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

REGION III

Report Nos. 50-454/79-17; 50-455/79-17

Docket Nos. 50-454; 50-455 License Nos. CPPR-130; CPPR-131

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Byron Nuclear Generating Station, Units 1 and 2

Inspection At: Byron Site, Byron, IL

Inspection Conducted: December 11-12, 1979

Inspectors: J. E. Konklin C Williams for: 1/3/80

E. W. K. Lee E.W.K.Lee 12/31/79

Approved By: C. C. Williams, Chief C C Williams 1/3/80
Projects Section 2

Inspection Summary

Inspection on December 11 - 12, 1979 (Report Nos. 50-454/79-17; 50-455/79-17)
Areas Inspected: Status of ongoing site construction activities; licensee actions relative to the resolution of previously identified items of non-compliance and unresolved items; licensee actions relative to the resolution of reportable deficiencies per 10 CFR 50.55(e) and 10 CFR 21; reactor coolant pressure boundary and other safety related piping work activities. This inspection involved a total of 21 on-site inspector hours by two NRC inspectors.
Results: No items of noncompliance or deviation's were identified.

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DETAILS

Persons Contacted

Principal Licensee Employees

*G. Sorenson, Project Superintendent
*J. McIntire, Site QA Supervisor
*R. Tuetkin, Lead Mechanical Engineer
*J. Mihovilovich, Lead Structural Engineer
*G. Smith, Lead Electrical Engineer
*J. Porter, QA Mechanical Coordinator
*S. Forsha, QA Structural Coordinator
*R. Aken, QA Electrical Coordinator

Blount Brothers Construction

R. Donica, QA/QC Supervisor

The inspectors also contacted othet licensee and contractor personnel, including craftsmen, QA/QC, technical and engineering staff members.

*Denotes those attending the exit interview on December 12, 1979.

Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (454/79-01-03; 455/79-01-03): Reliable Sheet Metal QA Manual and procedure deficiencies. The previous RIII report (50-454/79-01; 50-455/79-01) raised four specific questions regarding the content of the RSM QA Manual and RSM Procedure No. 8. During this inspection, the RIII inspector reviewed RSM Procedure No. 8, revised January 17, 1979, and the RSM Quality Assurance Manual, latest revision dated August 14, 1979. Based on this review, and discussions with the licensee, the inspector concluded that the previous questions regarding stop work authority, QA organizational structure, and segregation of unacceptable items in storage, have been adequately addressed in the revised documents, and that the question regarding audits does not require a revision to the documents. This item is considered to be resolved.

(Closed) Unresolved Item (454/79-05-01; 455/79-05-01): Questions regarding Certificates of Conformance/Compliance received by Hunter Corporation from Hilti Corporation. The previous RIII report noted that two certificates for concrete expansion anchors from Hilti Corporation are titled certificates of compliance, although the CECo and Hunter requirements specify certificates of conformance. The previous RIII report also noted that the certificates were not signed by a Hilti QA representative.

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During this inspection, the RIII inspector determined that, although the certificates in question are titled certificates of compliance, they are in substance certificates of conformance, and therefore meet the CECo and Hunter requirements. In addition, the inspector determined that a QA signature is not required on certificates of conformance for "off-the-shelf" items such as Hilti concrete expansion anchors. This item is considered to be resolve

(Closed) Noncompliance (454/79-08-01; 455/79-08-01): Failure to maintain adequate cleanliness and protection of components and equipment. The previous RIII report cited six examples in which installed components and equipment were not adequately cleaned or protected from possible damage.

During this inspection, the RIII inspector determined, by inspection of the work areas in question and by review of CECo QA Surveillance Report QG 59.3 dated August 16, 1979, that the specific conditions cited have been cited have been corrected and that appropriate actions have been taken to prevent recurrence. This item is closed.

(Closed) Unresolved Item (454/79-08-02; 455/79-08-02): Surface pit on Unit 1 upper core support barrel. During the previous RIII inspection, the inspector observed a surface pit on the Unit 1 upper core support barrel and obtained the licensee'a agreement that the pit would be evaluated to determine whether grinding or repair is required. During this inspection, the inspector reviewed Westinghouse Material Review Report No. FS-79-123, which includes a disposition dated September 10, 1979, by Westinghouse Engineering, Pensacola, stating that the surface pit is acceptable. This item is considered to be resolved.

Functional or Program Areas Inspected

Functional or program areas inspected are discussed in the following sections of this report.

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Section I

Prepared by: J. E. Konklin

Reviewed by: C. C. Williams, Chief
Projects Section 2

1. Review of Licensee Actions on Previous Inspection Findings

The RIII inspector reviewed the licensee's actions relative to the resolution of specific inspection findings which were identified in previous RIII inspection reports, and which were still in an open status prior to this inspection. The items reviewed, and the licensee actions relative to the resolution of the items are discussed in the foregoing section of this report.

2. Observation of Ongoing Site Construction Activities

A site tour was conducted to monitor the progress of site construction activities, and included observation of work activities and equipment status in the Unit 1 and 2 reactor containments, the fuel handling building, and the auxiliary building. The inspector also observed activities involving the destressing of post-tensioning tendons on the Unit 1 containment relative to the defective anchor-head problem which was reported to Region III as a reportable deficiency per 10 CFR 50.55 on November 29, 1979.

The inspector noted that installation of the Unit 2 primary loop piping and components is scheduled to begin during the first week of January 1980. The Unit 2 steam generators are scheduled for installation approximately March 1, 1970, to be followed by completion of the Unit 2 shielding walls by about July 1, 1980. With regard to electrical activities, approximately 500 cables are now being pulled per month, and major conduit installation activities are scheduled during the next three months. Installation of nuclear instrumentation is scheduled to begin in March 1980. Approximately 200 Category I hangers are installed, and hanger installation activites are proceeding at a significant rate.

3. Limitorque Valve Actuators, Reported Per 10 CFR 21

A report per 10 CFR 21 was made to the NRC by Jamesbury Corporation on October 16, 1978, regarding specific limitorque valve actuators at four plants, including Byron, which did not meet the applicable seismic requirements. During two previous Region III inspections (50-454/78-11; 50-455/78-11; 50-454/79-08; 50-455/79-08) identification and partial implementation of the required corrective actions by

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CECo were reviewed. During this inspection, the RIII inspector verified that the required rework of the involved valves to meet the seismic requirements has been completed. The above 10 CFR 21 reportable item is considered to be closed for the Byron Project. In addition, an associated unresolved item (454/79-07-03; 455/79-08-03) regarding reportability of the deficiency by CECo is also considered to be closed.

4. Defective Raytheon RC 747D Integrated Circuits - Reported per 10 CFR 50.55(e)

The licensee notified Region III on December 20, 1977 of a reportable deficiency per 10 CFR 50.55(e) regarding defective Raytheon RC 747D integrated circuits. During this inspection, the RIII inspector reviewed CECo Nonconformance Report NCR No. F-163, with a disposition completion dated September 13, 1979, which indicated that the Raytheon integrated circuits had been replaced with Motorola devices employing ceramic housings. The inspector also reviewed CECo QA Surveillance Report No. 1581, dated October 30, 1979, which verified that the corrective action had been implemented. The above 10 CFR 50.55(e) reportable item is therefore considered to be closed.

5. Post-Tensioning Buttonhead Cracks - Reported per 10 CFR 50.55(e)

The licensee notified Region III, on November 28, 1978, of a reportable item per 10 CFR 50.55(e) regarding deficiencies in the post-tensioning tendons for the Unit 1 and Unit 2 containments. The reportable item involved rejectable cracks on 13 tendons based on the crack criteria of INRYCO Specification 1610. During a previous RIII inspection (50-454/79-01; 50-455/79-01), the inspector reviewed the vendor nonconformance report which documented the buttonhead deficiencies, observed the buttonhead inspection activities, and discussed with the licensee the planned field inspection program and buttonhead test program.

During this inspection, the RIII inspector reviewed, and discussed with the licensee, the following documents:

a. Inryco Report on Investigation of Buttonhead Defects, dated March 9, 1979, which includes the results of single wire tensile tests and single wire, full tendon and reduced tendon dynamic tests with defective buttonheads.

b. Inryco Quality Control Procedure QC 5.1, dated March 1, 1979 and titled, "Inspection - Tendons", which includes as an appendix the revised Inryco buttonhead acceptance criteria BH 102.

c. Inryco Field Inspection Report for Buttonhead Tendons, dated March 9, 1979, which includes the results of the field inspection of buttonheads at Byron.

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Based on the above inspection, reviews and discussions, the inspector concluded that appropriate corrective actions have been taken with regard to the reported buttonhead deficiencies. The associated 10 CFR 50.55(e) item is therefore considered to be closed.

Subsequent to this inspection, a RIII Civil Inspection Specialist reviewed the Inryco Report on Investigation of Buttonheads Defects in detail at the Region III offices. The evaluation included review of all data collected as part of the Inryco performance testing program and the associated literature referenced in Appendi-x B of the report. The Civil Inspection Specialist concurred that appropriate action had been taken by the licensee.

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Section II

Prepared by: E. W. K. Lee

Reviewed by: D. H. Danielson, Chief
Engineering Support Section 2

1. Reactor Coolant Pressure Boundary Piping - Observation of Work Activities (Unit 1)

The inspector observed fitting up and alignment of Reactor Coolant System Weld No. 113 on drawing No. RC-7. It was determined that work was performed in accordance with procedure and that good construction practice was adhered to.

No items of noncompliance or deviations were identified.

2. Reactor Coolant Pressure Boundary Piping - Observation of Welding Activities (Unit 1)

The inspector observed welding of the Reactor Coolant System Weld No. 113 on drawing No. RC-7.

It was determined that (1) work was conducted in accordance with the traveler; (2) proper welding materials were used; (3) welding procedure requirements were met; (4) work area was free of weld rod stubs, and (5) physical appearance was acceptable.

No items of noncompliance or deviations were identified.

6. Safety Related Piping - Observation of NDE Work Activities (Unit 1)

The inspector observed magnetic particle examination of Component Cooling Water System Weld No. FW-297 on Drawing No. CC-21. It was determined that (1) surface condition was acceptable; (2) procedure requirements were met; (3) personnel were properly qualified and (4) equipment was currently calibrated.

No items of noncompliance or deviations were identified.

Exit Interview

The inspectors met with licensee representatives (denoted under Persons Contacted) at the conclusion of the inspection on December 12, 1979. The inspectors summarized the purpose and findings of the inspection. The licensee acknowledged the findings reported herein.

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