



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

Report No.: 50-400/84-10

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 at Harris site near Raleigh, North Carolina

|   |               |
|---|---------------|
| Inspectors: <u><i>G. F. Maxwell</i></u>   | <u>4/6/84</u> |
| G. F. Maxwell                             | Date Signed   |
| <u><i>R. L. Prevatte</i></u>              | <u>4/6/84</u> |
| R. L. Prevatte                            | Date Signed   |
| Approved by: <u><i>David M. Bemis</i></u> | <u>4/6/84</u> |
| David M. Bemis, Section Chief             | Date Signed   |
| Division of Project and Resident Programs |               |

SUMMARY

Inspection on February 20 - March 23, 1984

Areas Inspected

This routine, unannounced inspection involved 312 inspector-hours on site in the areas of Piping, Mechanical, Electrical, Concrete, Storage, Welding, Startup and Testing, and Followup on open items.

Results

Of the eight areas inspected, no violations or deviations were identified in seven areas; one violation was found in one area (Violation "Failure to follow procedures for filing certification records").

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*H. R. Banks, Manager CQA
- \*R. M. Parsons, Project General Manager
- J. L. Willis, Plant General Manager
- \*P. Foscolo, Assistant Project General Manager
- \*N. J. Chiangi, Manager QA/QC Harris Plant
- \*L. I. Loflin, Manager Harris Plant Engineering Support
- B. Van Metre, Manager, Harris Plant Maintenance
- C. S. Hinnant, Manager Start-up
- J. M. Collins, Manager Operations
- \*G. L. Forehand, Director QA/QC
- \*M. D. Vernon, Superintendent QC
- \*D. A. McGaw, Superintendent QA
- M. Thompson Jr., Senior Resident Engineer
- \*W. M. Langlois, CI Unit Supervisor

Other licensee employees contacted included 12 construction craftsmen, 10 technicians, 4 operators, 3 mechanics, 1 security force member, and 8 engineering personnel.

#### Other Organizations

- \*W. D. Goodman, Project Manager, Daniel Construction Company

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on March 23, 1984, with those persons indicated in paragraph 1 above. At no time during this inspection period was written material provided to CP&L by the resident inspectors.

### 3. Licensee Action on Previous Enforcement Matters

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

## 5. Safety-related Piping (49063C)

- a. The inspectors observed the mechanical QC inspection for cleanness of auxiliary feedwater valve 2AF-V154-SAB1. The following were evaluated during the inspection:

- (1) Conformance with construction/installation specifications, drawings and procedures;
- (2) Identification and control of material;
- (3) Conformance with inspection (QC) procedures;
- (4) Qualification of inspection personnel;
- (5) Control of nonconforming items.

During the inspection, the following were referenced for requirements: PSAR Section 1.8, Construction Work Procedure WP-128, Quality Control Inspection Procedure CQC-12 and applicable drawings.

- b. The inspectors observed work in progress on the feedwater modifications. These modifications, when completed, will allow 80 percent of the feedwater to flow through the main feedwater lines, and 20 percent to flow through the auxiliary feedwater lines during normal plant operation. The following were evaluated during the inspection:

- (1) Conformance with construction/installation specifications, drawings and procedures;
- (2) Identification and control of material;
- (3) Conformance with inspection procedures;
- (4) Qualification of inspection personnel;
- (5) Control of nonconforming items.

During the inspection the following were referenced for requirements: PSAR Section 1.8, Construction Work Procedures WP-102, WP-116, CQA-3, CQA-12 and applicable drawings.

No violations or deviations were identified in the areas inspected.

## 6. Mechanical (49053C)

- a. The inspectors observed work activities involved with the installation of Reactor Coolant Pump No. 1 into the pump casing. The activities involved the following:
- (1) Establishing proper cleanliness control of the installation of the pump;
  - (2) Inspection of equipment and rigging for general lifting;
  - (3) Use of calibrated tools;
  - (4) Proper use of inspection procedures for control pump installation;
  - (5) Control of nonconforming items;
  - (6) Qualification of inspection personnel.

During the inspection the following were referenced for requirements: PSAR Section 1.8, Construction Work Procedures WP-128, CQA-3, CQA-12 and applicable drawings.

No violations were identified in the areas inspected.

## 7. Electrical (51053C, 51063C, 92706B)

- a. The inspectors observed the installation activities associated with nine class IE cables with the following numbers: 10224C-SB, 12212D-SD, 12218E-SB, 11752C-SB, 11745E-SB, 11752-SB, 15750D-SB, 12284J-SA and 11727A-SA. The observations related to cable pulling between switchgear and various cabinets and termination activities. The following were evaluated during the observations:
- (1) The latest pull cards and procedures were in use;
  - (2) The size and type cable were correct;
  - (3) The cable identification (cable number and color code) was correct;
  - (4) The correct pulling tension was applied;
  - (5) The correct bending radius was applied;
  - (6) The cable routing was correct;
  - (7) The cables were protected from damage;
  - (8) Qualified electrical inspection personnel were monitoring the installation activities.

- b. The inspectors reviewed the certifications records of the electrical craft termination personnel. The review showed that numerous electrical termination certification records were not available in the QA vault. Also, the inspectors reviewed the certification records on tube benders and painters. This review found that the certification records of one painter was not in the QA vault. The electrical termination and painter certification records that were maintained by each discipline were current, but the records on electrical termination personnel were not being forwarded to the QA vault. The painter certification records maintained by that discipline showed transmittal sheets that had forwarded the missing records to the QA vault, but they had apparently been misplaced during transmission to, or after receipt at, the QA vault.

Work Procedure WP-44 (painter certification) requires that painter certification records be maintained in the QA vault. Work Procedure WP-210 (installation and termination of wire and cable) states that electrical terminators shall be qualified, and exhibits three and four provide the records forms. CQA-4 (QA records), Attachment 1, requires that personnel qualification and certification records be maintained in the QA vault and QAI 4.1 (Records filing index) provides a storage location for electrical termination certification records. In addition to these records not being maintained in the QA vault, the electrical discipline had not established positive methods to track electrical termination certifications to ensure that the certification did not lapse. As a result, safety-related termination had been performed by at least one electrical craft terminator whose certification had lapsed.

The above are instances of failure to follow procedures to ensure that the required construction certification records are filed in the QA vault. This is a violation, "Failure to follow procedure for filing certification records," 400/82-10-01.

Except as noted, no violations or deviations were identified in the areas inspected.

8. Concrete (92706B)

The inspectors observed portions of two concrete placements being made in the reactor auxiliary building (pours numbered 1RAXW315013 and 1RAXW315019).

- a. Concrete placement activities were inspected as they pertain to delivery time, rate of rise, free fall and testing of the concrete at the point of delivery and consolidation.
- b. Construction inspection personnel were present to assure compliance with the specification and procedural requirements.
- c. Suitable weather protection was provided, as applicable.

During the above observations, the following were referenced: PSAR Section 1.8, Design Specification CAR-SH-CH-6, Construction Procedures WP-01, WP-15, TP-15, QA-6 and QCI-15.2.

No violations or deviations were identified in the areas inspected.

9. Storage (50073C, 92706B)

The inspectors toured warehouses 1, 2 and 3, the outside piping laydown yard number 12 and various plant equipment storage areas. During the tours, the storage conditions of the equipment were evaluated to determine whether requirements are being met as follows:

- a. Piping and equipment, in general, were stored off the ground to prevent entry of dirt into them, or contamination from environmental conditions.
- b. The storage areas were identified sufficiently to provide identity and location as required by those who may be seeking the location of certain pipe spool pieces or equipment.
- c. The drainage, in general, was acceptable in areas where the piping spool pieces and tanks were stored.
- d. Access was adequate for placement or removal of pipe spool pieces and equipment.
- e. Warehouse equipment was stored in correct position.
- f. The required temperature and humidity control were being met as required.
- g. Access to plant storage areas was being maintained.
- h. Equipment installed heaters were energized as required.
- i. Protective covers were in place.

During the observations, the following were referenced for requirements: PSAR Section 1.8, and Construction Procedures AP-XIII-05, AP-XIII-07 and PGD-002.

No violations or deviations were identified in the areas inspected.

## 10. Welding (55083C)

- a. The inspectors examined the following welding activities on safety-related piping to determine whether applicable specifications and procedures were being met:
- (1) Piping weld joint C1-236-1-CS-430, shop welds 1, 2, 3, 4 and 5 (observed in process welding);
  - (2) Piping weld joint A1-190-1-C1-34-FW 358 (observed in process welding);
  - (3) Piping weld joint A4-236-2-SI-1-FW 460 (observed in process repairs on defective weld).
- b. The above observations included examination to determine if:
- (1) Welding identification and location were as specified;
  - (2) Welding procedure specification assignment was in accordance with applicable code requirements;
  - (3) Welding techniques and sequences were specified and adhered to;
  - (4) Alignment of parts was as specified;
  - (5) Welding equipment was in good working order;
  - (6) Welding personnel were qualified;
  - (7) Welding procedure specifications adhered to the requirements of ASME Section IX;
  - (8) Welding inspection personnel are following the requirements of the inspection procedures.

No violations or deviations were noted in the areas inspected.

## 11. Operations, Start-up and Testing (92706B)

- a. The inspectors observed the in process tests being conducted on the digital rod position indicator coil stack assemblies. The coils, located in place above the reactor vessel, were being tested with a Weststone Bridge type instrument accurate to within  $\pm 0.3\% \pm 0.01$  ohm. The readings were being taken to determine if the coils had resistance values of  $6 \pm 10\%$  ohms and "0" ohms resistance between other points, as applicable. During the evaluation the inspector observed the presence of QC inspection personnel. The responsible craft and inspection personnel were implementing the applicable procedural requirements (Construction Procedure WP-132); upon questioning them, they were found

to be cognizant of the procedural and work requirements necessary to perform the tests which were in process.

- b. The inspectors observed the in process adjustments being made on a torque switch located inside the valve operator for an emergency service water suction valve identified as 3SWB3SA. The valve operator was being adjusted to allow a dampening of the valve prior to its being fully opened and also prior to being fully closed. The electrical diagram for the valve operator was depicted on drawing CAR-2166-B-401 sheet 2217 revision 6. The drawing was compared with the drawing control list utilized by document control center and was found to be the most current revision. The technicians, who were making the adjustments, were utilizing CP&L procedure identified as "Motor-operated Valves (1/2-9000-E-06) in conjunction with the above referenced drawings.
- c. The inspectors evaluated the in process tests being conducted on the emergency service water screen wash pump and its motor. The motor, identified as 412-1A SA, was being tested to determine if it was rotating in the correct direction, prior to coupling the motor's shaft to the pump. The test was being conducted as required by CP&L's procedure, identified as "Initial Checkout of Electric Motors" (1/2-9000-E-05).

In the areas inspected, no violations or deviations were identified.

12. Follow-up on Open Items (51053C, 92706B)

(Closed) Inspector Follow-up Item 400/83-37-03 "Scheduling Overtime". The inspectors evaluated an approved copy of CP&L's administrative procedure O-OMM-01 Revision 0 titled, "Conduct of Operations" and found it to satisfy the requirements of NUREG 0737 item I.A.1.3 as clarified by NRC's Generic Letter number 82-02. This item is closed.

No violations or deviations were identified in the areas inspected.

13. Other Areas (92706B)

- a. The Senior Resident Inspector (Construction) assisted M. S. Callahan of NRC Headquarters Division of Organization and Personnel in conducting recruitment interviews at N.C. State University on March 12, 1984.
- b. During this reporting period three Region II inspectors and one NRR reviewer (soils) visited Harris site.
- c. During this reporting period two CP&L self-initiated audits were conducted at Harris in the areas of hangers, start-up activities and training. The resident inspectors attended the exit conferences on the audits.



- d. On March 23, 1984, the inspectors made a presentation at the CP&L Corporate Office. The presentation was made to various factions of the utility's staff. The topics covered during the presentation included: the responsibilities and duties of the resident inspectors; how resident inspections are scheduled and conducted; the USNRC organization; and how the USNRC interfaces with the utility.
- e. The inspectors reviewed the Region II Open Items List (OIL) for the Harris Project. The report and the CP&L records on this subject were compared. Forms with the appropriate corrections have been prepared and forwarded to Region II to allow updating of the computer tracking systems for OIL's.