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

REGION III

Report No. 50-461/79-04

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, Illinois

Inspection Conducted: April 3-5, 1979

Inspector: C. M. Erb C. M. Erb 4/23/79

Approved By: D. H. Danielson, Chief for 4/23/79
Engineering Support Section 2

Inspection Summary

Inspection on April 3-5, 1979 (Report No. 50-461/79-04)
Areas Inspected: Procedures for removal and replacement of recirculation inlet safe ends (N2) on reactor pressure vessel; QA Manual review; quality records for Class 1 and Class 2 equipment; storage of NSSS equipment. The inspection involved a total of 19 inspector-hours onsite by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

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DETAILS

Persons Contacted

Licensee Employees

*J. O. McHood, Vice President
*G. M. Brashear, Manager of Site
*J. F. Hampton, QA Supervisor - Site
*D. E. Korneman, Supervisor Mechanical Construction
*R. J. Canfield, Construction Supervisor
*E. Connon, Assistant Supervisor Construction
*B. F. Kacer, QA on Second Shift
*M. Tindill, Quality Assurance
*L. W. Dozier, Mechanical Construction

Baldwin Associates (BA)

*J. Hilding, QA Manager
*T. Selva, QC, Technical Services
*B. G. Carson, Manager, Technical Services
*J. F. Lineham, Manager QC
*R. D. Halverson, QC Engineer
T. Bostwick, Warehouse
M. Gann, Warehouse
M. Cook, Inspector - Receiving

Reactor Controls Incorporated (RCI)

J. Klaux, Site Manager
W. Mays, General Foreman
*R. Jastremski, Quality Control Corporate Level 3
*C. S. Guarneri, QC Supervisor, Level 2

General Electric Company (GE)

*S. Hall, Site QC

Bristol Steel Company

A. Whigham, Supervisor QA

*Denotes those present at the exit interview.

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Licensee Action on Previous Inspection Findings

(Open) Unresolved Item (50-461/79-01-01) Qualification ventilation duct seals. The licensee contacted S&L as to the environmental qualification and suitability of V-986 tape meeting ASTM D-1056, RE43 as a sealant in safety related ducting. S&L replied that the material would require additional testing for thermal and radiation documentation. However, S&L felt that current regulations do not require thermal and radiation aging characteristics.

The inspector asked the licensee in a subsequent telecon to identify specifically the various ventilation systems where this sealant tape would be used. Presently, it is being installed in non safety related ducting.

This item will remain open until the licensee assures the inspector that this tape does not require further environmental qualification.

Licensee Action on 10 CFR 50.55(e) Items

(Closed) 50.55e item, letter dated March 7, 1979, from W. C. Gerstner to Region III. This item NCR-1810 covered the repair of 14 drywell wall weld defects found in an independent QA audit. The inspector examined welds, NDE records and corrective action and found acceptable repairs had been made. The above letter was implemented and the item is closed.

Functional or Program Areas Inspected

1. QA Manual Review - Reactor Controls Incorporated

   This manual included provisions for compliance with 10 CFR 50, Appendix B Criteria and also included a written practice for training and certification of NDT personnel per the requirements of SNT-TC-1A, 1975 Edition.

   This manual also included the activity of the Authorized Nuclear Inspector as required by ASME Section III, Division I. Reactor Controls Incorporated have the contract for removal and replacement of the recirculation inlet and feedwater nozzle safe ends on the Clinton reactor pressure vessel.

   No items of noncompliance or deviations were identified.

2. Replacement Program for Recirculation Inlet Nozzles (N2) Unit 1

   The following specifications and procedures are being used to effect the cutoff of original safe ends and welding of replacement safe ends.

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Etch, Rev. 1, RCI, Determine Cutoff Line
PE-2, Rev. 2, RCI, Penetrant Test, weld preparation
GE 21A-2039, Clean and Etch
GE 21A-2041, Repair of Arc Strikes for Reactor Assembly
GE 21A-2040, Cleaning and Cleanliness Control for Field Modification

All ten nozzles had been removed and machining of the weld preps has started using an air operated tool which revolves around the outside of the nozzle.

Two replacement safe ends were observed by the inspector onsite. These safe ends were received on PQC No. 114 and were S/N J7664 and S/N J7656. The PQC identified one deviation where the overall length was short 0.110" and would require compensation on mating parts.

The safe end composition is a special low carbon type 316 stainless steel with nitrogen. Two of the safe ends were forged by Coulter Steel Company and the chemical analysis of Ht. 74717 is as follows:

C%	Mn%	P%	S%	Si%	Cr%	Ni%	Mo%	Cu%	Co%
.018	1.60	.031	.014	.47	16.37	12.69	2.15	.19	.30

The mechanical properties were yield 34,400 psi, tensile 75,400 psi.

The safe ends are buttered with Inconel where the inboard weld to the vessel nozzle is made. The cut on the old safe end was made through the original Inconel weld prep so that this pressure retaining weld is Inconel on both sides. Inconel filler weld rod is used. This weld will be made to procedure WPS-W-43/43 CTS-1 which requires a GTAW root with consumable insert and after a minimum root thickness is achieved, SMAW is used to completion.

Required nondestructive testing will be as follows:

Liquid Penetrant test by RCI, weld prep.
Liquid Penetrant test by RCI, GTAW welding.
Liquid Penetrant test by RCI, completion of weld.
Radiography, U. S. Testing, completed weld.
Ultrasonic test, completed weld.

The weld, internal to the safe end, of the thermal sleeve to the safe end will be made with an automatic welder manufactured and qualified by Dimetrics Incorporated. Dimetrics will furnish a qualified procedure and weld materials for this work. Liquid Penetrant Test will be the only NDT performed on this weld which is over 12" from the outside pressure retaining weld.

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This replacement work will meet the requirements of ASME Code, Section XI, 1974 Edition through Summer 1975 Addenda, and Section III, 1974 Edition through Summer 1976 Addenda.

No items of noncompliance or deviations were identified.

3. Storage of Class 1 and 2 Components - Unit 1

The following items were examined and found to be stored in a heated warehouse.

System	Item	Manufacturer	Release	Description
HPCS	Globe Valve	Anchor Darling	PQC-V-437	10" 900 lb.
RCIC	Pump	Bingham Williamette	PQC-DD-957	Certs Not Here
M.S.	Iso Valve	Atwood and Morrill	PQC-N-243	24", C1-1
RHR	Pump	Byron Jackson	PQC-DD-810	C1-2
CRD	Hyd. Control	General Electric Co.	PQC-03144	--

The inspector noted that many items in the warehouse bore "Hold Tags" indicating a lack of documentation. The inspector noted that this could be an installation problem when production begins to requisition many items and final QA approval is not onsite.

Items where the receiving documentation was onsite and had the necessary certifications and deviations appeared to be satisfactorily documented.

No items of noncompliance or deviations were identified.

4. Qualification Papers for RCI Inspector

While examining the qualifications for PT inspection by RCI inspectors for the N2 nozzle safe end program, one inspector, Mr. Guarneri, lacked papers onsite. RCI stated action will be taken immediately to forward proof of qualification to the site. PT inspection onsite will only be performed by people with papers.

This is an unresolved item that will be examined on a subsequent inspection. (461/79-04-01)

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. An unresolved item is discussed in Paragraph 4.

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Exit Interview

The inspector met with site personnel (denoted under Persons Contacted) at the conclusion of the inspection on April 5, 1979. The inspector summarized the scope of the inspection, including the unresolved item. The licensee acknowledged the finding.

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