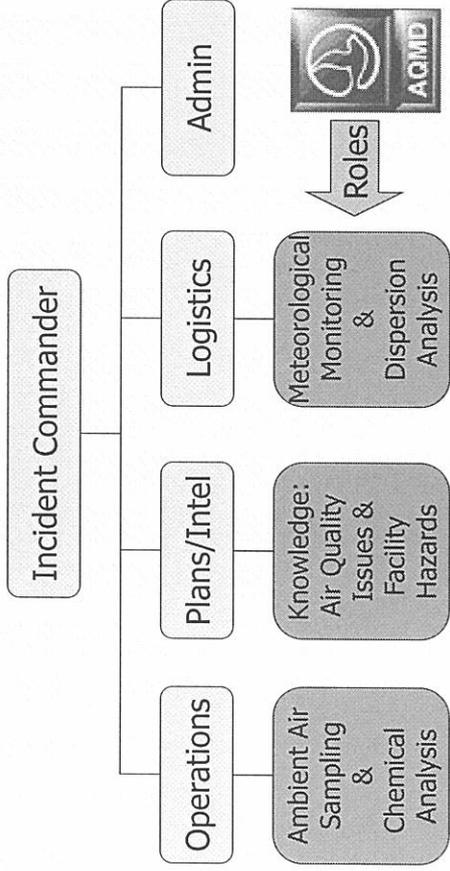


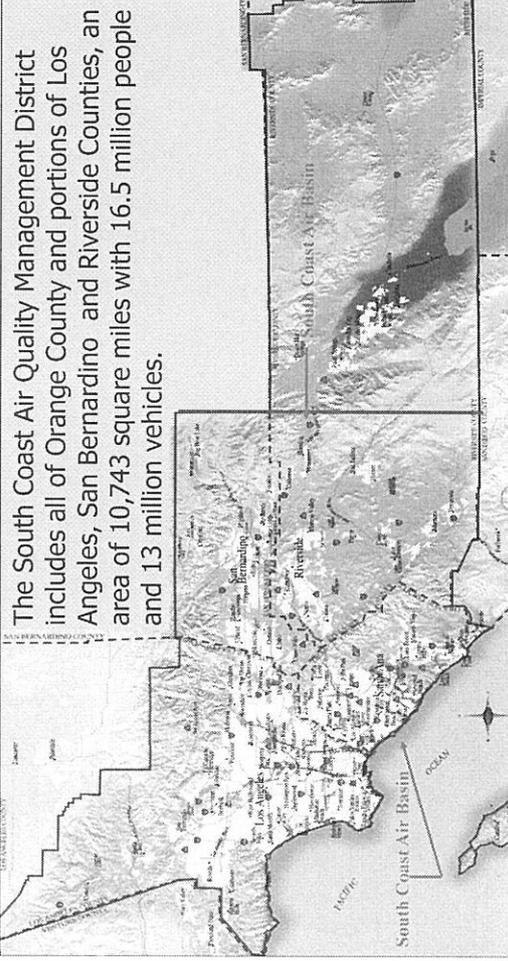
Incident Command System



AQMD Emergency Response Program

September 28, 2011

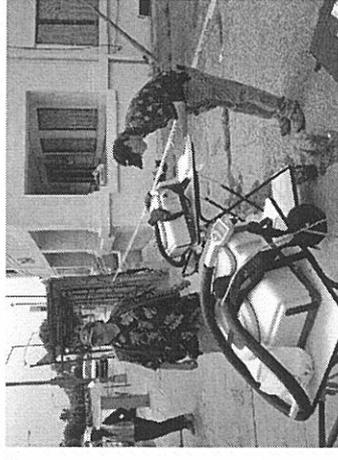
South Coast Air Quality Management District



The South Coast Air Quality Management District includes all of Orange County and portions of Los Angeles, San Bernardino and Riverside Counties, an area of 10,743 square miles with 16.5 million people and 13 million vehicles.

Role of SCAQMD in Emergency Response

- SCAQMD is an Emergency Response Agency
- Provides Specialized Support within the Incident Command System (ICS)

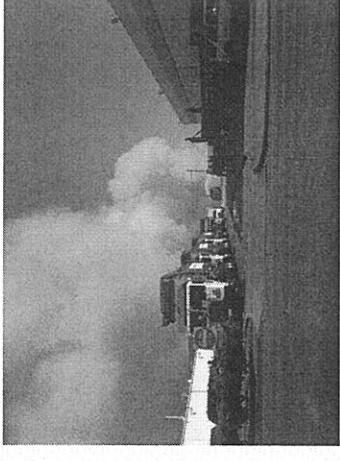


Compliance Supervisor

- On-Scene Coordinator
- Incident Commander for SCAQMD Staff
- Point of Contact for other Agencies
- Able to Take Preliminary Samples (Canister and Tedlar® Bag)
- Provides Communication with Incident Commander (IC), including SCAQMD Measurement Results

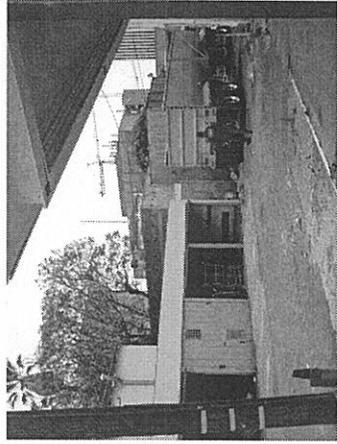
Event Awareness

- Public Phone Number: 1-800-CUT-SMOG
 - Day (7am to 9:00pm): Live Operator (M-F)
 - Night and Weekends(9:00pm to 7am): Voicemail
- Field Staff
- News
- Text Alerts



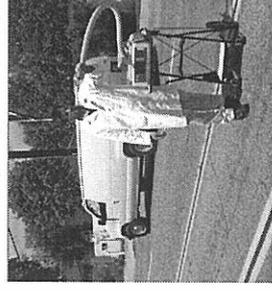
Air Quality Inspector

- Supports the On-Scene Coordinator
- Follows up after the Incident



AQMD ER ON-SCENE STAFF

- Compliance Supervisor
- Inspector
- Instrument Technicians
- Chemists



Response Timeline

- Initial Phone Contact with I C
- Level/Type of Response
- Compliance Staff Response
 - 1-2 hrs Depending on Incident Location
 - Canister/Lung Sampler
- Instrument Technician/Chemist
 - 2-3 hrs Depending on Incident Location



Air Quality Instrument Spec.

- Set up Instrumentation as Needed (Specialty Instruments and Wind Systems etc.)
- Delivers Prepared Sampling Devices and Equipment
- Delivers Samples to the SCAQMD Laboratory



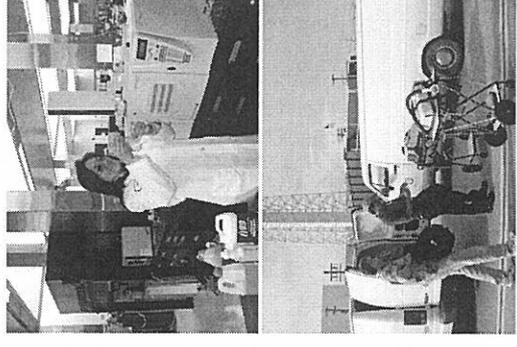
Sampling Overview

- Sampling Protocol
 - Perimeter Measurements
 - Provide guidance to Hazmat
- **#1 Rule: Personal Safety**



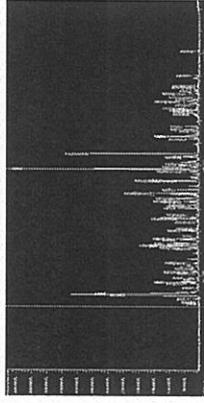
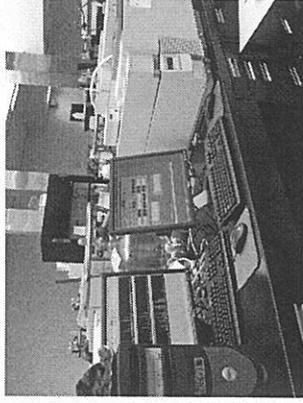
Air Quality Chemist

- Laboratory
 - Performs Analyses of Samples Delivered to the Laboratory
 - Generates Data and Reports for Review by the Laboratory Manager
- Field
 - Provides Expertise on Sampling and Analyses using Portable Instrumentation and Equipment



Canisters: Analysis

- Based on U.S. EPA methods
- Measures certain levels of gaseous compounds (i.e. Benzene, Vinyl Chloride, Xylene)
- Identification and concentration estimation of other compounds



ER Field Equipment

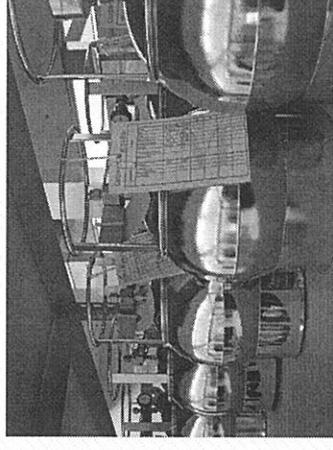
- Canisters
- Tedlar Bags/ Lung Sampler
- Containers for Non Gaseous Samples
- Portable GC/MS
- Organic Sulfur Detector
- Wipes
- Collection Plates
- Filter Samplers
- Real Time PM Samplers

Canister: Limitations

- Time for Reportable Results
- Number of Samples is Limited
- Semi-Volatile and Sulfur compounds

Canisters

- Simple
- Reliable
- Rugged
- Quick Sampling
- Analysis of Samples Provides the Best Measurements for Gaseous Compounds

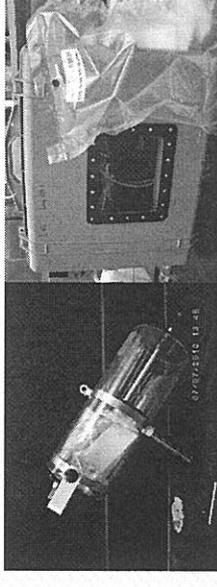


Lung Sampler: Limitations

- High Temperature Samples or Locations
- Dusty Samples or Locations
- Samples with Water or Other Fluid Droplets
- High Pressure Samples

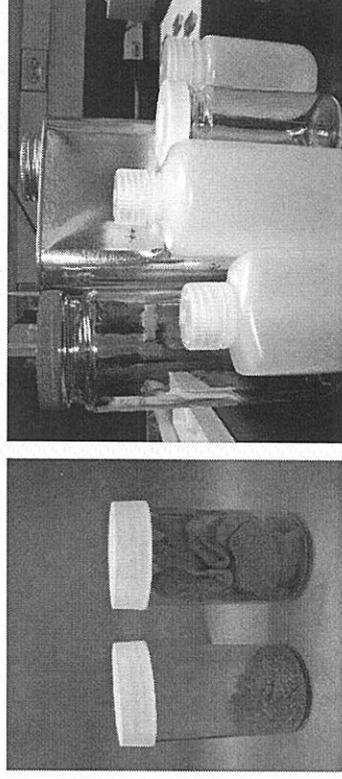
Lung Sampler Overview

- Apparatus for Collecting Air Samples
 - Hand Held Sampler (Recommended for Fire Agencies)
 - Integrated Sampler (Several Minutes)
- Operates Like a Lung
- Portable
- Intrinsically Safe
- Easy to Use



Containers for Non-Gaseous Sampling

- Evidence that May be Relevant in Determining the Cause or Source of an Incident
- Contaminated Soil, Liquid(s), Paper or Clothing

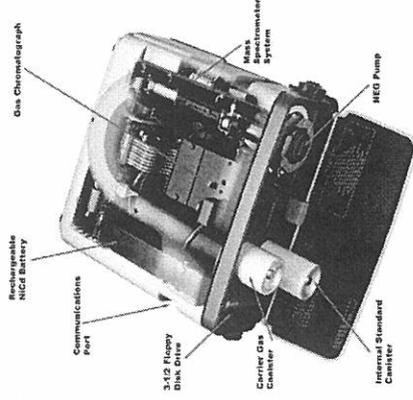


Lung Sampler: Uses

- Collection of Samples Where Substance Loss or Change is Likely
 - Sulfur Gases
 - Nitrogen Compounds
 - Other Reactive Gases
- Collection of Air Samples Requiring “Intrinsically Safe” Equipment
 - Refineries
 - Sewers

Portable GC/MS Overview

- One Touch GC/MS Sampling
- Multiple Options for Operation
 - Probe
 - Front Panel
 - Laptop
- On Board Display
- Automatic GPS and Time Stamp



Asbestos

- Any Suspect Material is Sampled
- Containers Can Be Jars (Glass or Plastic) or Sealable Plastic Bags with Date and Location
- Important to Collect Discreet Samples (One Type of Material Per Container)



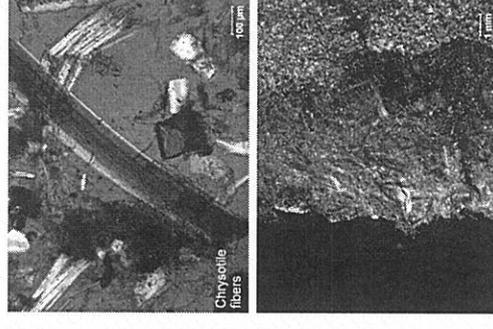
Portable GC/MS Overview

- Truly Portable
 - Hand Carry
 - Backpack
 - Cart
- Rugged for Field Deployment
- Easily Decontaminated



Possible Asbestos Containing Materials

- Pipe Insulation
- Transit Panels
- Floor Tile
- Blown Acoustic Ceiling
- Duct Insulation

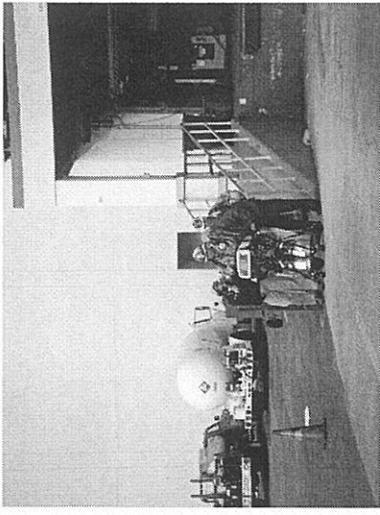


Limitations

- Less Detection Capability than Laboratory Analysis
- More Volatile Species are not able to detectable (e.g. Light Hydrocarbons, HCN, HCl, HF, NH₃, CO)
- Not Intrinsically Safe
- Battery Life
- Needs Proper Routine Maintenance

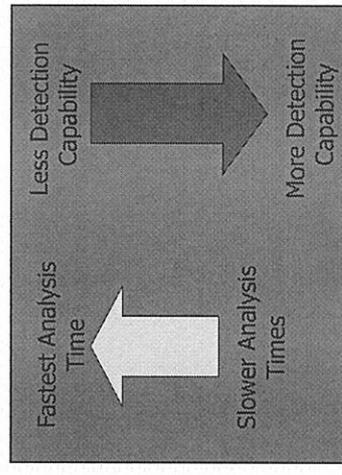
Advantages – On Site Analysis

- Reduce Time Frame for Reportable Results
- Ability to Take Many Measurements
- Modify Sampling Strategy



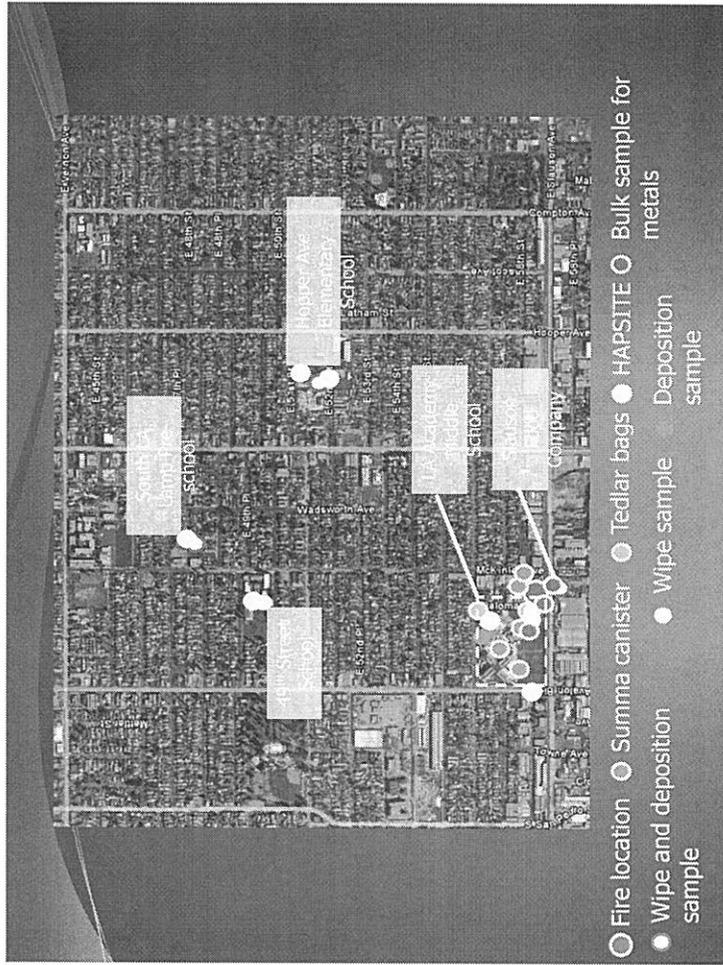
Advantages - Versatility

- Survey Mode
 - Real Time
 - Source level
- Loop Injector Mode
 - Near real time
 - Perimeter level
- Sorbent Trap Mode
 - Near real time
 - Near ambient level



Legend

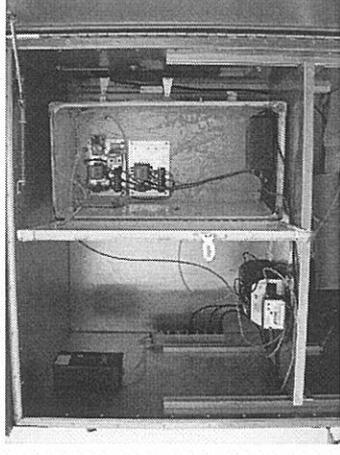
- Fire location
- Summa canister
- Tedlar bags
- HAPSITE
- Bulk sample for metals
- Wipe and deposition sample
- Wipe sample
- Deposition sample



Automatic Sampling



- MOCOM real time Hydrocarbon analyzer w/ trigger sampling to canisters with notification
- AQMD sample pick up



- AQMD sample pick up