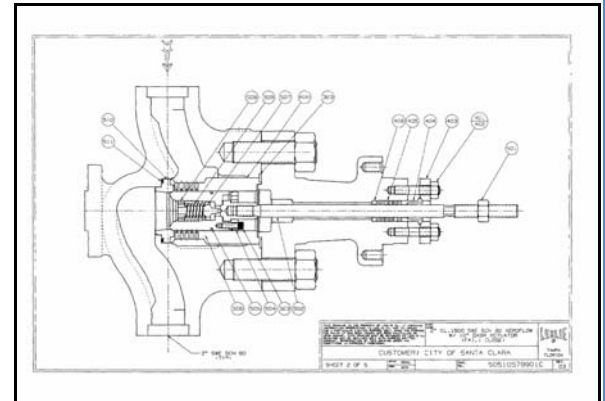


## Combined Cycle Power Plant Startup System Design Change

The City of Santa Clara – Silicon Valley Power – Donald Von Raesfeld Power Plant



### LOCATION:

Santa Clara, California

### PROJECTS & SERVICES:

- Project Management
- Engineering Design
- Construction Oversight
- Quality Control/Quality Assurance
- Startup Services Including Tuning

### PROJECT OVERVIEW:

Source California Energy Services, Inc. (SC Energy) was contracted by the City of Santa Clara, Silicon Valley Power, to provide project management, an engineering evaluation, detailed design drawings, and construction supervision for modifications to the turbine main steam drain line system at the Donald Von Raesfeld Power Plant in Santa Clara, California. The new combined cycle power plant went operational in 2003. The major components at this plant include two 50 MW combustion turbines, two Heat Recovery Steam Generators, and one 50 MW steam turbine.

The existing system designed by the original AE caused severe water hammer events, steam exhaust noise, and resulting delays in daily system startups. SC Energy engineers redesigned the turbine drains system and eliminated the water hammer and excessive noise. A complete evaluation of the startup and generation process for this 150 MW combined cycle plant was conducted. Flow analyses were performed on the steam systems and piping and control changes were recommended.

Modifications were made to both the piping/valve system and the ABB/Bailey DCS control system. SC Energy was responsible for providing the engineering evaluation, AutoCAD drawing and documentation updates, construction supervision, and startup support.