



Proposed Rule 1495 – Commodity Fumigation Working Group Meeting #2 Thursday May 21, 2026 – 2:00 pm

Zoom Meeting: <https://aqmd.zoomgov.com/j/1600908662>

Call-in Option: (669) 254-5252 – Meeting ID: 160 090 8662

Agenda

WGM #1 Recap and Activity Updates

Commodity Fumigation Regulatory Landscape

West Long Beach Case Study

Next Steps

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Recap of Working Group Meeting #1



- West Long Beach Methyl Bromide Investigation
 - Initial CARB monitoring and South Coast AQMD activities
- Background on Commodity Fumigation
 - Distinguished from sterilization or soil, structural fumigation
- Discussion of Commodity Fumigation Facilities
 - 38 facilities permitted by county agricultural commissioners to use fumigants within South Coast AQMD
 - 22 facilities reported actual fumigant usage in 2024
- Fumigant Usage and Identification
 - Methyl bromide most common with 75% of 2024 tonnage
 - Sulfuryl fluoride: 23% of 2024 tonnage
 - Also discussed potential alternatives: ethyl formate, CO₂

Activity Updates

- Rule Team Updates
 - Site visits with four (4) different facilities
 - Multiple stakeholder meetings with interested parties
 - Information gathering and analysis process ongoing
- Memorandum of Understanding (MOU)
 - Returns permitting authority to South Coast AQMD
 - Approved by LA County Board of Supervisors and South Coast AQMD
 - Currently awaiting signatures from both parties
- Department of Pesticide Regulation (DPR)
 - Released report on proceedings regarding Post-Harvest Commodity Fumigation in California from the California Council on Science & Technology

Report available here: <https://ccst.us/wp-content/uploads/ccst-roundtable-proceedings-post-harvest-commodity-fumigation.pdf>



Agenda

WGM #1 Recap and Activity Updates

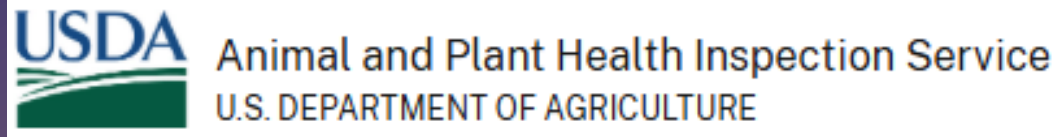
Commodity Fumigation Regulatory Landscape

West Long Beach Case Study

Next Steps

Regulatory Landscape

FEDERAL

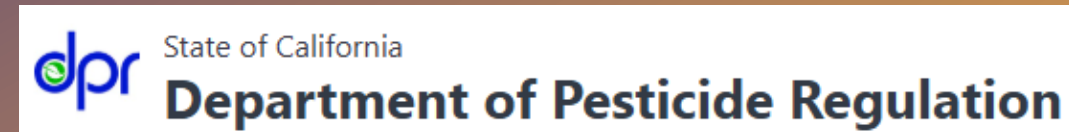


- Maintain commodity treatment manual
- Enforcement inspections



- Registration of Fumigants, including:
 - Approval of label
 - Applicator certification
 - Protective measures

STATE



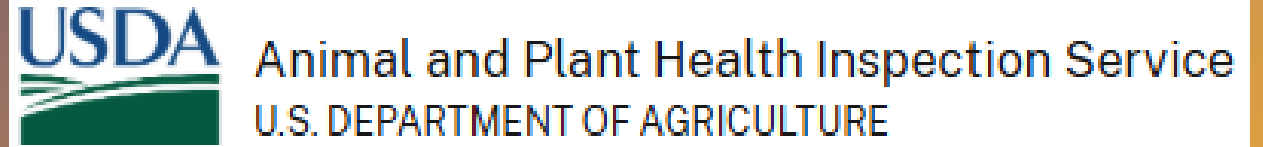
- Evaluate pesticide risk prior to approval for use in California
- Continuous evaluation of pesticides
- Licensing and training of operators and others
- Maintain statewide usage inventory

LOCAL



- Issue Restricted Materials Permits
 - Require notification prior to fumigation
- Collect and report countywide usage
- Enforcement inspections

Federal Regulatory Overview



- Pesticide (including fumigants) Registration
 - Examination of pesticide ingredients and review of scientific studies
 - Usage on specific commodities
 - Amount, frequency, and timing of use
 - Storage and disposal practices
 - After approval, periodic re-review of pesticides, called “reevaluation”
- Protect US agriculture from invasive pests and prevent spread of domestic pests
 - Research and development of protective measures
 - Development of treatment procedures
 - Physical inspections

Federal Oversight


RESTRICTED USE PESTICIDE
Due to Acute Toxicity
For retail sale to and use by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

Methyl Bromide Quarantine Fumigant

FOR QUARANTINE/REGULATORY USE ONLY
SUPERVISION BY REGULATORY AGENT REQUIRED

ACTIVE INGREDIENT: Methyl Bromide 100%
TOTAL: 100%
This product weighs 13.99 lbs./gal. at 68 °F (20 °C).

KEEP OUT OF REACH OF CHILDREN

DANGER  **PELIGRO**
POISON [Note: «Poison» will be printed in red.]

ACCEPTED
Sep 30, 2015
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8536-29

IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY. TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.

THE USE OF THIS PRODUCT IS STRICTLY PROHIBITED IN RESIDENTIAL STRUCTURES INCLUDING, BUT NOT LIMITED TO, SINGLE AND MULTI-FAMILY RESIDENTIAL PROPERTIES, AND DAYCARE FACILITIES.

THE USE OF THIS PRODUCT IS ALSO STRICTLY PROHIBITED IN NURSING HOMES, HOTELS, DORMITORIES, SCHOOLS, HOSPITALS, AND PUBLIC RESTAURANTS.


DO NOT STORE IN OR WITHIN 100 FEET OF A RESIDENCE. STORE IN A DRY, COOL, WELL-VENTILATED AREA UNDER LOCK AND KEY.

METHYL BROMIDE IS A NEUROTOXIC GAS THAT CAN CAUSE SEVERE RESPIRATORY ISSUES, CONVULSIONS, COMA, LONG-TERM HARM TO THE NERVOUS SYSTEM, OR DEATH.

READ ALL LABELING BEFORE USING THIS PRODUCT, AND FOLLOW ALL DIRECTIONS AND PRECAUTIONS.

IF YOU DO NOT UNDERSTAND THE LABEL, FIND A CERTIFIED APPLICATOR TO EXPLAIN IT TO YOU IN DETAIL.

[SI USTED NO ENTIENDE LA ETIQUETA, BUSQUE A UN APLICADOR CERTIFICADO PARA QUE SE LA EXPLIQUE A USTED EN DETALLE.]

 **SOIL CHEMICALS CORPORATION dba**
CARDINAL PROFESSIONAL PRODUCTS
P. O. Box 782 • Hollister • CA 95024

Net Contents: _____ LBS

Methyl Bromide Quarantine Fumigant, EPA Reg. No. 8536-29, Draft Specimen Label, 2015 September 25, p. 1

- Under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), manufacturers of restricted use pesticides (RUPs) must register with U.S. EPA
 - Submission must include studies on impacts to health and environment
 - Also must submit a “label” for review and approval
- Label contains requirements for safe use, including:
 - Only used by certified applicators
 - Appropriate PPE must be worn
 - Maintain buffer zones around fumigation site
 - Commodity fumigated covered in tarpaulins (tarps) and sealed
- At least every 15 years, “reevaluation” for impacts to human health and the environment
 - Search for new research studies and published literature
 - Iterative drafts posted to federal docket for public comment
 - May include additional risk mitigation and label changes

Additional Federal Oversight

- USDA Animal and Plant Health Inspection Service (APHIS) maintains a manual of approved treatments for commodities to prevent the movement of pests into and within the U.S.
- Lists chemical treatments using methyl bromide, sulfuryl fluoride, and other fumigants
 - Also details nonchemical treatments such as heat, cold treatment, and irradiation
- Identifies appropriate treatment procedures for target pests on specific commodities
- USDA inspectors present at all times to ensure proper commodity treatment

USDA Animal and Plant Health Inspection Services
U.S. DEPARTMENT OF AGRICULTURE

Treatment Manual

Table Of Contents

- 1. [Treatment Manual](#)
- 2. [Download a PDF of this page - Treatment](#)

1. [Treatment Manual](#)

Treatment Manual

Find treatment information for quarantine significant plant pests for imported and domestic commodities.

Introduction - Overview
[Chemical and Nonchemical Treatments Index](#)

Treatment Schedules

- [Search the ACIR Treatments Tile \(schedules for imported commodities\)](#)
- [Schedules for Domestic Movement of Regulated Articles](#)

Chemical Treatments

- [Fumigants-General Information](#)
- [Methyl Bromide \(General Reference\)](#)
- [Methyl Bromide - Tarpaulin Fumigation](#)
 - [Special Procedures for Adding Gas and Extending Exposure Period - Tarpaulin Fumigation](#)
- [Methyl Bromide - Chamber Fumigation](#)
- [Methyl Bromide - Ship Fumigation for Emergency Situations](#)
- [Methyl Bromide - Special Procedures for Container Fumigations Without a Tarpaulin](#)
- [Methyl Bromide - Closed-door Container Fumigation](#)
- [Sulfuryl Fluoride](#)
- [Phosphine | en español |](#)
 - [Amount of Phosphine Liberated by Various Products | en español |](#)
- [Aerosols](#)
 - [Aircraft Aerosol Calculations](#)
- [Dips](#)

Condition of Entry



- Certain agricultural commodities must be fumigated for pests as a “condition of entry” by APHIS
- Example: Table grapes from Chile
 - European grapevine moth (*Lobesia botrana*) is prevalent in Chile and not present in California
 - To ensure moth doesn’t affect U.S., methyl bromide fumigation or other approved treatment is required
- Table grapes from other countries, such as Peru, do not require methyl bromide fumigation
 - May still require another treatment method for target pests, such as cold treatment

Actionable Pests

- Travelers and importers declare fruits, vegetables, plants, or plant products at ports of entry
 - Agriculture specialists conduct inspections for certain “actionable pests”
 - If actionable pests are detected, the product may be destroyed or the commodity may require emergency fumigation, usually with methyl bromide

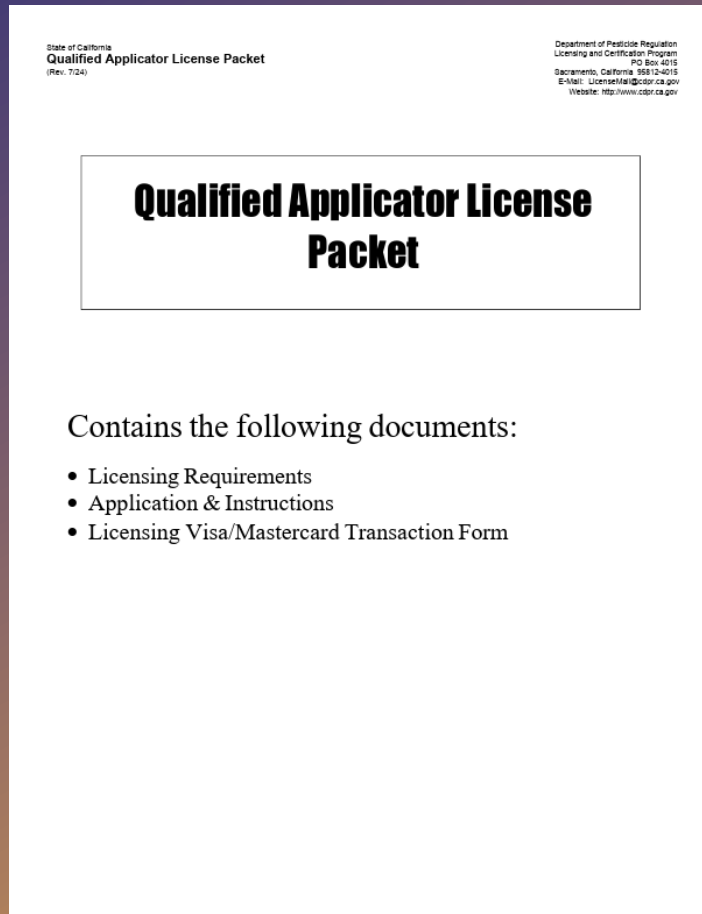


Department of Pesticide Regulation (DPR)

- Reviews of federally registered fumigants before use in California and continuous evaluation to ensure safety after fumigant is approved
 - May include air monitoring
 - If required, DPR can place additional restrictions on fumigants for mitigation
- Enforcement of pesticide use laws and regulations jointly with county agricultural commissioners (CACs)
- Receives pesticide usage reports from local counties and compiles publicly available statewide report



State-Specific Requirements




- DPR reviews and approves federal restricted use pesticides for use in California
 - Designated as California restricted materials
 - Publishes studies, risk evaluations, and mitigation documents for fumigants or other restricted materials
- CACs work closely with DPR to enforce agricultural state laws and regulations at the local level including issuing restricted material permits with buffer zones
- Applicators of restricted materials must have Qualified Applicator Certificate (QAC)
 - Includes forms, fees, prerequisite exams, certification testing and requires continuous education credits


County Agricultural Commissioners

At the local level, county agricultural commissioners issue restricted materials permits to applicators


- Specifies allowable pesticides and quantities, specific sites and equipment, such as minimum stack heights, worksite plans, and buffer zones
- Permittee interview required including discussion of mitigation measures and possible alternatives
- Notice of Intent 24 hours prior to fumigation
- May have other restrictions, such as hours of operation, aeration times, and daily or annual pesticide limits
- Monitoring, recordkeeping, and reporting required
- Permits are site-specific and may be more restrictive than federal or state requirements (i.e. stack height)



Los Angeles County Agricultural Commissioner/Weights and Measures
12300 Lower Azusa
Arcadia, CA 91006
Phone: 626-575-5466
Fax: 626-443-6652
RESTRICTED MATERIALS PERMIT: 19-24-195281A



QAL- Category A License # 98099




Work to be done by licensed PCO only.

I understand that this permit does not relieve me from liability for any damages to any persons or property caused by the use of these pesticides. I waive any claims of liability for damages against the County Department of Agriculture based on the issuance of this permit. I further understand that when pesticides are used in conflict with the manufacturer's labeling or in violation of the conditions of this permit, I authorize inspection at all reasonable times and in accordance with the Department of Pesticide Regulation or the County Department of Agriculture and its staff to inspect the use of pesticides or emptied containers and equipment used in accordance with the permit and mitigation measures pursuant to Title 3, California Code of Regulations, and Title 3, California Code of Regulations, environmental, social, and technological factors, I hereby certify that the use of pesticides will not have any significant adverse impact on the environment.

(Form PR-ENF-125 (Rev 11/10))

Applicant: _____
Applicant Signature: _____
Issuing Officer: _____



Commodity Fumigation Buffer Zones

The screenshot shows the EPA website's navigation bar with the EPA logo and search bar. Below the navigation bar, the breadcrumb trail reads "Home / Pesticide Registration". The main heading is "Methyl Bromide Commodity Fumigation Buffer Zone Lookup Tables". Underneath, it says "Methyl Bromide Products Requiring Buffer Zones". A paragraph explains that product labels require a specified buffer zone and that distances must be determined according to the tables and instructions. Below this is a table listing product names and their EPA registration numbers. Further down, there is a section titled "Tables for Determining Buffer Zone Distances" with a link to instructions and a list of buffer zone distances for each application. At the bottom, there is a section for "TREATMENT BUFFER ZONES" with a table linking to PDF files based on treatment time.

Product Name	EPA Registration Number
METH-O-GAS 100	5785-11
METH-O-GAS Q	5785-41
METHYL BROMIDE 100	8536-15
METHYL BROMIDE QUARANTINE FUMIGANT	8536-29
METABROM 100	8622-16
METABROM Q	8622-55
INBROM 100 QUARANTINE FUMIGANT	92448-1

Tables for Determining Buffer Zone Distances

- [Instructions for determining the correct table to use for each type of application.](#)
- Buffer zone distances for each application:

TREATMENT BUFFER ZONES

TREATMENT TIME	BUFFER ZONE FILE (includes application rate, enclosure size, and retention rate)
8 hours or less	PDF
More than 8 hours	PDF

- Tables scientifically derived using modeling of worst-case weather conditions during operations
 - Different buffer zones based on application rate, enclosure retention, stack/no stack, and volume
- CACs have authority to issue site-specific permit conditions
 - May use DPR recommended permit conditions to determine buffer zone distances for treatment and aeration

For specific buffer zone lookup tables, refer to:

<https://www.epa.gov/pesticide-registration/mbcommoditybuffer>

South Coast AQMD Role

- South Coast AQMD authority and strategies include planning, rules, permitting, enforcement, as well as ambient and specialized air monitoring
- Federal Clean Air Act
 - U.S. EPA regulates “hazardous air pollutants” (HAPs) and delegates enforcement authority to South Coast AQMD
- State Air Toxic Hot Spots Act (AB 2588)
 - For facilities with significant health impacts, requires South Coast AQMD to reduce risk of “toxic air contaminants” (TACs) to surrounding community
- Rulemaking
 - Industrywide approach for all applicable facilities
 - For this rule, studying both federal HAPs, such as methyl bromide and phosphine, as well as state TACs, such as sulfuryl fluoride



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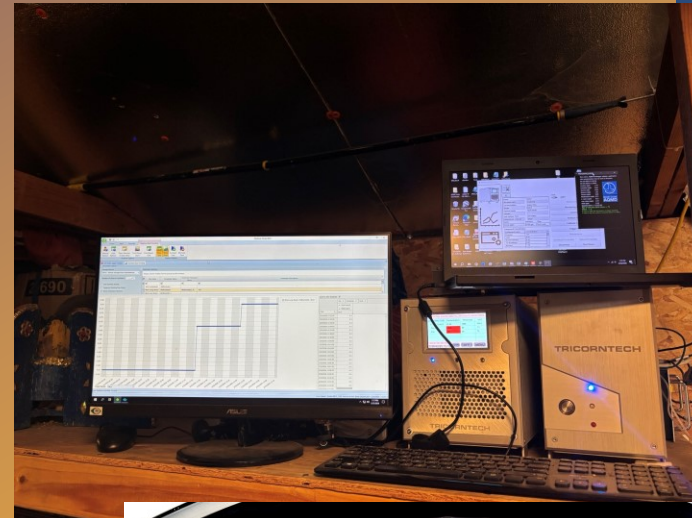
Commodity Fumigation Regulatory Landscape

West Long Beach Case Study

Next Steps

Overview of West Long Beach Case Study

- Ambient air monitoring detected concerning levels of annualized average and hourly average methyl bromide concentrations
 - Dependent on meteorological conditions
- Physical changes in early 2025 to equipment and modified work practices reduced ambient methyl bromide levels
 - Annualized average decreased by 60%
 - Individual hourly average peaks decreased by 64%
- Ambient air monitoring has demonstrated concentration decreases through March 2026



Background



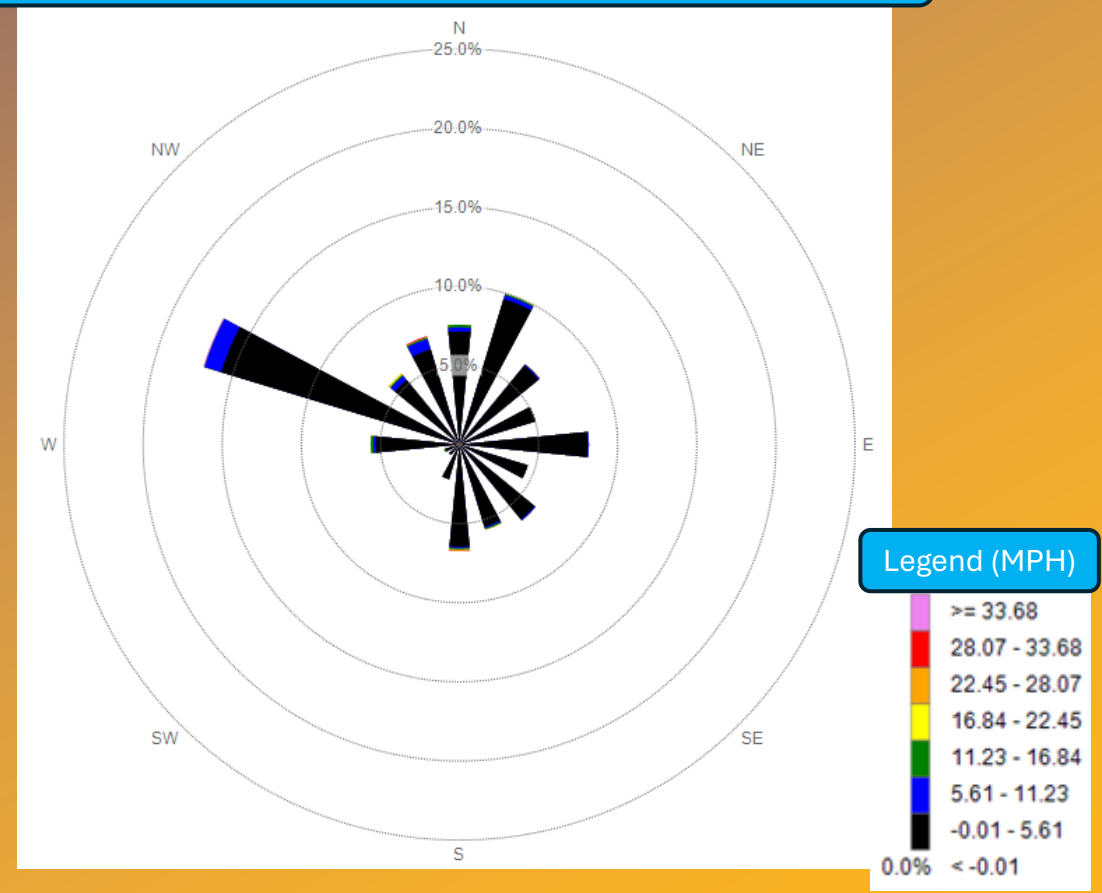
Source: latimes.com

- Elevated methyl bromide levels detected at MATES monitoring location “Hudson Station”
 - Appreciation for Jesse Marquez, founder of Coalition for a Safe Environment, for this insight
- In 2023, CARB began special monitoring for methyl bromide
 - Automated gas chromatography (autoGC) system with hourly average concentration readings
 - Since May 2025, South Coast AQMD operates CARB’s special monitoring site
- Upwind on the monitoring locations are two (2) commodity fumigation facilities
 - Facility A: 200 yards away due west
 - Facility B: Southwest 400 yards away

West Long Beach Commodity Fumigation Map



Wind Rose – Hudson Station Weather Station



West Long Beach Fumigation Practices



- Inside of a building, pallets of commodities spaced out to allow air flow
 - Fans placed in spacings to increase air mixing
- Temporary enclosure constructed around commodity to minimize treatment area volume and minimize amount of fumigant needed
 - Minimizing fumigant used reduces operator costs and reduces fumigant emissions during aeration
- After treatment, commodities complete aeration with used fumigants ventilated out exhaust stack

West Long Beach Initial Mitigation Measures

- Prior to air monitoring in 2023, Facilities A and B had taken some steps to reduce community exposure
 - Agreed to fumigate at night after school hours
 - Equipped with emission stacks about 10 - 20 feet above roof
- However, prior to 2025, including the 2023-2024 monitoring timeframe, Facilities A and B largely operated independently
 - May ventilate methyl bromide simultaneously
- Under CARB monitoring, between January 12, 2023, and April 30, 2024, the average concentration was 2.1 parts per billion (ppb) at the monitoring site

Facility A (December 2024)



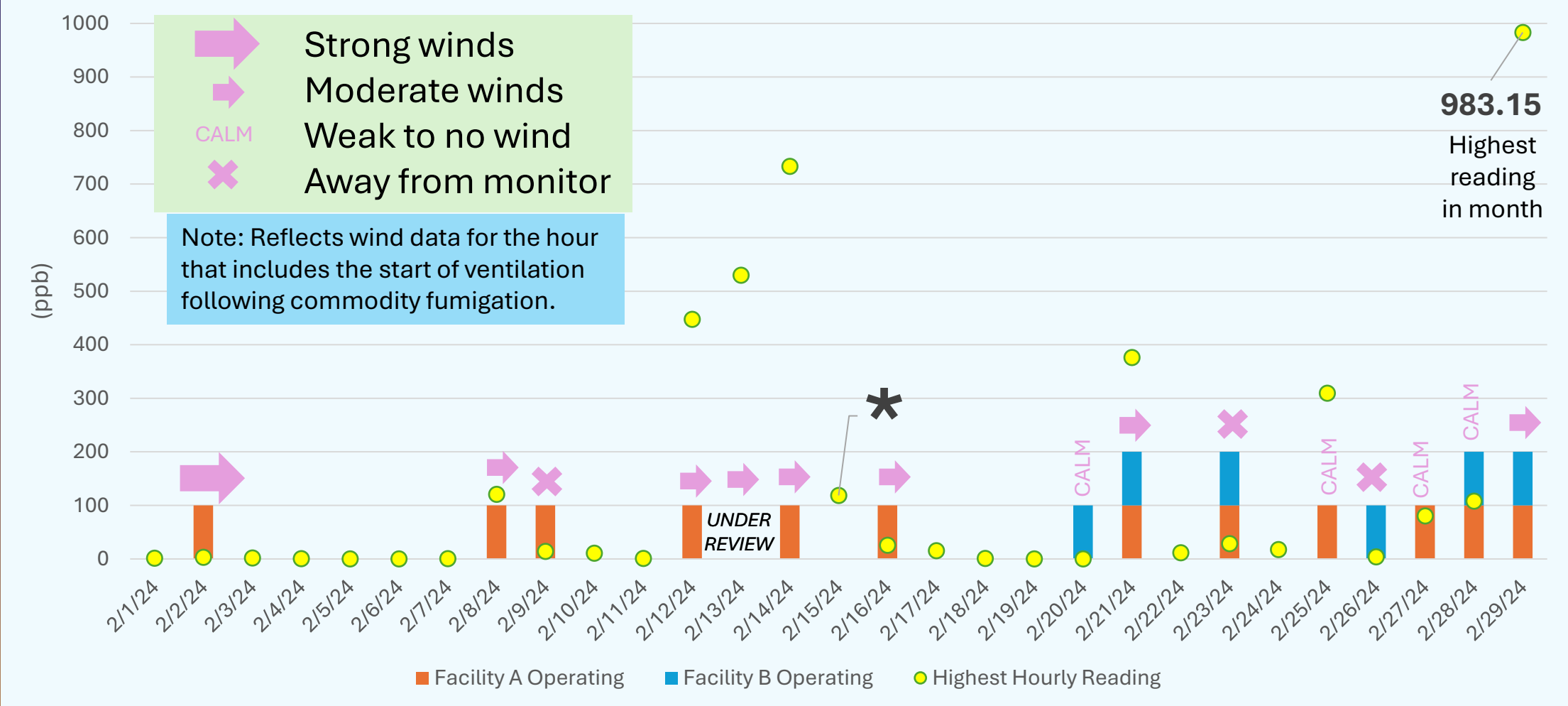
Facility B (July 2022)



Source: Google Street View

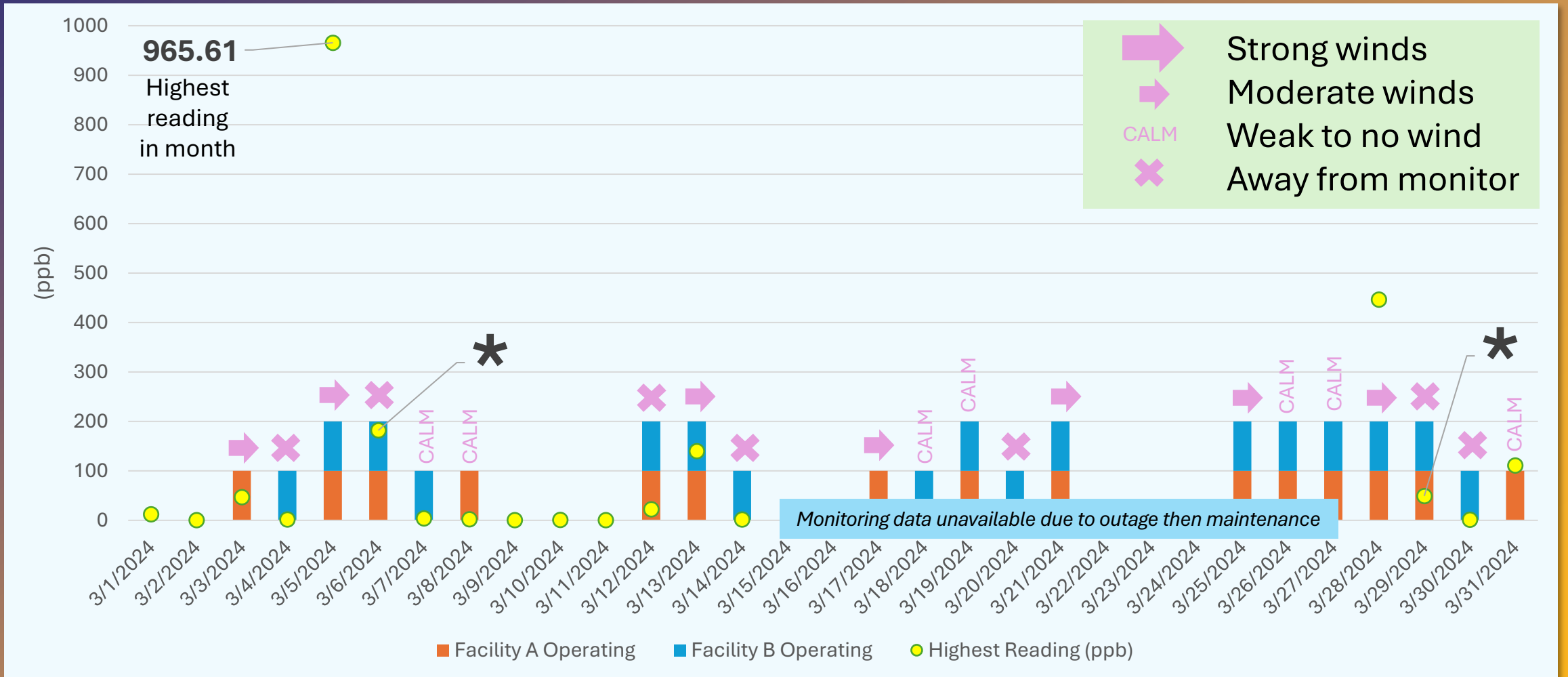
For detailed CARB monitoring data: <https://ww2.arb.ca.gov/capp/cst/ch2/wcwlb/methyl-bromide>

Detail of February 2024 Monitoring and Operations



*Reading was at 12:00 am, residual from previous day fumigation

Detail of March 2024 Monitoring and Operations



*Reading was at 12:00 am, residual from previous day fumigation

West Long Beach Supplemental Mitigation Measures

In response to monitoring results, in early 2025 facilities took measures expected to reduce ambient methyl bromide levels:

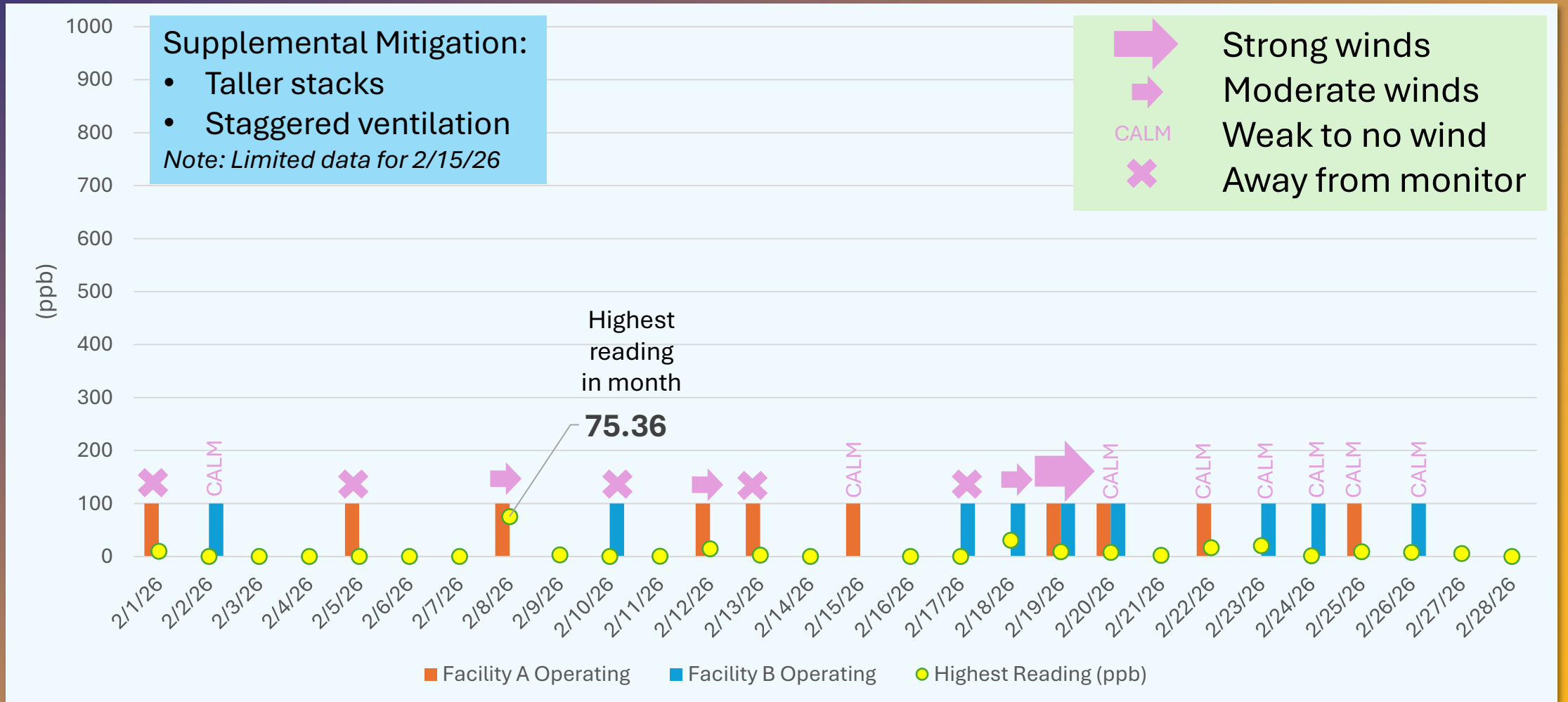
- Raised stack height from 10 feet above roof to at least 55 feet above ground level
- Staggered ventilation start times
 - Facilities A and B work cooperatively not to begin ventilation at the same time, staggering by at least one (1) hour
- Continued to conduct fumigation and ventilation only during nighttime hours when nearby park and school unoccupied
- Average of hourly readings in the consecutive 12-month period April 2025 to March 2026 was **more than 60% lower** than CARB monitoring revealed



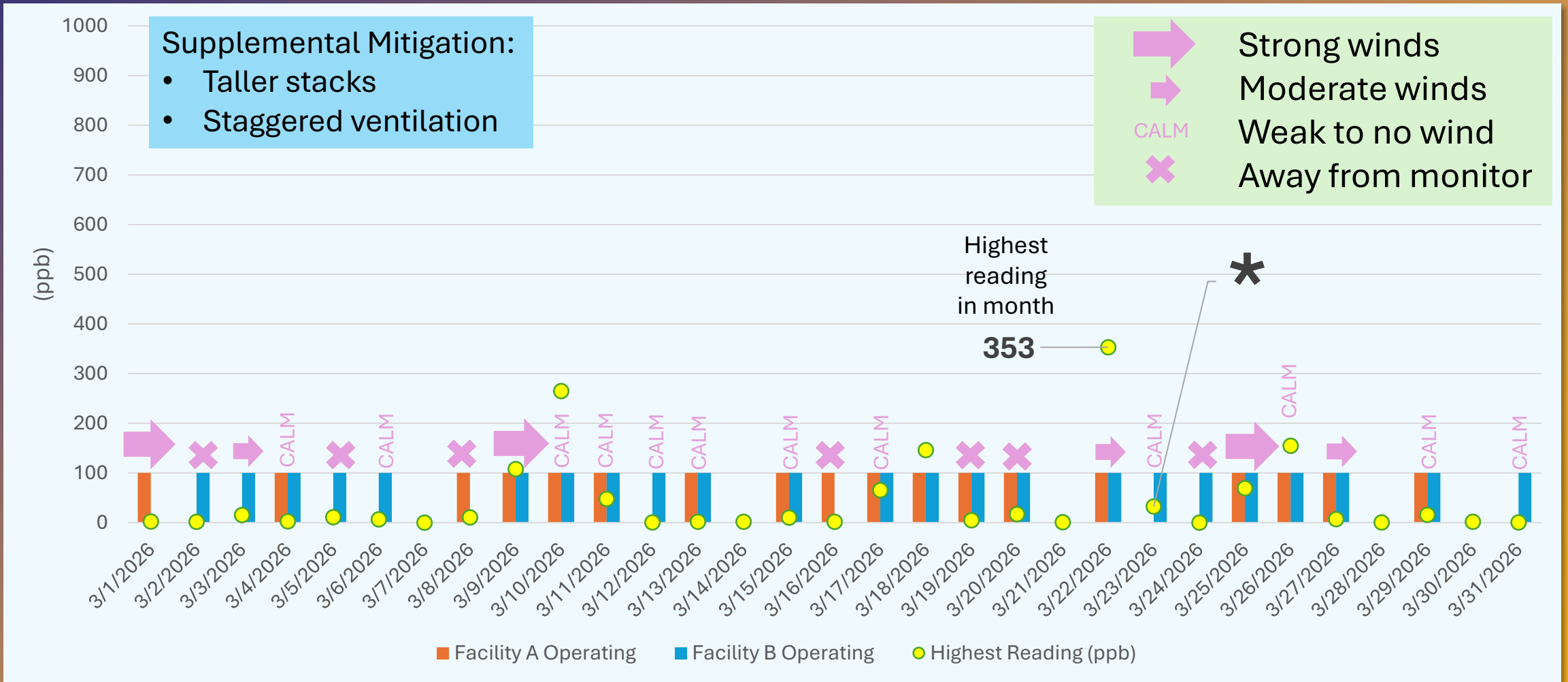
Source: Google Street View

For detailed monitoring data: <https://xapp.aqmd.gov/Methylbromide/>

Detail of February 2026 Monitoring and Operations after Supplemental Mitigation Measures



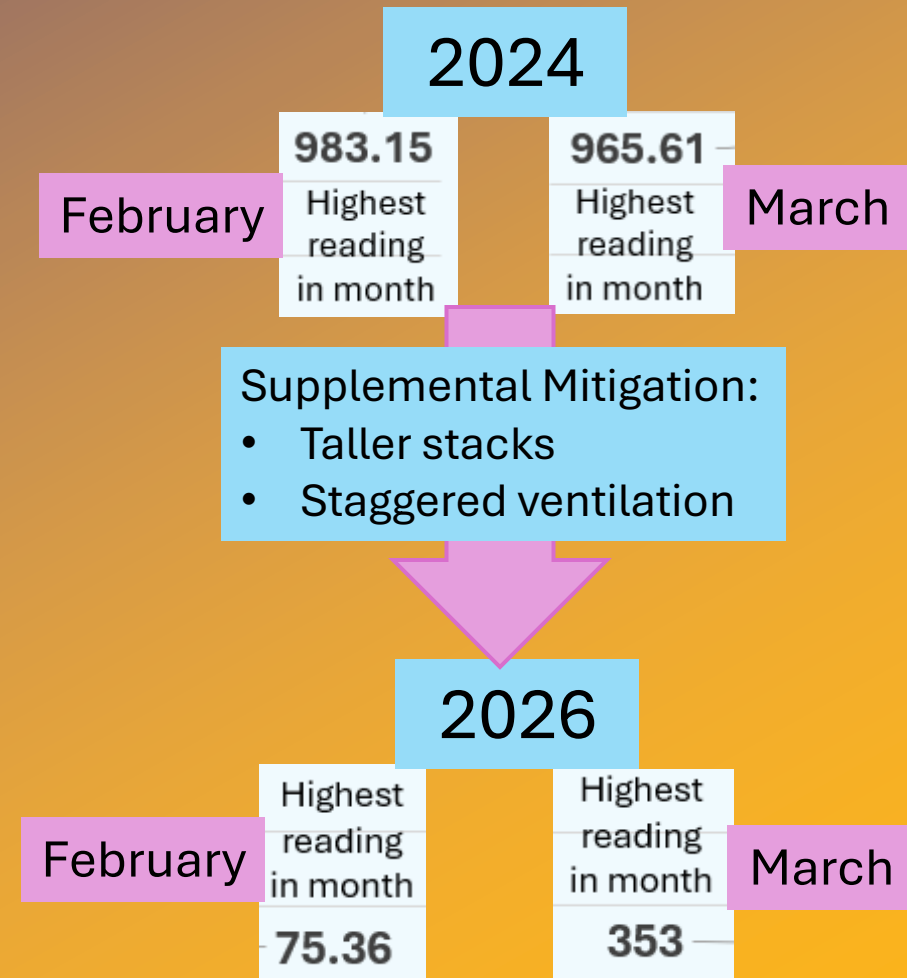
Detail of March 2026 Monitoring and Operations after Supplemental Mitigation Measures



*Reading was at 12:00 am, residual from previous day fumigation

Case Study Conclusions

- Long term monitoring, beginning from 2023 to today and ongoing, demonstrated both concerning levels of ambient methyl bromide as well as the efficacy of supplemental mitigation measures
 - Also demonstrated ambient concentration highly dependent on meteorological conditions
- Supplemental mitigation measures reduced both hourly average peaks as well as annualized averages
 - Annualized average decreased by 60%
 - Missing readings prevent more precise estimate
 - Individual hourly average peaks decreased by 64%



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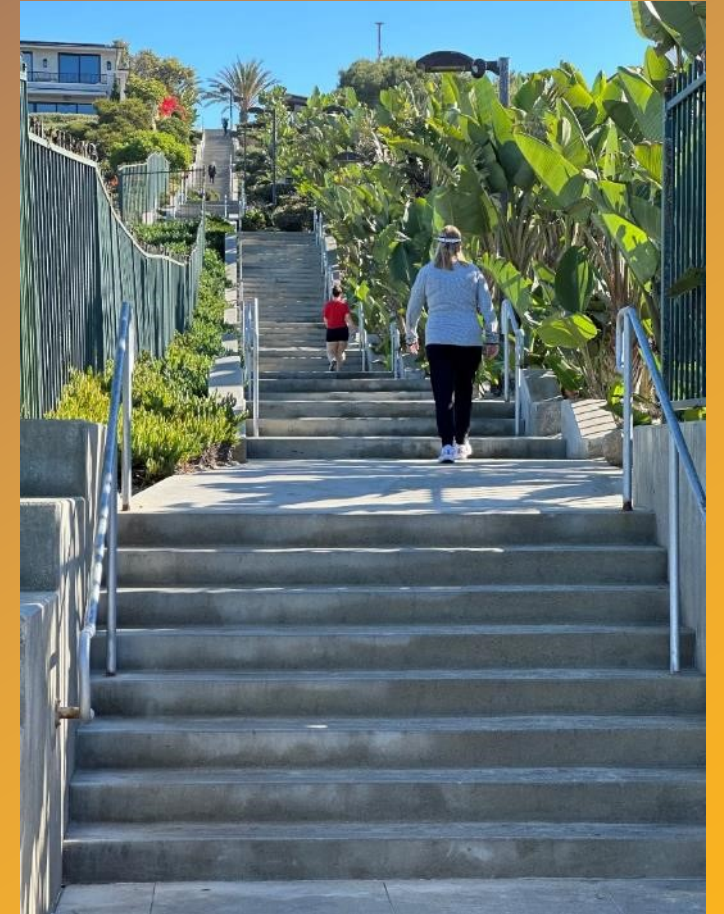
Commodity Fumigation Regulatory Landscape

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Next Steps

Next Steps

Milestone	Projected Date
Working Group Meeting #3	June 2026
Public Workshop	Summer 2026
Set Hearing	Fall 2026
Public Hearing	Winter 2026



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Rule 1495



Proposed Rule 1495 Team

Areio Soltani
Air Quality Specialist

- (909) 396-3318
- asoltani@aqmd.gov

Charlene Nguyen
Program Supervisor

- (909) 396-2648
- cnguyen@aqmd.gov

Mike Morris
Planning & Rules
Manager

- (909) 396-3282
- mmorris@aqmd.gov

Michael Krause
Assistant Deputy
Executive Officer

- (909) 396-2706
- mkrause@aqmd.gov

