



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

Report No.: 50-400/84-34

Licensee: Carolina Power and Light Company  
411 Fayetteville Street  
Raleigh, NC 27602

Docket No.: 50-400

License No.: CPPR-158

Facility Name: Harris Unit 1

Inspection Conducted: September 18-21, 1984

Inspector: W. P. Ang 10-1-84  
W. P. Ang Date Signed

Approved by: J. J. Blake 10/3/84  
J. J. Blake, Section Chief Date Signed  
Engineering Branch  
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 24 inspector-hours on site in the areas of Seismic Analysis for As-built Safety-Related Piping (IEB 79-14) and Pipe Support Baseplate Designs using Concrete Expansion Anchors (IEB 79-02).

Results: No violations or deviations were identified.

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## REPORT DETAILS

### 1. Licensee Employees Contacted

- \*R. A. Watson, Vice President, Harris Nuclear Project
- \*R. M. Parsons, Project General Manager, Completion Assurance
- \*E. J. Wagner, Engineering General Manager
- \*N. J. Chiangi, Manager, QA/QC, Harris
- \*L. I. Loflin, Manager, Harris Engineering
- \*A. H. Rager, Manager, CI
- \*D. C. Whitehead, QA Supervisor, Surveillance
- L. Williams, Principal Engineer, Harris Engineering
- \*A. Fuller, Principal Engineer, Harris Engineering

Other Organization

#### EBASCO Services

P. N. Sheth, Principal Engineer, IEB 79-14

NRC Resident Inspectors

- \*G. F. Maxwell
- \*R. Prevatte

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on September 21, 1984, with those persons indicated in paragraph 1 above. The following items were discussed with the licensee. The licensee acknowledged the items with no dissenting comment.

(Open) Inspector Followup Item 400/84-34-01, QA and HPES Questions (paragraph 5)

(Open) Unresolved Item 400/84-34-02, Pipe Support Inspection Discrepancies (Paragraph 5)

### 3. Licensee Action on Previous Enforcement Matters

(Closed) Violation 400/84-25-05, Harris Plant Engineering (HPES) Nonconformance Procedure. The licensee's letters of response dated November 18, 1983 and November 30, 1983, have been reviewed and determined to be acceptable by Region II. The inspector held discussions with the licensee and examined the corrective actions as stated in the letters of response. The inspector concluded that the licensee had determined the full extent of the subject noncompliance, performed the necessary survey and followup actions to correct the present conditions, and developed the necessary

corrective actions to preclude recurrence of similar circumstances. The corrective actions identified in the letters of response have been implemented.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. New unresolved items identified during this inspection are discussed in paragraph 5.

5. Seismic Analysis for As-Built Safety-Related Piping Systems (IEB 79-14) and Pipe Support Baseplate Designs Using Concrete Expansion Anchors (IEB 79-02)

A follow-on inspection to RII Report 50-400/84-02 was performed to verify licensee compliance with IEB 79-14 and IEB 79-02 requirements and licensee commitments. The licensee's IEB 79-14 program was reviewed and discussed with the licensee. A HPES procedure that is being developed for IEB 79-14 titled "Procedure for Stress Analysis Verification of Safety-Related Piping Systems" was discussed with the licensee. The licensee was informed that the procedure covered most of the IEB 79-14 requirements but did not provide a comprehensive documentation of the entire Harris IEB 79-14 and IEB 79-02 program which are contained in several other site procedures and should be referenced. Although a trial 79-14 walkdown has been started to try out the program, no final walkdowns have been performed. Pending formal review, approval and issuance of the comprehensive procedure, this was identified as Inspector Followup Item 400/84-34-01, QA and HPES questions.

QA surveillances were performed on pipe support installation and inspections. QA surveillances for the months of August and September (84-934, 84-941, 84-982, 84-988, 84-1040, 84-1039, 84-1046, 84-1049) were reviewed and discussed with the licensee. No programatic breakdown in the QC/CI inspections of pipe supports were identified by the surveillances. Although the surveillances had been performed weekly, no formalized regular schedule had been issued to assure continued surveillances on the pipe support installation and inspection program. Furthermore, surveillances should include the remainder of the IEB 79-14 program, i.e. the piping walkdowns. Pending formalization of comprehensive surveillance schedules, this was identified as a second item for Inspector Follow-up Item 400/84-34-01, QA and HPES questions.

The following component cooling water rigid strut type pipe supports that had been inspected by QC and CI were selected and inspected for conformance to drawing requirements and installation and inspection requirements:

1-CC-H-929  
 1-CC-H-933  
 1-CC-H-934  
 1-CC-H-982  
 1-CC-H-985

1-CC-H-933 was attached to a wall by concrete expansion anchors; the remainder was welded to embed plates. 1-CC-H-933 was also inspected for conformance to IEB 79-02 requirements. During the inspection of the above noted pipe supports, the following items were noted.

- a. Pipe Support 1-CC-H-933 had gaps in excess of 1/16" between the baseplate and the wall. Discussions with the licensee indicated that a program for inspecting baseplate gaps was being developed.
- b. Inspections of baseplates and concrete expansion anchors are performed prior to attachment of the remainder of the pipe support. While it was recognized that this would identify discrepancies and allow correction early during pipe support installation, the inspector informed the licensee that installation of the remainder of the pipe support could invalidate some of the accepted inspection attributes of the baseplate and the concrete expansion anchor, examples of this would be the baseplate gap, concrete expansion anchor embedment depth, etc.
- c. The strut for pipe support 1-CC-H-933 was noted to have 3/16" clearance to an adjacent pipe. Potential clearance problems need to be identified and evaluated. The licensee indicated that it was in the process of preparing a procedure for inspection of piping and pipe supports for clearances and interferences.
- d. A structural member, Pc. 5, of pipe support 1-CC-H-934 was welded to embed plates. The weld was located in a lap between two embed plates. Because of the lap, Pc. 5 was notched to allow installation and welding. The notch on Pc. 5 was not shown on the pipe support drawing. No inspection record of the condition was readily available.

Pending further NRC inspection to verify the acceptability of the above noted conditions, this was identified as Unresolved Item 400/84-34-02, Pipe Support Inspection Discrepancies.

(Closed) Inspector Followup Item 400/83-25-17 identified a potential for design review problems regarding independent verification and ANSI N45.2.11 requirements. Subsequently, the licensee revised HPES procedure 3.1 to clarify design review independence requirements and HPES 3.3 to correspond with ANSI N45.2.11 requirements. The inspector follow-up item was closed.

No violations or deviations were identified.

#### 6. Licensee Identified Items

(Closed) Item 400/83-132, "Removal of Expansion Anchor After Inspection" (10 CFR 50.55(e)). The final report was submitted on July 1, 1983. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives, reviewed supporting documentation, and observed representative samples of work to verify that the corrective action identified in the report has been completed. This item is closed.