging, Hoisting & Handling, PCR - 95A - 80 Section 5.1.1, Note 2 states: "Under no circumstances shall rigging or hoisting be attempted off of Safety Related equipment or piping. Exceptions to the above must be approved by the Architect Engineer and the Owner (in writing) prior to the initiation of the work." The inspector notes that Owner written approval for the dead-man restraint was obtained from IP Mechanical Supervisor but not from the Architect Engineer as required. There is no record of any engineering calculations or rationale to support the approval. The approval was unknown to QA or QC and was not included in the traveler package.

This item is considered in noncompliance with the requirements of 10 CFR 50, Appendix B, Criterion V, Clinton FSAR Section 17.2.5, and Baldwin Associates Project Procedure BAP 2.11 PCR 95A - 80 Section 5.1.1 Note 2.

Exit Meetings

The resident inspector attended an exit meeting conducted by the RIII Inspectors D. Danielson, J. Schapker, W. Key on October 8, 1980. The inspector met with the licensee representatives (denoted under Persons Contacted) on October 3, 10, 17, 24, and 31, 1980. The inspector summarized the scope and findings of the inspections performed. The licensee representatives acknowledged the findings reported in previous paragraphs.

PRELIMINARY INSPECTION FINDINGS

1. LICENSEE

Illinois Power

2. REGIONAL OFFICE

3. DOCKET NUMBERS

50-461

4. LICENSE NUMBERS

5. DATE OF INSPECTION

10/6-10/80☒ 6. Within the scope of the inspection, no items of noncompliance or deviation were found.☐ 7. The following matters are preliminary inspection findings:☐ 8. These preliminary inspection findings will be reviewed by NRC Supervision/Management at the Region III Office and they will correspond with you concerning any enforcement action.*[Signature]*
Nuclear Regulatory Commission Inspector*10/10/80*

PRELIMINARY INSPECTION FINDINGS

1. LICENSEE

Illinois Power Co.

2. REGIONAL OFFICE

III
REGIONAL

3. DOCKET NUMBERS

50-461

4. LICENSE NUMBERS

5. DATE OF INSPECTION

10/13-17/80

☒ 6. Within the scope of the inspection, no items of noncompliance or deviation were found.

☐ 7. The following matters are preliminary inspection findings:

☐ 8. These preliminary inspection findings will be reviewed by NRC Supervision/Management at the Region III Office and they will correspond with you concerning any enforcement action.

H. H. Swernore
Nuclear Regulatory Commission Inspector

10/17/80

PRELIMINARY INSPECTION FINDINGS

1. LICENSEE

Ill Power

2. REGIONAL OFFICE

*III
Resident*

3. DOCKET NUMBERS

50-461

4. LICENSE NUMBERS

5. DATE OF INSPECTION

10/20 - 24/80☒ 6. Within the scope of the inspection, no items of noncompliance or deviation were found.☐ 7. The following matters are preliminary inspection findings:☐ 8. These preliminary inspection findings will be reviewed by NRC Supervision/Management at the Region III Office and they will correspond with you concerning any enforcement action.

H. L. Lamm
Nuclear Regulatory Commission Inspector

PRELIMINARY INSPECTION FINDINGS

1. LICENSEE

Illinois Power

2. REGIONAL OFFICE

*III
Resident*

3. DOCKET NUMBERS

50-461

4. LICENSE NUMBERS

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5. DATE OF INSPECTION

11/1/80 - 11/7/80

☐ 6. Within the scope of the inspection, no items of noncompliance or deviation were found.

☒ 7. The following matters are preliminary inspection findings:

10 CFR 50 Appendix B, Criterion V states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures,.....and shall be accomplished in accordance with these instructions, procedures, or drawings.

Baldwin Associates' Rigging, Hoisting and Handling Procedure BAP 2.11 PCR 95 A-80 Note #2 of Para. 5.1.1 states: "Under no circumstances shall rigging or hoisting be attempted off of Safety Related equipment or piping. Exceptions to the above must be approved by the Architect Engineer and the Owner (in writing) prior to the initiation of the work.

Contrary to the above, installation of the inclined fuel transfer tube was performed using the containment polar crane beam as a load-carrying support. Architect Engineer written approval or engineering calculations/rationale were not obtained prior to the rigging and load application.

☐ 8. These preliminary inspection findings will be reviewed by NRC Supervision/Management at the Region III Office and they will correspond with you concerning any enforcement action.

A. J. Livermore
Nuclear Regulatory Commission Inspector