

# Remote Monitoring & Control

## Computerized System Control and Telemetry

To optimize system performance, including contaminant extraction and destruction efficiency, RSI has developed a fully automated, user-friendly, computer control system for its modular remediation systems. The Phoenix S.A.V.E.™ Controller maximizes vapor flow from the extraction wells and minimizes alternate fuel consumption simultaneously. The electronic controller senses any deviation from the stoichiometric air-to-fuel (A/F) ratio to optimize contaminant destruction and meet stringent air emissions standards. With the ability to optimize system operation to meet Air Quality Control standards, the patented computerized control system is cutting-edge technology.

Maintaining optimal A/F ratio is challenging with variations in site conditions, such as fluctuating hydrocarbon, oxygen or carbon dioxide concentrations. Competing systems require constant operator input to adjust to changing conditions. The Phoenix S.A.V.E.™ Controller can handle virtually any change in site conditions, from a slug of free product to a temporary loss of supplemental fuel. In the event of system shutdown based on the automatic detection of an incorrect operating condition, the computer can be preprogrammed to restart after verifying that all operating conditions are correct.

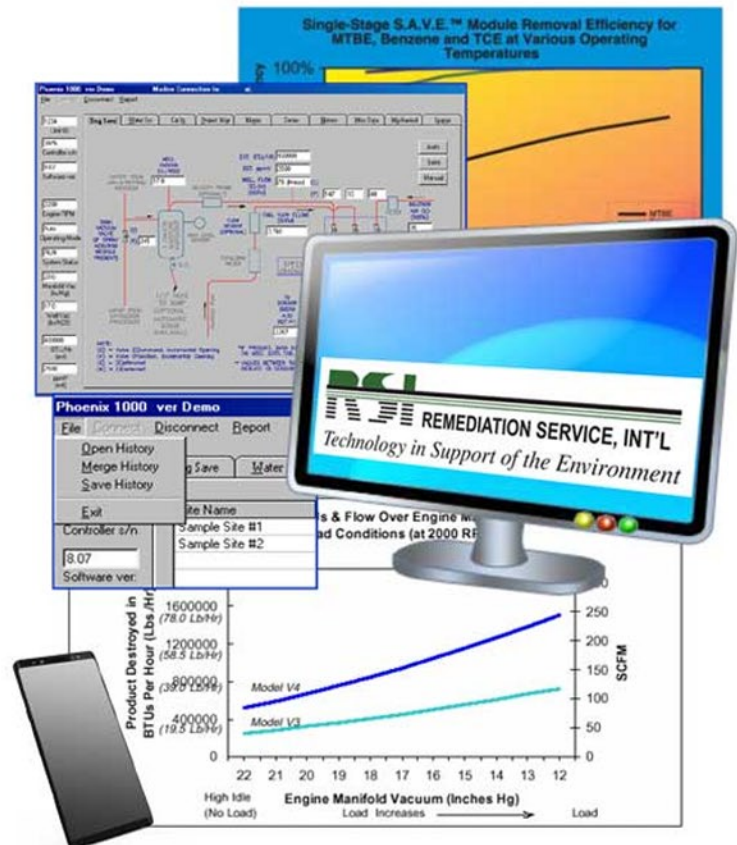


In the event of a system shut down, the optional telemetry system can report unit status to the technician on call.

The Phoenix S.A.V.E.™ Controller will not start the engine when a safety "kill" switch has been activated, for instance, due to high engine temperature, low oil pressure or high water level in the moisture knockout tank.

U.S. Patent: 4,846,34; 4,979,886

Canadian Patent: 1,287,805



Monitor and control any site anywhere from your desktop workstation

The Phoenix S.A.V.E.™ Controller has proven cost effective for our S.A.V.E.™ systems. Increased runtime, less-frequent maintenance visits, and reduced cleanup costs are achieved with this breakthrough technology. Truly innovative environmental solutions.

“Patents



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## Landline or Cellular

### Bidirectional communication and control

#### The Project Manager

The optional "Project Manager" software module allows for control of the "Smart Valve Manifold System".

This unique system optimizes BTUs extracted from the contamination source by rotating from well to well to determine the most efficient method of extraction. This reduces energy cost and increases contaminant removal rates. The system can be manually overridden for operator control, both on and off site.

**Phoenix 1000 ver Demo**

| Unit ID | EST. BTU/HR |
|---------|-------------|
| 1234    | 400000      |
| 3876    | 2500        |

**Phoenix 1000 ver Demo**

File Connect Disconnect Report

- Open History
- Merge History
- Save History
- Exit

Controller s/n: 8.07  
Software ver: I. C. ENGINE

Sample Site #1  
Sample Site #2

PHOENIX 1000 S.A.V.E.™ CONTROLLER

OPERATING PROCEDURES

- TURN THE IGNITION KEY SWITCH CLOCKWISE ONE POSITION TO ON
- FOLLOW DIRECTIONS ON DISPLAY WINDOW

PHOENIX 1000 S.A.V.E.™ CONTROLLER

REMEDIATION SERVICE, INT'L

Left - Site Controller; Right - Phoenix Host Software

#### The Phoenix Data-logger

Monitoring includes data reporting on engine vital signs and system operation. Reports are generated automatically or manually at the discretion of the operator. Data is stored at programmable intervals for future retrieval, and it can be downloaded via direct or modem connection to the PC.

#### Host Program Requirements

Any Pentium or higher computer running Microsoft Windows 95 or higher with a minimum of 8 megabytes of free disk space. U.S. Robotics (3COM) Sportster modem (internal or external).

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