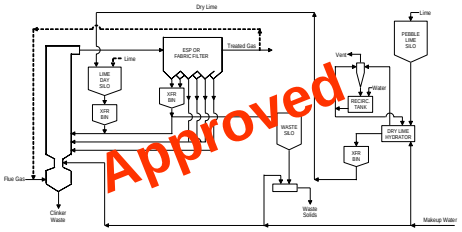
Customer	Utility
Service	Design Review for APC Systems

Strategic Solutions
SSI Associates, Inc.



Due Diligence for Design of First-of-a-Kind APC Systems

Design Review to Ensure Mechanical/Process Performance and Operational Efficacy.

Challenge

A U.S. supplier of environmental control systems for utility and industrial facilities licensed exclusive rights to the U.S. market for process technology from an international corporation. The technology involved both particulate and SO_2 control for industrial facilities, municipal solid waste incinerators and utility boilers. The first two U.S. applications were nearing completion with support from the international licensor. As a due diligence effort to support their guarantees, the U.S. supplier engaged the staff of Strategic Solutions to review the designs to identify potential shortfalls that could lead to startup and operational issues.

Approach

A Strategic Solutions team of staff and subcontractors undertook a “due diligence” review covering five aspects of the designs for the systems.

- **Contract Requirements** – Each contract was reviewed to extract both the explicit and the implicit requirements relative to performance of the systems. The requirements were delineated in performance requirement documents with reference to system integration, specific equipment design details, and operating and maintenance commitments.
- **Design Concepts and Equipment Selection** – Design documents (drawings, equipment specifications and calculations) were reviewed with the lead engineers to understand the basis and approach for developing the designs. These interactive interviews were complemented with management discussions about particular concerns relative to potential liabilities and shortfalls. Design concepts were then compared with precursor system relative to both design and performance.
- **Equipment Integration** – An internal team review was then performed to address endemic (individual equipment) and systemic (integrated equipment) concerns regarding the impact of the range operating conditions, transition through operating conditions and possible upsets on overall performance and operability.
- **Construction - T**he system under construction was then inspected. The focus of the inspection was general operability and maintainability.
- **Operating and Maintenance Manuals** – Finally, the operating and maintenance manuals were reviewed in detail.

All of the information was distilled into findings and recommendations for fine-tuning equipment and adjusting operating guidelines.

Value/Result

- Identified numerous, correctible problems in equipment designs, equipment interfaces and operating parameters.
- Improved operating and maintenance procedures.
- The adjustments implemented precluded contractual issues and maximized project returns.

Strategic Solutions, Inc.
http:/www.strategic-solutions-inc.net
ssi@strategic-solutions-inc.net