



PlumeRAE

Plume Measurement and Decision Support



PlumeRAE is a unique, turn-key solution for rapid monitoring and assessment of situations involving the release of hazardous substances. PlumeRAE measurement software integrates information from other RAE Systems products such as AreaRAEs, as well as data transmitted by a WEATHERPAK™ Weather Station. Furthermore, the plume measurement software displays a graphic of the toxic plume, the speed at which it is spreading, and the concentration of the toxic compound.

- Track and validate plume movement and dispersal
- Employ intelligent placement tactics for responders
- Evaluate toxicological effect on responders and the community
- Create emergency response strategy
- Assess how long the event will persist

PLUMERAE SYSTEM COMPONENTS

- RAE Systems Rapid Deployment Kit (RDK)
 - Four AreaRAE Wireless Detectors with GPS
 - ProRAE Guardian Software preloaded on PC
 - Carrying case for easy transportation
- PlumeRAE Plume Measurement Software
 - Complete with GIS mapping data covering a single state (U.S. only; additional countries available)
- Coastal Environmental Systems WEATHERPAK
 - Solid-state weather station with embedded RAELink wireless modem for monitoring wind speed, direction, temperature, and humidity

APPLICATIONS

- Hazardous material response
- Industrial fence line monitoring
- Public venue protection
- Crisis management



THE CHALLENGE

Releases of toxic materials present first responders with an immediate challenge—determining what actions need to be taken to protect nearby populations. They must answer a number of questions:

- Where is the toxic plume headed, and in what concentration?
- What areas need to be evacuated?
- Who should shelter in place?
- What roads should be closed?
- How do we prioritize actions with limited resources available?

PLUME MEASUREMENT WITH PLUMERAE

PlumeRAE gives Municipal first responders information to make crucial decisions.

- GPS-equipped AreaRAE wireless monitors placed in strategic locations measure the levels of critical toxic chemicals and communicate their measurements to a PC running RAE Systems safety monitoring software ProRAE Guardian
- Weather data transmitted by a Coastal Environmental Systems WEATHERPAK® completes the information package needed for analysis
- RAE Systems safety monitoring software feeds this information to PlumeRAE which is running on the same PC
- The Plume Measurement Software integrates the information and shows users a picture of the toxic plume, the speed at which it is spreading, and the concentration of the toxic compound

