Attachment 1 to the
SALP Board Report

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JAN 2 9 1985

MEMORANDUM FOR: E. H. Johnson, Chief
Reactor Project Branch, Region IV

FROM: J. Nelson Grace, Director
Division of Quality Assurance, Safeguards,
and Inspection Programs
Office of Inspection and Enforcement

SUBJECT: RIVER BEND SALP: QA BRANCH INPUT WITH RESPECT TO DESIGN ACTIVITIES

By telephone call of John Jaudon the QA Branch was requested to provide its input for the River Bend SALP with respect to the Integrated Design Inspection conducted by the Office of Inspection and Enforcement. Our input is provided below.

Integrated Design Inspection

The inspection took place at the River Bend Station, West Feliciana Parish, Louisiana; Stone and Webster Engineering Corporation, Cherry Hill Operations Center, Cherry Hill, New Jersey; General Electric Company, Nuclear Energy Division, San Jose, California; Reactor Controls, Incorporated, San Jose, California; and Gulf States Utilities Company, Beaumont, Texas. The inspection took place over the period from April 9, 1984 to June 1, 1984. The IDI Report (50-458/84-18) was issued August 29, 1984. Approximately 2100 hours of direct inspection activity was involved in the IDI.

The inspection focused on the low pressure coolant injection mode of the residual heat removal system and the automatic depressurization system, although other areas were also covered as delineated in the inspection report. Activities included examination of design, design bases, design procedures, records, and inspection of the systems as installed at the plant. Emphasis was placed on reviewing the adequacy of design details as a means of measuring how well the design process had functioned for the selected samples.

Integrated Design Inspection Results

Section 1 of the report provides a summary of the results of the inspection and the conclusions reached by the inspection team. We concluded that the overall design process appeared adequate in each of the engineering disciplines inspected (mechanical systems, mechanical components, civil/structural, electrical power, and instrumentation and control). However, based on the results of the inspection, including some of the more significant deficiencies identified in Chapter 1 of the report, we had a concern regarding the design verification process used for River Bend. We believed that certain of the deficiencies identified in the report should have been found and corrected by the design verification process. Our concern was heightened by the fact that system

descriptions (or system design criteria) were not used to guide the design effort for the River Bend project. Use of such guidance is a standard approach at most architect/engineering firms, including Stone and Webster. It did not appear that the design verification process for the River Bend project was modified to accommodate the fact that the River Bend project did not use system descriptions. Because a great deal of good work was also reviewed, we did not consider that the findings warranted negative conclusions concerning adequacy of the overall design process. Based on these considerations, we concluded that additional effort was required to provide assurance that the design verification process had been effective in detecting errors. We indicated that a limited design review should be conducted by off-project Stone and Webster or Gulf States Utilities personnel of a sample of other safety related systems to determine whether or not deficiencies similar to those found by the IDI team could be expected elsewhere.

Integrated Design Inspection Followup Activities

Gulf States Utilities Company (GSU) responded to the IDI Report by its letter of October 26, 1984. In addition to responding to individual inspection items, GSU indicated that it would undertake an of project review as recommended in the IDI Report. Two systems -- the Reactor Core Isolation Cooling (RCIC) and Fuel Building Ventilation (HVF) Systems -- formed the basis for the off-project review. Results of the off-project review will be presented to the Office of Inspection and Enforcement at a public meeting in Bethesda on February 6, 1985.

A follow-up inspection to the River Bend IDI was conducted by the Office of Inspection and Enforcement at the Stone and Webster Cherry Hill Operations Center from November 19-21, 1984. The purpose of this inspection was to assess the adequacy and status of action regarding the IDI Report.

Assessment

GSU has been aggressive in responding to the IDI Report. Response to individual inspection findings has been acceptable for the most part, with approximately 15 inspection items still remaining open. Results of the off-project review received appropriate GSU (and S&W) management attention. Adequate and highly qualified personnel are being devoted to resolution of IDI Report items. It is apparent that GSU (and S&W) management is interested in assuring quality in design activities.

Based on the present status of activities -- approximately 15 inspection items remain open and results off-project review still to be assessed -- it is recommended that design activities be assessed Category 2.

Brian Grimes

for J. Nelson Grace, Director
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and Inspection Programs
Office of Inspection and Enforcement