Source California

Energy Services

Your Source for Powerful Solutions

P.O. Box 3151
San Luis Obispo, CA 93403
[t] 805.595.9900
[f] 805.595.9121
www.sourcecalifornia.com

Hydrogen Sulfide Incinerator Replacement
Calpine Corporation

LOCATION:

Sonoma County, California

SERVICES PROVIDED:

- Managerial and Technical Consulting
- Engineering (Mechanical, Electrical, I&C)
- Planning/Project Management
- Quality Assurance/Quality Control
- Operations and Maintenance
- Design
- Design Drafting

PROJECT OVERVIEW:

Source California Energy Services, Inc. (SCES) was selected by the Calpine Corporation to provide a complete detailed design for a geothermal hydrogen sulfide (H_2S) primary abatement system.

Units 7 and 8 primary abatement system consists of two 3-stage steam driven ejector systems, a single high-volume incinerator, and multi-stage sulfur dioxide scrubbers. This equipment effectively removes H_2S from the non-condensable gas streams via high-temperature thermal oxidation. SCES's scope included providing the complete detailed design of all civil, mechanical, and electrical and control systems from preliminary foundation designs through providing on-site project startup assistance. SCES's AutoCAD capability was fully utilized in preparing a complete set of multi-disciplined construction drawings.

One of SCES's challenges was to provide burner management controls for the incinerator on a Programmable Logic Controller (PLC) platform using Allen Bradley's new Control Logic 5000 software. The design includes consideration of NFPA design standards for safe burner operation. It is also able to meet stringent emission standards set by the state of California, as well as the local County Air Resources Board.