

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/84-42(DRS)

Docket No. 50-461

License No. CPPR-137

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

Facility Name: Clinton Nuclear Power Station, Unit 1

Inspection At: Clinton Site, Clinton, Illinois

Inspection Conducted: November 26-28, 1984

Inspector: *K. D. Ward*
K. D. Ward

12/13/84
Date

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

12/14/84
Date

Inspection Summary

Inspection on November 26-28, 1984 (Report No. 50-461/84-42(DRS))

Areas Inspected: Announced routine safety inspection to review:
10 CFR 50.55(e) items; observe containment penetrations and review quality records; review containment structural steel welding records; tour welders training area; examine the pre-issue storage of weld rod and the weld issue room; review safety-related structure records; observe spent fuel storage racks and review quality records; review safety-related component quality records; and review safety-related piping weld repairs. This inspection involved a total of 26 inspector-hours by one NRC inspector including 8 inspector-hours during off-shifts.

Results: No items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Illinois Power Company (IP)

- *W. Connell, Manager QA
- *J. Loomis, Construction Manager
- *J. Perry, Manager, Nuclear Programs Coordination
- *F. Spangenberg, Director Nuclear Licensing
- *H. Daniels, Jr., Project Manager
- *H. Victor, Manager NSED
- *G. Bell, Director, Construction QA
- *R. Campbell, Director, Quality Systems and Audits
- *M. Hassebrock, Director QE&V
- *J. Sprague, QA Specialist
- *J. Woten, Supervisor
- J. Brownell, QA Specialist
- R. Minnich, Procurement, QA

Baldwin Associates, Inc. (BA)

- *E. Rosol, Deputy Project Manager
- *L. Osborne, Manager M&TS
- S. Linthicum, Technical Services
- M. Lehman, Resident Engineer
- S. Martin, QC Receiving Supervisor

The inspector also contacted and interviewed other licensee and contractor employees.

*Denotes those attending the exit interview.

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

- a. (Closed) 50.55(e) Item (461/83-10-EE): Welding deficiencies on containment liner dome and closure seam. The inspector reviewed the final report dated October 18, 1984, and documents relating to this subject. Illinois Power's investigation of this issue has shown that the surface of the dome liner was suitable for inspection and interpretation and the magnetic particle examination (MT) performed by CB&I was valid. The investigation found only one crack penetrated through the full 1/4" dome liner thickness. This crack was repaired, Magnetic Particle tested (MT'd) and vacuum box (leak) tested. An NRC inspector observed this test, with satisfactory results. This item is considered closed.
- b. (Closed) 50.55(e) Item (461/84-03-EE): Improper installation of anchor bolts in the auxiliary building. The inspector reviewed the final report dated November 7, 1984, and documents relating to the subject.

As a result of an investigation, by the licensee, concrete expansion anchors (CEAs) were inspected that were used on Balance of Plant (non-safety) installations. Ten supports in each building were inspected. This was a random selection to include all disciplines. The supports were located on floors, walls, and in the overhead. A total of eighty CEAs were tested with seven concerns being identified. The results of the inspection were forwarded to BA Resident Engineering (BARE) for evaluation. Illinois Power requested Sargent and Lundy (S&L) to evaluate the safety significance of the NCRs requiring rework to CEA installations. Based on their evaluation, S&L has stated that the identified deficiencies would not have adversely affected the safety of operations of CPS had the deficiencies gone uncorrected. Investigation of this potentially reportable issue is complete. Illinois Power Company has reviewed and evaluated the findings of the investigation and has determined that no conditions adverse to the safe operations of CPS were found. This item is considered closed.

- c. (Closed) 50.55(e) Item (461/84-04-EE): Southwest Fab, substituting heavier wall pipe fittings in large bore piping without S&L approval. The inspector reviewed meeting notes between Region III and IP dated February 27, 1984, and documents relating to this subject.

IP informed Region III that they were withdrawing the subject potential 10 CFR 50.55(e) because of their investigation. IP has not identified a condition with adverse significance to the safe operation of CPS. No hardware changes, either piping or pipe hangers, were required. The inspector concurs with the withdrawal of this item. This item is therefore considered closed.

- d. (Closed) 50.55(e) Item (461/84-05-EE): Incorrect material substitutions of large bore pipe. The inspector reviewed the report withdrawing this item dated September 24, 1984, and documents relating to the subject.

The installation travelers for the main steam downcomers had been through a review by the Document Review Group (DRG). The substitution of pipe with incorrect wall thickness had not been identified. The Baldwin procedure BQAI-110-11, Rev. 1, Final Review of Piping/Mechanical Record Packages, required the reviewer to verify that the material used conformed to Code/Class/Specification. It did not specifically address the attribute of wall thickness or ASME Code Class.

Nonconformance Reports were written to obtain resolution of the hardware deficiencies and evaluate their significance.

The Resident Engineer's Office has completed the review of all ASME large bore safety-related isometrics and safety-related travelers. All material additions by the constructor were verified against the Architect/Engineer's design document for compliance with the specification. All heat numbers and Receiving Inspection Report (RIR) numbers which are shown in the piping travelers, for the material

added, were verified against the Certified Material Test Reports (CMTRs) to assure that material description in the traveler accurately documents the installed material. All incorrect substitutions were identified and Nonconformance Reports (NCRs) were written where required.

Illinois Power's investigation of the above matter is complete and has determined that the issue does not represent a reportable deficiency under the provisions of 10 CFR 50.55(e). The inspector concurs with the licensee's evaluation. This item is considered closed.

- e. (Closed) 50.55(e) Item (461/84-09-EE): Certification of materials supplied by Rockwell Engineering and Carlson Steel Products. The inspector reviewed the final response dated November 13, 1984, and the documents relative to the subject.

Corrective Action Request (CAR) No. 147 was issued to document and obtain resolution of the issue regarding the qualification of Rockwell Engineering to ASME Section III, Subsection NCA-3800 (NA-3700) requirements. Training programs have been developed and conducted for personnel involved in activities associated with ASME materials (i.e., procurement requisitions, purchase orders, vendor qualification, document review, etc.). Baldwin Associates Resident Engineering expanded their review of procurement requisitions to ensure that material requirements are specified (i.e., specification, code, etc.). BA's Procurement Manual was revised to assign BARE responsibility for the technical adequacy of requisitions and purchase orders (Ref: BA Procurement Manual, Appendix "A", Rev. 22).

Investigation of this potentially reportable issue is complete. Illinois Power Company has reviewed and evaluated the findings of this investigation and has determined that no significant conditions adverse to the safety of operations of CPS were found. The inspector agrees with this conclusion. This item is considered closed.

3. Containment (Penetrations) - Review of Quality Records

The inspector reviewed the pertinent work and quality records for three containment penetrations; one electrical #1EE-29E, one piping #1MC-200H and an access penetration #EH9 and determined that the records exist to confirm that quality requirements have been met and that the records reflect work accomplishment consistent with NRC requirements and SAR commitments. The inspector reviewed PO's, receipt inspection reports, records relative to installation activities and determined that inspections have been performed as required, welding has been performed in accordance with approved procedures and inspections have been performed to verify correct positioning and alignment.

No items of noncompliance or deviations were identified.

4. Containment (Penetrations) - Observation of Work Activities

The inspector selected three containment penetrations, one electrical #1EE 26E, one piping #1MD-192-W1 and an access penetration #EH 12.

The completed work was reviewed for the electrical and the access penetration and the inspector observed performance of work on piping penetration #1MD-192-W1. The inspector reviewed documents related to the subject and determined that the requirements of applicable specifications, standards, work procedures, testing procedures and inspection procedures were met. The method of assembly of components were consistent with design drawings and travelers. Installation activities and other activities, such as testing, were conducted with reference to specified procedures. Nondestructive examinations (NDE) were performed in accordance with work specifications. NDE personnel were certified in accordance with SNT-TC-1A. QA/QC inspection activities were performed as required by established procedures and by properly qualified personnel.

No items of noncompliance or deviations were identified.

5. Containment (Structural Steel Welding) - Review of Quality Records

The inspector observed cutting of checker plate and welding of gussetts #6-39 P8 within the containment and determined that the records were in conformance with established procedures and reflected work accomplishment consistent with applicable requirements. The inspector reviewed travelers which covered visual and dimensional inspections and the inspector also observed dimensional inspections being performed. The inspector also toured the welders training area, the pre-issue storage area for the weld rod and the weld rod issue room. Welder qualifications and NDE records were also reviewed.

No items of noncompliance or deviations were identified.

6. Safety-Related Structures, Structural Steel and Supports - Review of Quality Records

The inspector reviewed the pertinent work and quality records associated with plates #F1-2B4-A3-2 and F1-2B4-G3-2 and determined that the records met the established procedures and reflected work accomplishment consistent with NRC requirements and SAR commitments. The inspector reviewed, material test reports, receiving inspection reports, NCRs, erection specifications, drawings and other QC records.

No items of noncompliance or deviations were identified.

7. Spent Fuel Storage Racks

The spent fuel storage racks were fabricated by Metal Projects and supplied by Nuclear Energy Services in 1981 and 1982. The inspector reviewed the design and purchase specifications, drawings, required design and fabrication Codes, receipt inspection reports, procedures for handling, packaging, shipping, and storage. The inspector also reviewed

work procedures that provided instructions for qualified and controlled field welding and NDE procedures and personnel qualifications, and S&L Specification K-2889A dated May 29, 1980. The inspector reviewed the following quality assurance records indicating that applicable requirements and commitments have been met: receiving inspection reports, shop fabrication records, material certifications, inspection reports, NDE records and an audit of Nuclear Energy Services Quality Program. The inspector visually examined selected welds of the spent fuel racks and found them to be acceptable. The racks are scheduled to be installed during March 1985.

No items of noncompliance or deviations were identified.

8. Safety-Related Components - Review of Completed Work

The inspector selected a representative component and reviewed the completed work for a pipe and valve including weld #A7 joining them in the recirculation piping system. The inspector reviewed documents relative to storage, handling, receipt inspection reports, cleanliness, travelers, installation, NCRs, welding, NDE and filler metal specifications.

No items of noncompliance or deviations were identified.

9. Safety-Related Components - Review of Quality Records

The inspector reviewed pertinent quality related work and inspection records, relative to a pipe and nozzle including weld #MPL B1B-D003 joining them within the Reactor Coolant pressure boundary. The inspector reviewed documents relative to storage, installation, cleanliness, material certifications, and other related documentation.

No items of noncompliance or deviations were identified.

10. Safety-Related Piping - Special Welding Applications

The inspector reviewed several records of weld repairs and determined that they were conducted in accordance with applicable requirements and specified procedures. The welds were: weld #1FW-2-9, pipe to nozzle and weld #1FW-2-10, pipe to 90° elbow in which the weld repairs consisted of mechanical removal of surface defects with no rewelding required. Weld repairs of weld #1-DG-1-3, pipe to 90° elbow, weld #1-DG-1-1 pipe to pipe and weld #1-DG-1-2, pipe to pipe were conducted by gouging and rewelding the area. The inspector reviewed the welding procedures used for the weld repairs, qualification of the procedures, NDE records and certification of welders and found them to be acceptable.

No items of noncompliance or deviations were identified.

11. Exit Interview

The inspector met with site representatives (denoted in Persons Contacted paragraph) at the conclusion of the inspection. The inspector summarized the scope and findings of the inspection noted in this report.