

# RV, TRAILER, AND TRUCK BASED MONITORING SYSTEMS

## Environmental Services

Providence provides fixed and mobile air monitoring stations/shelters with air and meteorological monitoring instruments. RV-based systems can provide a comfortable interior work spaces. Trailer based stations provide the same capabilities as a fixed station but on a mobile platform. Truck chassis based systems provide superior durability under a variety of monitoring conditions. Features for each system can be modified based on customer's needs.

### RV-BASED MONITORING SYSTEMS

#### Monitoring Platform

- 31 ft commercial RV
- Slideout room with sofa for meetings or work space
- Hydraulic leveling jacks
- 7kW generator
- 10m pneumatic mast for meteorological monitors
- GPS system
- Refrigerator
- Microwave oven

#### Monitoring Instruments

- Criteria pollutants O3, NOx, PM10 (TEOM continuous monitor), SO2, and CO
- H2S
- Mercury
- Organic compounds by a onboard GC
- Meteorological parameters

#### Supporting Instruments

- Dynamic dilution calibrator with ozone generator and gas phase titration mixing chamber
- Zero air generator
- Hydrogen generator
- Air sample pre-concentrator
- Data acquisition and communication system

### TRAILER-BASED MONITORING SYSTEMS

#### Monitoring Platform

- Fixed shelter or transportable trailer
- Electricity hook-up
- Phone line, cellular or RF communication
- Retractable 10m meteorological tower
- Air conditioning and heating system

#### Available Monitoring Instruments

- SO2 analyzer
- NOx analyzer
- CO analyzer
- Ozone analyzer
- Continuous PM10 or PM2.5 monitor using beta attenuation or Tapered Element Oscillating Microbalance (TEOM)
- Filter-based PM10 or PM2.5 monitor
- Total Non-Methane Organic Compounds (TNMOC) analyzer for VOC monitoring
- H2S analyzer
- GC with FID, MSD, or other

#### Available Monitoring Modes

- Conventional continuous monitoring
- Criteria triggered monitoring
- Wind direction driven monitoring

#### Integrated Data Acquisition and Communication System

- Web based AIM software provides real time access to meteorological data and pollutant data
- Real time notification based on selected criteria
- Web based data analysis and visualization tools such as time series plots, wind back trajectory, forward trajectory, scatter plot, pollution rose over satellite maps

### TRUCK-BASED MONITORING SYSTEMS

#### Monitoring Platform

- Roof platform with folding railing and safety gate
- Two 6.5KW propane generators
- Automatic switching between shore and generator power
- Automatic hydraulic leveling jacks to stabilize the vehicle when stationary
- Shock mounted instrument bench
- 10m pneumatic mast with DTEC obstruction detection system
- Electric hoist for cylinder loading/unloading

#### GC-MS

- Five columns designed to analyze light and heavy ozone precursors, air toxics and sulfur compounds
- Direct or canister sample analysis
- On-board canister cleaning station
- On-board canister pressure station for analysis and dilution
- Sensitivity down to low ppt level
- Data acquisition to Providence web based AIM software

#### Stack Testing System

- SO2, NOx, CO, CO2, VOC analyzers
- Heated sampling line and sample probe
- Sample gas conditioning system

Meteorological Station with Auto-Alignment Sensor to Eliminate the Need for Wind Sensor Alignment

Surveillance Camera with Pan/Tilt/Zoom and Remote Control Capability (Mounted On Mast)

#### Integrated Data Acquisition and Communication System

- Web based AIM software provides real time access to met data and GCMS data
- Analysis tools such as wind back trajectory, forward trajectory and scatter plot over satellite maps



**PROVIDENCE**

Offices located throughout Louisiana, Texas and Mississippi

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