



OEHHA
California Office of Environmental
Health Hazard Assessment



CALIFORNIA
AIR RESOURCES BOARD



California Department of
Pesticide Regulation



Methyl Bromide in West Long Beach

January 30, 2025

Purpose of Meeting

Discuss Background and Air Monitoring Data

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graph TD; A[Discuss Background and Air Monitoring Data] --> B[Discuss Health Risk]; B --> C[Share Interagency Work to Address Methyl Bromide Emissions]; C --> D[Answer Your Questions];
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Discuss Health Risk

Share Interagency Work to Address Methyl Bromide Emissions

Answer Your Questions

Key Takeaways

Community concerns prompted CARB Methyl Bromide monitoring

Air monitoring detected elevated concentrations in the community

Breathing low levels over time increases health risk
Residents nearby can take steps to reduce risk

Agencies investigated and taking a precautionary approach
Facilities voluntarily agreed to new risk reduction measures

Agencies will track and measure improvement
Real-time methyl bromide monitoring data available to the public

Speaker Introductions and Government Agencies and Roles

California Air Resources Board (CARB)

Identifies and regulates toxic air contaminants and sets reporting requirements for air pollutants, monitors air quality and addresses local air pollution in Community Air Protection Program

Department of Pesticide Regulation (DPR)

Regulates pesticide use to protect human health and the environment

Office of Environmental Health Hazard Assessment (OEHHA)

Serves as the lead state agency for the assessment of health risks posed by environmental contaminants

Speaker Introductions and Government Agencies and Roles

**South Coast Air Quality
Management District (South
Coast AQMD)**

Implements Air Toxics “Hot Spots” Program,
regulates sources of air contaminants, monitors
air quality

**Los Angeles County
Agricultural Commissioner
(LA CAC)**

Issues and enforces permits for use of MeBr in
commodity fumigation, conducts site inspections

**U.S. Environmental
Protection Agency**

Approves and registers pesticides, specifies use
restrictions and requirements, sets air pollutant
requirements



Discuss Background and Air Monitoring Data

What is Methyl Bromide (MeBr)?

- Colorless, odorless (unless in high concentrations) pesticide
- Banned internationally, but allowed for use as a fumigant of agricultural products for import/export (known as "commodity fumigation")
- It is a toxic air contaminant
- LA CAC issues Restricted Materials permits to facilities



Why is CARB Monitoring for Methyl Bromide Near the Port in West Long Beach?

Awareness

- Community expressed concerns to CARB about Methyl Bromide commodity fumigation near residential area

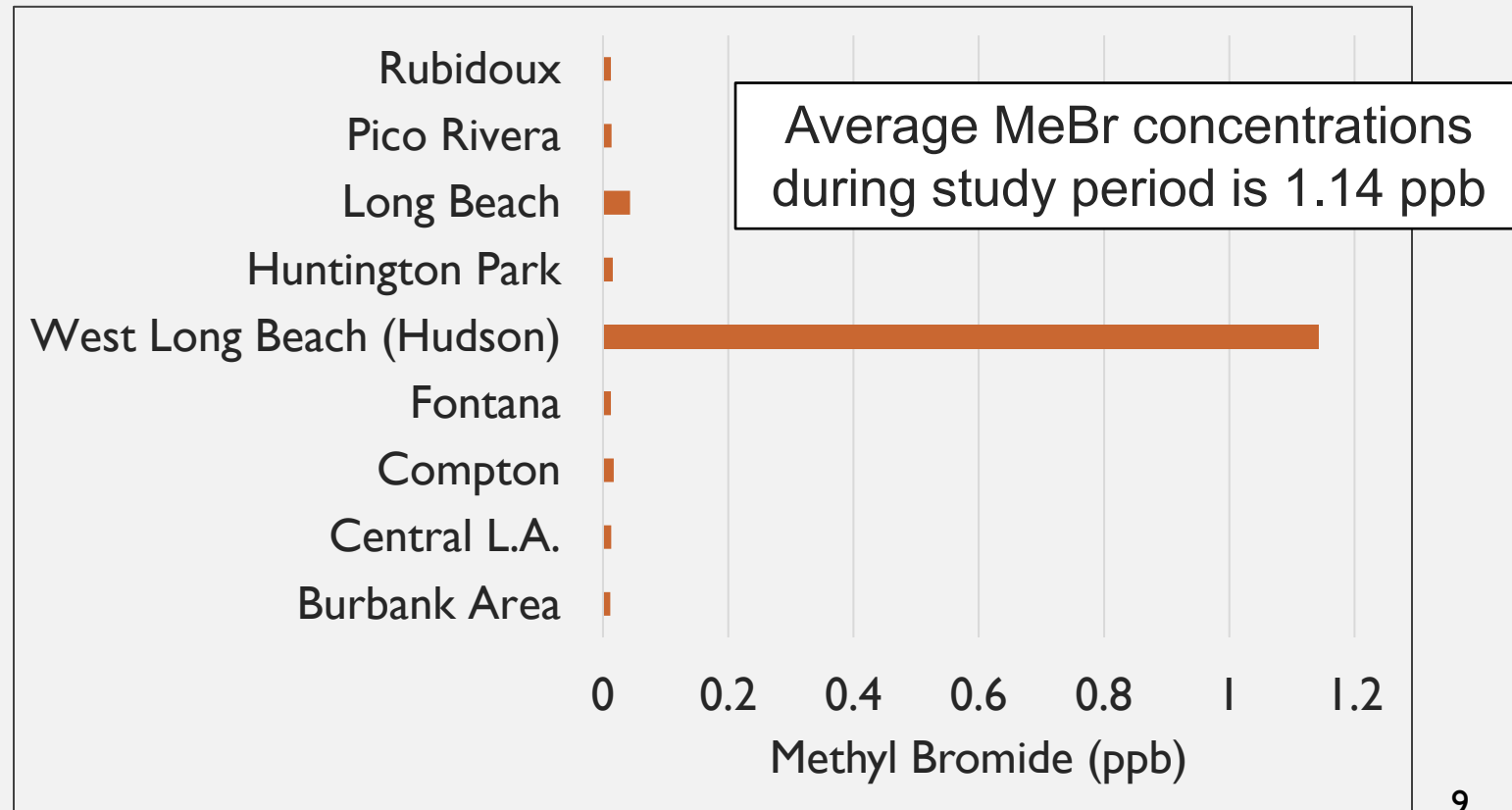
Information Gathering

- CARB reviewed information from previous monitoring efforts and local wind patterns to develop a monitoring strategy

Prior MeBr Monitoring In West Long Beach (Aug 2018 – Apr 2019)



- Multiple Air Toxics Exposure Study V (MATES V) conducted by South Coast AQMD
- Measured more than 100 air toxics across the South Coast air basin
- Monitored concentrations of MeBr in West Long Beach were greater than other sites



Sources of Methyl Bromide Emissions in West Long Beach

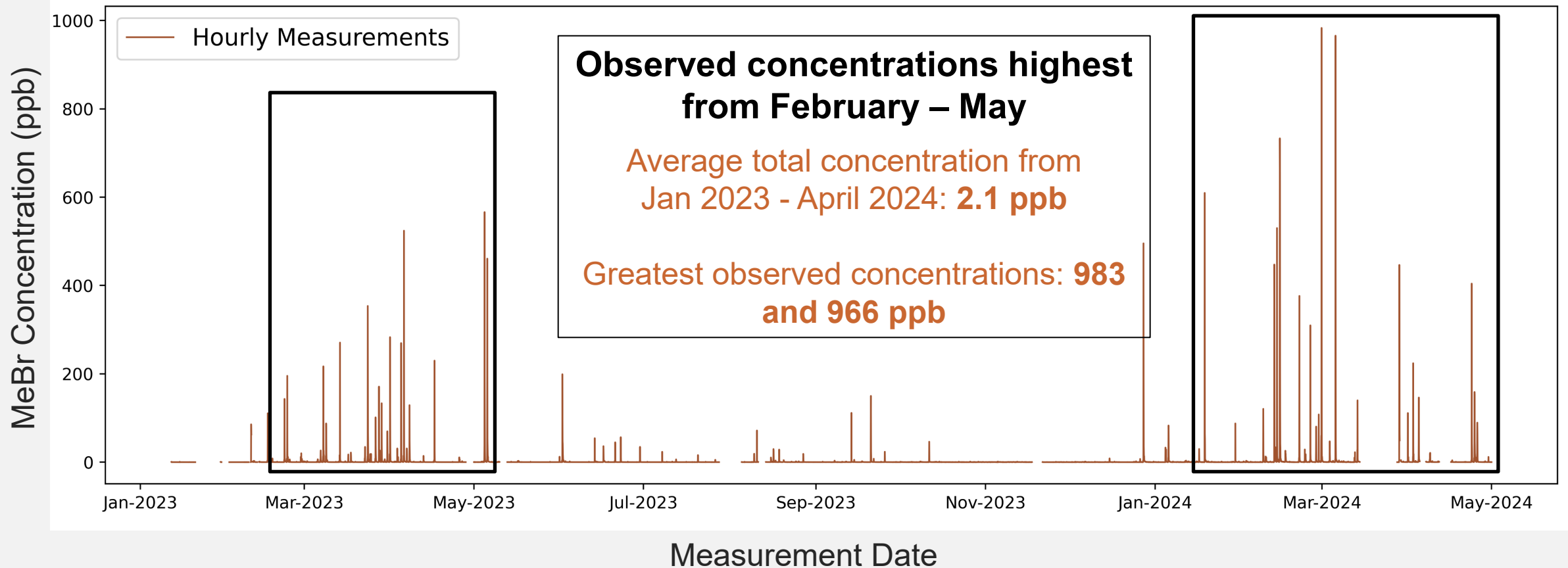
- Two commodity fumigation facilities in West Long Beach: Three Rivers Trucking (Ag-Fume) and San Pedro Forklift (SP Fume)
- Fumigation process treats agricultural and other natural resource commodity imports or exports to comply with domestic and international regulations
- Commodities are covered with tarps inside warehouse buildings

Current MeBr Monitoring in West Long Beach (Began in Jan 2023)

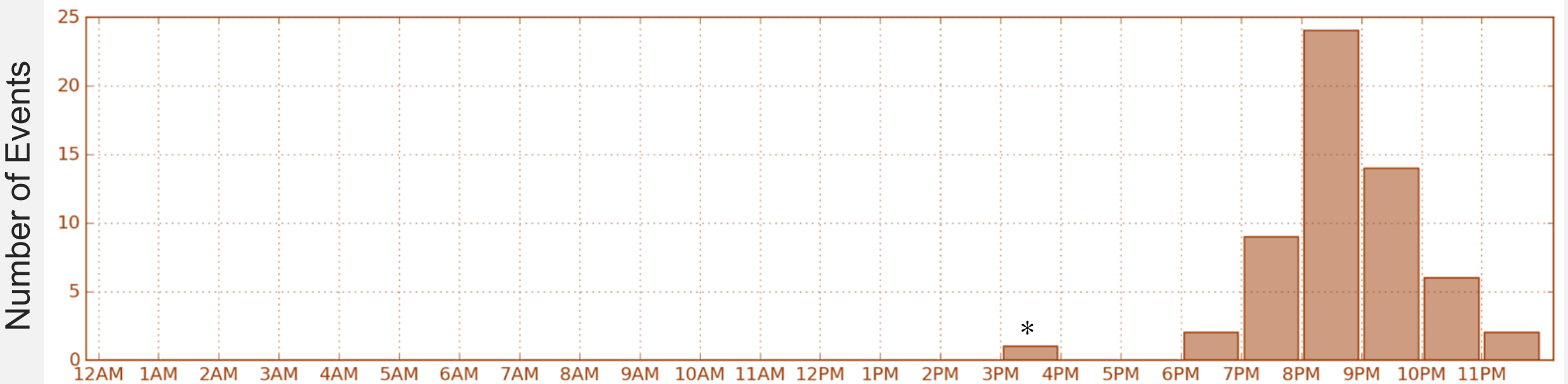
- CARB established a temporary air monitoring site
- Site is downwind of two known fumigation facilities
- Located in AB617 community
- Using new technology to take hourly measurements



MeBr Concentrations Observed Between Jan 2023- April 2024



When are Elevated Concentrations Happening?



Number of elevated hourly concentration (events above 100 ppb) by hour

- Almost all after 6 pm, no values above 100 ppb observed during school hours
- * This elevated concentration was on a Sunday

Where are there elevated concentrations?

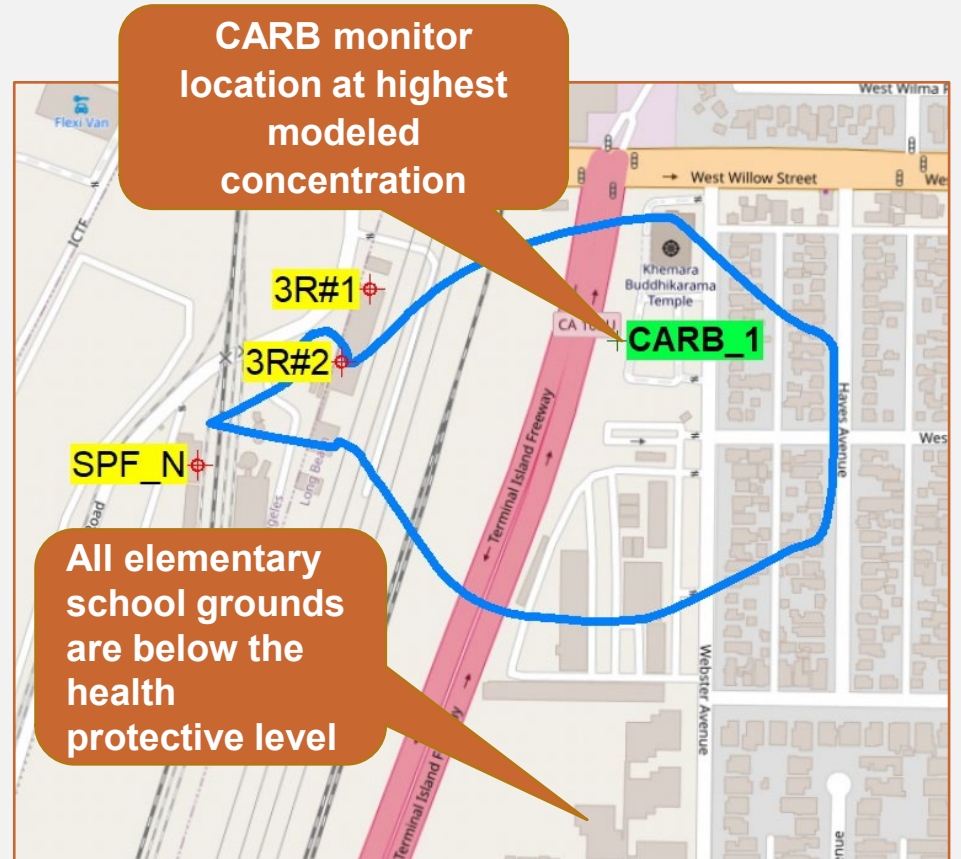
Links two nearby commodity fumigation facilities as likely sources.

Conservatively estimates MeBr air concentrations at distances from the source.

It shows that air concentration exponentially decreases as distance increases from the source.

Air concentration at Hudson Elementary school grounds are below the health protective level.

Modeling takes into consideration uncertainty in emission timing and meteorological data.



- DPR modeling simulated conditions in the Hudson Park area of West Long Beach for period of CARB's MeBr monitoring
- The model considers usage (time, amount, location), facility information, local weather data

Overview of DPR Modeling Work



Discuss Health Risk

What are Reference Exposure Level (RELs)?

- Reference Exposure Level (REL) is the concentration of a chemical in air that is not expected to cause adverse non-cancer health effects
- Set by California Office of Environmental Health Hazard Assessment (OEHHA)

Acute REL

A health-protective level for intermittent, 1-hr exposures





Chronic REL

A health-protective level for continuous exposures over a long period, such as up to a year or more



MeBr Potential Health Impacts

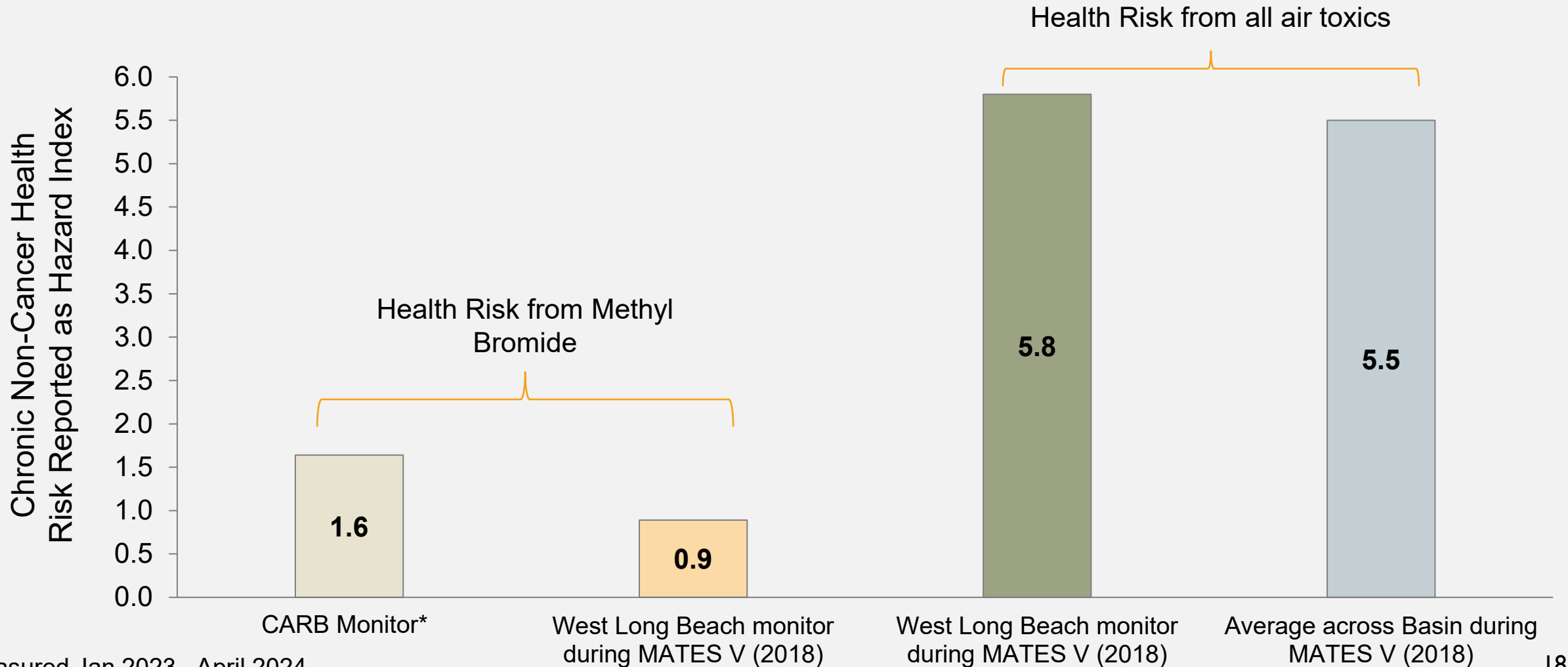
Time Period	Monitoring Results ^a	REL	Potential Health Impacts ^c
Average Annual (Chronic) 	2.1	1	Long-term exposure above chronic RELs may lead to lesions in the nasal cavity and other developmental and nervous system effects.
One-hour (Acute) 	983 (2/29/24) 966 (3/5/24) ^b	1,000	Short-term exposure above acute RELs can cause headaches, dizziness, nausea, and difficulty breathing.

a. All values are in parts per billion (ppb).

b. Two readings from Jan 2023 – Apr 2024 air monitoring approached OEHHA Acute REL.

c. There isn't enough scientific information to determine if MeBr is a carcinogen.

How do Monitored Levels Compare to South Coast Background Levels From All Air Toxics?



*measured Jan 2023 - April 2024

Steps You Can Take to Reduce Risk if you Live Nearby

- If you think you have been exposed to a pesticide or you are experiencing symptoms, please call your medical provider. For free, first aid advice, call Poison Control at 1-800-222-1222.
- If I live nearby, how can I reduce potential for pesticide exposure? Keep windows, doors closed in evening hours (especially February – end of April).



Interagency Work to Address
MeBr Emissions and Next Steps

Role of LA County Agricultural Commissioner (LA CAC)

- **LA CAC uses data and Dept. of Pesticide Regulation (DPR) guidelines to determine if permit may be issued.**
- Responsible for visiting sites at which Restricted Materials, (e.g., Methyl Bromide) is proposed to be used.
- Consults with companies and licensed individuals proposing to use the Restricted Material, collecting/reviewing data.
- **If a permit is issued:**
 - Notice of Intent (NOI) must be submitted to LA CAC prior to each application of the Restricted Material.
 - CAC will conduct site inspections to ensure the permit conditions are being followed.



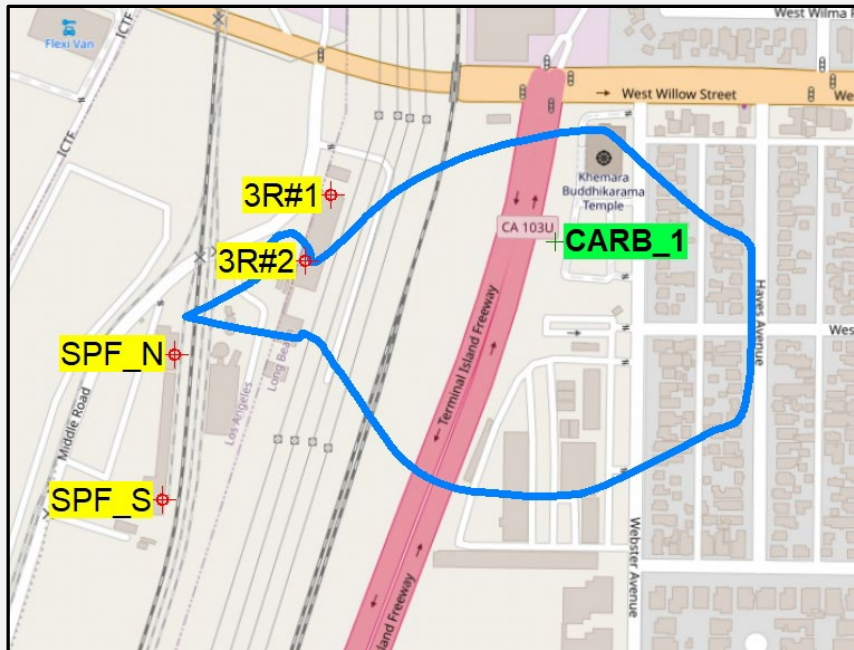
LOS ANGELES COUNTY
AGRICULTURAL COMMISSIONER/
WEIGHTS & MEASURES

Los Angeles County Agricultural Commissioner (LA CAC) Work

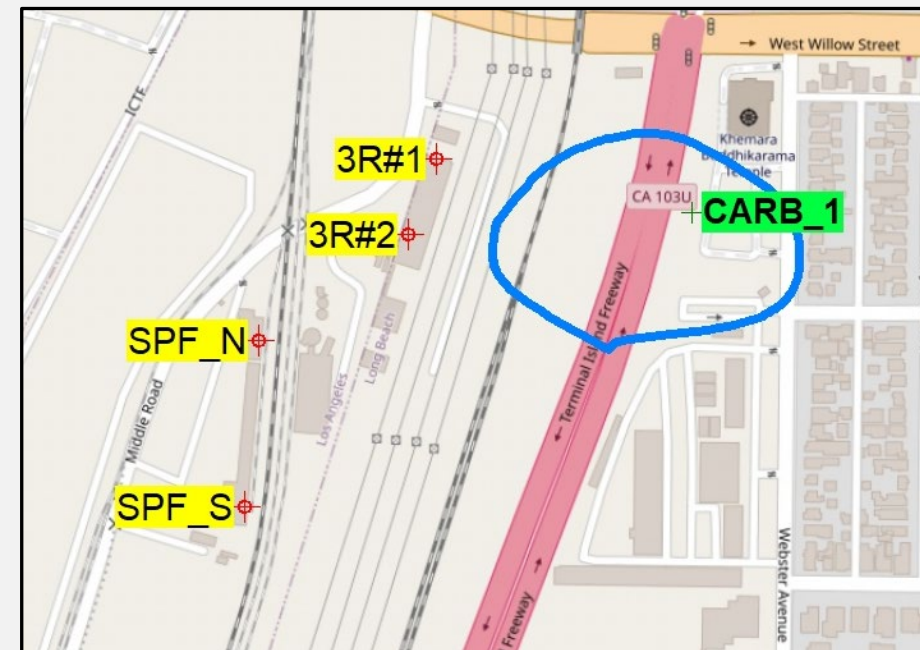
- **From the time CAC was informed of the emissions data collected by CARB:**
 - LA CAC has been in direct communication with USDA, CARB, South Coast AQMD, and DPR
 - Reviewed the data provided by CARB
 - Met with both the fumigators to discuss and amend permit conditions
 - Worked with USDA, CARB, South Coast AQMD, and DPR as well as the fumigators to review and evaluate emissions data and change permit conditions

LA CAC Revised Restricted Materials Permit Conditions for Two Commodity Fumigation Facilities

Updated Permit Conditions to further reduce exposure, including Required taller stacks (55ft) and larger fans which disperse higher in the air, reducing ground level concentrations



Current



Expected after new stack heights

LA CAC Revised Restricted Materials Permit Conditions for Two Commodity Fumigation Facilities

Updated Permit Conditions to further reduce exposure also included:

- Explicit requirement that no fumigation can be done during school hours
- More stringent requirements preventing ground level leaks
- Increased record keeping requirements to allow for correlation between use and ground level monitored results
- Staggering chamber releases to prevent higher combined releases from each facility

South Coast AQMD – Next Steps



Comprehensive emissions report of toxic air contaminants for Ag Fume and SPF Terminals due March 2025

Approved emissions report will be used for risk screening to determine next regulatory steps



Staff has reached out to all other fumigation facilities in our jurisdiction to ensure that they are compliant with emission reporting requirements

California Air Resources Board – Next Steps



Engage in inter-agency efforts to reduce ground level concentrations



Continue to monitor MeBr and track improvements



Make data readily available online to the community

Methyl Bromide Dashboard



Click here for MeBr webpage

METHYL BROMIDE DATA DASHBOARD



Latest MeBr Concentration

OEHHA Acute (1-hour) REL = 1000 ppb

0.4 ppb
1 PM, 8 Jan 2025

Average MeBr Concentration

OEHHA Chronic REL = 1 ppb

1.9 ppb
12 Jan 2023 to 8 Jan 2025

Plot display options

Select time period

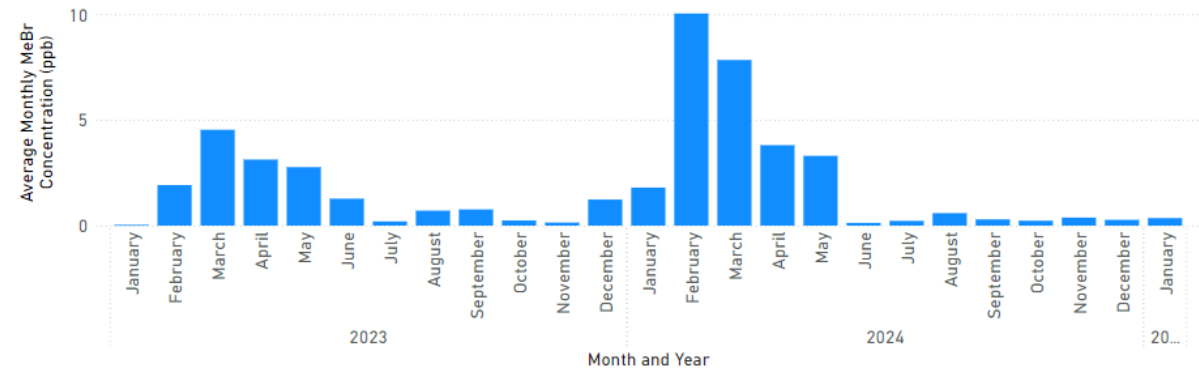
Last 7 Days (Hourly Data)

All Data (Monthly Data)

Select value type

Average

Maximum



<https://ww2.arb.ca.gov/capp/cst/ch2/wcwb/methyl-bromide>

Where To Find More Information

CARB Website has:

- This presentation
- Background on MeBr air monitoring in West Long Beach
- Link to real-time MeBr air monitoring dashboard to get latest air monitor concentrations
- Steps you can take to reduce your risk of exposure
- South Coast AQMD and LA CAC MOU Regarding Methyl Bromide Agricultural Commodity Fumigation Facilities



<https://ww2.arb.ca.gov/capp/cst/ch2/wcwlb/methyl-bromide>



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Facilitated Questions and Discussion