

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/84-18(DRS)

Docket No. 50-461

License No. CPPR-137

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

Facility Name: Clinton Power Station, Unit 1

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: June 26-29, and July 2, 1984

Inspector: *D. E. Keating*  
D. E. Keating

8/16/84  
Date

Approved By: *D. H. Danielson*  
D. H. Danielson, Chief  
Materials and Processes Section

8/16/84  
Date

Inspection Summary

Inspection on June 26-29, and July 2, 1984 (Report No. 50-461/84-18(DRS))

Areas Inspected: Routine, unannounced safety inspection to review status and licensee action on 10 CFR 50.55(e) items; and allegations. The inspection involved a total of 40 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Illinois Power Company

W. C. Gerstner, Executive V. P.  
D. P. Hall, V. P.  
\*W. Connell, Manager, Q. A.  
H. E. Daniels, Jr., IPC Project Manager  
D. I. Herborn, Director - Licensing  
R. S. Rickey, Assistant Plant Engineer  
H. R. Victor, Nuclear Station Engineer  
M. Pacy, Program Coordinator - Piping/Mechanical  
J. R. Sprague, Station Q.A. Specialist

#### Baldwin Associates

A. E. King, Jr., Project Manager  
L. Osborne, Manager Quality and Tech. Services

The inspector also contacted other licensee and contractor personnel.

\*Denotes those present at exit interview.

### 2. Licensee Action on 10 CFR 50.55(e) Items

(Open) 50.55(e) Item (461/84-03-EE): Improper Installation of Concrete Expansion Anchor Bolts.

It was stated in Inspection Report 50-461/84-12 that the licensee was using a modified AISC inspection of the concrete expansion anchors and attachment plates. This is incorrect. The inspection method in use at the Clinton Power Station is prescribed in IE Bulletin 79-02, Rev. 2, Appendix A, which is more restrictive. This prescribes a zero reject rate, i.e., one (1) failure means 100% inspection of entire population. The inspection population of 58 assemblies has been developed for this type of inspection by Stone and Webster for other nuclear sites and has been accepted by the NRC. This population figure will be applied to each area that is being reinspected and to each craft involved.

To date, in addition to the initial 290 piping hangers inspected, 49 safety-related electrical hangers have been inspected. The remaining nine (9) have been inspected and documented. Three (3) nonconformances have been written and are awaiting disposition. By mid-July, 1984, the inspections should be underway on the safety-related HVAC hangers followed by safety-related civil/structural hangers, 58 of each type are to be inspected. In addition to the inspections listed above 80 additional hangers, 10 from each building and all disciplines, have been randomly selected and inspected. These were from nonsafety-related areas.

No items of noncompliance or deviations were identified at this time. This will continue to be monitored during future inspections.

(Open) 50.55(e) Item (461/84-12-EE): Concrete Expansion Anchors Do Not Penetrate Structural Slabs.

On June 4, 1984, the licensee identified the condition that certain concrete expansion anchors did not penetrate the structural slab as required by the design drawing and construction specifications as developed by the design engineers, Sargent & Lundy.

A concern regarding this was expressed in a letter of February 10, 1984, IP letter Y-18575, R. L. Howe to D. K. Schopfer and in a letter of May 14, 1984, S&L letter SLMI-12213, D. K. Schopfer to W. Connell.

On May 15, 1984, an as-built documentation of the finishing slabs was started. This activity will identify the location of all plates presently installed. The type of plate, location, bolt number, diameter, and length will be shown on inspection drawings developed from a list of structural drawings provided by Sargent & Lundy.

On May 16, 1984, a memo to A. E. King and L. W. Osborne of Baldwin Associates was prepared requesting a written response for future compliance to existing procedures and specifications regarding effective embedment depth of concrete expansion anchors.

The licensee has started this inspection effort at El. 825'-0 with the slab above the Control Room. The efforts will be documented and any nonconforming conditions will be documented on Nonconformance Reports.

These efforts and the documentation will be reviewed during future inspections.

(Open) 50.55(e) Item (461/83-10-EE): Foreign Substance on Seam Weld on Containment Liner Dome.

With regard to the referenced 50.55(e) item the inspector reviewed the following documents:

- . Southwest Research Institute Final Report SWRI Project 17-5222-109, dated January 1, 1984, "Characterization of a Foreign Material for Illinois Power Pertaining to Nonconformance Report No. 12825.
- . Baldwin Associates Technical Services Inspection Report No. BA-7687, dated December 14, 1983.
- . Memo Y-18907 dated December 12, 1983, M. Pacy to W. Connell, "Observance of a Substance on Containment Liner Weld."
- . Memo dated December 12, 1983, R. Agee to W. Connell covers same subject as memo referenced above.

- . BA letter dated December 9, 1983, D. R. Johnston to D. S. Selva.
- . Memo dated December 12, 1983, Y-18358, W. Connell to L. W. Osborne.
- . Brand Examination Services and Testing Company (BESTCO), Procedure SMT-LW, Revision 0, dated April 27, 1984, Magnetic Particle Examination of Containment Liner Welds 10 CFR 50.55(e) 83-10.
- . BESTCO Magnetic Particle Examination Report No. 1, dated May 18, 1984, Containment Liner Weld R2/R3.
  - MT1: A 2" transverse crack at 60° Az.
  - MT2: A 2" area unsuitable for MT exists in the vertical weld located 36" C.W. from 140° Az. and 9½" from the circular weld.
  - MT3: A 2-3/4" area that is unsuitable for MT exists in the vertical weld located 60½" C.W. from 150° Az. and 9½" from the circular weld.
  - MT4: A 5/8" linear indication exists in the vertical weld located 66" C.W. and 2½" from the circular weld.

Report No. 2, dated May 8, 1984, Vertical Weld At 120° Az., 7'-6" to 8'-6" Up From R2/R3. This is the location where foreign material was found on the weld. The material has been removed and the weld has been determined to be acceptable.

Report No. 3, dated May 8, 1984, Repair Plate At 9° Az. and 2'-0" Down from R2/R3.

- MT1: A 9" crack exists 1½" from the 3 o'clock position.
- MT2: A 5/8" linear indication exists ½" C.C.W. from the 12 o'clock position.

Report No. 4, dated May 8, 1984, Dollar Weld.

- MT1: A 3/16" linear indication exists 9-3/4" from the 180°/270° corner on the 270° side of plate.
- MT2: A 7/8" linear indication exists 1-3/4" from the 90°/180° corner on the 180° side of the plate.

- . Chicago Bridge and Iron (CBI), Procedure MTP 74-2653/413 Revision 2, MTP 74-2653/413B, Revision 2  
VTP 74-2653/4B, Revision 2
- . Baldwin Associates Technical Services Procedure BTS 405.

The following nonconformance reports were reviewed:

- . NCR 14335 through 14339
- NCR 14341 through 14347
- NCR 14350 through 14359
- NCR 14361 through 14370
- NCR 14340, 14348, 14349, 14360, and 15514
- NCR 15513 covered foreign substance on weld

In addition the inspector physically inspected the areas of Dome Liner indicated on the above referenced BESTCO reports.

The linear indications and cracks referred to are to be investigated further through excavation of these areas and repairs made. This activity should be ready for further review the week of July 23, 1984.

No items of noncompliance or deviations were identified at this time. This activity will be reviewed during subsequent inspections.

### 3. Followup on Allegations

(Closed) Allegation (RIII-84-A-0178-01)(No. 28-01). ASME N5 data packages have been turned over to Illinois Power (IP) covering safety-related systems without the required N5 data reports.

The inspector reviewed ASME Code Section III, 1974 Edition with 1974 Summer and Winter Addenda, subsection NA-8000 series and ASME Code interpretation III-1-77-159 in order to establish the requirements for turnover of N5 data packages for ASME Code systems. The inspector also interviewed the Baldwin Associates (BA) Manager of Quality and Technical Services (Q and TS) as well as the Senior Authorized Nuclear Inspector (ANI) regarding the method of turnover for N5 data reports.

ASME requirements state that before an N5 data report can be furnished, a hydrostatic test must be performed on each system and/or subsystem involved. The Code also states that the contractor responsible for installing ASME Code safety-related piping systems, BA in this case, has the option of performing the tests or subcontracting the performance of the tests. In this case Illinois Power has elected to subcontract the testing. This requires control of the release of these packages. The Code does not specify how this is to be accomplished. Therefore, BA formed "custody packages" of all pertinent information which is released to the licensee. After the hydrotests have been performed, which are also witnessed by BA Q&TS, these "custody packages" are returned to BA Q&TS to have the data reviewed for accuracy and completeness.

The ANI is notified when a hydro is to be performed. He reviews the package covering the system to be tested. After his review the ANI signs the package over to IP. The licensee signs for receipt and performs the test. After the test has been performed the ANI signs off that he witnessed the test. The licensee then signs the package over to BA which signs for receipt. A system may be broken into a series of sub or partial systems. These are accumulated until the entire system has been tested and documented. This, then, is transmitted to the document vault for file.

On January 6, 1984, the first of thirteen (13) partials were tested. On March 31, 1984, the last of these partials were tested. These are part of eight (8) ASME design systems. As of this date there have been no other tests performed. The inspector reviewed a sample of these data packages and found them to be acceptable.

Based upon the reviews performed and the interviews conducted, this allegation could not be substantiated.

(Closed) Allegation (RIII-84-A-078-02)(No. 28-02): No action being taken on inadequacies identified and documented by the licensee's Quality Assurance (QA) group in the storage and maintenance area.

The inspector interviewed the BA Manager of Quality and Technical Services, the licensee's Station QA Specialist, and others concerning this item. Even though the licensee has increased substantially their efforts in this area, based upon these interviews, a review of licensee surveillance reports, and a review of Correcting Action Report (CAR) 130 dated September 29, 1984, this item has been substantiated.

Car 130 which concerns the storage and maintenance of safety-related and nonsafety-related equipment, will continue to be monitored during future inspections. Also, the issuance and placement of maintenance tags describing the maintenance required and the frequency will be monitored during future routine inspections.

(Open) Allegation (RIII-84-A-078-02)(No. 28-03): Southwest Fabricating piping isometrics have been reviewed and approved by "undegreed and unqualified engineers."

The inspector reviewed RIII Inspection Report No. 50-461/82-20 and the 10 CFR 50.55(e) (461/82-10-EE) report which was issued on 10/7/82.

Southwest Fabricating isometrics had been approved with minimum wall violations in certain systems. The above referenced 50.55(e) report addresses this. In the above mentioned inspection report an open item exists regarding the sequence of approval of Sargent and Lundy "M" series drawings and Southwest Fabricating isometrics as they relate to documenting the direction of flow.

Based upon the review of these reports and interviews with licensee personnel this allegation has been substantiated. However, it must be noted that this allegation item was received in the Region III office approximately four (4) months after corrective actions had been started by the licensee. The item was received on 2/8/83.

The corrective actions started will continue to be monitored during future routine inspections.

(Open) Allegation (RIII-84-A-078-04)(No. 28-04): Licensee's vendor audit program was unable to identify or prevent the problem of Basic Engineers supplying "defective hardware".

This item needs additional review to determine the validity of the allegation.

(Open) Allegation (RIII-84-A-078-05)(No. 28-05): The problems associated with all the 10 CFR 50.55(e) reports and audit findings were caused in part by a large number of people who did not have a strong technical background. "Undegreed and unregistered engineers performing engineering reviews and making judgments in the Construction Engineering as well as the Quality groups."

The inspector reviewed the job description and personnel certifications and qualifications of a selected number of auditors and document reviewers. This activity is broad enough in scope to include the personnel of all the above referenced items of this allegation.

4. Exit Interview

The inspector met with licensee personnel (see Persons Contacted paragraph) at the conclusion of this inspection and discussed the inspection scope and findings.