Emergency Response: Overview

Presented by Greg Vlasek
ARB/OER Mission
OER Program

- Fires, chemical spills, industrial disruptions, natural disasters that exceed local capabilities.
- Community based (non-hot zone) air monitoring and surveillance.
- Air quality assessment (modeling/meteorology).
- Respond to local government requests, with ‘lean forward’ posture.
- Coordinate interagency response with other air quality and public health partners.
Needs During an Emergency

- Chemical identification
- Plume predictions
- Air monitoring and sampling results
- PPE recommendations
- Protective health actions
- Coordinated messaging for PIO/JIC
- Re-entry and clearance issues
OER Monitoring Capability

- AreaRAE/ppbRAE PID
- Miran Sapphire IR spectrometer
- Portable Met
- Colorimetric Tubes
- E-BAM/Microdust
- Laboratories: Organics, Inorganics
- Fixed ARB, District, NPS, and USFS air monitor network
Layered Monitoring Approach

- Portable Samplers
- Mobile Samplers
- Network Monitors
- Field IR Detectors
- Summa Canisters
Layered Deployment Strategy

1st Level
- Network Sites
  - Compliance
  - Trends
  - General exposure studies

2nd Level
- Mobile Sites
  - Complaints
  - Micro situation
  - Follow up to action
  - Reentry

3rd Level
- Portable Sites
  - Population exposure
  - Short terms changes and trends
Interagency Coordination
Air Response Model

Message to Audience

Data

Data to Message

Audience
Example Responses

• San Bruno Natural Gas Explosion – Sept 2010
• Escondido “Explosives” House – December 2010
• Fukushima Radiation Monitoring – March 2011
• Clearlake Geothermal Venting – Spring 2011
• Chips/Ponderosa Wildfires – Summer 2012
• Rim Fire – Summer 2013
• Redding “Explosives” House – Feb 2014
• King Fire – Summer 2014
Wildfire Air Monitoring

Portable air monitor deployments during wildfires
San Bruno Pipeline Explosion

Recovery phase air monitoring for particulate matter and asbestos
Escondido Bomb House
King Fire 2014

Single largest OER deployment
- Ten E-BAMs
- Five weeks
Cache and Loan Programs

PM2.5 Monitor
Cache Program
Redding
Mariposa
Santa Barbara

Cache consists of two complete E-BAMs.

Other loans available
Refinery Air Monitoring Project

• Inventory existing assets and resources: **Completed**
• Evaluate capabilities and propose enhancements
• Develop statewide guidance on best practices
• Improve coordination, training, and preparedness
Industrial Monitoring Methods

- Fixed Network Stations
- Personal and Handheld Monitors
- Hazmat Vehicles and Mobile Labs
- Community Monitors
- Process Unit Monitors
- Fenceline Monitors
Open Path Monitoring
Community Monitoring
Future Monitoring Platforms

Advantages:
- Lower Cost
- Portable
- Real-time
- Widespread distribution
- Increased spatial resolution

Challenges:
- Accuracy/precision
- Calibration
- Interferences
- Interpretation
Web and Electronic Tools

AirNOW wildfire webpage
- Dynamic map with data overlays: Current PM2.5 AQI (network & E-BAM), fire locations, and smoke plumes.

California Smoke blog
- [http://californiasmokeinfo.blogspot.com/](http://californiasmokeinfo.blogspot.com/)
- Available for public messaging (multiagency support).

CARPA website
- [http://www.arb.ca.gov/carpa/carpa.htm](http://www.arb.ca.gov/carpa/carpa.htm)
- Password protected ‘coordination center’ directory for specific coordination needs.

Office of Emergency Response webpage
- [http://www.arb.ca.gov/aaqm/erp/erp.htm](http://www.arb.ca.gov/aaqm/erp/erp.htm)
- Technical capabilities, past deployments, request for support.
Emergency Response

Latest Information

California Office of Emergency Services Contact List

The CalOES Emergency Services Contact List provides names and contact information for each county's Emergency Service Coordinator. When requesting emergency air monitoring equipment from the California Air Resources Board Office of Emergency Response, contact the Emergency Service Coordinator for assistance. The coordinator can guide you through the mission tasking process to request services from the Office of Emergency Response.

Office of Emergency Response: Mission Request Procedure

The California Air Resources Board (ARB), Office of Emergency Response (OER) has created a step by step procedure to request emergency air monitoring services from the ARB. This procedure applies to any emergency involving the release of a hazardous airborne contaminant when a local agency has exhausted its resources to protect public health or the environment. The Office of Emergency Response can provide state-level support for air contaminant monitoring, sampling, analysis, and dispersion modeling.

The Office of Emergency Response: Mission Request Procedure provides a detailed procedure on how to request support from the Office of Emergency Response and provides contact information for requesting assistance.

Page Links

- Assets and Technical Capabilities
- Background and Mission Statement
- Past Deployments
- Staff Expertise
- Training Opportunities
Thursday, July 23, 2015 - Wragg Fire - Napa County

Smoke Plume from the Wragg Fire as it looks from satellite imagery. This does not reflect air quality data at one's breathing level. Information on can be found at http://smoke.airfire.org/monitoring/.

**July 23, 2015 (6:30 AM): Satellite-observed Smoke over Northern California.**

![Satellite image of smoke plume over Northern California](image-url)

Posted by PlacerCounty APCD at 10:42 AM  No comments:
CARPA Webpage

California Environmental Protection Agency
Air Resources Board

UP LINKS
- ARB Homepage
- Outreach Programs
- California Air Response Planning Alliance (CARPA)

PROGRAM LINKS
- Background and Mission
- Charter
- Fire Information Page
- Newsletter
- Steering Committee (login required)
- Subcommittees
- Tool Kit
- Date
- Data to Message
- Message to Audience
- Emergency Response
- Trainings / Meetings

RESOURCES
- Contact Us
- Join the CARPA Email List
- RSS / Newsfeed

In the event of an emergency, contact:
California State Warning Center (800) 652-7550
US EPA Region 9 Duty Officer (800) 300-2193
CDC/ATSDR 24-Hour Emergency Response Center (770) 488-7100

Current Emergencies
There are no current fires with major impacts in California. More information can be found at:
- California Smoke Information Blog
- CAL FIRE Current Incidents
- Fire Information Map - PFIRS
- Federal Interagency Smoke Management Site
- Interagency Incident Information System (IncWeb)
- How to Request Emergency Air Monitoring Support from the ARB, Office of Emergency Response

Latest Information

2015 IASC/CARPA Workshop: Managing Smoke Impacts
May 13th and 14th 2015
California Air Resources Board/ Monitoring and Laboratory Division
1927 13th Street, Sacramento, CA 95811
AirNow Wildfire Webpage
AirFire Webpage and Graphs

Monitoring

24-Hour Rolling Mean of Raw PM2.5 Data
Operated by United States Forest Service

- Permanent (from AirNowTech)
- Temporary (from AirSys & WRCC)

Plot Type: 24 Hour Rolling Mean
Y Scale: Automatic

PM2.5 Concentration (µg/m³)

Color levels for 24-hour average PM2.5

Moderate
Good
Refinery Webpage

Refinery Air Monitoring

This page last updated July 2, 2015

There Are No Alerts At This Time

Latest Information

Real-Time Refinery Fenceline and Community Monitoring Data

- Alan Bakersfield
- Chevron Richmond
- Phillips 66 Rodeo

California Refinery Emergency Air Monitoring Capabilities Report Released

May 12, 2015

ARB’s Monitoring and Laboratory Division and the California Air Pollution Control Officers Association (CAPCOA) have completed the first volume of the Refinery Emergency Air Monitoring Assessment Report. The May 2015 report, “Objective 1: Delimitation of Existing Capabilities” is now available online.

The report provides a comprehensive inventory of emergency air monitoring assets and capabilities located in and around California’s fifteen major oil refineries. It serves as the basis for the ongoing assessment and guideline development phases of the project.

To view this report, please select the links below:

- Refinery Emergency Air Monitoring Assessment Report: Objective 1 Final Report (1.8 MB)
- Refinery Emergency Air Monitoring Assessment Report: Objective 1 Appendices (30.17 MB)

Torrance Refinery Incidents // Air Quality Impacts

- Fire at ExxonMobil Torrance (March 11th, 2015)
- Fire at ExxonMobil Torrance Extinguished (Reuters)
- Firefighters Douse Another Fire at ExxonMobil Torrance (Daily Breeze)
- ExxonMobil Torrance Air Impacts Assessment (February 18th, 2015)

The unit that reportedly failed is the electrostatic precipitator that
Information or Questions

ARB/Office of Emergency Response

Greg Vlasek
Greg.Vlasek@arb.ca.gov