

Sampling Plans and Coordinated Monitoring

CARPA Data Subcommittee

CARPA EBAM training, June 28, 2011



Monitoring Considerations

Start with defining objectives:

- ✓ How long will you monitor?
- ✓ What concentrations are you looking for?
- ✓ What areas are representative of the worst-case scenario?
- ✓ Will you base any actions/follow-up on the data?
- ✓ Do you have to meet state or local regulations?
- ✓ Are your instruments sensitive enough?
- ✓ Do you have a communication plan in place?



Sampling Plans

- Operational Period
- Sit Summary
- PPE
- Contact info
- Responding Agencies

Operational Period		California Environmental Protection Agency Air Resources Board Office of Emergency Response	Prepared by: C. Pearson
12/7/10 0600	12/10/10 1800		Approved by: G. Vlasek
Date/Time	to Date/Time		

Air Emergency Response Sampling Plan

State Responsibility Area
 Federal Responsibility Area

Incident: San Diego County Explosives Stockpile

Counties/District Affected: San Diego County

CalEMA Mission Task No. 2010-SOU-6059 Description Chemical Fire

ICP/EOC Location(s): ICP at Escondido Fire Station 3 (1808 Nutmeg Street, Escondido)

Situation Summary CalEMA FEMA Other

* On November 18, a massive stockpile of highly explosive materials was discovered at a residential structure located at 1954 Via Scott, in an unincorporated area of San Diego County, near Escondido. On Tuesday, November 30, San Diego County submitted a Proclamation of Local Emergency for the incident and subsequently requested Governor Schwarzenegger to proclaim a State of Emergency. On Wednesday, the Governor proclaimed a State of Emergency for the County. * A Multi Agency Coordination Group conference call took place.

Suggested PPE Site specific health & safety plan attached

Because staff will be working downwind of the incident, it's possible that there may be brief, moderate exposures to air toxics and particles. Staff are required to have with them at all times an air purifying respirator with dual VOC/HEPA filters. Field work also requires steel-toed boots, long pants, and high visibility vests. We anticipate a

Field Staff Deployed			
Name	Contact Info	Agency	Assignment
Greg Vlasek	(916)838-0872	CARB	OER Chief
Mark Copple	(530)306-0226	CARB	Field Surveillance Unit
Charles Pearson	(916)206-3899	CARB	Field Surveillance Unit
Shelley DuTeaux	(916)206-1771	CARB	Field Surveillance Unit
Neil Adler	(916) 837-3410	CARB	Field Surveillance Unit

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Responding Agencies		
Representative	Agency	Contact Information
Robert Kard	San Diego Co APCD	(858)692-4299 Robert.Kard@sdcounty.ca.gov/
Nick Vent; HazMat Group Ldr	San Diego Co Env Health	nick.vent@sdcounty.ca.gov/(619) 778-9500
Bill Brick	San Diego Co APCD	Bill.Brick@sdcounty.ca.gov/(858) 583-9893
Mahmood Hossain	San Diego Co APCD	Mahmood.Hossain@sdcounty.ca.gov/(858)692-9978
Brad Long	San Diego Co Env Health	Brad.Long@sdcounty.ca.gov/(619) 778-4917

Sampling Plans

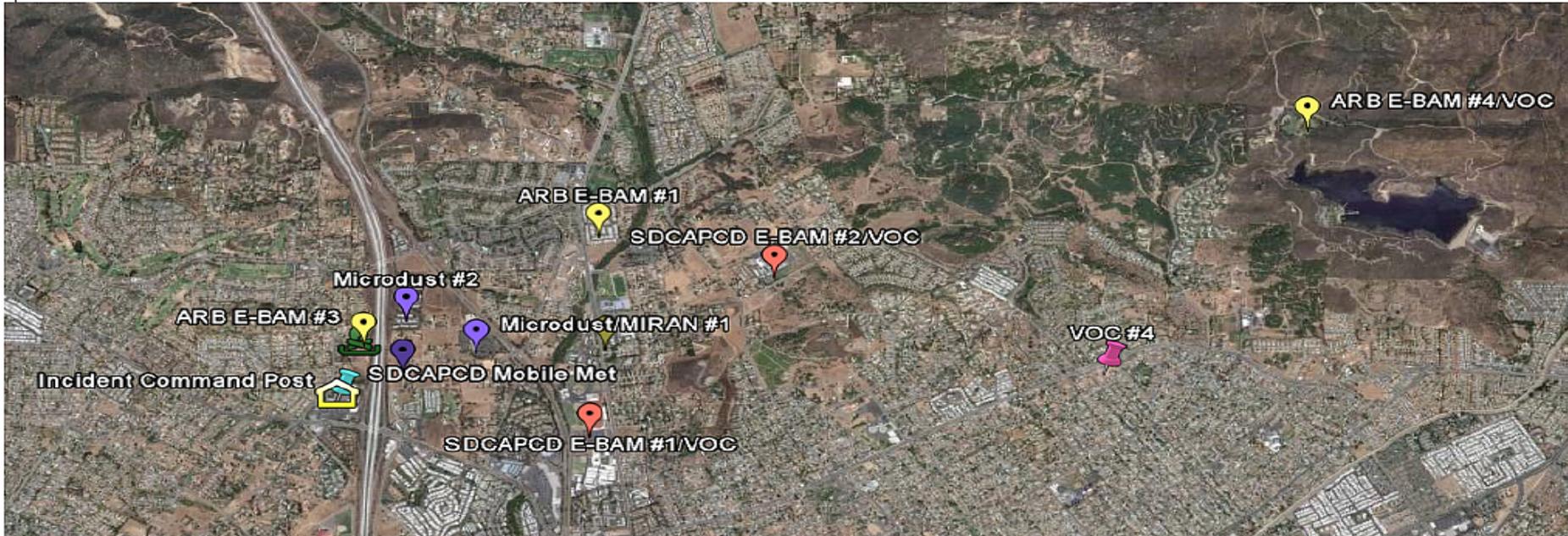
- Impacted Areas
- Health Actions
- Sampling Objectives
- Sampling Equipment

Area of Impact and any Specific Targets of Concern: Schools downwind of incident, multi-family dwellings downwind of incident, locations far downwind where terrain meets plume spread, including Dixon Lake, and any locations where there are supported reports of plume laydown or smolder.	
Contaminant(s) and Health Action Levels: Pentaerythrite tetranitrate (PETN): TEEL-1 = 0.05 mg/m3; Sulfur Trioxide: AEGL-1 (4 hr) = 0.20 ppm Nitric Acid (fuming): ERPG-1 = 1 ppm; note odor threshold ~ 1ppm Hydrogen peroxide (>35% aq sol): ERPG-1 = 10 ppm; Sulfuric acid (conc): ERPG-1 = 2.0 mg/m3 (0.5 ppm) Hydrogen chloride, Hydrochloric acid: 8 hr AEGL-1 = 1.8 ppm; Benzene AEGL-1 8 hr = 9 ppm Hexamethylene tetramine (HMTD): TEEL-1 = 30.0 mg/m3 (5.23 ppm); Vinyl chloride AEGL-1 8 hr = 70 ppm	
Weather forecast (12-24 hrs): From SDC APCD; Weather condition favor burn on Thursday Dec 9, 2010	
General Sampling Objectives	
<input checked="" type="checkbox"/> Gather reference sampling data within area of concern to for historical/background pollutant levels <input checked="" type="checkbox"/> Establish real-time sampling within affected population center to determine contamination levels <input checked="" type="checkbox"/> Establish monitoring in evacuation area for pending re-entry <input checked="" type="checkbox"/> Establish air sampling to determine contaminant gradients or boundaries <input type="checkbox"/> Conduct personal air sampling of on-site ERT personnel <input checked="" type="checkbox"/> Site-specific sampling for targeted location (i.e., evacuation center, hospital, fire camp, etc) <input type="checkbox"/> Complaint investigation; Location: _____ <input checked="" type="checkbox"/> Other objective: Summa Canister analysis to support real time measurements.	
Deployed Field Sampling Equipment	
Reference (network sites): Particulate Matter <input type="checkbox"/> BAM 10 <input checked="" type="checkbox"/> BAM 2.5 <input checked="" type="checkbox"/> Gravimetric Filter: <input checked="" type="checkbox"/> PM10 <input checked="" type="checkbox"/> PM2.5 Meteorology <input checked="" type="checkbox"/> station met Toxics <input type="checkbox"/> VOC canisters (910) <input type="checkbox"/> Metals filters (924)	Portable (day-week): Particulate Matter <input checked="" type="checkbox"/> EBAM 2.5 <input type="checkbox"/> EBAM 10 Meteorology <input checked="" type="checkbox"/> WEATHERPAK <input type="checkbox"/> iMet Toxics <input type="checkbox"/> VOC canisters (910) <input type="checkbox"/> Metals filters (BGI) <input type="checkbox"/> Asbestos (HighVol/MiniVol)
Mobile (hour-day): Particulate Matter <input checked="" type="checkbox"/> MicroDust Toxics <input type="checkbox"/> areaRAE (PID) <input type="checkbox"/> Canister (critical orifice)	Survey/Confirmation (min-hour): Toxics <input checked="" type="checkbox"/> Miran (field IR) <input type="checkbox"/> ppBRAE (PID) <input checked="" type="checkbox"/> Colorimetric tubes <input type="checkbox"/> Sorbent tubes <input checked="" type="checkbox"/> Canister (grab sample) <input type="checkbox"/> areaRAE (PID)

Sampling Plan Map

Sketch/Compose map of site and any areas of concern.

(Indicate major landmarks and sampling)



Legend:

Google Map Link=
[http://maps.google.com/maps/ms?
f=q&source=s_q&hl=en&geocode=&ie=UTF8&msa=0&msid=1
04284236844156191006.00049673dc5d3f7488527&ll=33.0310
76,-117.079658&spn=0.522707,1.234589&t=h&z=10](http://maps.google.com/maps/ms?f=q&source=s_q&hl=en&geocode=&ie=UTF8&msa=0&msid=104284236844156191006.00049673dc5d3f7488527&ll=33.031076,-117.079658&spn=0.522707,1.234589&t=h&z=10)

Notes:



Google Map Available Online

[Click Here](#)

Large responses often have multiple agencies responding.



Monitor placement during Escondido Response

-  SDCAPCD E-BAM #1/Summa #89030
Escondido Union High School District
-  SDCAPCD E-BAM #2/Summa #6000
Rincon Middle School
-  ARB E-BAM #1
North Broadway Elementary School
-  ARB E-BAM #2/Summa #80422/MIRAN #2
Calvin Christian School
-  ARB E-BAM #3
Terrace Park
-  ARB E-BAM #4/Summa #89049
Dixon Lake
-  Microdust/MIRAN #1
Jehovah Witness Kingdom Hall
-  Microdust #2
MSA Safesite Loc #14
-  Microdust #3
MSA Safesite Loc #15 (Greenview & Greenview)
-  Weatherpak 2504
-  Weatherpak 2506
-  SDCAPCD Mobile Met/SD Summa #?
-  MSA Location #3
-  MSA Location #4
-  MSA Location #5
-  MSA Location #6
-  MSA Location #7
-  MSA Location #8
-  MSA Location #9
- MSA Location #10
- MSA Location #11

