

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-315/83-05(DE); 50-316/83-06(DE)

Docket No. 50-315; 50-316

License No. DPR-58; DPR-74

Licensee: American Electric Power Service Corporation  
Indiana and Michigan Power Company  
2 Broadway  
New York, NY 10004

Facility Name: D. C. Cook Nuclear Plant, Units 1 and 2

Inspection At: American Electric Power Service Corporation (AEPSC),  
New York, NY

Inspection Conducted: March 16-17, 1983

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

4/1/83

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

4/1/83

Inspection Summary

Inspection on March 16-17, 1983, (Report No. 50-315/83-05(DE); 50-316/83-06(DE))

Areas Inspected: Licensee actions relative to IE Bulletin No. 79-14; review of licensee actions relative to previously identified findings. The inspection involved a total of 12 inspector-hours at the corporate engineering office by one NRC inspector.

Results: Of the areas inspected, no items of noncompliance or deviations were identified.

## DETAILS

### Persons Contacted

#### American Electric Power Service Corporation

- \*M. P. Alexich, Nuclear Division Manager
- \*H. T. Sinclair, Assistant Manager, Design Division
- \*J. L. Williams, Manager, Mechanical Design Section
- \*J. I. Castresana, Manager, Nuclear Safety and Licensing Section
- \*T. W. Baker, Manager, Piping and Valves Section
- T. Satyan-Sharma, Senior Engineer, Nuclear Safety and Licensing
- R. A. Herbst, Senior QA Engineer
- \*S. Ulan, Senior Engineer, Mechanical Design

\*Denotes those attending the management exit interview on March 17, 1983.

### Licensee Action on Previous Identified Items

(CLOSED) Violation (315/82-07-01; 316/82-07-01): The AEPSC design control over the contractors who are performing some of the IEB 79-14 evaluation work was considered to be insufficient. The licensee corrective action program was reviewed. See Paragraph 1 for details.

(CLOSED) Unresolved Item (315/82-07-02; 316/82-07-02): The licensee should provide clarification in plant instructions on how to measure the snubber cold and hot position settings. See Paragraph 2 for review details.

(CLOSED) IE Bulletin 79-14: As a result of NRC-RIII inspections conducted from CY 1979 to present at the AEPSC corporate design engineering office in New York, NY, and at the D. C. Cook site, all noncompliance and unresolved items identified during the course of the staff reviews and observation had been corrected and resolved. The IE Bulletin 79-14 is closed.

### Functional or Program Areas Inspected

#### 1. AEPSC Re-verification of IEB 79-14 Evaluations Performed by Consultants

During the previous Region III review of the licensee's followup of IEB 79-14 evaluations (315/81-19-02; 316/81-22-02; 315/82-07-01; 316/82-07-01), it was determined that while the AEPSC's in-house program was adequate, its control over the contracted consultants who were performing some of the piping system analyses appeared to be deficient. Since then a program was developed by AEPSC to further review the work done by the consultants. The program and the implementat on findings were forwarded to Region III in the following correspondence:

- . AEP: NRC: 0691, "IE Inspection Report Nos. 50-315/82-07; 50-316/8-07," dated 6/7/82
- . AEP: NRC: 0691A, same subject as above, dated 10/29/82.

. AEP: NRC: 0691B, same subject as above, dated 1/28/83.

During this visit, the inspector reviewed the licensee's program including the following ASPSC Design Division procedures:

- . Mechanical Design Special Procedure (MDSP) No. 79-14-10, "Verification of Consultant's Pipe Stress Analyses for Acceptance by AEPSC," Revision 0, dated 7/1/82.
- . MDSP No. 79-14-11, "Procedure and Specifications for Performing Re-analysis of Piping Systems, per IE Bulletin 79-14," Revision 0, dated 12/1/82.

Subsequent to the review, the inspector stated that the procedures were considered to contain adequate provisions, criteria, and measures to perform the subject re-verification work. To assess the AEPSC implementation of the program, the inspector selected the following four calculation packages (one for each involved consultant) for his review and evaluation:

- a. Associated Technologies Incorporated Calculation No. 1-055, "Component Cooling Water System (1-CCW-15), Return from Let Down Heat Exchanger and Seal Water Heat Exchanger," dated 3/31/80. AEPSC Acceptance of Services Checklist (ASC) for D. C. Cook Plant (Procedure 79-14-10), dated 8/4/82.
- b. Harstead Engineering Associates, Inc. Calculation No. 1-133, "Auxiliary Feedwater - Motor Driven Auxiliary Feed Pump to Steam Generator," dated 1/21/80. AEPSC ASC per procedure 79-14-10, dated 11/11/82.
- c. EDS Nuclear, Inc. Calibration No. 1-111, "Essential Service Water," dated 2/15/80. AEPSC ASC per Procedure 79-14-10, dated 11/2/82).
- d. Teledyne Engineering Services TR-4128-1, Calculation No. 1-36, "Auxiliary Feedwater Pump Discharge Piping (1-FW-6)," dated 1/8/80. AEPSC ASC per Procedure 79-14-10, dated 11/15/82.

The technical review areas included:

- . Justification and rationale for accepting as-built deviations from design/analytical requirements.
- . Re-verification review coverage including completeness in checklist signoffs.
- . Re-checking of equipment nozzle loading conditions. For those that had exceeded the pump manufacturer's allowable, there was sufficient evaluation for safe equipment operations by means of alternate computations.

- . Checking that piping configuration and suspension system component locations had been checked.
- . Checking that structural evaluation of support load changes resulting from piping analysis revisions had been performed.
- . Comparison of load combinations and the summation of stresses at various services conditions with the code allowables.

No items of noncompliance or deviation were identified as a result of the review. The matter is closed.

2. Procedure for Site Measurement of Snubber Cold Position Settings (CPSs) and Hot Position Settings (HPSs)

In conjunction with Region III inspection Reports Nos. 50-315/82-07; 50-316/82-07, Paragraph 2, the questionable snubbers CPSs and HPSs had been clarified by the licensee. The inspector reviewed the following documentation:

- . AEPSC Design Engineering letter to D. C. Cook plant, "Questionable Snubber Settings, Unresolved NRC Item 315/82-07-02; 316/82-07-02," dated 10/26/82.
- . D. C. Cook Nuclear Plant Procedure No. 12 MHP 4030 STP.004, "Inspection or Test of ITT Grinnell Hydraulic Shock and Sway Suppressors," Revision 10, dated 11/23/82.
- . Plant Work Order No. 530050100, completed on 5/5/82 relative to the inspection of snubber 1-GBD-574.
- . AEPSC Design Engineering memorandum, File No. DC-D-5710.2M, "Snubber Setting of Snubber No. 1-GBD-S574, Revision 3 , "Unresolved NRC Items 315/82-07-02; 316/82-07-02," dated 10/25/82.

The inspector considered that the licensee's procedure clarification and re-evaluation effort was adequate. This matter is resolved.

3. Exit Interview

The inspector met with licensee representatives prior to the conclusion of the inspection. The inspector summarized the scope of findings of the inspector. The licensee acknowledged the findings reported herein.