

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-454/84-26(DE); 50-455/84-22(DE)

Docket Nos. 50-454; 50-455

Licenses No. CPPR-130; CPPR-131

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

Facility Name: Byron Station, Units 1 and 2

Inspection At: Byron Site, Byron, IL

Inspection Conducted: May 3-4, 7-9, 15 and 18, 1984

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

6/19/84  
Date

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

6/19/84  
Date

Inspection Summary

Inspection on May 3-4, 7-9, 15 and 18, 1984 (Reports No. 50-454/84-26(DE); 50-455/84-22(DE))

Areas Inspected: IE Bulletins and 50.55(e) items; as-built walkdown of structural steel framing; steam generator upper and lower lateral supports; and reactor coolant pump support columns and bases. The inspection involved 45 inspector-hours onsite by one NRC inspector.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Commonwealth Edison Company (CECo)

T. Tramm, Nuclear Licensing Administrator  
G. Sorenson, Construction Superintendent  
\*M. Lohman, Assistant Construction Superintendent  
\*R. B. Klingler, Project QC Supervisor  
J. Mihovilovich, Project Construction Lead Structural Engineer  
K. J. Hansing, QA Superintendent

#### Hunter Corporation

M. Somsag, QA Supervisor

#### Hatfield Electric

E. Tovo, Project Engineer

#### Powers-Azco-Pope

R. Larkin, Site QA Manager

#### Reliable Sheet Metal

R. Irish, Site QA Manager

#### Johnson Controls

S. Peerson, QC Supervisor

#### Blaunt Brothers

\*R. Bay, QA Supervisor  
D. Hoffman, QC Inspector

The inspector also contacted and interviewed other licensee and contractor personnel during this reporting period.

\*Denotes those present during the exit interview.

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

- a. (Open) 10 CFR 50.55(e) 82-09 (454/82-09-EE; 455/82-09-EE) ITT-Grinnell Figure 306/307 Mechanical Snubber Bracket Interference

On December 2, 1982 Region III was notified of deficiency reportable pursuant to 10 CFR 50.55(e) regarding potential bracket interferences in mechanical snubbers provided by ITT Grinnell. Certain of these assemblies (size 3 assemblies) may have pipe clamp interference problems. Others (size 35 assemblies) may have end brackets which could interfere with the snubber.

Design drawings and ITT Grinnell production information has been reviewed to identify suspect snubber assemblies. The assemblies would be inspected prior to the establishment of a repair program and a completion schedule. A final report will be issued documenting the inspections, the repairs required to restore design margins, and the schedule for completion of the repairs.

In a letter dated June 14, 1983 (J. M. Nappi/ITT Grinnell to J. Deress/CECo) ITT Grinnell outlined their investigation of worst case tolerances and conditions, and their Verification Program. The inspector requested that the results of this program be made available for review prior to close out of this item. This information has yet to be furnished, therefore, this item will remain open pending further review during a future inspection.

- b. (Open) 10 CFR 50.55(e) 82-10 (454/82-10-EE; 455/82-10-EE) Elcin Rigid Strut Pins

On December 23, 1982 a phone call was made between the USNRC Region III (R. D. Walker, J. Streeter, and L. Reyes) and Commonwealth Edison Company (C. W. Schroeder, T. E. Watts and D. Wozniak). The purpose of the phone call was to report a potential 10 CFR 50.55(e) for LaSalle Unit 2, Byron Units 1 and 2, Braidwood Units 1 and 2.

The test program and engineering evaluations have been documented in Region III Inspection Report No. 50-254/83-32 and 50-265/83-32 for Quad Cities Units 1 and 2.

A review of the technical aspects of the test program and engineering evaluations will be made in a future inspection. This item, therefore, will remain open.

- c. (Closed) 10 CFR 50.55(e) 83-07 (454/83-07-EE; 455/83-07-EE) Reactor Coolant Pump Failure

This was originally report to Region III on May 5, 1983 pursuant to 10 CFR 50.55(e). Two interim reports have since been issued, letter dated June 9, 1983 (E. D. Schwartz to J. G. Keppler) and letter dated September 23, 1983 (T. R. Tramm to J. G. Keppler). The final report is a letter dated May 2, 1984 (T. R. Tramm to J. G. Keppler).

This final report documents the examinations and evaluations of the damaged bearing components of RCP 1A which were performed by Westinghouse Corporation. These examinations and evaluations indicated that there was no evidence of material or process deficiencies. They did indicate, however, that silica sand was present in the remelted metallic debris as well as on the scored surface of the rotor journal. Since no other failure mechanism could be identified it was concluded that the introduction of sand particles into the bearing annulus caused scoring which lead to complete surface destruction. CECO has been unable to locate the source of the containment sand. Only one (1) of four (4) pumps failed after operating over 1000 hours with no apparent difficulties. Plant

cleaning procedures and filtering systems appear to be adequate. CECO will keep the Region apprised of further developments and/or problems of this nature.

The inspector reviewed the examination results and evaluations of Westinghouse Corporation and the licensee and determined that these appear to be adequate and support the conclusion reached regarding the RCP 1A bearing failure.

### 3. Structural As-Built Walkdown

The inspector conducted as-built walkdowns and document reviews of the following areas:

- . Selected areas and elevations of Unit 1 and 2 containment structural framing, including structural framing modifications.
- . Steam generator bolting and supports, main steam support structures, and reactor coolant pump support column modifications.

#### a. Document Reviews

The following documents were reviewed:

##### Main Steam Generator (MSG)

MSG 1RC01AB-1, Process Sheet for Installation (type 2)  
MSG 1RC01BD-4, Process Sheets for Installation (types 2 & 3)  
Drawing IHS-1119-4, Bottom Lateral Inner Supports, EL. 443' (±),  
Sheets 1, 2, and 3 MSG-4  
RCP-1 Process Sheet HRCPS-1  
Drawing IHS-1107, Bolting Location for RCP Support Steel, Sheets 1,  
2, and 3  
Process Sheets for pumps 1 and 4 at EL. 390' (±)  
Procedure SIP 20.514, paragraphs 4.3 and 4.6

##### Containment - Unit 1

Drawing S-2106, Revision D, Framing Modification Plan EL. 407'-0",  
Areas 2 and 3  
Drawing S-2110, Revision E, Framing Modification Plan EL. 419'-0",  
Areas 2 and 3  
Drawing S-2111, Revision D, Framing Modification Plan EL. 419'-0",  
Areas 1 and 4  
Drawing S-2112, Revision D, Framing Modification Plan EL. 426'-0",  
Areas 2 and 3  
Drawing S-2107, Revision D, Framing Modification Plan EL. 407'-0",  
Areas 1 and 4  
Drawing S-2113, Revision J, Framing Modification Plan EL. 426'-0",  
Areas 1 and 4

b. As-built Walkdowns

An as-built walkdown of MSG-1 and MSG-4 bottom lateral and upper lateral supports was conducted along with RCP-1 support columns 1, 2, 3, 4, and RCP-4 support columns 1, 2, and 3. In Unit 1 Containment an as-built walkdown of E1. 407'-0" and E1. 419'-0" Areas 1 and 4 was conducted of selected framing members including verification of type of connection (whether slip connection, friction connection, or field welded). The walkdown of the MSG columns, the pressurizer columns, the lateral supports for the MSGs and RCPs referred to above was conducted to make certain the corrective action to 10 CFR 50.55(e) (83-03) referred to in Region III Inspection Reports No. 50-454/84-04(DE) and 50-455/84-03(DE) had been completed in Unit 1 and with similar results in Unit 2.

c. Material Traceability

Traceability of material was performed on the following structural beams (bm) in Areas 1 and 4:

<u>E1. 407'-0"</u>	<u>E1. 419'-0"</u>
bm 40802	bm 61201
bm 41001	bm 61202
bm 41002	bm 61302
bm 41202	bm 61401
bm 41301	bm 61402
bm 41302	bm 61501
bm 41403	
bm 41502	
bm 41503	

The mill certifications for each beam were available and retrievable. These contained the respective heat numbers for each beam, the material grade, chemical analysis, and other pertinent data as required.

No items of noncompliance or deviations were identified.

4. Removal of Temporary or Deleted Attachments

In a letter dated December 17, 1981, from R. Tuetkin to the five site contractors most likely to make and remove temporary attachments to the structural framing steel of the Containment, Fuel Handling Building, and the Auxiliary Building, it was stated that the appropriate contractor subsequent to removal of the attachments request an MT examination of the surface area be performed. This was rescinded by a letter dated February 2, 1982, from R. Tuetkin to the five contractors which stated that the contractor removing the deleted or abandoned temporary attachments would grind the area flush. The contractor would then perform a visual examination to the following criteria: surfaces shall be smooth, uniform, and free from cracks, mechanical marks, or tears. If welds are required to bring the surface into this condition, the contractor shall perform these weld repairs utilizing appropriate approved procedures.

Review of contractors procedures indicated that all contractors visually inspect the surface before and after attachment removal on structural members they install. If these attachments were installed on structural members erected by the prime structural contractor, an "out-of-house" DR is written to CECO Project Construction Department (PCD). The prime structural contractor then visually inspects the surface both before and after removal as well as actually removing the item. If, in any of the above cases, it is deemed necessary an MT examination of the surface is requested of the independent testing contractor onsite and is performed and evaluated by him.

The procedures reviewed were:

- . Hunter Corporation SIP 4.000, Revision 13, page 33, article 14.7.4a  
SIP 4.003  
Welding Procedure, WPS 23
- . Hatfield Electric Procedure 7A
- . Reliable Sheet Metal Procedure 3, Temporary Attachments  
Procedure 30, Control of Construction Procedures
- . Johnson Controls QAS 111BY, Revision 9, Visual Inspection of Hangers
- . Powers-Azco-Pope FOP QC 3, Revision 12  
Section 9.0 Visual Inspection  
Section 10.0 Removal of Temporary Attachments

No items of noncompliance or deviations were identified.

5. Exit Interview

The inspector met with licensee and contractor representatives (denoted in Paragraph 1) at the conclusion of the inspection and summarized the inspection scope and findings.