

Town Hall Meeting

Air Quality Issues in Mecca



**SOUTH COAST
AIR QUALITY MANAGEMENT DISTRICT (AQMD)**

Presentation Overview

- AQMD's Recent Investigation into Odors Affecting the Community of Mecca
 - Background
 - Odor Complaint Investigations
 - Compliance Inspections
- Ambient Air Monitoring
 - Types of Air Monitoring / Sampling
 - Results of Monitoring Activities

Background

Odor Events Affecting Mecca

- On December 15, 2010, AQMD received a complaint from the Saul Martinez Elementary School reporting odors from an unknown source causing students and staff to become ill.
 - Riverside Co. Environmental Health, HazMat Branch, and Cal Fire, Hazardous materials Team, initiated the complaint investigation and were followed up by AQMD.
- Additional incidents causing significant odor complaints reported to AQMD occurred on January 26 and April 15, 2011.
 - Western Environmental, Inc. was identified by AQMD as the source of the odors both times.

Summary of Odor Complaints in Mecca Received by the AQMD

Month	Saul Martinez Elementary School	Mecca Elementary School	Community and Residents	Total Complaints Received
December 2010	1	None	None	1
January 2011	24	8	16	48
February 2011	7	5	20	32
March 2011	14	2	70	86
April 2011	28	0	7	35
Total Complaints	74	15	113	202

Map of Complaints

AQMD Complaint Investigation Procedures

- AQMD conducted field investigations, site inspections and odor surveillances on 62 different occasions since December 15, 2010.
- Whenever possible, contact the complainant in advance to gather additional complaint-related information.
- Upon arrival in the vicinity of the complaint and alleged source, perform surveillance of the immediate surrounding area to verify the alleged source.
 - Prior complaint / compliance history of possible sources in the area.
 - Wind speed and direction.
- If available, meet with the complainant to obtain further information and verify emission.
- Upon arrival at the apparent source, observe / inspect facility operations.
- Document all findings.

Odor Complaint Investigations

- AQMD staff have detected odors at various locations including Saul Martinez and Mecca Elementary School campuses, the surrounding community, and at nearby businesses/operations.
- On twenty five (25) separate days, AQMD staff have confirmed operations at Western Environmental, Inc. and / or Waste Reductions as the source of the odors.
- AQMD also participated in interagency investigations to identify the source(s) of the odors with U.S. EPA and Riverside Co. Environmental Health, HazMat Branch

Facilities / Operations Inspected

- Facilities Located on Tribal Lands:
 - Western Environmental, Inc. / Waste Reduction Technologies
 - Green Gas
 - Colmac Energy, Inc.
- Facilities Located on non-Tribal Lands:
 - Forty (40) industrial related facilities identified in the cities of Mecca and Thermal
 - Notices of Violation issued to three facilities for non-compliance with AQMD Rules and Regulations
 - Gasoline Storage and Dispensing / Emission Limits for Boilers and Large Heaters
 - Two (2) landfill operations
 - Mecca 2 & Oasis Landfills - Riverside Co. Waste Management
 - Coachella Valley Water District (Waste Reclamation Plant no. 4)
 - Various agricultural fields / water containment reservoirs
 - Saul Martinez and Mecca Elementary Schools

Efforts to Identify and Minimize Odor Sources

- Western Environmental, Inc.
 - Oil/water separation pond (natural gas/rotten egg / sulfur / petroleum odor/burnt motor oil odors)
 - Oil/water separation pond now permanently filled in and replaced with on-site storage tanks.
- Waste Reduction Technologies
 - Co-composting operation (human waste/sewage odor)
 - Open-air mixing of soy whey products/bio-solids from sewage treatment facilities / agricultural waste. Facility has temporarily suspended accepting of soy-whey products.
- Other odor sources may still exist depending on the types of operation or materials received / handled.

Western Environmental, Inc. Oil/Water Separation Pond





AQMD Air Monitoring Activities

AQMD Air Monitoring Activities

Three types of air monitoring and sampling were conducted:

- **LONG-TERM MONITORING**

- Samples collected over 24-hours over multiple days or weeks to assess long-term (chronic) toxic risk

- **GRAB SAMPLES**

- Instantaneous samples collected in the community during odor events to assess short-term (Acute) toxic risk

- **SOURCE SAMPLES**

- Samples taken very near the suspected source of odors to determine a “fingerprint” of emissions. Communities are not exposed to the levels measured in this manner due to dispersion of pollutants as they move away from the source.

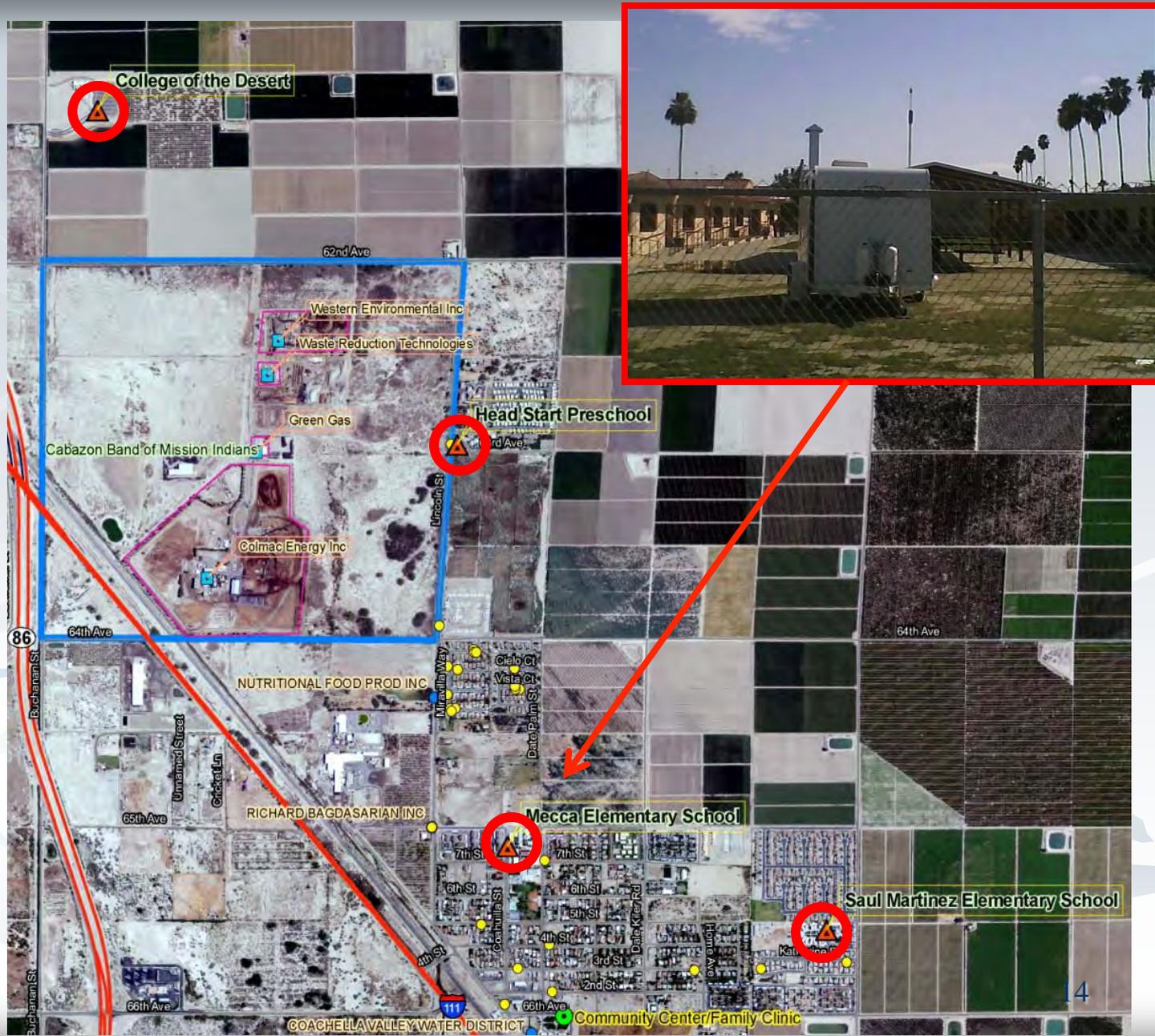
LONG-TERM MONITORING

Four sampling locations plus Indio

~2 weeks of daily sampling

Over 60 samples collected and analyzed

All air toxic gases were below or within typical urban ranges



Grab Samples

- Better suited to capture toxic pollutants during odor events
- Odors are often not detectable – the human nose is more sensitive than the technology
- Seven different grab samples collected during odor events at Saul Martinez Elementary School from January – March 2011
 - All levels of sulfur compounds were below the lowest amount detectable by the instrument (3 ppb) and thus below the CA standard of 30 ppb for hydrogen sulfide
- Another grab sample at Gene Wilmas Drive and 62nd St. on Feb 25, 2011
 - No toxic pollutants detected, slightly higher levels of non-toxic gases such as octane and nonane

Source Samples

- Provides a “fingerprint” of potential emissions at the source
- Levels detected are much higher than what would be experienced downwind in the community after dispersion
- January 11, 2011, Benzene detected next to oil/water pond at Western Environmental at levels higher than typical urban air (2.8 ppb)
 - Level is well below all short-term exposure limits
 - Levels in community would be much lower after dispersion
 - Some non-toxic compound also elevated (i.e. hexene, 10 ppb)
 - Sulfur compounds not detected



Source Samples (cont.)

- February 9, 2011, soy whey pond material at Western Environmental collected in a jar. Air in the jar was analyzed
 - Odorous sulfur compounds, dimethyl disulfide and dimethyl trisulfide
 - Neither are considered to be toxic
- February 25, 2011, samples taken next to oil/water and soy whey ponds at Western Environmental
 - Detected levels of toxics such as xylenes, toluene, ethyl benzene, and carbon disulfide
 - All below short-term health limits
 - Levels in community expected to be much lower after dispersion

Other Air Monitoring Activities

- Deposition plates
 - Plates deployed to look for particle fall-out from the air.
 - Examined under a microscope
 - Mold and spore levels were typical
 - Observed very small wood or plant fibers, more abundant near tribal lands
 - Possibly from wood waste processing
- Additional particle sampling is currently underway to measure levels of specific air toxic elements in the particles
- Airborne PCB monitoring is planned in the near future

Recent Activities Related to Western Environmental, Inc.

- California Environmental Protection Agency, Department of Toxic Substances Control, recent findings and actions:
 - Determination that Western Environmental, Inc. does not possess a valid state permit to accept California-only hazardous waste.
 - Notification to State of California generators to stop shipping gasoline-contaminated soils and other hazardous materials to Western Environmental, Inc.

Continued AQMD Efforts

- Sources on Tribal Lands:
 - AQMD will continue to work cooperatively with U.S. EPA and the Cabazon Band of Mission Indians to seek a long-term solution to minimize odors and emissions
- Sources on non-Tribal Lands:
 - AQMD will continue to monitor activities of sources that are not on tribal lands to assure continued compliance with AQMD Rules and Regulations
 - AQMD will continue to respond to air quality complaints, work with other agencies to provide technical support and collect and analyze samples when appropriate

Where do I call to report an Air Quality Complaint?

Report all Air Quality Complaints Toll Free to

1.800.CUT.SMOG

(1.800.288.7664)

For Spanish Speaking Complainants, Report all
Air Quality Complaints Toll Free to

1.800.876.3666