



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

Report No.: 50-400/85-37

Licensee: Carolina Power and Light Company
 P. O. Box 1551
 Raleigh, NC 27602

Docket No.: 50-400

License No.: CPPR-158

Facility Name: Harris Unit 1

Inspection Conducted: September 20 - October 20, 1985

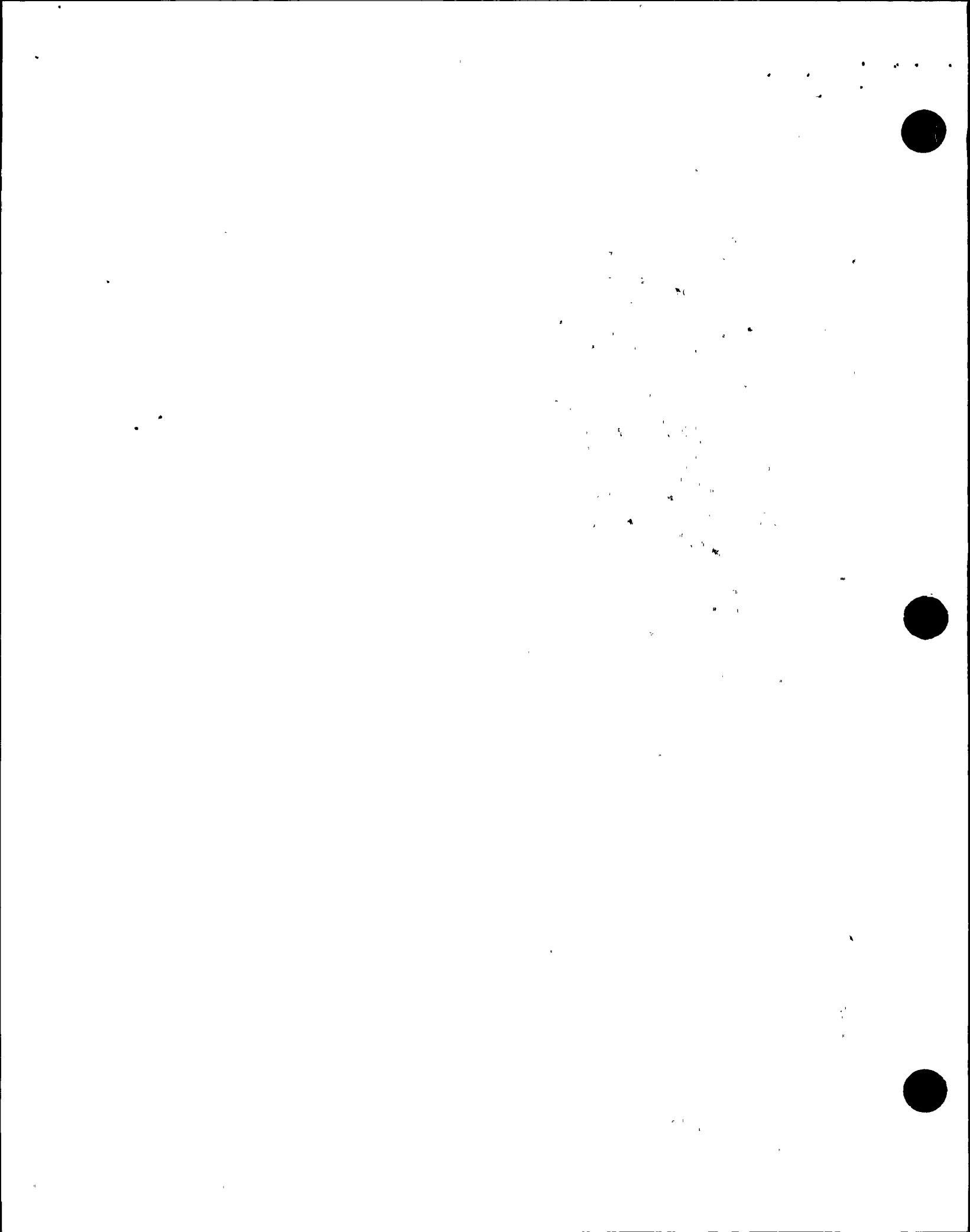
Inspectors:	<u>J.S. Mellen</u>	<u>10/29/85</u>
	FOR F. Maxwell	Date Signed
	<u>J.S. Mellen</u>	<u>10/29/85</u>
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	FOR P. Burris	Date Signed
	<u>J.S. Mellen</u>	<u>10/29/85</u>
	FOR P. H. Skinner	Date Signed
Approved by:	<u>P. E. Fredrickson</u>	<u>10/28/85</u>
	P. E. Fredrickson, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine, announced inspection involved 250 resident inspector-hours on site in the areas of Unresolved and Inspector Follow-up Items; IE Bulletins; Preoperational Test Program; Fire Protection and As-built Drawings.

Results: No violations or deviations were identified in the areas inspected. Two Unresolved Items were found in two areas ("Resolution of Concerns Associated with IE Bulletin 83-05," paragraph 4; and "Plant Organization Chart for Operations," paragraph 5).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

N. J. Chiangi, Manager, QA/QC Harris Plant
J. M. Collins, Manager, Operations
G. L. Forehand, Director, QA/QC
J. L. Harness, Assistant Plant General Manager, Operations
C. S. Hinnant, Manager, Start-up
L. I. Loflin, Manager, Harris Plant Engineering Support
D. A. McGaw, Superintendent QA
C. L. McKenzie, Acting Director, Operations QA/QC
G. A. Myer, General Manager, Milestone Completion
R. M. Parsons, Project General Manager, Construction Confirmation
Completion
M. Thompson, Jr., Manager, Engineering Management
D. L. Tibbitts, Director, Regulatory Compliance
B. Van Metre, Manager, Harris Plant Maintenance
M. D. Vernon, Superintendent QC
E. J. Wagner, Manager, Engineering
C. C. Wagoner, Project General Manager, Construction
R. A. Watson, Vice President, Harris Nuclear Project
J. L. Willis, Plant General Manager, Operations

Other licensee employees contacted included 20 construction craftsmen, 12 technicians, 4 operators and 5 engineering personnel.

2. Exit Interview

The inspection scope and findings were summarized on October 18, 1985, with the Vice President, Harris Nuclear Project. No written material was provided to the licensee by the resident inspectors during this reporting period. The licensee did not identify as proprietary any of the materials provided to or reviewed by the resident inspectors during this inspection.

3. Unresolved and Inspector Follow-up Items (92701 and 92702)

- a. (Closed) Unresolved Item 400/84-43-03 "QA Surveillance Closeout". The inspectors interviewed site QA surveillance personnel and reviewed the results of a follow-up QA surveillance documented in report numbered QASC 85-205. The follow-up surveillance was conducted to determine if open surveillance reports were being closed adequately. The evaluation revealed that CP&L conducted an in-depth review of 50 QA surveillance reports. Those selected were performed from July 5, 1983 through December 22, 1983. The results of the CP&L evaluation did not reveal any cases of improper closing of open QA surveillance reports. This item is closed.

- b. (Closed) Unresolved Item 400/85-30-03 "Training Records for Operations." As a result of this item, the licensee has revised procedure TI-906, "Training Records" (Rev. 2) to provide specific direction on the method to be used to assure training records are maintained in an up-to-date status. The specific record that did not reflect the current training status of the plant general manager has been brought up-to-date. Based on this review, this item is closed.
- c. (Closed) Inspector Follow-up Item "Operations Fire Brigade Training" 400/85-27-03. The inspectors reviewed the independent assessment performed by the Quality Assurance group. This assessment verified that training required for the fire brigade was performed and documented in the permanent plant records in accordance with approved administrative procedures. This item is closed.

4. IE Bulletin Follow-up (92703)

The inspector reviewed the licensee's actions taken in response to IE Bulletin 83-05, "ASME Nuclear Code Pumps and Spare Parts Manufactured by the Hayward Tyler Pump Company." The licensee provided copies of test procedures 1-4065-M-01, "Emergency Service Water Pump Operational Test"; and 1-4065-M-02, "Emergency Service Water Pump Endurance Test," which combined satisfy the guidance provided in IEB 83-05. Neither of these tests has been performed on the Emergency Service Water (ESW) pumps at this time. The inspector reviewed these tests in detail and provided the following comments to the licensee:

- a. All operational tests specified in Attachment 2 to IEB 83-05 have not been incorporated into the two procedures identified above.
- b. Insufficient data were taken to calculate and determine acceptability of pump head, packing gland temperature, packing gland leakage and pump horsepower.
- c. Comparison of pump data.

Based on this review, the resolution of the above identified comments is being identified as Unresolved Item 400/85-37-02 "Resolution of Concerns Associated with IE Bulletin 83-05."

No violations or deviations were identified.

5. Preoperational Test Program (71302, 42400B)

- a. The inspectors conducted tours of the various plant areas. The following items were observed and assessed during the tours to assure compliance with requirements:
 - (1) The general condition of the plant's housekeeping and the overall condition of equipment were observed.

- (2) The inspectors observed electrical personnel placing cables in their respective cable trays and conduits. Sufficient care was being taken to prevent damage to the cables being placed and to cables which had already been installed.
 - (3) The inspectors looked for uncontrolled openings in previously cleaned or flushed systems or components. Where system openings were identified, cleanness controls were established during flushing.
 - (4) The inspectors observed instances where construction personnel were working on equipment which had already been turned over to the start-up group. The work was being accomplished under the proper administrative controls provided in the Start-up Manual.
- b. The inspectors observed operations personnel deenergizing electrical components as required by the clearance program when equipment is being placed out of commission for repairs, tests or rework.
 - c. The inspectors reviewed log books maintained by the test group to identify problems or plant activities that may be appropriate for additional follow-up.
 - d. The inspectors evaluated the activities being conducted by the CP&L operations QA surveillance personnel. QA surveillance personnel were present and observed the major preoperational tests conducted during this reporting period. The results of their observations were promptly documented and distributed to those responsible for the activities which were observed.
 - e. During this inspection period the inspectors reviewed and witnessed the licensee's inspection conducted in accordance with the Westinghouse Owners Group inspection recommendations on their emergency diesel generator 1A-SA. This post-initial run inspection was performed under the control of the on-site Transamerica Delaval representative. The inspectors have witnessed the teardown and inspection of the emergency diesel generators on a daily basis. The inspection results show no apparent damage to the diesel internals inspected, however, the inspectors plan to continue review of the conduct of the licensee's inspection program.
 - f. The inspectors witnessed portions of the inspection of the "A," "B," and "C" steam generators (S/G). Inspection of S/G "C" with a remote-controlled color television camera revealed two metal wedges approximately two inches square and 1/4 inch thick. These two foreign objects were located on top of the bottom tube sheet, approximately one and one half feet from the inspection hole. Licensee personnel are investigating the probable source of the objects and a method to remove them from the S/G.

Inspections of S/Gs "A" and "B" were conducted with no further foreign objects of this nature identified. The inspectors will inspect the removal of the identified objects during future inspections.

- g. During this inspection period the inspectors reviewed the Final Safety Analysis Report (FSAR); Plant Administrative Procedures (AP); and proposed Technical Specifications (TS) to insure that plant staffing requirements were met and in accordance with the above identified documents. While reviewing the position of Assistant Plant General Manager, the inspectors noted that this position does not appear in the FSAR, AP or TS, yet this position is identified in Plant Special Order PSO-85-003 and has been filled since approximately May 1985.

The inspectors discussed this concern with site management. The Vice President, Harris Nuclear Project stated that the applicable sections of the FSAR, TS and AP would be revised during the upcoming months, to reflect the existing site organization.

This concern is identified as an Unresolved Item, "Plant Organization Chart for Operations" 400/85-37-03.

No violations or deviations were identified in the areas inspected.

6. Fire Prevention/Protection (42051C, 71302)

- a. The inspectors observed the fire prevention and protection activities related to containing combustible materials where the ignition of these materials could damage safety-related structures. The inspectors also observed the ongoing site training activities for the construction fire brigade.
- b. Some of the specific areas observed by the inspectors during this period were:
- (1) Nonflammable protective coverings were observed over various safety-related pumps and components located throughout the plant.
 - (2) The inspectors observed during the various tours of the reactor auxiliary building and the containment building that the accumulation of combustible materials in these areas was being minimized.
 - (3) Flammable materials were stored to prevent or reduce the likelihood of combustion.
 - (4) Welding activities were observed in at least ten separate locations throughout the site and in each instance it was observed that appropriate fire extinguishing equipment was available within close proximity of the welding activities. It was also noted that the portable fire extinguishers contained sufficient fire extinguishing medium, as evidenced by displaying current inspection stickers and having unbroken seals.

- (5) The inspectors observed that at the various elevations throughout the reactor auxiliary building and the containment building, fire suppression devices were strategically located and readily available for use.
- c. The inspectors observed in-process work activities associated with the installation of fire penetration seals located in the walls of the emergency diesel generator building (west) and in the reactor auxiliary building, elevation 236' (walls separating charging pump 1A-SA and 1C-SAB). Those activities observed included:
- (1) Locating the penetrations to be sealed;
 - (2) Installation of penetration damming materials;
 - (3) The application of the Dow Corning Silicone RTV Foam;
 - (4) Verification that the correct site structural drawings were being used to locate those penetrations which required sealing;
 - (5) The identification of the penetrations with the required tags.

The installation of the sealing materials was being conducted in accordance with construction work procedure WP-148 "Penetration Seals and Installation." The CP&L requirements for penetration seal inspections are described in Construction Inspection Technical Procedure TP-69 "Inspection of Penetration Seals".

No violations or deviations were observed in the areas inspected.

7. Comparison of As-built Plant to FSAR Description (37301)

- a. The inspector reviewed train A of the residual heat removal system (RHR). This review was to determine that the as-built plant conforms to the commitments contained in the FSAR in that: physical installation is in agreement with simplified flow diagrams (SFD), and that control and logic instrumentation conform to the instrumentation and controls in the FSAR. The following SFDs were compared to the FSAR drawings:

SFD: CPL-2165-S-1324	FSAR: Fig. 5.4.7-1
SFD: CPL-2165-S-1308	FSAR: Fig. 6.3.2-1
SFD: CPL-2165-S-1309	FSAR: Fig. 6.3.2-2
SFD: CPL-2165-S-1310	FSAR: Fig. 6.3.2-3

Each of these SFD drawings (as built) had modifications made to the as-built systems that were not depicted on the drawings contained in the FSAR. The inspector discussed these differences with Harris management personnel. These personnel stated that the FSAR drawings would be updated to reflect the as-built conditions prior to obtaining the operating license.

In addition to the above general comments, the inspector also noted the following specific differences among the FSAR drawings, the SFDs and actual as-built configuration:

- (1) Valve 1RH-19 is shown to have a reach rod; there is no reach rod installed on the valve at this time.
 - (2) Valves 1RH-31 and 1RH69 are shown in the FSAR as motor-operated globe valves, but on the SFD they as motor-operated gate valves.
 - (3) Notes on FSAR drawings pertaining to system operations are not included on the SFDs.
- b. Control wiring diagrams for RHR pump 1A, valves 1RH-1, 1RH-2, 1RH30, 1RH-20, 1RH-58, 1SI-322, 1SI-300 and 1SI-359 were reviewed for operation and interlock features specified in the FSAR. The specific drawings reviewed were: CAR2166-B-401, Sheets 321, 325, 327, 331, 332, 333, 414, 416 and 446. Comments on the logic review indicate the following:
- (1) FSAR Section 5.4.7.2.1 states that the miniflow bypass lines motor-operated valves are interlocked to open when RHR pump discharge flow is less than approximately 500 gpm and close when flow exceeds approximately 1000 gpm. The settings for these valves have been changed to higher valves with a temperature dependence.
 - (2) FSAR Section 5.4.7.2.4 states that the RHR suction valves are interlocked to prevent opening if reactor coolant system pressure is greater than 425 psig, which corrected for instrument error and location, is an actual pressure of 365 psig, and these valves receive auto-close signals if pressure exceeds 750 psig. The actual setpoints for these functions are 363 plus or minus 15 psig and 700 plus or minus 15 psig. If a +15 psig tolerance is applied to the 363 psig value, this would appear to exceed the FSAR commitment.

The examples identified above are collectively identified as an Inspector Follow-up Item 400/85-37-01, "Differences Between the As-built Plant and FSAR."

No violations or deviations were identified in the areas inspected.

