

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report Nos. 50-454/85044(DRS); 50-455/85043(DRS)

Docket Nos. 50-454; 50-455

License Nos. NPF-37; CPPR-131

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

Facility Name: Byron Station, Units 1 and 2

Inspection At: ITT-Grinnel Corporation, Providence, RI (ITT-G)

Inspection Conducted: October 3, 1985

Inspector: *D. H. Danielson*  
I. T. Yin

10/22/85  
Date

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

10/22/85  
Date

Inspection Summary

Inspection on October 3, 1985 (Report Nos. 50-454/85044(DRS); 50-455/85043(DRS))

Areas Inspected: Special, announced inspection to evaluate the modified Boeing steam generator snubber (SGS) production tests conducted by ITT-G. The inspection involved a total of 16 inspector-hours at the vendor testing facility and at the RIII office by one NRC inspector.

Results: No violations or deviations were identified.

## DETAILS

### 1. Persons Contacted

#### Commonwealth Edison Company (CECo)

\*G. D. Tolksdorf, QA Engineer/Lead Auditor

\*H. M. Jensen, Consultant

#### ITT-Grinnell Corporation (ITT-G)

\*E. R. Eramian, Engineering Manager, Special Services

\*D. V. Walshe, Division QA Manager

\*D. W. Mills, Jr., Senior Project Engineer

\*R. E. Richards, Supervisor, Special Services

\*Denotes those attending the management exit interview on October 3, 1985.

### 2. Licensee Actions on Previous Inspection Findings

(Closed) Violation (455/85004-01): Failure to conduct life cycle qualification test for the modified Boeing SGSs in accordance with procedure. The inspector determined that the alternative life cycle testing was acceptable. The inspector witnessed portions of the product tests conducted on the modified Boeing SGS (see Paragraph 4) and observed no procedural deviations.

(Closed) Open Item (455/85004-02): Ineffective licensee communication with RIII concerning procedure changes and deficiencies identified during Boeing SGS investigative and qualification testing. The licensee measures taken to improve the subject communication appears to be effective. Test procedures were transmitted to RIII for review prior to conducting the tests. The inspector was also informed about various activities in a timely manner prior to the licensee conducting tests.

### 3. Licensee Action on 10 CFR 50.55(e) Items

(Closed) 50.55(e) Item (454/84-06-EE; 455/84-06-EE): The ultrasonic testing of the Boeing steam generator snubber (SGS) revealed a material lamination around the piston rod end. Subsequent visual inspections also identified some manufacturing defects. All defects were removed or repaired by the licensee. The inspector's review of licensee corrective actions and observation of the tests conducted for the modified Boeing SGSs, concluded that acceptable measures were taken to resolve issues contained in the 10 CFR 50.55(e) report.

### 4. SGS Production Tests

An extensive SGS design and requalification test program was completed by CECo after identification of the defective Boeing SGSs. The program was implemented by CECo and ITT-G. The inspector reviewed procedures and observed testing at various times between July 1984 and February 1985.

Production tests for the 24 modified Boeing SGSs to be installed at Byron Unit 2, and Braidwood Units 1 and 2 were conducted at the ITT-G, Warren, Ohio, and ITT-G, Providence, Rhode Island facilities beginning August 1985.

a. Review of Production Procedures

The following procedure was presented to RIII for review in July 1985:

- ITT-G Test Procedure, SPS-8416-1, "Functional and Spring Rate Testing of Steam Generator Snubbers," Revision 6, dated July 8, 1985.

The following procedures were presented to RIII for review in September 1985.:

- ITT-G Test Procedure, SPS-8416-1, "Functional and Spring Rate Testing of Steam Generator Snubbers," Revision 7, dated September 12, 1985.
- ITT-G Procedure, "Setting Lockup on Boeing Large Bore Valves with SF-1154 Fluid Steam Generator Snubbers," Revision 1, dated September 12, 1985.
- ITT-G Assembly Procedure, "ITT Grinnell Modification of Boeing Large Bore Steam Generator Snubbers for Commonwealth Edison Byron and Braidwood Nuclear Power Stations," Revision 4, dated September 12, 1985.

b. Observation of Testings

The inspector observed production tests conducted for the modified Boeing SGS No. 15 on October 3, 1984 at ITT-G. The lockup velocity, bleed rate, and spring rate tests were conducted in accordance with the procedure. No anomalies including seal leaks were observed during the tests. Review of the preliminary test data indicated acceptable performance characteristics.

c. Review of Test Records

The inspector reviewed product test records for the modified Boeing SGS No. 18. The records were contained in ITT-G Test Data Form SPS-8416-TD, dated July 29 through August 8, 1985, and approved on August 24, 1985. The inspector checked some of SGS displacement and reactive load data based on the original instrumentation strip charts and verified the data to be accurate. The inspector also reviewed some of the displacement transducer calibration records, and the application of calibration factors in the data evaluation and documentation. All the numerical values were verified to be correct.

No violations or deviations were identified as a result of the inspector's review.

5. Exit Interview

The Region III inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on October 3, 1985. The inspector summarized the scope and findings of the inspection. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee representatives did not identify any such documents/processes as proprietary.