

From Through The Probe to Emergency Response

(Improving Response Support Capacity With Existing QA Resources)

EPA Region VII
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Truck Mounted Mobile Air Quality Assurance Laboratory Monitoring Audits & QA

- Primary function of our mobile lab is for the National Performance Audit Program audits.
- Most of these audits are being done by Region 7 personnel, remainder done by ESAT contractors.



Air Monitoring Emergency Response Activities

- EPA Region 7 air monitoring staff realized that the mobile lab was underutilized
- We began seeking opportunities to deploy the system for non-routine applications to support emergency response and homeland security preparedness applications.
- In this presentation, we present the current and planned modifications to the stock NPAP mobile laboratory configuration in order to provide the system flexibility needed to support emergency response deployments.

Air Monitoring Emergency Response Activity Support

- Continuously sample through an intake sampling system with a seven port manifold system.
 - Sulfur Dioxide
 - Carbon Monoxide
 - Ozone
 - Nitrogen Dioxide.
- In the near future Capability to sample
 - Ammonia
 - Hydrogen sulfide



Air Monitoring Emergency Response Activity Response

- Future plans to have a collocated PM_{2.5} continuous analyzer to measure PM Course.
- Ability to field a portable GC/MS equipment for on-site screening of common volatile organic compounds at low levels.



Meteorological Support

- The ability to collect continuous meteorological parameters (wind speed, wind direction, barometric pressure and temperature) using RM Young met equipment on a 24 foot bumper mounted crank-up tower which is on order.



Summa Canister Sampling

- The ability to do air toxic sampling using a XONTECH Canister Sampler. This unit has the capability to sample 16 canisters at any designated sampling time and date. This unit only samples air into a canister, a separate laboratory is needed to analyze the samples.



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Real-Time example (2/07/2007)

- Several 55-gallon chemical drums explode
- 100-foot-high flames that spewed black smoke and sticky residue and sent neighbors scurrying for shelter.
- No injuries were reported, local residents were asked to remain out of the area until the fire subsided.
- The plant housed solvents and mineral spirits.



Chemical Plant explosion



Real-Time Air Monitoring

- Continuous Plume from North to South
- NO₂, CO, SO₂
- 24 hour sampling for health concerns
- No major health concerns were found



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Questions

