

COMMUNICATING DATA FOR LOCALIZED AND COMMUNITY AIR MONITORING



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South Coast AQMD

NACAA Monitoring Steering
Committee Meeting

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LOCALIZED AND COMMUNITY AIR MONITORING

- Within scope of neighborhood or facility
- Focused objective for specific source(s) or concerns
- May be ongoing (facility) or a specific incident (fire, oil spill, train wreck)
- May include non-regulatory methods, including air quality sensors or research grade sophisticated equipment



**CONSIDERATIONS
IN COMMUNICATING
THE DATA**

Public better understands “AQI”

Multiple pollutants and measurement methods create complexity

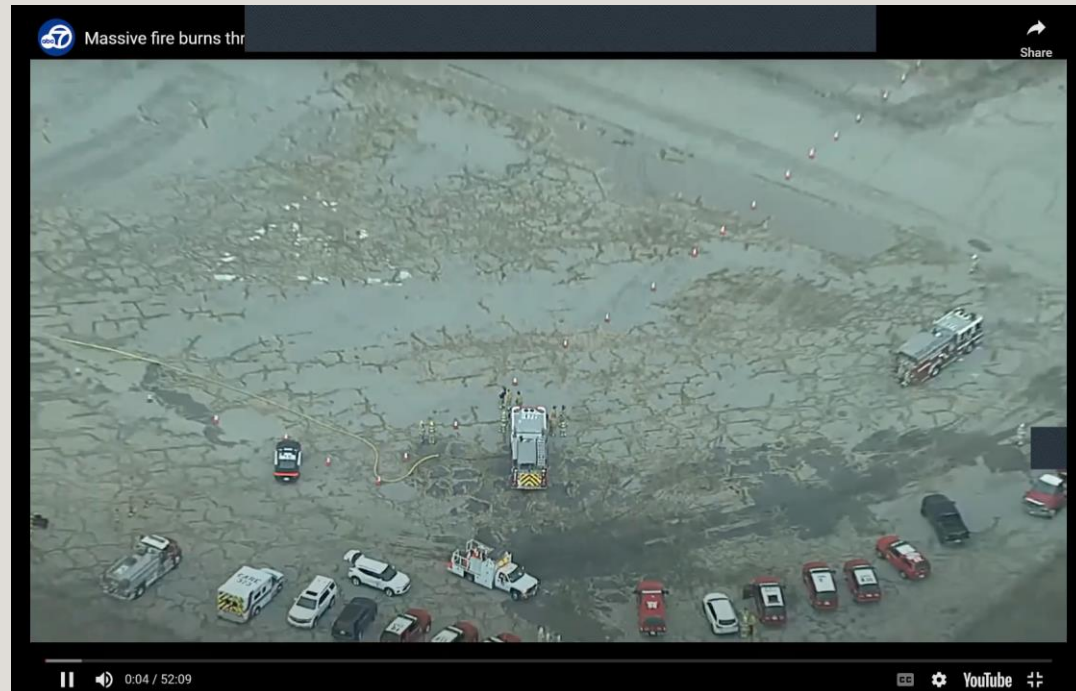
- Survey
- Health Thresholds
- Compliance

Perceptions of health effects are broad

Concerns are immediate

TUSTIN HANGAR FIRE INCIDENT (NOVEMBER 2023)

- Old Navy Hangar on City Property
- Ongoing Fire
- Adjacent to communities
- Air Quality Concerns
 - PM
 - Metals
 - VOCs
 - Asbestos



INITIAL RESPONSE



MULTI-METALS MOBILE PLATFORM

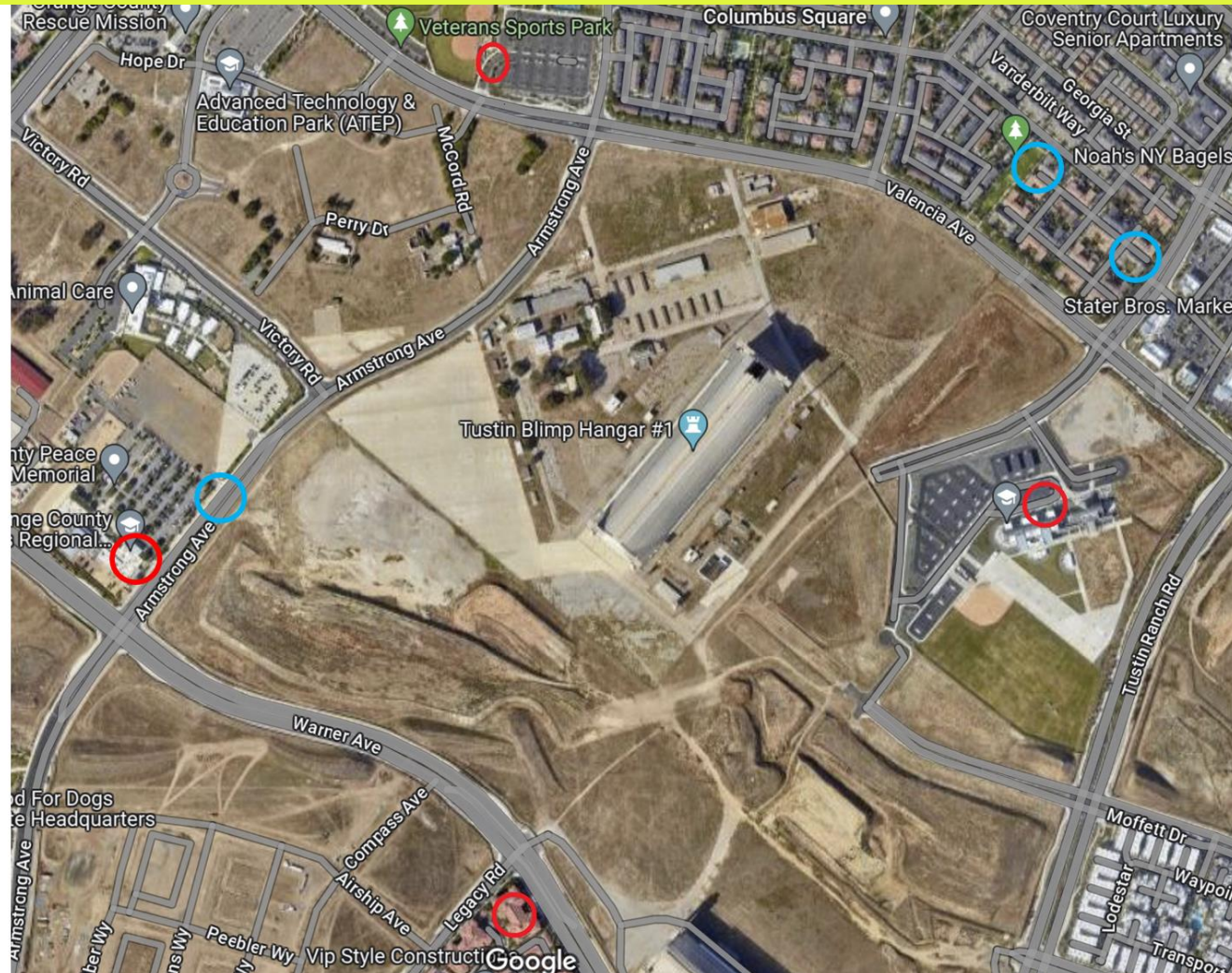
| Instrument | Pollutant measured | Time resolution | Manufacturer |
|---|---|-----------------|---|
| Xact 625i | Particulate metals | 5 min | Cooper Environmental LLC |
| GRIMM 11-D | PM ₁ , PM _{2.5} , PM ₁₀ , TSP, Number Size Distribution (0.25-35 μm) | 6 s | GRIMM Aerosol GmbH, Muldestausee, Germany |
| MAGIC Condensation Particle Counter (CPC) | Particle Number (PN) | 1 s | Aerosol Dynamics Inc., CA, USA |
| Photoacoustic Extinctionmeter (PAX) | Black Carbon (BC) | 1 s | Droplet Measurement Technologies, CO, USA |
| T500U | NO ₂ | 3 s | Teledyne API, CA, USA |
| Li-830 | CO ₂ | 1 s | LI-COR Biosciences, USA |
| Airmar 200WX | Wind Speed and Wind Direction | 1 s | Airmar Technology Corporation, NH, USA |



INITIAL SAMPLING LOCATIONS

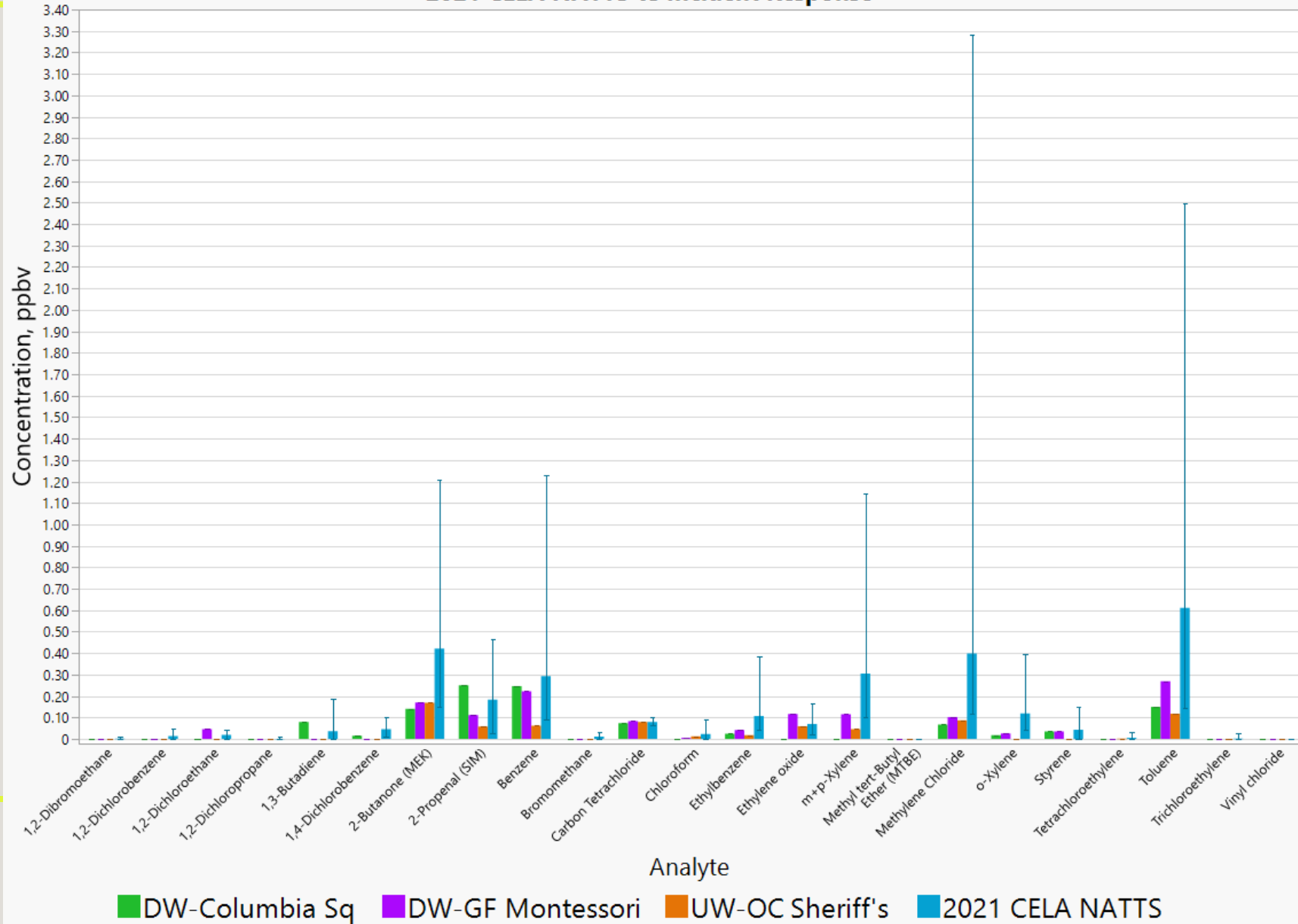
Deposition
Glass Plate ○

Grab Sample
(Canister) ○



CANISTER GRAB SAMPLES RESULTS

2021 CELA NATTS vs Incident Response



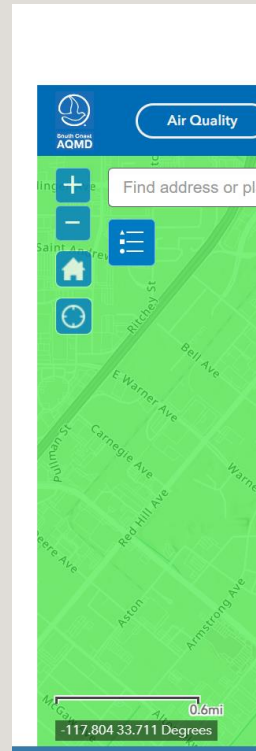
ASBESTOS

- Active Air Sampling
- Debris Analysis



AQI AND LOCALIZED AIR DATA

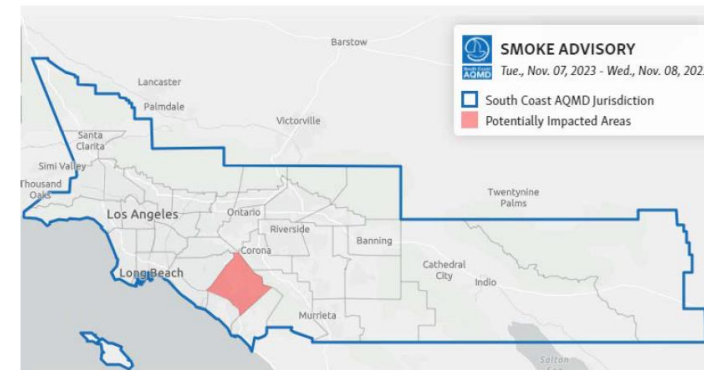
- Smoke Advisory
- Public would check on mobile apps for air quality updates
- Concerns of air quality because “good air quality” was always displayed



FOR IMMEDIATE RELEASE: November 7, 2023
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South Coast AQMD Issues a Smoke Advisory for a Hangar Fire at the Former Tustin Air Base

Valid: Tuesday 10:00 a.m. until Wednesday 11:59 p.m.



To view current air quality in your neighborhood, download the [South Coast AQMD app](#) or visit www.aqmd.gov/AQImap.

Forecasted Smoke and Air Quality Impacts

- A large hangar located in Tustin continues to burn slowly.



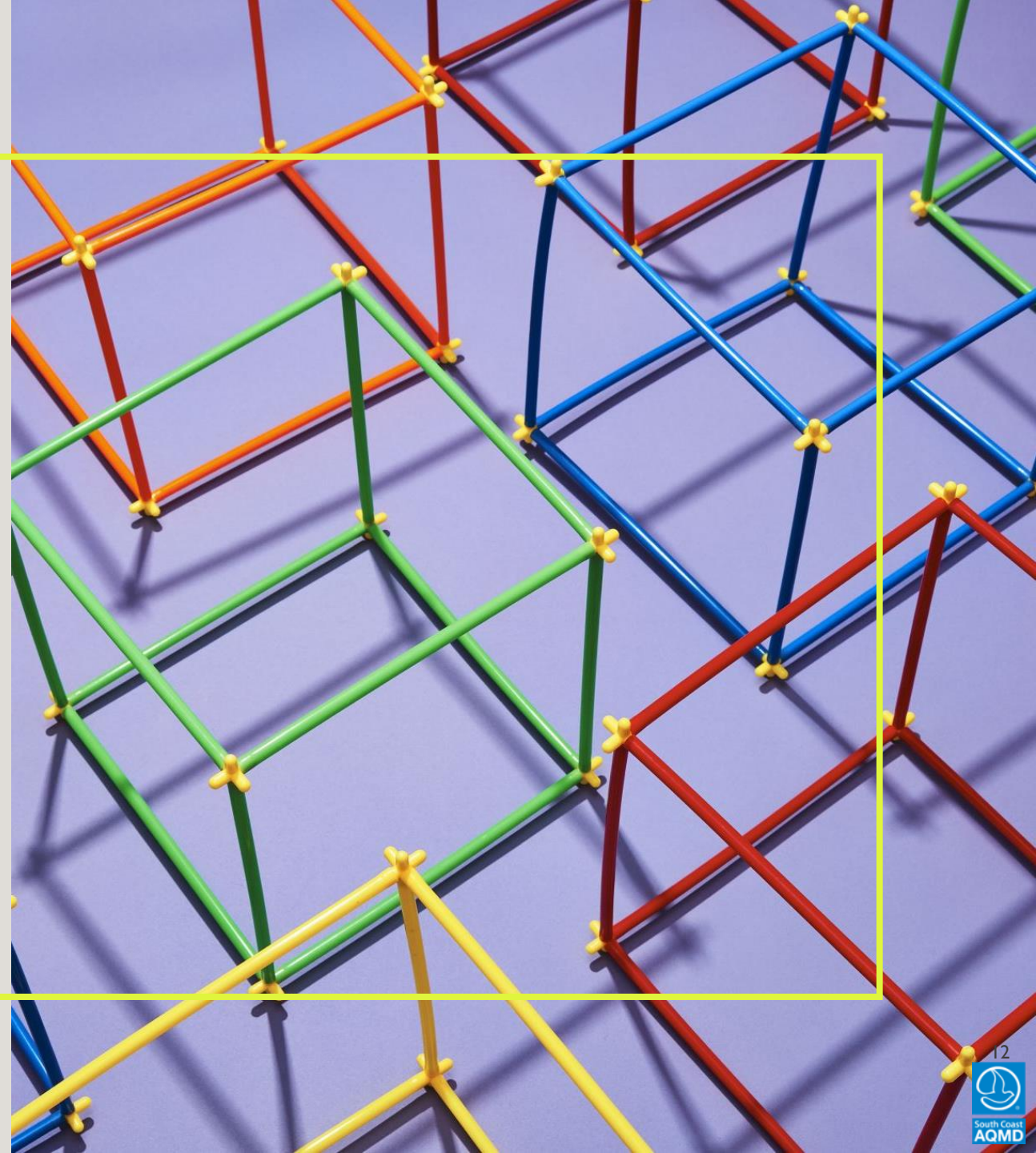
ADDITIONAL EFFORTS

- U.S. EPA Region 9 and U.S. Navy
 - Continuous PM
 - Continuous VOC
 - Fixed Site Metals
 - Fixed Site Asbestos
- Public Health



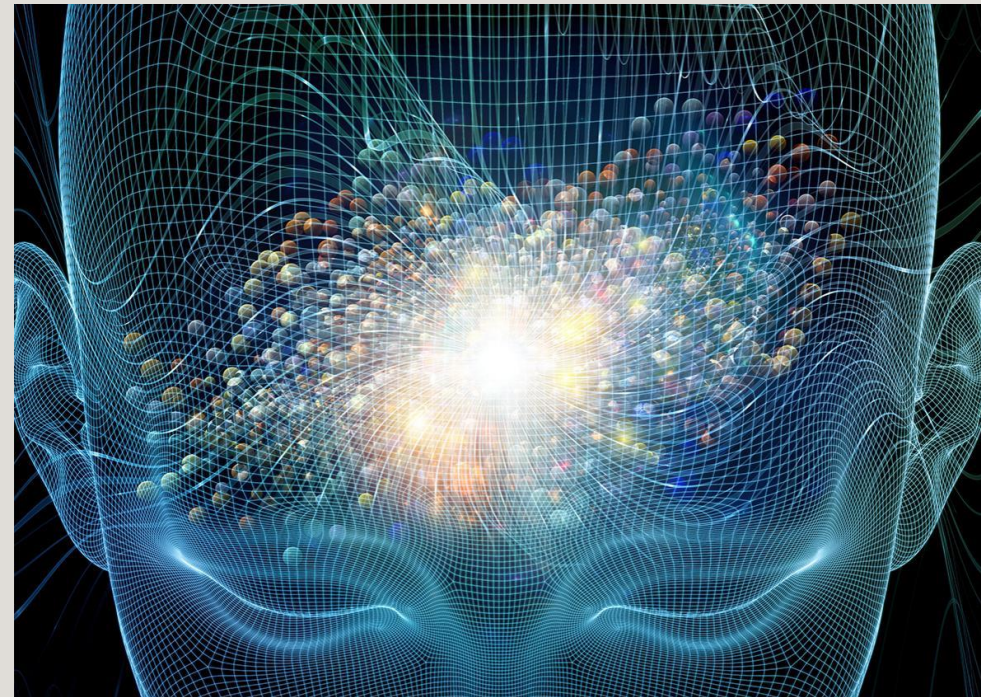
COMPLEXITY

- Multiple Organizations
- Varied Purposes
- Different Instruments and Data Formats
- Action Level Determination



PERCEPTION AND RISK

- Community Observations
 - Visual – Smoke (PM)
 - Smells – Odors (H₂S, VOCs)
- Measurements and Health Thresholds
 - Science is changing (e.g. Ethylene Oxide)
 - Federal and local thresholds may differ
- Health Messaging



COMMUNICATION WITH COMMUNITY

The screenshot shows the Tustin website's 'AIR QUALITY UPDATES' page. The page features a navigation menu with categories like 'GOVERNMENT', 'DEPARTMENTS', 'RESIDENTS', 'BUSINESS', 'VISITORS', and 'HOW DO I...'. The main content area is titled 'AIR QUALITY UPDATES' and includes sections for 'Air Quality Updates', 'What is Being Measured in the Air?', and 'What is Particulate Matter?'. A table lists various pollutants collected and analyzed in a laboratory.

| | | | |
|----------|------------|----------|-----------|
| Antimony | Arsenic | Barium | Beryllium |
| Cadmium | Chromium | Cobalt | Copper |
| Lead | Molybdenum | Nickel | Selenium |
| Silver | Thallium | Vanadium | Zinc |

Expert Panel Information

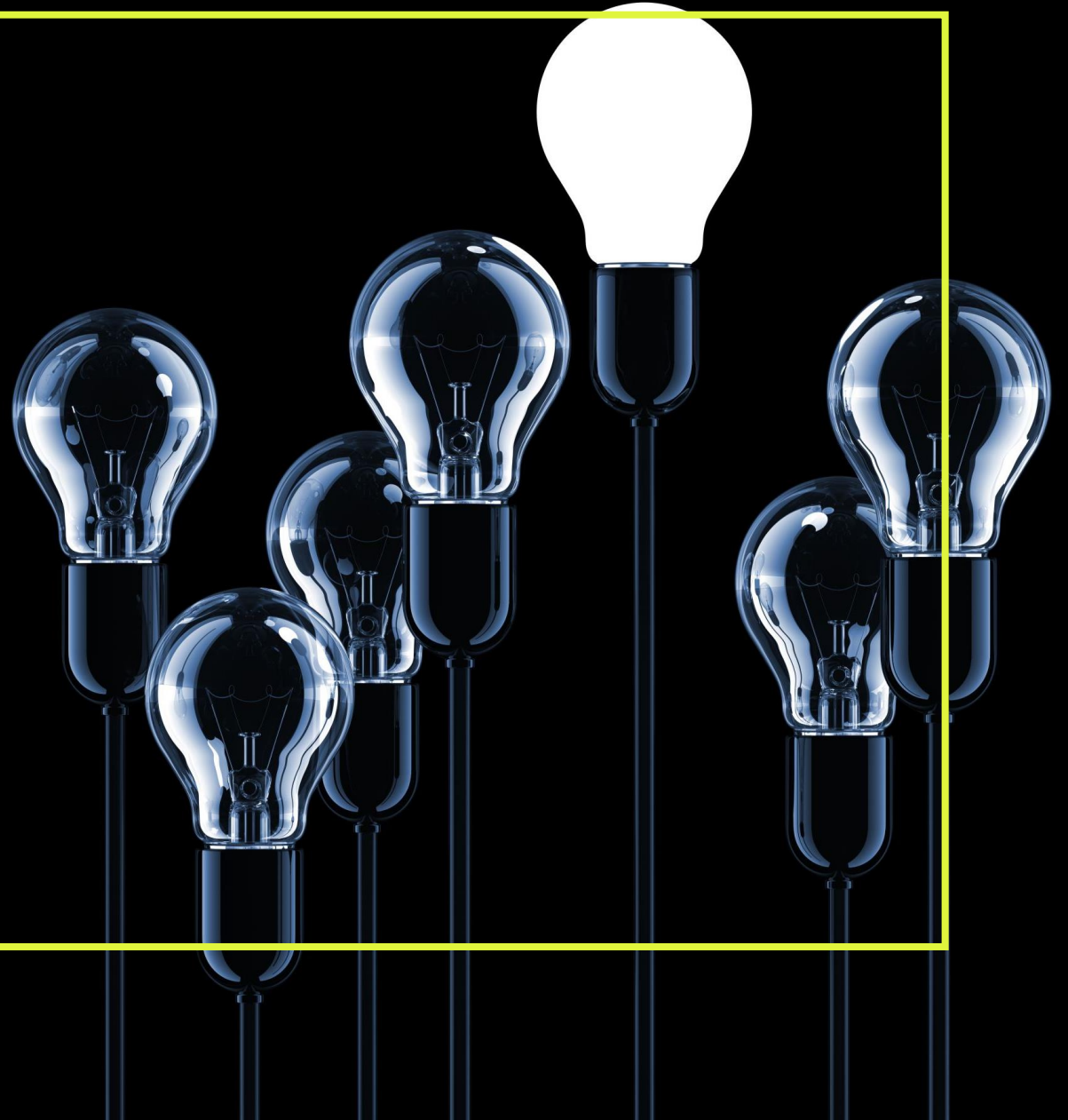
Hangar Fire Incident

December 21, 2023



CONCLUDING REMARKS

- Effective localized and community air monitoring requires good communication to the community to be successful
- Measurement toolbox and multi-agency approaches are appropriate
 - Increases complexity of air monitoring information
 - Connecting to human health and public perspective



Thank you!

- **Contact Info**

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