

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

Report No.: 50-400/86-41

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 //May 19-23, 1986

Inspector:

P. Kleinsgrige

<u>Vine 26, 1986</u> Date Signed

Approved by:

J. J. Blake, Séction Chief

Engineering Branch

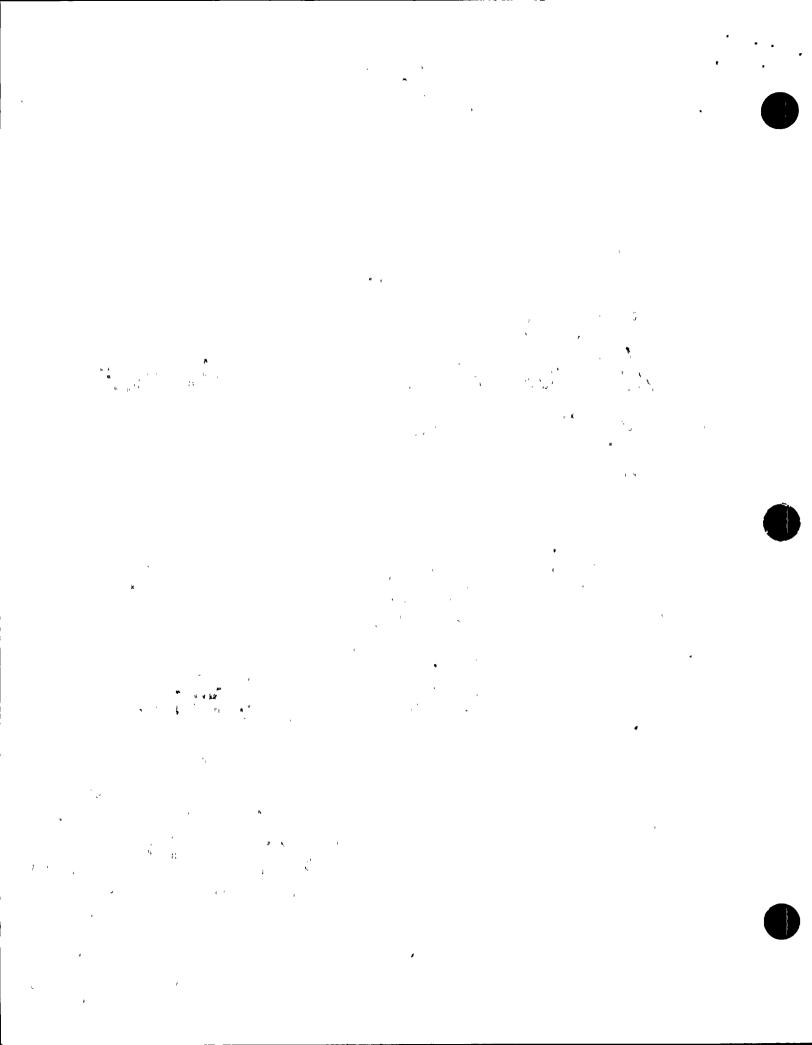
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved in the areas of licensee actions on previous enforcement matters (92701B) (92702B), housekeeping (54834B), material identification and control (42902B), material control (42940B), spent fuel storage racks (50095B), safety-related heating, ventilating, and air conditioning (HVAC) systems (50100), weld heat treatment (55186B), nondestructive examination, safety-related components - review of quality records (50076B), reactor vessel internals - observation of welding and associated activities (55093B), and inspector followup items.

Results: One violation was identified - 50-400/86-41-02: "Failure to Procure Materials That Conform to Purchase Specification Requirements" - paragraph nos. 3, 12b and 12c.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- R. A. Watson, Vice President, Harris Nuclear Project N. J. Chiangi, Manager, QA/QC Harris Plant
- *G. L. Forehand, Director, QA/QC
- *L. I. Loflin, Manager, Harris Plant Engineering Support
- *D. L. Tibbitts, Director, Regulatory Compliance
- *E. J. Wagner, Manager, Engineering

Other licensee employees contacted included construction craftsmen, engineers, technicians, and office personnel.

Other Organization

O. F. Painter, Manager, Westinghouse (W)

NRC Resident Inspectors

- G. F. Maxwell.
- S. P. Burris
- *P. G. Humprhey

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 23, 1986, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

(Open) Inspector Followup Item 50-400/86-41-01: "Spent Fuel Racks Fabrication Records" - paragraph 6.a.

(Open) Violation 50-400/86-41-02: "Failure to Procure Materials that Conform to Purchase Specification Requirements" - paragraphs 3, 12.b, and 12.c.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters (92701B)(92702B)

(Closed) Unresolved Item 50-400/84-44-04: "Program for Control of Purchased Materials"

The Construction Appraisal Team (CAT) inspection reported, in NRC Report 50-400/84-41, that they selected 20 piping samples representing 290 feet of pipe to determine whether ASME requirements for pipe wall thickness were met. The measured pipe wall thicknesses were compared against the minimum wall thickness requirement specified by ASME (12.5 percent below nominal thickness). The NRC CAT inspectors identified a significant number of piping samples (30 percent) to have been below specified minimum wall thickness which indicated deficiency in the supply of piping material from two manufacturers which did not meet the purchase specification or ASME Code requirements for SA 106 material, and a deficiency in the surveillance and inspection of purchased piping material.

The above indicates that the licensee's program for the control of purchased materials affecting quality, was not effectively implemented to assure that purchased piping was in conformance with specified acceptance criteria and requirements for pipe wall thickness. The above is contrary to 10 CFR 50, Appendix B, Criterion VII, which requires that measures be established to assure that purchased materials, equipment, and services conform to procurement documents. This matter will be closed as an unresolved item and opened as an example of violation 50-400/86-41-02 discussed further in paragraph 12.c.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort

Housekeeping (54834B), Material Identification and Control (42902B), and Material Control (42940B)

The inspector conducted a general inspection of the power block to observe activities such as housekeeping, material identification and control; material control, and storage.

Within the areas examined, no violations or deviations were identified.

6. Spent Fuel Storage Racks (50095)

The inspector reviewed selected records associated with the installation of spent fuel storage racks to determine whether the licensee is adequately preparing, reviewing, and maintaining a system of quality records; whether there is reasonable assurance that the records reflect work accomplishment

consistent with the stated requirement; and whether the records indicate any potentially generic problems, management control inadequacies or other weaknesses that could have safety significance. Specific areas examined are indicated below.

a. The inspector reviewed selected records to determine whether quality records indicate that applicable requirements and commitments have been met. Specific types of records examined were: vendor/shop fabrication records, including material certifications; receiving inspection and storage surveillance records; installation records; certifications of materials; and weld identification and weld material traceability as required.

With regard to the examination above, the vendor/shop fabrication records including material certification for the PWR spent fuel racks were not available at the time of this inspection. Pending NRC review of the above records for compliance to applicable requirements, this matter will be identified as inspector followup item 50-400/86-41-01: "Spent Fuel Rack Fabrication Records."

- b. The inspector reviewed selected nonconformance reports to check for proper handling and disposition.
- c. The inspector reviewed the audit report indicated below to determine the following: the required audit has been performed in areas established in audit plan; audit findings have been reported in sufficient detail to permit a meaningful assessment by those responsible for corrective action; and the licensee/contractor has taken proper followup action on those matters in need of correction.

Audit Report No.

QAA/0081-86-01 QAA/0081-85-06 QASC/83-210

Within the areas examined, no violations or deviations were identified.

7. Safety-Related Heating, Ventilating, and Air Conditioning (HVAC) Systems (50100)

The inspector reviewed samples of safety-related HVAC system records to determine whether the licensee was adequately preparing, reviewing, and maintaining a system of quality records; whether there is reasonable assurance that the records reflect work accomplished consistent with NRC requirements and SAR commitments; and whether the records indicate any potentially generic problems, management control inadequacies, or other weaknesses that could have safety significance. The following specific areas were examined.

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- a. The inspector reviewed selected inspection records to determine whether required inspection of various aspects of the HVAC and supports were conducted.
- b. The inspector reviewed the inspection records for duct section 159A to duct section AVD61SB1 on Drawing CP&L-HV/1-G-523-S01-014, RO-BL-14 and the related supports to assess adequacy of the inspection effort and the inspection record.

Within the areas examined, no violations or deviations were identified.

8. Weld Heat Treatment (55186B)

The inspector reviewed records for safety-related piping as indicated below to determine whether applicable code and procedural requirements had been met. The applicable code for Post Weld Heat Treatment (PWHT) is ASME Section III, Subsection NC and ND.

The inspector examined the cumulative stress-relief records for the below listed welds to determine whether the total time at temperature did not exceed that permitted by applicable Code requirements based on the welding procedure qualification record.

Weld No.

1-MS-30-FW-283 1-MS-31-FW-286 1-MS-32-FW-302

Within the areas examined, no violations or deviations were identified.

9. Nondestructive Examination

The inspector reviewed procedures, observed in-process examinations and reviewed quality records as described below to determine whether applicable code, procedure and regulatory requirements were being met. The applicable code for nondestructive examination is ASME B&PV Code, Section V, 1974 Edition with Addenda through Winter 1976.

a. Review of Quality Program

The inspector reviewed the below listed documents to ascertain whether the nondestructive examination program had been approved by the licensee and whether adequate plans and procedures had been established to assure that the examinations would be controlled and accomplished consistent with commitments and regulatory requirements.

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<u>No.</u>	<u>Title</u>
CP&L-CQC-19, Rev. 21	"Weld Control for Piping and Fuel Pool Liners"
CP&L-NDEP-601, Rev. 6	"Visual Examination of Piping System and Component Welds"
CP&L-QCI-19.1, Rev. 17	"Preparation and Submittal of Weld Process Control Sheets"
CP&L-NDEP-10, Rev. 6	"Training Qualification and Certification of Nondestructive Examination Personnel"
CP&L-NDEP-20, Rev. 3	"Training Qualification and Certification of Visual Examination Personnel for Inservice Inspection"
CP&L-WP-300, Rev. 9	"Instrument Work Package Preparation and Control"
CP&L-WP-302, Rev. 7	"Installation of Supports for Safety/Seismic Related Instrumenta-tion"
CP&L-NDEP-605, Rev. 5	"Visual Examination of Seismic I, Structural and Hanger Welds (SHNPP)"
CP&L-CQC-11, Rev. 7	"Instrumentation Inspection"
CP&L-QCI-11.1, Rev. 4	"Instrumentation Inspection"

b. Visual Examination (57050)

(1) Procedure Review

The inspector reviewed the procedures above to determine whether the visual examination procedures used by the licensee/contractor met applicable AWS/ASME Code, regulatory, specification and contract requirements. Specific areas examined were: issued and qualified in accordance with QA program; method; application; how visual examination is to be performed; surface condition; method or tool for surface preparation; direct or remote viewing; illumination, instruments or equipment; sequence of performing examination; data tabulation; acceptance criteria; and report.

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(2) Work Observation

The inspector observed in-process visual examination of the below listed welds to determine whether the visual examination was conducted by properly qualified personnel in accordance with procedures and the licensee's/contractor's approved QA program. Specific areas examined were: applicable drawing, instructions or travelers clearly specify the test; procedure was available in the area where the work is being performed; personnel were qualified to perform the assigned task; required tools and examination aids were available at the work location; specific areas, locations and extent of examination were clearly defined; test attributes were as specified; and defects were evaluated in accordance with the procedure requirements, correct acceptance criteria are used and the inspection results are reported in a prescribed manner.

Weld No.

5-RC-3-1-SW-4 5-RC-3-5-SW-1 IS/1-IA-478WS7-FW-1

(3) Record Review

The inspector reviewed a sample of records to determine whether they are prepared, evaluated, and maintained in accordance with applicable commitments and/or requirements.

(a) The inspector reviewed the below listed inspection personnel qualification records to ascertain whether these qualification records properly reflect the following: employer's name; person certified; activity qualified to perform; effective period of certification; signature of employer's designated representative; basis used for certification; and annual visual acuity, color vision examination and periodic recertification.

Inspection Personnel

MH WRC GPH WRJ RJP JDS MDT PT EEV

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il B (b) The inspector reviewed the below listed visual inspection reports.

Report No.

1-SW-526-FW-1948 1-SW-152-FW-540 1-SW-48-FW-13 1-SW-14-FW-295 1-SW-4-9-SW-1 1-CT-44-FW-282 1-CT-44-FW-281 1-CT-16-FW-115 1-CT-10-FW-201 1-CT-2-FW-189

(c) The inspector independently verified the below listed visual inspection report results using the licensee's procedure for conducting the inspection.

> 5-RC-3-1-SW-4 5-RC-3-5-SW-1 IS/1-IA-478WS7-FW-1

Within the areas examined, no violations or deviations were identified.

10. Safety-Related Components - Review of Quality Records (50076B)

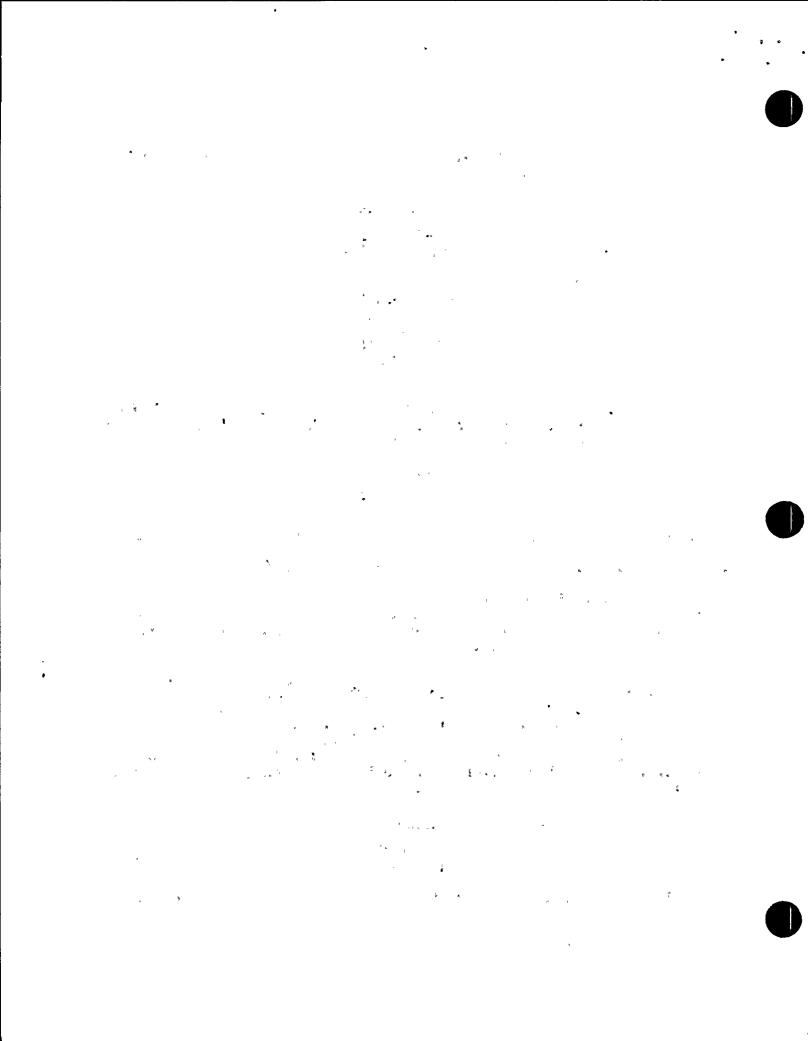
The inspector reviewed quality related records relative to safety-related components to ascertain whether those records reflected work accomplishment consistent with NRC requirements and SAR commitments. Specific areas examined are indicated below.

The inspector reviewed records of the below listed QA audits associated with safety-related components to ascertain whether applicable requirements were met in the following areas: records confirm that the audits performed were of the scope and frequency specified; deficiencies identified during the audits were corrected (or being corrected in a timely manner) and documented, and whether corrective action was such that repetition of the deficiency, or similar deficiencies, would be precluded; and audits were qualified for the work they performed.

Audit No.

QAA/0081-85-06 QAA/0081-86-01

Within the areas examined, no violations or deviations were identified.



11. Reactor Vessel Internals (Welding), Observation of Welding and Associated Activities (55093B)

The inspector reviewed procedures examined completed work and reviewed records to determine whether activities pertaining to field welding of reactor vessel internals had been accomplished in accordance with regulatory requirements, applicable codes, standards and licensee's commitments. Examination of completed work was selected because the window of opportunity for direct observation of active welding had past. The applicable code for reactor internals is not applicable. Table 3.2.1-1 to the FSAR states: "The reactor internals were fabricated prior to implementation of subsection NG of the ASME Code. However, the reactor internals were designed and fabricated consistent with ASME Code requirements."

The inspector reviewed procedures, examined selected welds, and reviewed records with particular attention directed in the following areas: welding identification; weld preparation; welding material; welding; and inspection.

Within the areas examined, no violations or deviations were identified.

12. Inspector Followup Items

a. (Open) Inspector Followup Item 50-400/83-27-01: "Unavailable Steam Generator Records"

This item concerned records, indicated below, not available for NRC review.

- Fabrication inspection records and material certification documentation for steam generators A, B, and C.
- Steam Generator 1-A Snubber and Bumper Support Installation Report (TP-28) and As-Built Report (WP-25 Exhibit 2).

During this inspection, the inspector reviewed the bumper and snubber installation report and the as-built report, but the fabrication inspection and material certification records were still not available. This item remains open.

b. (Closed) Inspector Followup Item 50-400/86-29-02: "HEPA Filter COC Exceptions"

This item concerns the fact that the certificate of compliance (COC) for the High Efficiency Particulate Air (HEPA) filters listed several exceptions to the specification that had not been resolved by the licensee. Subsequently, the licensee has determined that the HEPA filters intended for the E6 (1B-SB) safety-related air handling unit

were erroneously identified as non-nuclear safety-related. Because of this failure, the COC was not reviewed for compliance with the purchase order specification. Therefore, the exceptions to the specifications noted in COC were not resolved. This matter is part of violation 50-400/86-41-02, and is discussed further in paragraph 12.c.

c. (Closed) Inspector Followup Item 50-400/86-29-03: "Incomplete HEPA Filter Documentation"

This item concerns the fact that the COC for the HEPA filters does not include the identification of documents and test reports which support the COC as required by ANSI/ASME N509-1976, paragraph 5.1.4. As indicated in paragraph 12.b., the licensee failed to receipt inspect the HEPA filters and review the documentation for the HEPA filters for the safety-related E6 (1B-SB) air handling unit because the filters were erroneously identified non-nuclear safety-related. It is unclear how many other items did not receive receipt inspection or document review because of erroneous identification as non-nuclear safety-related.

The above clearly indicates that safety-related materials (HEPA filters for E6 (1B-SB) air handling unit) were available in the warehouse for safety-related use, when in fact, they (the HEPA filters) did not conform with the purchase order and specification requirements (exceptions noted in supplier's COC and the lack of identification of documents and test reports which support the COC as required by ANSI/ASME N509-1976).

The above example as well as the example discussed in paragraph 3 indicate that the program for the control of purchased materials affecting quality was not effectively implemented to assure that purchased piping material and HEPA filters were in conformance with specified requirements. The above is a violation of 10 CFR 50, Appendix B, Criterion VII which requires measures be established to assure that purchased materials conform to procurement documents.

Unresolved item 50-400/84-44-04 and inspector followup items 50-400/86-29-02 and 50-400/86-29-03 will be closed and violation 50-400/86-41-02, "Failure To Procure Materials That Conform To Purchase Specification Requirements" will be opened.

d. (Closed) Inspector Followup Item 50-400/86-29-04: "Activated Charcoal Qualification Test Results"

This item concerns the fact that the certification documentation provided to the inspector, of record for Report No. 86-29, for activated charcoal, did not include the results of the qualification test in accordance with ANSI N509 as required by paragraph 3.i. of Regulatory Guide 1.52, Revision 2. The licensee has now provided this inspector with the qualification test data. The inspector has no further questions in this matter. This item is considered closed.

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e. (Closed) Inspector Followup Item 50-400/86-29-05: "Charcoal Filter Design Data"

This item concerned the licensee's inability to provide objective quality evidence (OQE) to substantiate compliance with the last paragraph of Regulatory Guide 1.52, Rev. 2, Section 3.i. The licensee has now provided the inspector with the necessary OQE. The inspector has no further questions in this matter. This item is considered closed.

f. (Closed) Unresolved Item 50-400/86-29-06: "Charcoal Batch Volume"

This item concerned the possibility that the volume of charcoal batch 10, Lot 44 exceeded the maximum allowed by Regulatory Guide 1.52 using the charcoal density provided by the licensee. The licensee provided a more accurate figure for density of the specific batch of charcoal and recalculated the batch volume. The calculations verified that the batch volume was, in fact, in accordance with Regulatory Guide 1.52. The inspector has no further questions. This matter is considered closed.

Within the areas examined, no violations or deviations were identified except as noted in paragraph 12.c above.

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