



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
 REGION II  
 101 MARIETTA ST., N.W.  
 ATLANTA, GEORGIA 30323

Report Nos.: 50-338/88-29 and 50-339/88-29

Licensee: Virginia Electric and Power Company  
 Richmond, VA 23261

Docket Nos.: 50-338 and 50-339

License Nos.: NPF-4 and NPF-7

Facility Name: North Anna

Inspection Conducted: September 12-16, 1988

Inspector: *R. P. Garity*

10/19/88  
 Date Signed

Approved by: *J. J. Blake*  
 J. J. Blake, Chief  
 Materials and Processes Section  
 Engineering Branch  
 Division of Reactor Safety

10/19/88  
 Date Signed

SUMMARY

Scope: This routine, unannounced inspection was conducted in the areas of IEB 79-14 (Module 25529)

Results: In the areas inspected, violations or deviations were not identified.

Generally, the licensee demonstrated a high level of professionalism and safety consciousness throughout its organization. ALARA considerations were given a high priority during the pipe support walkdown. However, some of the drawings presented to the inspector as As-Built Drawings were of poor quality, illegible, and/or confusing in content. In addition, several minor discrepancies were observed between the information contained on the drawings and what was installed. While these findings raise questions about attention to detail and supervision, they generally have no affect on safety. The calculations were readily available and appear to have been done to applicable codes and standards.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*M. L. Bowling, Assistant Station Manager
- \*D. C. Compton, Senior Staff Engineer, Engineering Mechanics, Civil Engineering Dept.
- \*R. F. Discoll, Manager of Quality Control
- \*M. R. Kansler, Superintendent of Maintenance
- \*P. Kemp, Licensing Coordinator
- \*J. Leberstein, Engineer, Licensing Dept.
- \*D. Quare, Associate Engineer, Licensing Dept.
- \*G. M. Robinson, Jr., Manager of Civil Engineering
- \*J. E. Wroniewicz, Supervisor of Site Nuclear Engineering
- \*C. A. Zalesiak, Senior Engineer, Engineering Mechanics, Civil Eng. Dept.

Other licensee employees contacted during this inspection included technicians.

#### NRC Resident Inspectors

L. P. King, Resident Inspector

\*Attended exit interview

### 2. Action On IEB 79-14

The focus of this inspection was a review of the licensee program conducted to resolve the issues identified in IEB 79-14, "Seismic Analysis for As-Built Safety-Related Piping Systems."

The inspection began with a discussion with cognizant licensee engineers about the scope of the program whereby a list of the included systems was developed. From this list the inspector chose two systems for a detailed review, taking into account ALARA considerations and operational concerns. The two systems included: The Component Cooling Water System (East Lead), 118P, in the Auxiliary Building of Unit 1, and the Main Steam Line in the Reactor Containment to Turbine Room By-Pass, 1010 KA, of Unit 2.

For the Component Cooling Water System, the following drawings were reviewed:

<u>Drawing</u>	<u>Revision</u>
11715-ECI-118P	M1
11715-FC-24G	5
11715-PSSK-118P.01	1

<u>Drawing</u> (cont'd)	<u>Revision</u>
-118P.02	1
-118P.03	1
-118.04	1
-118.05	1
-118.06	1

For the Main Steam Line, the following drawings were reviewed:

<u>Drawing</u>	<u>Revision</u>
12050-ECI-101KA	1M
12050-FP-1B	9
12050-MSK-101K1	4
12050-PSSK-101KA.01	-
-101KA.02	-
-101KA.03	-
-101KA.04	-
-101KA.05	-
-101KA.06	-
-101KA.07	-
-101KA.08	-
-101KA.09	-
-101KA.10	-
-101KA.11	-

The Field Quality Control Procedure QC-11.4, entitled "Inspection of Pipe Hangers," was reviewed. Although later voided, this procedure required a 100% inspection of all Q1, Q2, Q3, and S-Class pipe supports to assure conformance to the design documents. The procedure contains a check list which includes items such as location, clearance, base plate and anchor bolt orientation, system, and line number.

Also reviewed was Field Quality Control Procedure QC-11.2, entitled "Field Fabrication and Erection of Piping, Control Program." This procedure was used to continuously inspect piping and components, to verify the location and identification of all materials, and to assure that the system run geometry is in accordance with applicable design documents and system flow diagrams. Upon completion of the installation phase, this procedure was voided.

A walkdown was conducted of the above-referenced portion of the Main Steam Line. All 12 supports indicated on Drawing No. 12050-ECI-101KA, Rev. 1M were reviewed. The inspector encountered various difficulties due to poor drawing quality, inaccessibility of some of the supports, and a hostile environment due to elevated temperatures. A detailed inspection was made of five of the supports, while the rest were cursorily reviewed for items such as general installed configuration, attachment to correct line, location of attachment, and other gross characteristics. Of the supports

checked closely, some minor dimensional discrepancies were discovered. Some fillet weld discrepancies were noted but were always larger than specified and were, therefore, acceptable. Also, in the case of Drawing No. 12050-PSSK-101KA.05, the "A" and "B" snubbers were reversed from their actual installation.

A separate walkdown was conducted for the above-referenced Component Cooling Water System. Of the six supports, only one, 1-CC-R-24 of Drawing No. 11715-PSSK-118P.01, was accessible. Several discrepancies were noted, the most important being that of the 3/4" X 4" gusset plate on the north side of the 8 x 8 x 3/8 tubular steel column and its base plate. The plan view shows the plate attached to the column and base plate via fillet welds. However, there is a 1/2" gap between the column and the installed plate. The plate is not shown on the Elevation Looking East. Two additional drawing inconsistencies were noted on this drawing: The 3/8" x 6" plates shown in the elevation 4'-9" above the floor, welded to the column, are not shown in Section 2-2; and the angle arrangement used to support the 1"φ line, SI-12-1502-03, is not shown on the elevation. Three of the other supports were elevated, requiring a scaffold, for accessibility and two were located inside a high radiation cubical. Nevertheless, a visual review was made of the three visible supports for general geometric configuration and orientation, attachment location, etc. Discrepancies were noted on Drawing No. 11715-PSSK-118P.02, Support 1-CC-R-25, in that a horizontal brace is incorrectly shown on the north side of the support while it is actually installed on the south side (sheet 1 of 3) and the elevation is incorrectly called out to be looking west while it should be called out looking east (sheet 3 of 3).

The calculations of the previously-referenced supports were reviewed. Although some were difficult to follow, they generally appeared to be adequate, being done to applicable codes and standards.

In conclusion, the inspector felt that IEB 79-14 could not be closed due to the numerous discrepancies identified between the drawings and as-built supports. While none of the noted discrepancies affect the safe operability of the plant, generally being editorial oversights, they indicate a lapse in attention to detail and/or a breakdown of supervision. In order to make a more complete evaluation of the problem, the inspector will review additional systems to determine if the observations made during this inspection are unique to the specific systems sampled or are generic to the entire 79-14 program. Therefore, IEB 79-14 remains open pending future investigation.

### 3. Exit Interview

The inspection scope and results were summarized on September 16, 1988, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.