



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION II
 101 MARIETTA STREET, N.W., SUITE 2900
 ATLANTA, GEORGIA 30323-0199

Report No.: 50-395/94-06

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

Docket No.: 50-395

License No.: NPF-12

Facility Name: Summer

Inspection Conducted: February 22-24, 1994 and February 28-March 3, 1994

Inspector:

[Signature]
 William P. Kleinsorge P. E.
 Reactor Inspector

3/11/94

Date Signed

Approved by:

[Signature]
 Jerome J. Blake, Chief
 Materials and Process Section
 Engineering Branch
 Division of Safety

3/16/94

Date Signed

SUMMARY

Scope:

This routine, announced inspection was conducted in the area of Steam Generator Replacement Project.

Results:

The licensee's controls for contractor oversight and interface appear to be well organized. The existing procedures for storage and receiving inspection are generic in nature and do not adequately implement the storage, handling and receiving inspection requirements delineated the Westinghouse Steam Generator (SG) Technical Manual. The licensee's engineering design, modifications and analysis associated with SG lifting and rigging appears appropriate to the circumstances.

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

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REPORT DETAILS

Persons Contacted

Licensee Employees

- *J. Archie, Steam Generator Replacement Project (SGRP)
- *W. Baehr, Manager, Health Physics
- *M. Browne, Manager, Design Engineering
- *K. Beale, SGRP Communications Coordinator
- *R. Clary, SGRP Manager
- *A. Koon, Vice President Nuclear Operations Coordinator
- *P. LaCoe, Assistant to Plant Manager
- *K. Nettles, General Manager, Station Support
- *A. Rice, Nuclear Licensing
- *J. Skolds, Vice President Nuclear Operations
- *G. Taylor, Plant Manager

Other licensee employees contacted included engineers, technicians, operators, mechanics, security force members, and office personnel.

Bechtel Corporation (BPC)

- *B. Slover, Site Manager

Westinghouse Electric Corporation (W)

- M. Battaglia, Westinghouse Pensacola Plant (WPP) Manufacturing Engineer
- J. Bayless, WPP Lead Engineer
- G. Bieberbach, WPP Engineering Manager
- B. Fisher, WPP Project Engineer
- J. Frioud, WPP Lead Manufacturing Engineer
- B. Hood, WPP Engineer
- P. Langford, WPP Engineer
- O. Machado, WPP Nuclear Projects Manager
- K. Meritt, WPP Quality Assurance (QA) Manager
- T. Patten, WPP Planner
- C. Popalis, WPP Unit Manager
- W. Rosenberger, WPP QA Manager
- S. Skoyen, QA Manager
- R. Smelstoys, WPP Plant Manager

Quality Consultants International (QCI)

- J. Orlando, SCE&G Site Representative
- F. King, SCE&G Site Representative

South Carolina Public Service Authority

- *R. White, Nuclear Coordinator

Nuclear Regulatory Commission (NRC)

*R. C. Haag, Senior Resident Inspector

*T. R. Farnholtz, Resident Inspector

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Steam Generator Replacement Project (SGRP) (50001)

Controls for Contractor Oversight and Interface

SCE&G's oversight of Westinghouse Corporation (W) during the Steam Generator (SG) fabrication phase, consists of Project Progress Meetings (essentially monthly periodicity), audits and a resident oversight at the Westinghouse Electric Corporation-Pensacola Plant (WPP).

The licensee, to date, has conducted: a pre-award survey of W; three attribute audits at WPP; audits of W sub-tier suppliers; and participated in a Nuclear Utility Procurement Issues Committee (NUPIC) audit at WPP.

The licensee has contracted with Quality Consultants International (QCI), of Pensacola FL, to provide oversight of W at the WPP. QCI started part time surveillance of W work activities in March 1992. The QCI presence increased with the work load, as warranted, on the SCE&G Steam Generators. In October 1993, with the start of the tubing operations, QCI provided 24 hour coverage with two individuals. Typically, during the tubing operation and other critical operations, QCI was onsite at WPP 20 hours per day and on call for 24 hours per day.

W notifies QCI of pre-identified Customer Witness Points (CWP) and Customer Hold Points (CHP), QCI then witnesses the activity identified by the CWP or CHP. QCI may wave CNPs, the waving of CHPs requires SCE&G approval.

In addition to witnessing identified work activities QCI, reviews W work packages, conducts general surveillance of W work activities, participates in SCE&G audits, has provided resident oversight at W tube supplier's facility, and conducts followup inspections on SCE&G open items and audit findings.

To access SCE&G's oversight of W and others, during the SG fabrication phase, the inspector interviewed SCE&G, QCI and W personnel, reviewed audits listed below, attended the February 1993 Project Progress Meeting at WPP and observed welding and machining activities at WPP. Observations were compared with "V. C. Summer Nuclear Station Replacement Steam Generator Contract" (with W) and ES-321, Revision 6, "Procurement of Materials and Equipment."

The inspector reviewed the audit reports listed below, including selected check sheets, finding reports and associated followup documentation.

Audits Reviewed		
Identification	Dates	Title
CGSW-0050-PQ 503.5.1	8/26-29/91	Preaward Survey Conducted at Westinghouse Pensacola Plant
CGSW-93-0101	3/3-8/93	Attribute Audit Subject: Control of Special Process, Quality Assurance Records, Control of Measuring and Test Equipment.
(DRAFT)	1/20/94	Attribute Audit Subject: Control of Inconel 690 Weld Materials.
NUPIC 93-028	6/7-11/93	NUPIC Audit to Qualify Westinghouse Electric Corporation-Pensacola Plant on Wisconsin Electric's Qualified Suppliers List
GCSE-0061-PQ	6/23-24/92	Attribute Audit Subject: QA Program, Design Control, Procurement Document Control, Control of Purchased Materials Equipment and Services

SCE&G's oversight of Bechtel Corporation (BPC), W, Power Cutting Incorporated (PCI) a subsidiary of W and other subcontractors and vendors, during the SG installation phase, is delineated in SCE&G 21927-PIM, "Project Interface Manual (PIM)".

To access SCE&G's oversight of BPC, W, PCI and others, during the SG installation phase, the inspector interviewed SCE&G and BPC personnel, and reviewed Revision 3 of SCE&G 21927-PIM and CGSV-1463-PQ, "Preaward Survey Conducted April 27-29, 1992", for BPC.

The licensee's controls for contractor oversight and interface appear to be well organized.

SG Handling and Storage Provisions

To determine whether SG and associated equipment handling and storage provisions and controls are in place to avoid degradation during handling and storage, the inspector reviewed SCE&G Engineering Services (ES) procedures ES-361, Revision 3, "Receiving Inspection" and ES-381, Revision 4, "Materials Management". The inspector compared the above EPs with W Technical Manual 1440-C358, "Preliminary", "Vertical Steam Generator Instructions for South Carolina Electric and Gas". The ES procedure are generic in nature and do not adequately implement the storage handling and receiving inspection requirements as delineated in W Technical Manual 1440-C358. The licensee indicated that they would

have procedures in place addressing the storage, handling and receiving inspections requirements consistent with W direction, prior to the SG arrival on site.

Lifting and Rigging: Engineering Design, Modification, and Analysis

To access engineering design, modification, and analysis applicable to SG lifting, the inspector interviewed licensee personnel and reviewed the below indicated documents. Specific areas examined included: crane rigging; SG component drop analysis; safe load path; and laydown areas. Observations were compared with Generic Letter 81-07, "Control of Heavy Loads," and NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants".

Documents Reviewed		
Identification	Rev.	Title
MCN 90002B	12/3/93	Scope: Work associated with installation and removal of temporary SG replacement structures inside containment including bridges, structures and cranes, and the removal and reinstallation of interferences.
MCN 90002C	12/27/93	Scope: Work associated with the installation of temporary SG structures outside containment, rigging operations inside and outside containment required to handle and transport the new and old SGs, and the evaluation of underground utilities.
21927-N-003	0	Steam Generator Drop Analysis
21927-M-002-0006-03	7/1/93	Field Service Report (Whiting Services) Subject: Polar Crane Evaluation
21927-C-06	(Draft)	Steam Generator Load Drop Analysis

The licensee's engineering design, modifications and analysis associated with SG lifting and rigging appears appropriate to the circumstances.

With in the areas examined no deviations or violations were identified.

3. Exit Interview

The inspection scope and results were summarized on March 3, 1994, with those persons indicated in paragraph 1. The inspector described the areas inspected. Although reviewed during this inspection, proprietary information is not contained in this report. No dissenting comments were received from the licensee.

4. Acronyms and Initialisms

BPC	-	Bechtel Corporation
CHP	-	Customer Hold Point
CWP	-	Customer Witness Point
D. C.	-	District of Columbia
ES	-	Engineering Services
MCN	-	Modification Change Notice
NC	-	North Carolina
NPF	-	Nuclear Power Facility
NRC	-	Nuclear Regulatory Commission
NUPIC	-	Nuclear Utility Procurement Issues Committee
NW	-	Northwest
PCI	-	Power Cutting Incorporated
PIM	-	Project Interface Manual
P. E.	-	Professional Engineer
QA	-	Quality Assurance
QCI	-	Quality Consultants International
SC	-	South Carolina
SCE&G	-	South Carolina Electric and Gas Company
SG	-	Steam Generator
SGRP	-	Steam Generator Replacement Project
<u>W</u>	-	Westinghouse Electric Corporation
WPP	-	Westinghouse Electric Corporation-Pensacola Plant