

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/84-38(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: November 5-7 and 15-16, 1984

Inspectors: *J J Hansen for*  
K. D. Ward  
(November 5-7, 1984)

11/29/84  
Date

*J J Hansen for*  
D. E. Jones  
(November 15-16, 1984)

11/29/84  
Date

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

11/29/84  
Date

Inspection Summary

Inspection on November 5-7 and 15-16, 1984 (Report No. 50-461/84-38(DRS))

Areas Inspected: Special unannounced safety inspection of the independent verification of construction using the NRC nondestructive examination (NDE) van and preservice inspection activities. The inspection involved a total of 17 inspector-hours by two NRC inspectors including 2 inspector-hours during off-shifts.

Results: No items of noncompliance or deviations were identified.

## DETAILS

### 1. Persons Contacted

#### Illinois Power Company

D. Hall, Vice President  
\*J. Perry, Manager Nuclear Programs Coordination  
\*W. Connell, Manager QA  
R. Campbell, Director Quality Systems and Audits  
\*R. Richey, Assistant Plant Manager  
\*H. Victor, Manager, NSED  
J. Loomis, Construction Manager  
\*M. Hassebrock, Director, QE&V  
J. Cook, Assistant Plant Manager  
\*H. Daniels, Jr., Project Manager  
J. Brownell, QA Specialist  
\*F. Spangenberg, Director, Nuclear Licensing  
\*J. Greene, Manager Startup  
\*J. Spencer, Director Design - Design Engineering  
\*G. Bell, Director Construction and Procurement QA  
\*K. Graf, Director, Nuclear Support  
M. Delacruz, Administrative Assistant

#### Hartford Steam Boiler Engineering and Insurance Company

J. Walker, ANII

#### Southwest Research Institute (SWRI)

R. Forman, Team Supervisor  
J. Dinigans, Inspection Engineer

#### Baldwin Associates, Inc. (BA)

L. Osborne, Manager, Q&TS  
\*A. King, Jr., Project Manager  
\*E. Rosol, Deputy Project Manager  
\*R. Green, Assistant Manager, Q&TS

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

\*Denotes those attending the final exit interview November 16, 1984.

### 2. Preservice Inspection

#### a. General

Ref. Report No. 50-461/82-09

IPC contracted SWRI to perform the PSI in accordance with ASME Section XI, 1974 Edition, Summer 1975 Addenda.

b. Program and Procedure Review

The inspector reviewed the following program and procedures:

- . SWRI, Recording Data from Direct Visual, Liquid Penetrant, and Magnetic Particle Examination, IX-FE-116-0
- . SWRI, Liquid Penetrant Examination Color Contrast Method, NDT-200-1, Revision 55
- . SWRI, Dry Power Magnetic Particle Examination, NDT-300-1, Revision 23
- . SWRI, Fluorescent Magnetic Particle Examination, NDT-300-2, Revision 36
- . SWRI, Manual Ultrasonic Examination of Austenitic Pressure Piping Welds, NDT-600-31, Revision 11
- . SWRI, Manual Ultrasonic Examination of Ferritic Pressure Piping Welds, NDT-600-41, Revision 4
- . Material and Equipment Certification

The inspector reviewed the certification documents relative to the following items:

Ultrasonic Instruments, calibration blocks, transducers and couplant

Liquid Penetrant, penetrant, cleaner and developer

Magnetic particle, materials and equipment

c. NDE Personnel Certification, Observation of Work Activities, Review of Data Reports, QA Surveillances and Audits

The inspector reviewed several SWRI NDE personnel certifications in accordance with SNT-TC-1A, reviewed data reports and various audits.

The inspector also observed the work and had discussions with personnel during review of the following activities. These observations included calibrations, performance of the examinations, and the documentation.

- . Ultrasonic examination of weld #1-RR-BG-1, Loop B, Reactor Recirc.
- . Liquid Penetrant examination of weld #1-RR-AM-1, Loop A, Reactor Recirc.

No items of noncompliance or deviations were identified.

### 3. NRC Independent Measurements

There was an independent verification inspection performed at the Clinton facility, Unit 1, using the NRC NDE van and contractor technicians under NRC direction. Construction activities and materials were sampled through nondestructive examinations as a supplement to the existing inspection efforts.

This inspection began on November 5, 1984, and was completed on November 16, 1984. The NRC, Region I, requested documentation packages for each of the welds selected to be prepared by the licensee. The NRC reviewed the licensee's documentation packages and updated the NRC's procedures to be consistent with the licensee's procedures. The licensee also prepared packages for the welds selected containing the following on each weld:

- . Inspection Report
- . Weld History (QC History)
- . Material Certifications for base materials
- . Weld Wire Certifications
- . Piping drawings, Isometric of weld locations
- . NDE Reports on all NDE performed
- . NDE Procedures for RT, PT, MT and VT
- . Weld Procedures

The NDE van team performed the following examinations and inspection as appropriate:

Radiography - Pipe butt and socket welds, appropriate pressure boundary components.

Ultrasonics - Flaw detection and material thickness measurements, as appropriate, of piping, welds, structural components, vessels, heat exchangers, bolting, and other equipment.

Liquid Penetrant - Piping system components and structural elements.

Magnetic Particle - Piping system components and structural elements.

Hardness Testing - All of the previously listed components.

Windsor Probe - Safety-related concrete.

Delta Ferrite Indications (Severn Gage) - Stainless steel welds.

Alloy Analysis - Selected metallic components will have confirmatory chemical analysis performed.

Visual Examination - Weld quality, configuration verification of piping and structural systems.

Quality Records Review - Welding documentation, materials and personnel certification, NDE records to include radiographs.

The results of the above inspections and examinations will be documented in Region I's inspection report No. 84-35.

4. Exit Interview

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