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

Report No.: 50-395/88-18

Licensee: South Carolina Electric and Gas Company
Columbia, SC 29218

Docket No.: 50-395 License No.: NPF-12

Facility Name: Summer

Inspection Conducted: August 29 - September 2, 1988

Inspector: _____ 9/23/88
William P. Kleinsorge Date Signed

Approved by: _____ 9/23/88
J. O. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection was conducted in the areas of NRC Bulletins (92703) and Material Identification.

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

The licensee's aggressive investigation of NRC Bulletins and timely responses and positive indicator of the licensee's responsiveness to NRC initiatives. The investment in the mobile spectrographic equipment is a positive example of the licensee management's involvement in the assurance of quality.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*R. B. Clary, Manager, Design Engineering
*R. Cox, Supervisor, Mechanical/Chem. Plant Support
*H. I. Donnelly, Senior Engineer Regulatory Interface
*S. R. Hunt, Manager, Quality Systems
*A. R. Koon, Manager, Nuclear Licensing
*D. Lavigne, Manager, Materials and Procurement
*D. Moore, General Manager, Engineering Services
*K. W. Nettles, General Manager
*C. A. Price, Manager
*J. L. Scolls, General Manager, Nuclear Plant Operations

Other licensee employees contacted during this inspection included craftsmen, engineers, technicians, and administrative personnel.

NRC Resident Inspector

P. Hopkins, Resident Inspector

*Attended exit interview

2. NRC Bulletins (NRCB) (82703)

a. (Open) NRCB No. 87-01: "Thinning of Pipe Walls In Nuclear Power Plants"

This bulletin requested licensees to submit information concerning their programs for monitoring the thickness of Pipe Walls in high energy single-phase and two-phase carbon steel piping systems.

The inspector has reviewed South Carolina Electric and Gas (SCE&G) letter of September 1, 1988, and determined that the requested action(s) of the bulletin have been acceptably addressed. The inspector held discussions with responsible SCE&G representatives, reviewed supporting documentation and observed representative samples of work to verify that the actions identified in the letter of response have not been completed.

The licensee has had a wall thinning program for two phase flow since the commencement of power operations. The licensee program now contains approximately 1000 fittings in both single and two phase flow systems. During the fall 1988 refueling outage the licensee has scheduled the ultrasonic examination of approximately 108 fittings which includes those fittings that have been identified as the most

vulnerable to erosion - corrosion attack. Currently, the licensee's program is in a developmental stage pending further changes in the EPRI Guidelines NP-3944, April 1985, " Erosion/Corrosion in Nuclear Plant Steam Piping: Causes and Inspection Guidelines" and "Single-Phase Erosion-Corrosion of Carbon Steel Piping" dated February 19, 1987, and the results of the inspection planned for the Fall 1988 refueling outage.

The inspector noted that the licensee's existing procedures for measuring erosion-corrosion, using ultrasonic examination do not require the marking a permanent reference point for each band inspected. Without such a reference point it is not possible to accurately find a specific location on a fitting at a later date. Without the ability to accurately find specific locations on a fitting, accurate determination of actual erosion-corrosion rates is not possible. The licensee indicated that permanent reference marking would be included in the examination procedure used during the planned Fall 1988 refueling outage.

This bulletin will be subject of future inspections and will remain open.

b. (Open) NRCB No. 87-02: "Fastener Testing to Determine Conformance with Applicable Material Specifications"

The bulletin requested licensees to review their receipt inspection requirements and internal controls for fasteners and independently determine, through testing, whether fasteners (studs, bolts, cap screws and nuts) in stores at their facilities meet required mechanical and chemical specification requirements. Supplements 1 and 2 to the bulletin requested licensees to, 1) provide a list of suppliers and manufacturers from which safety-related ferrous fasteners 1/4 inch in diameter or greater, that may have been purchased within the past ten years, and 2) provide similar information for nonsafety-related fastener suppliers.

The inspector has reviewed South Carolina Electric and Gas (SCE&G) letters of January 12, 1988 and July 20, 1988, and determined that the requested actions of the bulletin have not been acceptably addressed. The inspector held discussions with responsible SCE&G representatives, reviewed supporting documentation and observed representative samples of work to verify that the actions identified in the letter of response have been completed.

Action Item 3 of the Bulletin requires a selection of 20 nuts (ten safety-related and ten nonsafety-related). The licensee selected seven safety-related and four nonsafety-related nuts. The above was the result of an misinterpretation by SCE&G of the intent and requirements of the bulletin, and a misunderstanding, by the NRC of the verbally transmitted reasons provided by SCE&G, for a reduction in the number of nuts required to be sampled.

The inspector discussed the above with the licensee, NRC Region II management, and NRC NRR Management Responsible for this bulletin and determined the following:

(1) SCE&G acted in good faith concerning their selection of sample size.

(2) The intent of the bulletin was to take a sample of ten each safety-related and ten nonsafety-related threaded male fasteners and ten each safety-related and ten each nonsafety-related nuts, for a total of 40 specimens.

(3) "Independent Testing" as used in this bulletin, means independent of the manufacturer/supplier and not independent of the licensee, provided that the licensee is independent of the manufacturer/supplier and has the facilities to perform the necessary testing.

This Bulletin remains open.

c. (Open) NRCB No. 88-02: "Rapidly Propagating Fatigue Cracks in Steam Generator Tubes"

This bulletin established a requirement, for licensees having Westinghouse steam generators with carbon steel support plates, to inspect and analyze the data from at least 3% of the total steam generator tube population for denting at the uppermost tube support plate.

The inspector has reviewed SCE&G letter of March 24, 1988, and determined that the requested actions of the bulletin have been acceptably addressed. The inspector held discussions with responsible SCE&G representatives, reviewed supporting documentation and observed representative samples of work to verify that the actions identified in the letter of response have not been completed.

The licensee indicated that Surveillance Test Procedure (STP) 404.901, "Steam Generator Tube Inspection," would be revised prior to performance of the next eddy current inspection currently scheduled for the Fall of 1988. Further the licensee indicated that the revision would initiate the following actions if denting is found in subsequent inspections and ensure compliance with item C of the bulletin: an enhanced primary-to-secondary leak rate monitoring program will be initiated and, a program will be established to minimize the probability of a rapidly propagating fatigue failure.

This bulletin will remain open pending NRC verification of the proposal revision to STP 404.901.

d. (Open) NRCB No. 88-05: "Nonconforming Materials Supplied By Piping Supplies, Inc. at Folsom, New Jersey and West Jersey Manufacturing Company at Williamstown, New Jersey"

This bulletin required licensees to submit information regarding materials supplied Piping Supplies Incorporate (PSI) and West Jersey Manufacturing (WJM) Company and to take actions to assure that (1) materials comply with the American Society of Mechanical Engineers (ASME) code and design specification requirements or are suitable for their intended use and (2) replace such materials. Supplement 1, to this bulletin, provided additional information about PSI and WJM supplied materials, reduced the scope of the materials review, delineated actions licensee are required to take to identify materials, and clarified actions licensees are required to take once noncomplying materials have been identified. Supplement 2 to this bulletin modified the schedule for actions requested by the Bulletin and Supplement 1 of the Bulletin and provided additional information about materials provided by WJM, PSI and recently identified company, Chews Landing Metal Manufactures Incorporated (CLM). For full power licensee's, Supplement 2 to the Bulletin indicated, based on reported measurements and analytical results to date, that it is appropriate to suspend, temporarily, the field measurements, testing, records review, and the preparation of Justifications for Continued Operations (JCOs) that were requested by the Bulletin and Supplement 1 until further notice. Holders of full power operating licenses were required to report the results of their records review, testing, and analysis performed as of the date of Supplement 2 in accordance with the 120 day reporting requirements specified in Paragraph 1 of the Bulletin (May 6, 1988 Plus 120 days is September 3, 1988).

The licensee has identified two Purchase Orders (POs) which involved 17 items supplied by WJM and PSI. Of these 17 identified items, seven were installed in the system. Three of the installed items are inaccessible for inspection during plant operation. Of the remaining ten items, the licensee has located nine in the warehouse. The disposition of all 17 items including is contained in SCE&G's Nuclear Change Notice 2988. This bulletin will remain open pending NRC receipt and review of the licensee's response to this bulletin.

e. Observations

Relative to the inspection of the licensee's actions concerning the four bulletins discussed above, the inspector noted that the licensee aggressively investigated the matters covered by the bulletins and responded in a timely manner to the bulletins. This is a positive indication of the licensee's responsiveness to NRC initiatives.

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

3. Material Identification

The licensee has procured a "Spectra Test" Model F, Optical Emission Spectrometer with the Argon pistol adaptor to facilitate the dedication/analysis of ferrous and nonferrous materials for safety, quality and nonquality-related use at the V. C. Summer station. The system consists of a light pistol with a 30 foot flexible umbilical tube which transmits the light from the area to the mobile spectrometer. The spectrometer is 40 x 24 x 28-inch, 400 lb unit fitted with 10-inch pneumatic wheels. The mobility of the unit will permit its use in many parts of the plant.

The inspector witnessed a demonstration of set-up calibration and analysis of a number of carbon steel and low alloy steel samples. The only limitations noted by the inspector were the following:

a. the accuracy of the analysis for carbon is some what less than for other elements

b. the equipment will not perform an analysis for phosphorous or sulfur.

The investment in this equipment, by SCE&G management, is a positive indicator of their involvement in the assurance of quality.

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

4. Exit Interview

The inspection scope and results were summarized on September 2, 1988, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Although reviewed during this inspection, proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

The licensee was informed that four NRC Bulletins were inspected and all four will remain open.