



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

Report No.: 50-400/84-30

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

Docket No.: 50-400

License No.: CPPR-158

Facility Name: Harris 1

Inspection Conducted: August 20-22, 1984

Inspector: J. J. Blake 8/31/84
 for W. B. Kleinsorge Date Signed

Approved by: J. J. Blake 8/31/84
 J. J. Blake, Section Chief Date Signed
 Engineering Branch
 Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection involved 25 inspector-hours on site in the areas of construction progress, welding procedure specification and welder qualification, preservice inspection - review of program (73051B), preservice inspection - observation of work and work activities (73053B), and inspector followup items.

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *R. M. Parsons, Project General Manager
- *P. F. Foscolo, Assistant Construction Project Manager
- *T. W. Brombach, Project Specialist - ISI
- *S. M. Pruitt, Sr. Specialist - ISI
- *T. F. Lentz, Project Engineer
- *G. L. Forehand, Director QA/QC
- *N. J. Chiangi, Manager QA/QC

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

Other Organization

- *G. F. Cole, Vice President, Daniel Construction Co.

NRC Resident Inspectors

- G. F. Maxwell, Senior Resident - Operations
- *R. L. Prevatte, Senior Resident - Construction

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on August 22, 1984, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

(Open) Inspector Followup Item 400/84-30-01: "VT-2, 3, and 4 Examiners" - paragraph 7c.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort

Construction Progress

The inspector conducted a general inspection of the power block construction site to observe construction progress and construction activities such as welding, material handling and control, housekeeping, and storage.

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

6. Welding Procedure Specification and Welder Qualification

- a. The following carbon steel welder qualification status records and "Records of Performance Qualification Test" were reviewed:

Welder Symbol

G-90
G-61
F-22
SM-57
G-32
D-91
E-91
I-66
I-32
I-75

- b. The following Welding Procedure Specifications (WPS) for carbon steel welding were selected for review and comparison with the ASME Code:

<u>WPS</u>	<u>Progress</u>	<u>PQR</u>
1-BA-5	GTAW/SMAW	1, 5, 28B and 28C
1-A-4	SMAW	66, 6GA and 1
1-B-1	GTAW	5
1-8-B-1	GTAW	46

*GTAW-Gas Tungsten Arc Welding
SMAW-Sheilded Metal Arc Welding

The above WPSs and their supporting Procedure Qualification Records (PQRs) were reviewed to ascertain whether essential, supplementary, and/or nonessential variables including thermal treatment were consistent with code requirements; whether the WPSs were properly qualified and their supporting PQRs were accurate and retrievable; whether all required mechanical tests had been performed and the

results met the minimum requirements; whether the PQRs had been reviewed and certified by appropriate personnel and; whether any revisions and/or changes to nonessential variables were noted. WPSs are qualified in accordance with ASME Section IX, the latest edition and addenda at the time of qualification.

- c. The inspector discussed the adequacy of the welding procedure specification parameters for the WPSs of b. above with the welders of a. above. All the welders interviewed indicated that they had experienced no problems depositing sound welds with the above WPSs as written.

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

7. Preservice Inspection (PSI) - Review of Program (73051B)

The applicable code for preservice and inservice inspection is the ASME B and PV Code, Section XI, 1980 Edition through Winter 1981 Addenda.

- a. The inspector reviewed the below listed documents to ascertain whether the PSI program had been approved by the licensee, and whether adequate QA plans and procedures had been established (written, reviewed, approved and issued) to assure that organization structure and QA personnel, audits, general QA requirements, work and quality inspection procedures, control of processes, corrective action, document control, examination control and control of examination equipment, quality records, and qualification of personnel were controlled and accomplished. The following documents were examined:

<u>Procedure ID</u>	<u>Title</u>
CP&L-PLP-604, Rev. 0	"Inservice Inspection"
CP&L-ISI-100, Rev. 0	"Control of Inservice Inspection Activities
CP&L - Corporate QA Manual, Rev. 5	SHNPP FSAR
CP&L-ISI-101, Rev. 1	"Control of Inservice Inspection Procedures, Documents, and Records"
CP&L-ISI-103, Rev. 0	"Receiving Inspection Procedure for Inservice Inspection Calibration Standards and Controlled Materials"
CP&L-ISI-104, Rev. 0	"Control of Inservice Calibration Standards"
CP&L-ISI-110, Rev. 0	"Performance of PSI Accessibility Walkdowns"

CP&L-IST-101, Rev. 0	"Preservice and Inservice Data Control Procedure (NES)"
CP&L-HPOS-AP-06, Rev. 2	"Procedure Review and Approval"
CP&L-HPOS-AP-07, Rev. 0	"Temporary Changes to Plant Procedures"
CP&L-CQA-3, Rev. 3	"Nonconformance Control"
CP&L-HPCS-MP-05, Rev. 20	"Permanent Marking of Site Materials and Components"
CP&L-ISI-200, Rev. 1	"Inservice Inspection Quality Groups A, B, & C Fluid Boundaries"
CP&L-ISI-201, Rev. 0	"ASME Preservice Inspection Program Plan (Except Reactor Vessel)"

- b. The inspector reviewed the below listed documents to determine whether the scope of the preservice inspection included: descriptions of areas to be examined; examination category; method of inspection; extent of examination; and justification for exceptions.

<u>Procedure No.</u>	<u>Title</u>
CP&L-ISI-201, Rev. 0	"ASME Preservice Inspection Program Plan (Except Reactor Vessel)"
CP&L-ISI-200, Rev. 1	"Inservice Inspection Quality Inspection Quality Groups A, B, & C Fluid System Boundaries"

- c. The inspector reviewed the below listed documents to determine whether the personnel qualification program for PSI is consistent with applicable regulatory requirements.

<u>Procedure No.</u>	<u>Title</u>
CP&L-IST-105, Rev. 0	"Procedure for Certifying of Nondestructive Examination Personnel (NES)"
CP&L-IST-106, Rev. 0	"Procedure for Certifying Nondestructive Examination Personnel to SNT-TC-1A, 1975 (CONAM)"

CP&L-IST-107,
Rev. 0

"Procedure for Certifying
Nondestructive Examination
Personnel to SNT-TC-1A, 1980
(CONAM)"

With regard to the examination above, the inspector noted that the program does not, at present, address the qualifications of VT-2, VT-3 and VT-4 examiners as specified in ASME Section XI. It should be noted, however, that no examinations have been performed to date requiring VT-2, VT-3 and VT-4 examiners. This matter will be examined in detail in a future inspection and will be identified as inspector followup item 400/84-30-01: "VT-2, 3, and 4 Examiners."

- d. The inspector reviewed the below listed documents to determine whether the PSI program and referenced documents contain adequate provisions relative to the control of NDE records in the following areas: examination results; NDE equipment - listing; calibration data sheets; calibration blocks - listing; personnel qualification; and drawings, sketches and work orders.

The inspector reviewed the documents to verify that responsibilities have been assigned for maintenance of required NDE records and that controls have been established to accomplish the following: define record storage facility; designate a custodian; describe the filing system; establish a method for verification that records and materials reviewed for storage are in agreement with transmittal documentation; provision governing access to files; and establishment of filing supplemental information.

<u>Procedure No.</u>	<u>Title</u>
CP&L-ISI-100, Rev. 0	"Control of Inservice Inspection Activities"
CP&L-ISI-101, Rev. 1	"Control of Inservice Inspection Procedures, Documents, and Records"
CP&L-IST-101, Rev. 0	"Preservice and Inservice Data Control Procedure (NES)"
CP&L-AMM-05, Rev. 0	"Document Control - Conduct of Operations"
CP&L-AI-4.1, Rev. 1	"Filing Index and Instructions"
CP&L-AI-4.3, Rev. 0	"Document Distribution and Control"
CP&L-AI-4.4, Rev. 0	"MicroGraphic Instruction"

CP&L-AI-4.6,
Rev. 0

"Preparation, Distribution and
Control of Correspondence
Originating On-Site at SHNPP"

CP&L-AI-4.7,
Rev. 0

"Correspondence Receipt and
Distribution Control"

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

8. Preservice Inspection - Review of Procedures (73052B)

The inspector reviewed the PSI procedures indicated in the following paragraphs to determine whether the procedures were consistent with regulatory requirements and licensee commitments. See paragraph 7 above for the applicable code.

- a. The following procedures were reviewed in the areas of procedure approval, requirements for qualification of NDE personnel, and procedure scope:

<u>Procedure No.</u>	<u>Title</u>
CP&L-IST-301, Rev. 0	"Magnetic Particle Examination Wet and Dry Methods (NES)"
CP&L-IST-302, Rev. 0	"Check Calibration for Magnetic Particle Inspection Equipment (NES)"
CP&L-IST-401, Rev. 0	"Liquid Penetrant Examination (Color Contrast, Solvent Removable) (NES)"
CP&L-IST-501, Rev. 0	"Procedure for Ultrasonic Examination of Piping Systems (NES)"
CP&L-IST-603, Rev. 0	"Operating Procedure for Zetec Digital Encoder/Decoder (CONAM Inspection)"
CP&L-IST-604, Rev. 0	"Multifrequency Eddy Current Procedures for Westinghouse D4 Steam Generator Tubing Using the MIZ-18 Digital Eddy Current System (Conam Inspection)"

b. Magnetic Particle

Procedure Nos. IST-301 and 302 were reviewed for technical adequacy and for conformance with ASME Section V, Article 7 and other licensee commitments/requirements in the below listed areas: examination

method; contrast of dry powder particle color with background and surface temperature; suspension medium and surface temperature for wet particles; viewing conditions; examination overlap and directions; pole or prod spacing; current or lifting power (yoke); and acceptance criteria.

c. Liquid Penetrant

Procedure IST-401 was reviewed for technical adequacy and conformance with ASME, Section V, Article 6 and other licensee commitment/requirements in the below listed areas: specified method; penetrant materials identified; penetrant materials analyzed for sulfur; penetrant materials analyzed for total halogens; acceptable pre-examination surface; drying time; method of penetrant application; surface temperature; solvent removal; dry surface prior to developing; type of developing; examination technique; and evaluation technique.

- d. Procedures IST-301, 302, and 401 were reviewed for compliance with the QA Manual to determine if completion of required records was specified.

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

9. Preservice Inspection - Observation of Work and Work Activities (73053B)

The inspector observed the preservice activities described below to determine whether these activities were being performed in accordance with regulatory requirements and licensee approved program and procedures. See paragraph 7 above for the applicable code.

- a. The inspector reviewed the qualification records for the below listed examiners to determine whether their qualifications were consistent with the licensee's procedures and regulatory requirements.

<u>Examiner</u>	<u>Level and Method</u>
GG	II-PT
HR	II-PT; II-MT; I-UT
RTS	III-PT; III-MT; III-MT; III-RT

b. Liquid Penetrant Examination

The inspector observed the liquid penetrant examinations indicated below. The observations were compared with the applicable procedures and the code in the following areas: specified method; penetrant materials identified; penetrant materials analyzed for sulfur; penetrant materials analyzed for total halogens; acceptable pre-examination surface; drying time; method of penetrant application; surface temperature; solvent removal; dry surface prior to developing; type of developing; examination technique; and evaluation technique.

<u>ISO No.</u>	<u>Weld No.</u>
1-ISI-CS-1	1-CS-SW-A4

c. Magnetic Particle Examination

The inspector observed the magnetic particle examinations indicated below. The observations were compared with the applicable procedures and the code in the following areas: examination method; contrast of dry powder particle color with background and surface temperature; suspension medium and surface temperature for wet particles; viewing conditions; examination overlap and directions; pole or prod spacing; current or lifting power (yoke); and acceptance criteria.

<u>ISO No.</u>	<u>Weld No.</u>
1-ISI-FW-MS-RC-3	1-MS-FW-289

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

10. Inspector Followup Item

(Closed) Inspector Followup Item 400/84-19-02: "Unavailable NDE Reports"

The licensee made the "unavailable" NDE Reports available to the inspector. The inspector reviewed the reports and has no further questions in this area. This matter is considered closed.