

Study of Neighborhood Air near Petroleum Sources (SNAPS) Inglewood Oil Field Communities

Air Monitoring Kickoff Meeting
June 2023

Listening to Language Interpretation

1. In your meeting controls, click **Interpretation**. (located at bottom of screen)
2. Click the language that you would like to hear. Options for this meeting are English and Spanish.
3. To only hear the interpreted language, click **Mute Original Audio**.

Windows | macOS

1. In your meeting/webinar controls, click **Interpretation**.

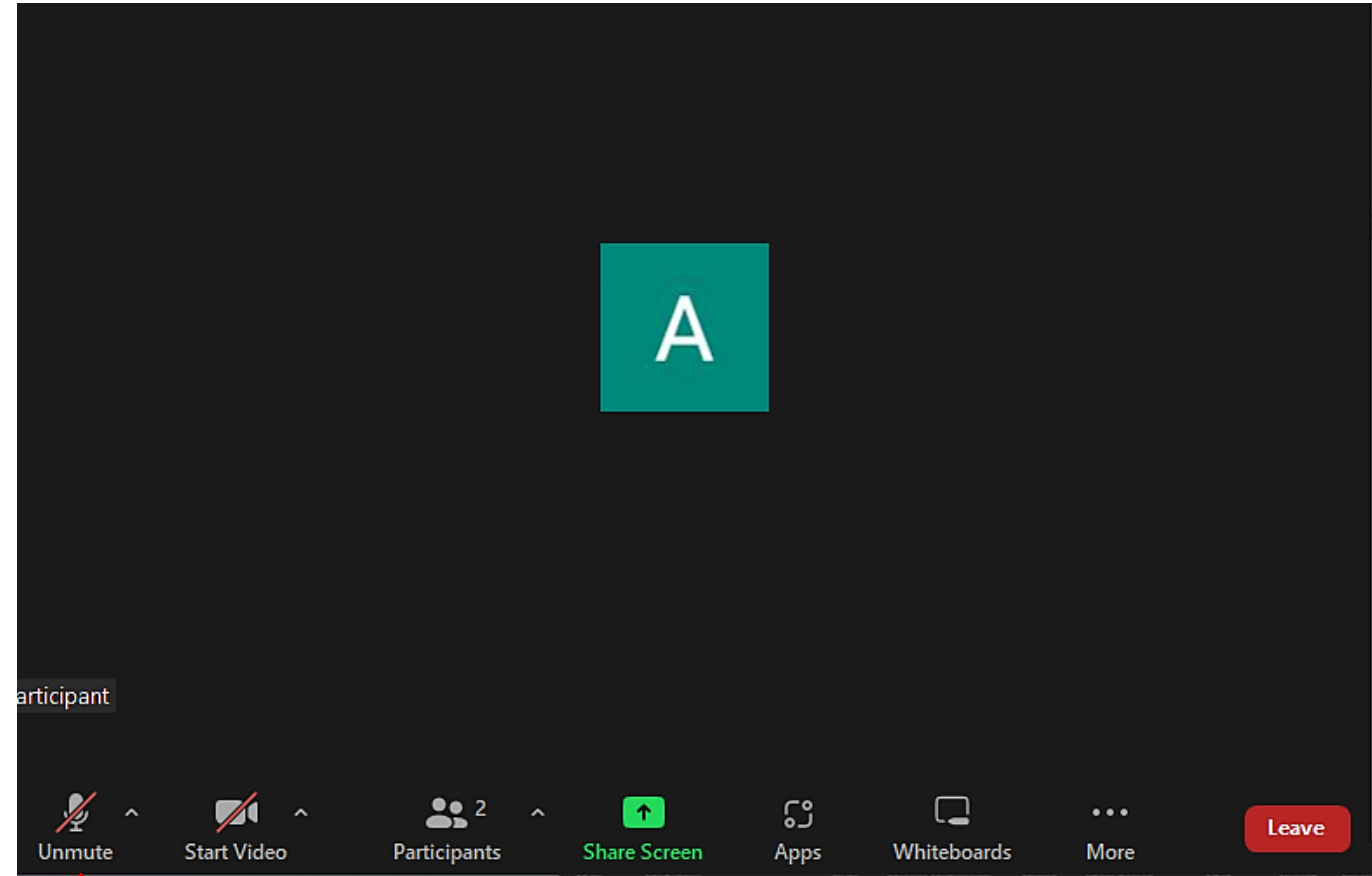
2. Click the language that you would like to hear.

3. (Optional) To hear the interpreted language only, click **Mute Original Audio**.

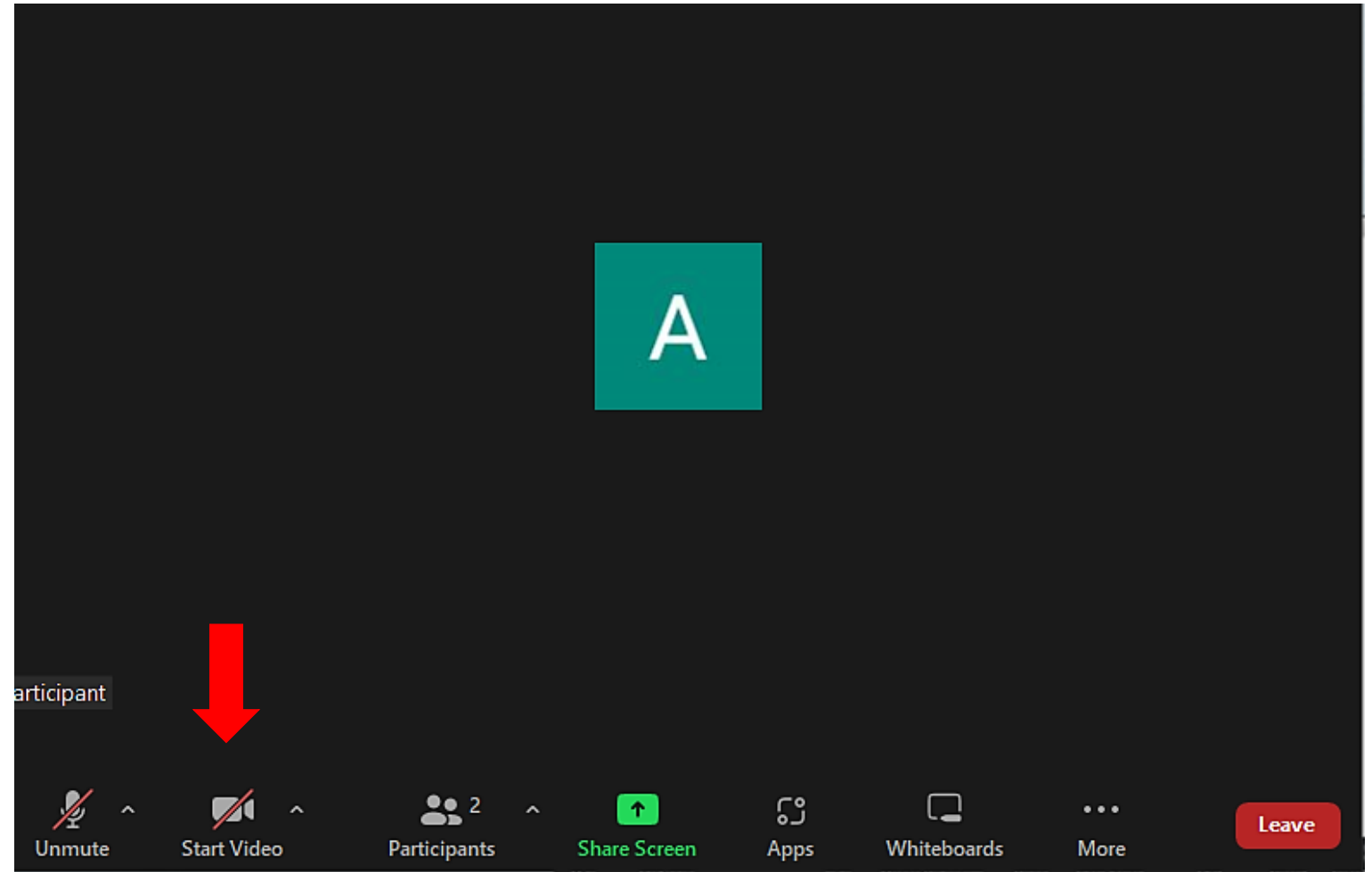
Mute/Unmute

Please remain on mute when you are not speaking.

Mute/Unmute button at the bottom left

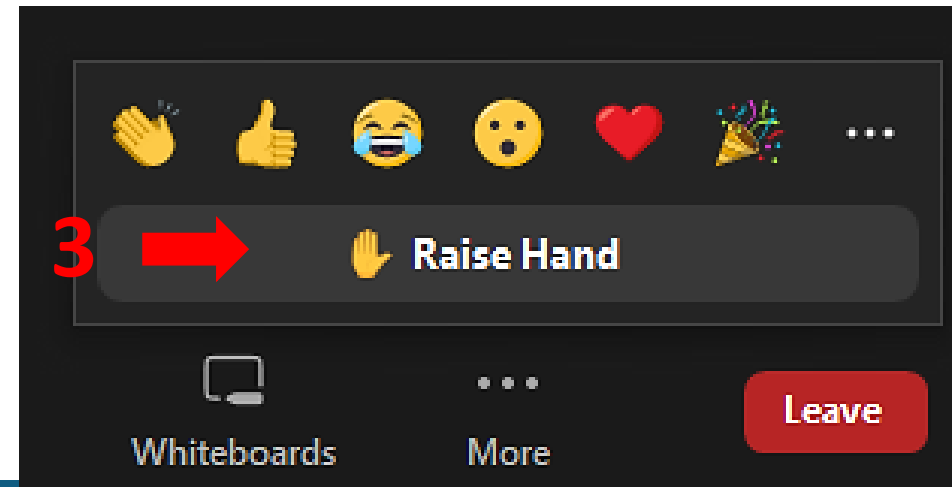
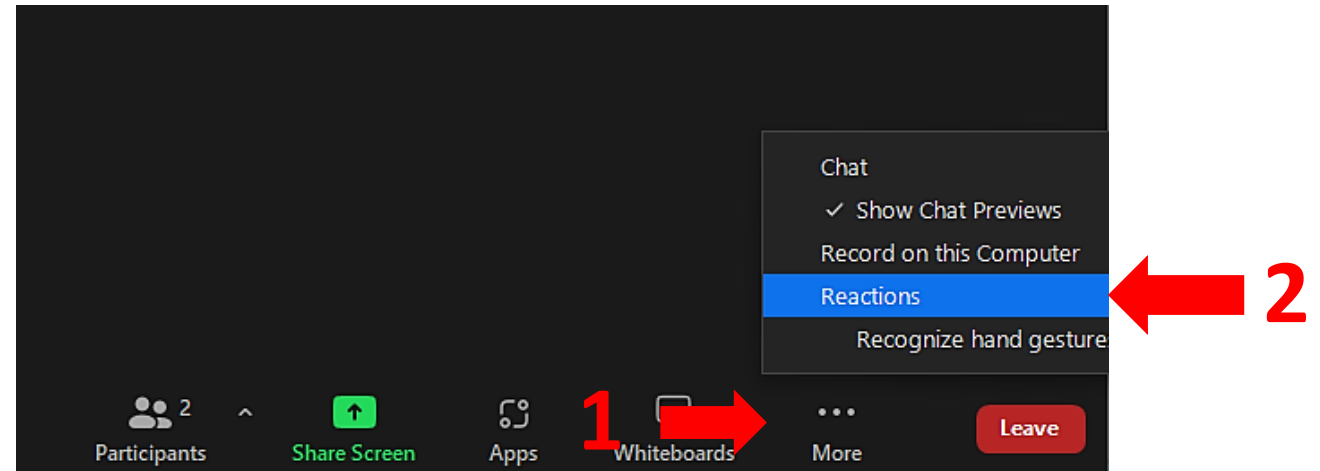


Click the camera icon at the bottom left of your screen to toggle your video on and off.



To be added to the speaking queue, please use **Raise Hand**

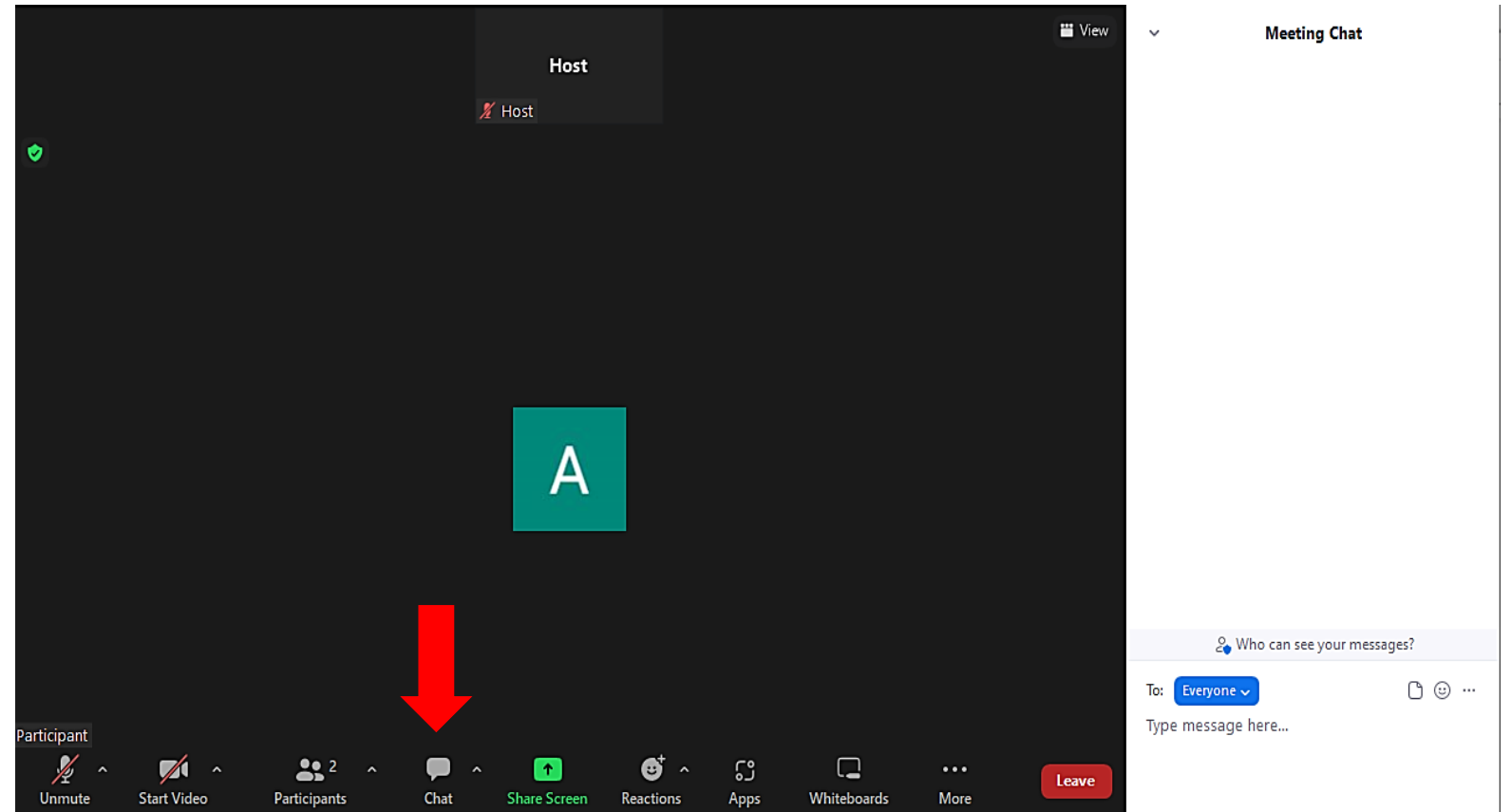
Click **Participants**, then **Raise Hand**.



Click on the **chat** icon near the center bottom of your screen.

Choose “private” chat to chat with the Host or Co-host

Private chats are archived.



Agenda

- ✓ **SNAPS Overview**
- ✓ **Stationary and Mobile Monitoring**
- ✓ **Communicating Results**
- ✓ **Timeline and Next Steps**



SNAPS Overview

- Characterize air quality in neighborhoods close to oil and gas extraction facilities
- Assess potential cumulative air quality impacts from all surrounding sources



Program Goals

Characterize air quality
in communities near oil and
gas operations

Identify emission sources as
feasible

Analyze data for
possible health risks

Major Pollutants

Toxic Air Contaminants (TACs)

Criteria Pollutants

Particulate Matter (PM_{2.5})
Carbon Monoxide (CO), Ozone (O₃)

Volatile Organic Compounds (VOCs)

Methane (CH₄)

Hydrogen Sulfide (H₂S)

Metals



Stationary and Mobile Monitoring

Stationary Monitoring: On-site and Discrete Measurements



On-site Measurements

- Fast response instrumentation (reported hourly)
- Continuous (measurements every second or minute)
- Compounds include those posted to our website in near real-time (CH_4 , H_2S , O_3 , CO , $\text{PM}_{2.5}$, BC); some VOCs and metals
- Meteorological data (wind speed, wind direction, temperature)

Discrete Measurements

- Requires lab analysis
- 24-hr samples taken every 6 to 12 days
- Compounds include aldehydes, polycyclic aromatic compounds (PAHs), and sulfur-containing compounds

Stationary Monitoring



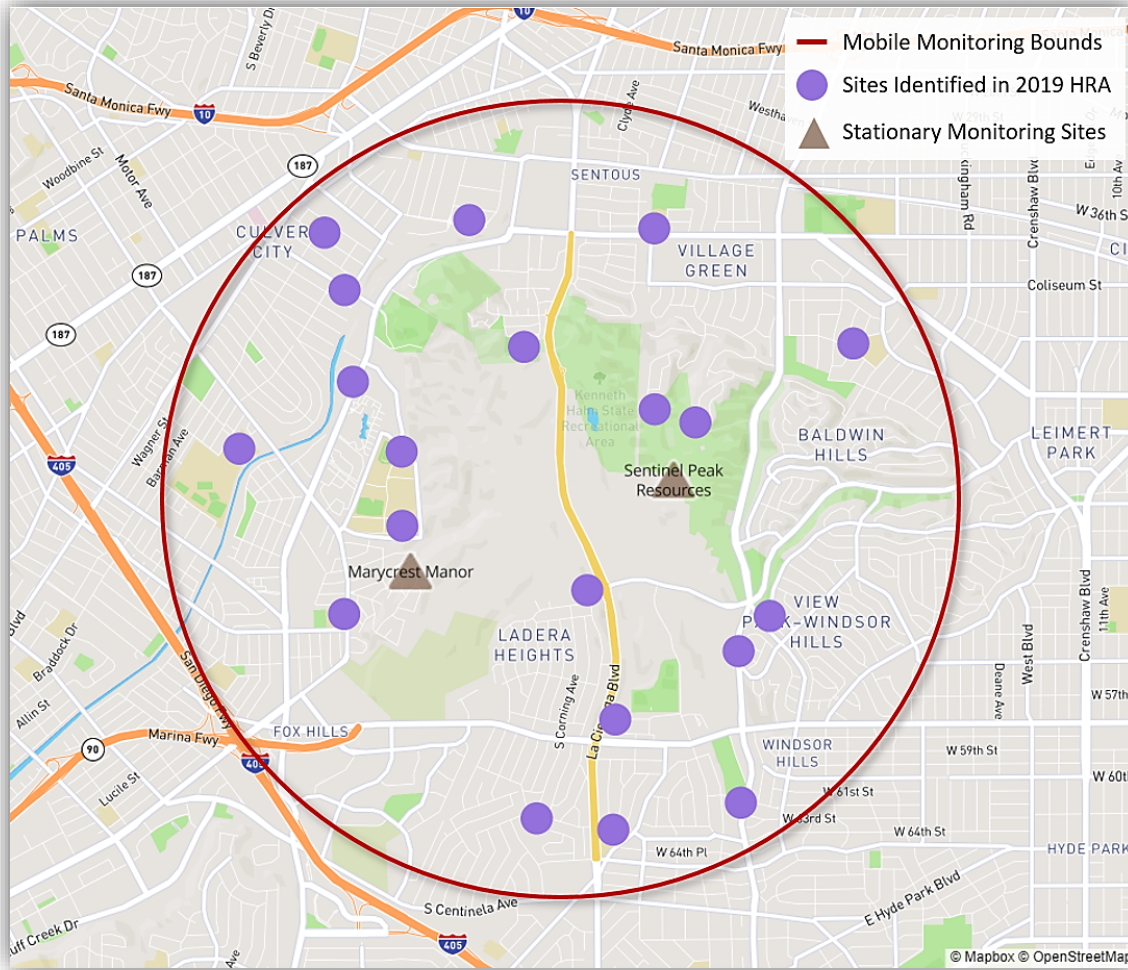
WSW Prevailing Wind Direction

- **Eastern edge of Oil Field (Site 1):** Sentinel Peak Resources Site (near Kenneth Hahn State Recreation Area)
- **West of Oil Field (Site 2):** Marycrest Manor right now – plan to move to West LA College late Summer/Fall 2023 (tentative)
- **Duration:** 12 months after start at backup site west of the Oil Field (>12 months total, data from Site 1 and Marycrest Manor starting June 2023)
- Equipment housed in climate-controlled trailers
 - On-site measurements
 - Discrete samples
 - Meteorological data

- Instruments housed within a vehicle
 - Measures methane, ethane, black carbon, ozone, and hydrogen sulfide continuously
 - BTX measurements every 15-30 minutes
- Monitoring along public roadways in communities around the Inglewood Oil Field
- Measurements are ‘snapshots’ in time
 - Multiple passes on streets
 - Includes upwind and downwind measurement periods



CARB SNAPS mobile monitoring platform
near Inglewood Oil Field – September 2022



- Frequency: 2 weeks per quarter, with about 6 hours per day and at least 3 days per week of monitoring
 - Various times of day (e.g., early morning)
 - Different days of the week
- Preliminary locations based on 2019 IOF Health Risk Assessment and recommendations from the community – monitoring also occurs between these locations as vehicle is moving

Community Sensor Deployment

- As recommended by the community, CARB will provide a limited number of low-cost sensors for deployment in neighborhoods near the IOF
 - Total VOC sensors
 - Sensors that monitor for BC, PM, CO, NO/NO2
 - Meteorological sensors
- Please email snaps@arb.ca.gov if you are interested in volunteering to host a sensor
- We will host a meeting and demonstration later this year with those that are participating



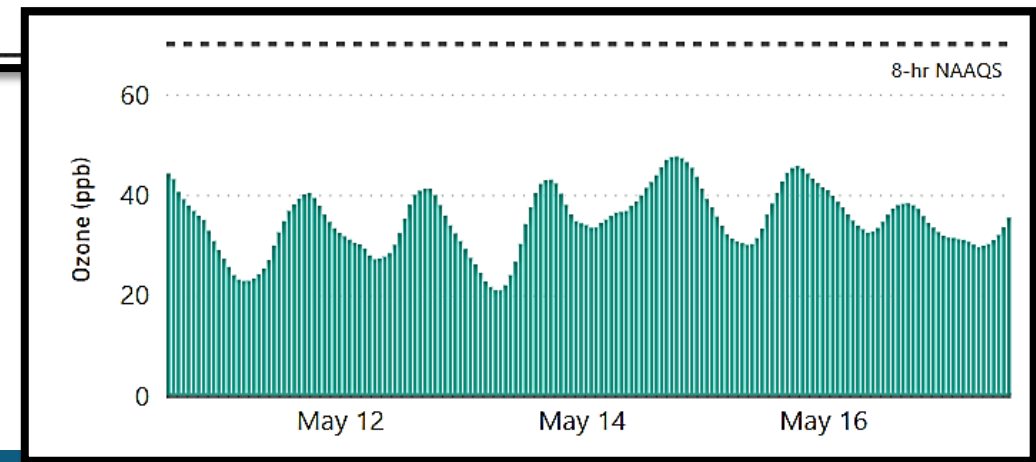
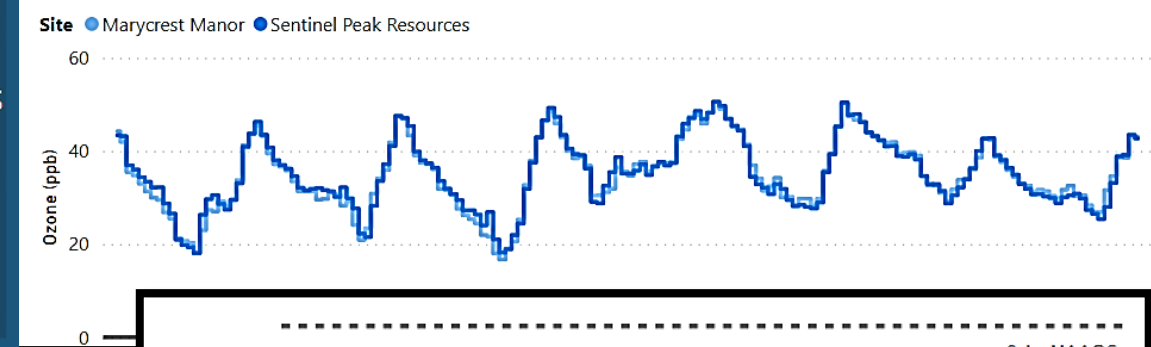
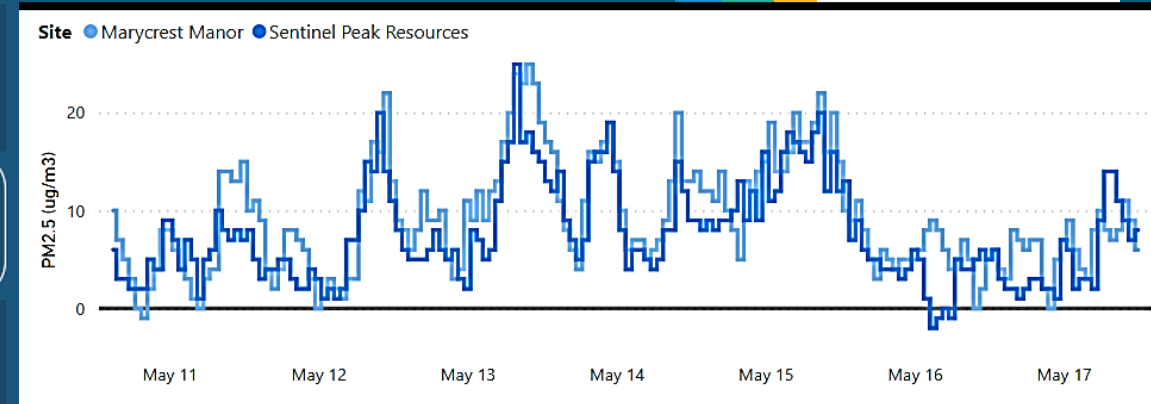


Communicating Results

Communication of Results

Measurement	Pollutants	Time to Public Posting of Data
On-site Instrumentation	CH ₄ , H ₂ S, O ₃ , CO, PM _{2.5} , black carbon (BC)	Hourly
Discrete Samples	Toxic air contaminants (TACs), non-TAC VOCs and metals	Updates to Community, As Available

- Site Map
- Health Data
- PM and O3 Timeseries
- CH4 and H2S Timeseries
- CO and BC Timeseries



- Concentrations of some on-site pollutants for both sites streamed hourly on project website
- Subsequent analysis detailing results for all pollutants released following monitoring completion

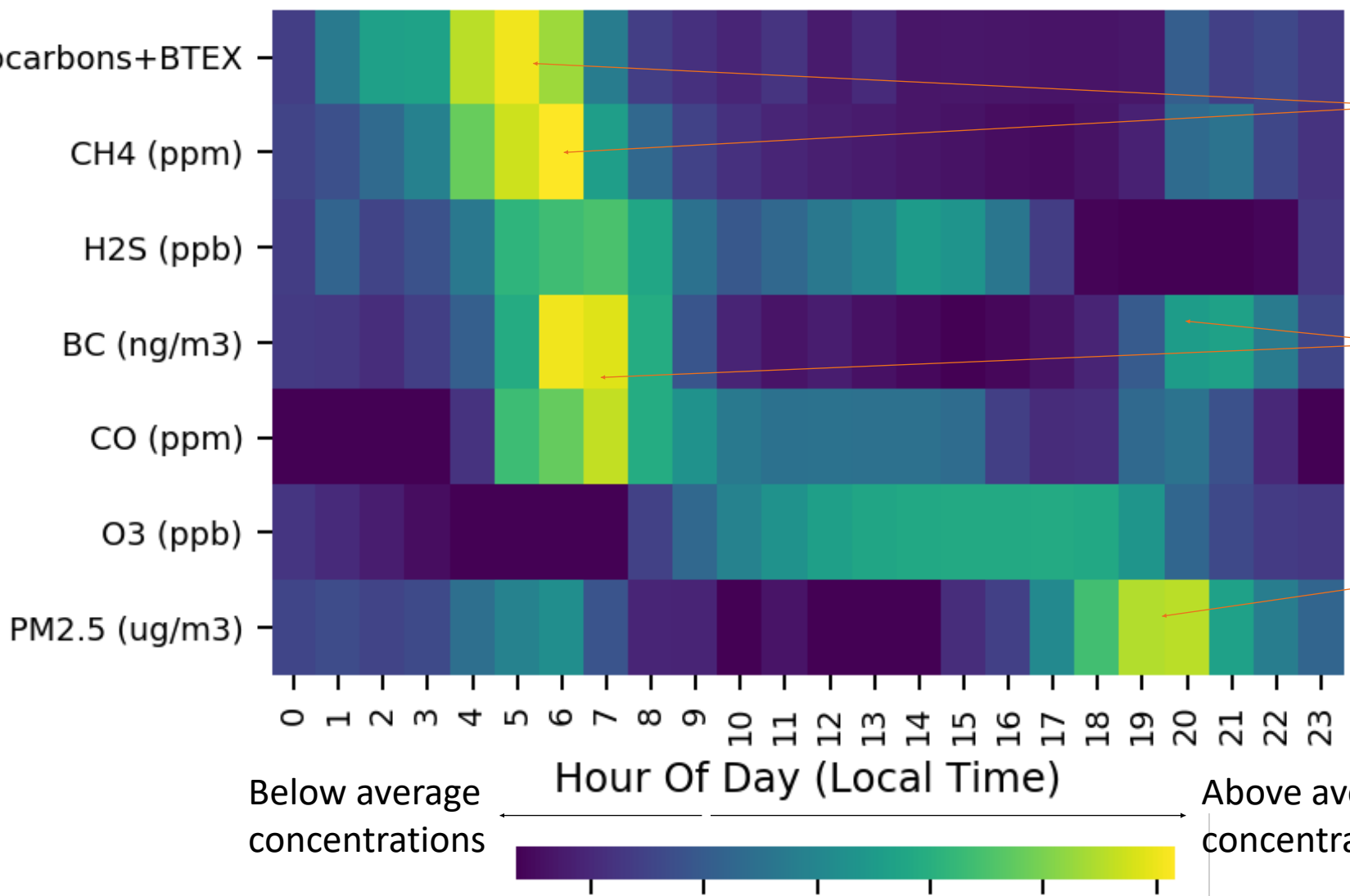
- Quarterly Updates
 - Posted to SNAPS website
 - Will include:
 - Progress updates
 - Preliminary data analysis, as feasible*
 - Comparisons to health-based thresholds and air quality standards
 - Statistics, e.g., average and maximum concentrations
- Mid-Monitoring Meeting
 - In-person or virtual meeting(s), likely in Fall/Winter 2023
 - Open discussion based on first several months of monitoring
 - Similar information as quarterly updates (e.g., preliminary data analysis)

Subsequent Data Analysis

- Air quality data analysis (CARB) will include:
 - Hourly, daily, monthly, seasonal trends in air pollutant concentrations
 - Statistics (e.g., average, maximum concentrations)
 - Case studies, as appropriate
 - Comparisons to regional data
 - Source apportionment - are pollutants likely originating from oil and gas-related sources? Mobile sources? Other?
- Health Risk Assessment (OEHHA) will:
 - Compare short- and longer-term exposure levels to health-based guidance values
 - Acute and chronic noncancer health guidance values
 - Cancer potencies
 - National and California Ambient Air Quality Standards



Example Data Analysis: Hourly Measurements (Lost Hills Mid-Monitoring Meeting)



Highest hydrocarbons, BTEX, and CH₄ in the early morning

Higher BC and CO in the morning and evening

PM_{2.5} typically highest during the evening (when most windy)

Data are preliminary. Final results will be published in the final report. 21

Odor and Air Quality Reporting

- Online tool and phone lines
 - Not for enforcement purposes – used by CARB staff to inform mobile monitoring timing/locations and aid in data analysis
 - Community members can quickly report odor complaints to CARB
 - Can include the following information:
 - Location
 - Time
 - Wind direction, if known
 - Type and strength of odor
 - For immediate action, please contact South Coast Air Management District at 800-288-7664 (1-800-CUT-SMOG)



<https://survey123.arcgis.com/share/964e9c7f4b744044ba89013a51e3721d?portalUrl=https://gis.carb.arb.ca.gov/portal>

Please categorize the odor*

Rotten Eggs ▼

Please rate the intensity of the odor*

Mild Strong Unbearable

Please enter the date and time when the odor began (this defaults to the current time)*



10-minute break



Timeline and Next Steps

Preliminary Timeline and Next Steps



Methane Task Force (CalEPA, CARB, CalGEM, CNRA)

- Formed by direction of Governor Newsom to identify and address methane leaks from oil and gas infrastructure, and to solicit input from communities, air districts, and local government entities
- Objectives include:
 - Share with the public progress on programs and efforts underway aimed at addressing leaks from oil and gas infrastructure
 - Elevate opportunities for deeper public and local agency engagement across these programs and efforts
- Currently working on joint inspections of oil and gas operations
- Quarterly meetings, next one scheduled for June 27, 2023

CARB's Oil and Gas Methane Regulation

- Adopted in 2017 to address methane emissions from oil and gas facilities
- Reduces fugitive and vented emissions from oil and gas sector
- Amendments to be proposed to CARB Board on June 22nd, 2023
- Amendments proposed to conform to EPA requirements, provide corrections and clarity, and incorporate requirements based on satellite data CARB expects to receive

Proposed Amendment: Required Response to Methane Satellite Data

- Proposed provisions would require operators to address leaks found via satellites
 - Operators must inspect facilities if notified of a leak by CARB
 - Leaks must be repaired within specified timeframes
 - Public comments on all proposed amendments accepted through June 12th
 - Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities
- <https://ww2.arb.ca.gov/applications/public-comments>

- Project webpage: <https://ww2.arb.ca.gov/our-work/programs/study-neighborhood-air-near-petroleum-sources>
- Visit project webpage to Subscribe and receive email updates
- General program questions: SNAPS@arb.ca.gov | (279) 208-7749
- Odor/air quality reporting in communities near the Inglewood Oil Field
Online Tool on SNAPS website or this QR code:



Call: (916) 323-8053 (English) | (916) 323-0180 (Spanish)

Questions?

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June 2023