



**MONTEREY BAY AIR RESOURCES DISTRICT
ADVISORY COMMITTEE MEETING**

JANET BRENNAN, CHAIR

THURSDAY, October 5, 2023 – 1:30 P.M.

24580 Silver Cloud Court, Monterey, CA – Boardroom

REMOTE MEETING OPTION FOR PUBLIC

Link to meeting: <https://us02web.zoom.us/j/81651280527>

Webinar ID: 816 5128 0527

By Phone (audio only, Webinar ID required): 1-669-900-6833

Members of the public that wish to participate in the hearing may do so by joining the Zoom Webinar ID or in-person at 24580 Silver Cloud Ct. Monterey. Should you have any questions, please contact Sirie Thongchua, Executive Assistant, at (831) 718-8028 or by email at sirie@mbard.org.

To Provide Public Comment via Zoom teleconference/video conference: During the meeting live, verbal public comments may be made by members of the public joining the meeting via Zoom. Zoom access information is provided above. Use the “raise hand” feature (for those joining by phone, press *9 to “raise hand”) during the public comment period for the agenda item you wish to address. Members of the public participating via Zoom will be muted during the proceedings and may be unmuted to speak during public comment after requesting and receiving recognition by the Chair. Please clearly state your full name for the record at the start of your public comment.

Before the Meeting: Persons who wish to address the Advisory Committee for public comment of an item not on the agenda are encouraged to submit comments in writing to Sirie Thongchua, Executive Assistant, at sirie@mbard.org by 5:00 p.m. on Tuesday, October 3, 2023. Comments received will be distributed to the Advisory Committee prior to the meeting.

SUMMARY OF ACTIONS

1. Call to Order – **The meeting was called to order by Chair Brennan at 1:37 p.m.**
2. Roll Call - **Present:** Janet Brennan, Sandy Coplin, Zane Hatchett, Bob Smith, Scott Storm, Caitlyn Turley. **Absent:** Matthew McCluney, Allen Stroh, Sandy Swint.

Introductions of Committee members and Board members in attendance.
3. Changes to the Agenda – **None.**
4. Public Comment Period – **None.**
5. **Accepted and Filed** Summary of Actions for the Advisory Committee Meeting of August 3, 2023
Action: Accepted and filed by consensus.
6. **Received** Presentation on Mid-Year 2023 Engineering and Compliance Activities
7. **Received** an Update on the Air Toxics Program
8. **Received** a Report, **Provided** Comments on Evaluation of a Best Available Retrofit Control Technology (BARCT) Rule for Lime Kiln Sources Subject to the BARCT Schedule, and **Recommended** No Further Action to Implement a BARCT Rule
Motion: Approve staff recommendation. Action: Approve. Moved by Sandy Cohen, Seconded by Bob Smith. Vote: Motion carried unanimously (summary: Yes = 6). Yes: Janet Brennan, Sandy Coplin, Zane Hatchett, Bob Smith, Scott Storm, Caitlyn Turley. Absent: Matthew McCluney, Allen Stroh, Sandy Swint.
9. **Received** a Presentation and Report on Daily Eight-Hour Peak Ozone Concentrations, Hourly Peak Ozone Concentrations, PM_{2.5} and PM₁₀ Air Monitoring Data for the First Half of 2023
10. **Received** Monthly Oral Report from Air Pollution Control Officer
Amy Clymo, Engineering and Compliance Manager, reported on the following:

Staffing

- We had three staff starts in September.
- On September 11, Michael Purugganan joined as an Air Quality Technician. He studied bioengineering at UC San Diego and has extensive experience working in the biotech industry. Michael will be working with Planning, Air Monitoring, and Engineering.

- On September 18, Michelle Kaiser joined the Compliance team as an inspector. Michelle transitioned from her previous position with us as an Air Monitoring Specialist which she started in December 2022. Michelle has a Bachelor of Science degree in Marine Biology from UCSC. Note: We are currently recruiting for the Air Monitoring Specialist position and the application deadline is tomorrow, October 6.
- On September 28, Chathura Viswanath joined the Engineering team as an engineer. Chathura comes to us from Purdue University with a master's degree in civil engineering with an Air Quality emphasis.

Engineering

- We have been notified about two companies that acquired offshore wind energy leases. The leases are located in the Pacific Ocean west of San Luis Obispo and Monterey County. We spoke with the Environmental Protection Agency about their regulation applicable to offshore wind energy projects called Outer Continental Shelf permitting. This regulation establishes air pollution requirements for sources within 25 nautical miles of the coast. We will continue to participate with these projects as they progress because they are currently in the very early stages of development.

Compliance

- Our inspectors have been busy with training opportunities now that more in-person training classes are being offered. Two inspectors attended Source Testing training in Sacramento and three inspectors completed visible emissions certification.
- The Monterey County District Attorney's office settled two of our cases.
 - The owners of The Park Lane, a senior living community located in Monterey, settled their case for failing to comply with asbestos laws during renovations and demolitions in 10 counties. This originated with our case and the DA was able to identify similar issues in other counties leading to the multi-county settlement. We will receive \$200,000 in penalties, \$46,166 in cost recovery, and \$100,000 for a college course on air pollution as a supplemental environmental project. Additionally, six other air districts will receive penalties and some funding for supplemental environmental projects. Thank you to our inspectors Bronwyn and Shawn for their work on this case.
 - The second case was with Ryan Peacock Inc. for violations of the state portable engine registration regulations. We will receive \$50,000 in penalties. Thank you to our inspector Isael Rubio-Salazar for his work on this case.

Planning and Air Monitoring

- All funds have been exhausted for the Electric Vehicle (EV) Incentive Program. Funds remain available in the Electric Bicycle Incentive Program, which provides low-income residents with an incentive to purchase Type 1, 2, and 3 eBikes.
- On September 20 a smoke advisory was issued due to the transport of smoke from Northern California wildfires. We have several tools on our website to provide the public with information such as a map of the smoke sensor network which measures

PM_{2.5}, an indicator of smoke, a map of the regulatory monitors, and a link to EPA's Fire and Smoke map.

- Planning Staff had a booth at an EV Ride and Drive event on October 1 at the Amtrak station in Salinas. The booth had various information on MBARD program. A variety of topics were discussed with the public including, EV, Electric Bike, and Wood Stove incentive programs, roundabouts, adaptive traffic systems, and wildfire smoke.

Community Outreach Highlights

- MBARD's e-newsletter was published in August in both English and Spanish. The newsletter is available on our website.
- October 4 was Clean Air Day. California Clean Air Day allows businesses, schools, government agencies, and other organizations to engage their members, students, employees, and customers to encourage participation. Participants pledge to take various actions from changing air filters to opting not to drive to switching out harmful cleaning products. We pushed out the pledge information through our social media sites.

11. Future Agenda Items

Chair Janet Brennan: repeated requests for a climate action plan presentation by a local jurisdiction such as Carmel, Gonzales, or Monterey, rather than another presentation from AMBAG

Sandy Coplin: expanded report on addressing the smoke issue in the San Lorenzo Valley beyond the Wood Stove Change Out Program

12. Chairman's Comments – **None.**

13. Comments from Committee Members – **None.**

14. Order for Adjournment – **The meeting adjourned at 2:39 p.m.**

Sirie Thongchua
Executive Assistant

Mid Calendar Year 2023 Engineering and Compliance Activity Data

AMY CLYMO
ENGINEERING AND COMPLIANCE MANAGER
OCTOBER 5, 2023



1

Outline

- Description of Engineering and Compliance
- Activity Data
- Activity Data Report Schedule



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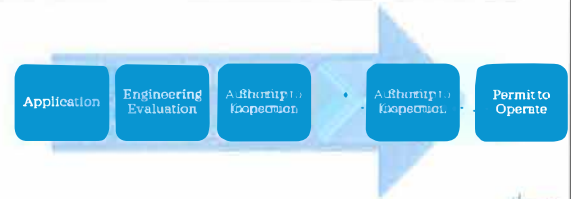
Engineering

- Evaluate permit applications for compliance with federal, state, and local rules and regulations
- Issue permits with operating conditions
- Develop rules and regulations
- Report annual stationary source emission inventory



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Permit Process Overview



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Engineering Data

Activity	Mid Calendar Year 2023
Permit Applications Received	190
Authorities to Construct Issued	93
Permits to Operate issued	110
Startup Inspections	61



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Compliance

- Conduct inspections of permitted sources
- Ensure compliance with permit conditions
- Take enforcement action for violations
- Ensure compliance with the federal asbestos regulation
- Respond to complaints



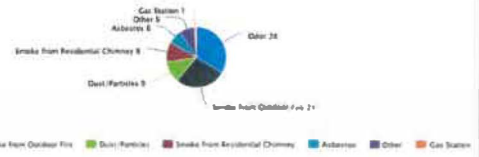
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Compliance Data

Activity	Mid Calendar Year 2023
Compliance Inspections	614
Asbestos Notifications	185
Asbestos Inspections	93
Variance Orders Issued	2
Source Tests Observed	11



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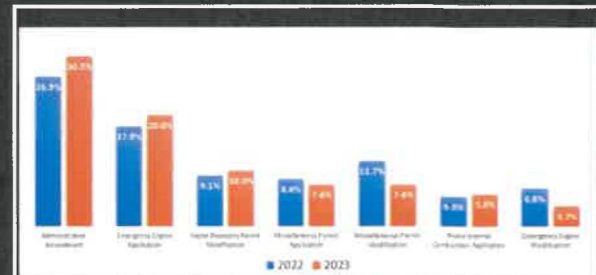
Complaints = 77

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Questions?



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Permit Applications Received = 190

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Air Toxics Program Update

AMY CLYMO
ENGINEERING AND COMPLIANCE MANAGER
OCTOBER 5, 2023



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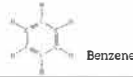
Outline

- What is an Air Toxic?
- Air Toxics “Hot Spots” Act
- Implementation Timeline



2

What is an Air Toxic?



- Federal HAP (Hazardous Air Pollutant)
 - An air pollutant listed under section 112 (b) of the Federal Clean Air Act as particularly hazardous to health.
- State TAC (Toxic Air Contaminant)
 - An air pollutant, identified in regulation by the California Air Resources Board, which may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazard to human health.



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Air Toxics “Hot Spots”

- In 1987, the California legislature adopted the Air Toxic “Hot Spots” Information and Assessment Act (AB2588).
- Goals of the act:
 - Collect toxic air contaminant (TAC) emissions;
 - Identify facilities having localized impacts;
 - Determine health risks; and
 - Notify affected individuals.



4

What is the Air Toxics “Hot Spots” Process?

- Applicability
- Emission Inventory Plans and Reports
- Risk Assessment
- Public Notification
- Risk Reduction



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Emission Inventory and Prioritization Score (PS)

Prioritization	Acute/Chronic Risk Score	Cancer Risk Score
Low	<1	<1 in one million
Intermediate	≥1	≥1 in one million
High	≥10	≥10 in one million

HIGH = the facility must prepare and submit a health risk assessment (HRA)

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Public Notification

•Notification triggered when HRA results exceed values in table below:

Significant Risk Threshold	
Cancer Risk	> 10 in one million
Acute/Chronic Risk Index	> 1



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Recent Activities

- Completed 92 gas station assessments
- Used industrywide guide to evaluate risk from gas stations with throughput ranging from 10,000,000 gallons to 600,000 gallons
- Results and Observations
 - 41 Intermediate priority
 - 51 Low priority
 - Risk dependent on nearest receptor location
 - Higher throughput gas station may have lower risk if farther distance to receptor



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Future Activities

- Complete remaining facilities in source categories: Aggregate operations, wastewater treatment facilities, military installations, and smaller gas stations.
- Transition intermediate facilities to California Air Resources Board's Criteria and Toxics Emission Reporting Regulation.



9

Questions?



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Evaluation of BARCT - Consideration of a New Rule for Lime Kilns Subject to AB 617

MARY GIRAUDO
ENGINEERING SUPERVISOR
OCTOBER 5, 2023



1

Outline

- AB617 Background & Rule Schedule
- Lime Processing Plant Overview
- BARCT Definition & Rule Review
- BARCT Applications & Feasibility
- Recommendation



2

Background

- AB617 added language to the Health & Safety Code which requires an air district that is nonattainment for one or more criteria pollutants to adopt an expedited rule development schedule that implements Best Available Retrofit Control Technology (BARCT).
- BARCT requirements only apply to industrial sources subject to the State Cap & Trade program as of January 1, 2017.
 - There are four industrial sources located in Monterey County.



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BARCT IMPLEMENTATION SCHEDULE

Rule Development Sources	2019	2020	2021	2022	2023
Steam Generators/ Boilers/Process Heaters	█	█	█		
Internal Combustion Engines		█	█	█	
Steam Driven Oil Production Wells (revise Rule 427)			█	█	
Lime Kiln				█	█

Schedule approved by the Board of Directors on November 14, 2018.



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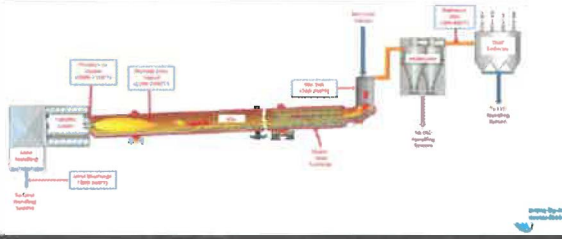
New BARCT Rule Under Consideration for Lhoist North America of Arizona, Inc. Lime Plant

- Facility originally constructed in 1942 and is the only operating lime plant in California.
- Dolomite (a type of limestone) is mined, crushed, and screened to produce raw dolomite for sale, or to be further processed to produce calcined dolomite (lime).
- The lime kilns generate NOx emissions from the combustion of fuel, which is a precursor compound to ozone formation. The focus of our BARCT review was on NOx emissions.
- Staff not proposing to move forward with a new rule.



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Straight Rotary Kiln



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BARCT DEFINITION

Emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.
(Health and Safety Code Section 40406)

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BARCT Rule Review

- MBARD staff searched regulatory requirements of other air district requirements, state, and federal regulations.
- Other regulatory agencies rules reviewed:
 - SJVAPCD Rule 4313 - Sugar Beet Processing Lime Mud
 - EPA New Source Performance Standards for Lime Manufacturing Plants Constructed or Modified After May 3, 1977 - No NO_x Requirements
 - Best Available Retrofit Technology (BART) promulgated by EPA in 2012 for L'hoist's Nelson Plant in Arizona - SNCR

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EMISSION FACTOR COMPARISON

Emission Factor lbs NO _x /ton product		
Pollutant	Nelson Plant in Arizona Coal/Petroleum Coke	Natividad Plant Natural Gas
NO _x	Kiln 1: 3.80 lb/ton Kiln 2: 2.61 lb/ton	Kiln 1: 0.65 lb/ton Kiln 2: 0.65 lb/ton Kiln 3: 0.63 lb/ton Kiln 4: 1.10 lb/ton*

* Kiln 4 maximum theoretical value reported. Unit has not operated in over 35 years.

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NO_x Emission Control Options

- Post Combustion Control Technologies to Consider
- Selective Catalytic Reduction (SCR)
 - Ammonia is injected into the exhaust gas upstream of a catalyst bed at operating temperatures of 700°F to 750°F.
 - On the catalyst bed, in the presence of oxygen (O₂), ammonia (NH₃) and nitric oxide (NO) or nitrogen dioxide (NO₂) react to form nitrogen and water.
 - 80% NO_x removal rate.
- Selective Non-Catalytic Reduction (SNCR)
 - Ammonia is injected into the flue gas in an appropriate temperature window of 1,600°F to 2,100°F
 - In the presence of oxygen (O₂), ammonia (NH₃) and nitric oxide (NO) or nitrogen dioxide (NO₂) react to form nitrogen and water.
 - 25-50% NO_x removal rate.

11

Straight Rotary Kiln



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Feasibility of SCR

- No SCR systems operating on lime kilns - **Not Achieved in Practice.**
- Kiln exhaust gas stream temperature has high degree of fluctuation.
- Without pre-heater, unit would need to be located prior to the kiln baghouse.
- In heavily dust laden environment fouling/clogging of the catalyst is certain to occur in a short time period.
- Deemed SCR to be technically infeasible.



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Feasibility of SNCR

- SNCR systems currently operating at Lhoist's Nelson Plant's preheater rotary kilns - **Achieved in Practice**
- Lhoist's Kiln 1-3 are straight rotary kilns, and Kiln 4 is a vertical kiln.
- SNCR is not a proven technology for non-preheater kilns since necessary exhaust gas temperature profiles are not available.
- Unreacted ammonia or urea could form ammonium bisulfite, a sticky compound, that can cause corrosion, fouling, & blockage within the preheater, ducting, baghouses & fans, causing excessive outages
- Pre-heater required to function downstream of the baghouses, adding significant cost to the system.
- Deemed SNCR to be technically infeasible.



14

SNCR - Cost Effectiveness Analysis

- Utilized data from cost estimates from SNCR installed on the pre-heater kilns at the Nelson Plant in AZ
- Analysis included capital cost, operating cost, and maintenance cost to retrofit Kilns 1 & 2 only
- Analysis did NOT include capital, operating, or maintenance cost for the installation of preheater systems.
- Applied the highest NOx reduction rate of 50%
- 5 year annual average NOx emissions from Kilns 1 & 2: 16 tons/year
- Potential NOx reductions: 8 tons/year
- \$25,843 total annual cost/yr + 8 tons/year reductions = \$58,000/ton NOx reductions
- CARB 2002 documented cost-effectiveness threshold range of \$5,000- \$18,000. Adjusted for inflation \$16,490 - \$30,600 in 2023 dollars
- \$58,000/ton exceeds cost effectiveness threshold of \$30,600/ton.
- Deemed SNCR not cost effective.



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Conclusions

- Kilns only operated on natural gas.
- Infrastructure for firing kilns on Recycled Light No. 6 Fuel Oil has been idled.
- Transition from No. 6 fuel oil between 1990-2010, in combination with reductions in production rates resulted in an annual NOx emission decrease of approximately 80-90%.
- CARB redesignated MBARD to attainment for the state 8-hour ozone standard in 2020.
- MBARD considers the fuel switch to natural gas as control alternative for the lime kilns.

A new rule to require BARCT on the non-preheater kilns at the Natividad Lime Plant is not feasible, achieved in practice or cost effective.



16

Recommendation

Provide comments on proposal of no further action to create a new rule due to Natividad's lime kilns being fueled by natural gas, and control technologies for non-preheater kilns not feasible, achieved in practice, or cost effective.



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Questions?



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EMISSION FACTOR COMPARISON

Pollutant	Emission Factor (lb NO _x /ton product)		
	Iverson Plant in Arizona Coal/Petroleum Coke	Natividad Plant Natural Gas	Natividad Plant Recycled Light No. 6 Fuel Oil ^a
NO _x	Kiln 1: 3.80 lb/ton Kiln 2: 2.61 lb/ton	Kiln 1: 0.65 lb/ton Kiln 2: 0.65 lb/ton Kiln 3: 0.63 lb/ton Kiln 4: 1.10 lb/ton ^b	Kiln 1: 2.72 lb/ton Kiln 2: 2.40 lb/ton Kiln 3: 3.59 lb/ton Kiln 4: NA ^c


^a Recycled light No. 6 Fuel Oil has not been used since 2010. Fuel oil delivery system's infrastructure is aged and inoperable.

^b Kiln 4 - Maximum theoretical value reported. This kiln operated in 35 years, value was not able to be adjusted for actual fuel usage and production data.

^c Kiln 4 is not permitted to fire on recycled light No. 6 fuel oil.



Air Monitoring Mid-Year Summary for 2023



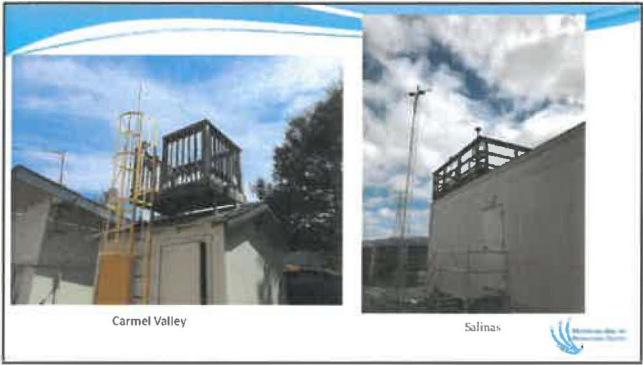
Shawn Boyle
Planning and Air Monitoring Supervisor

Advisory Committee Meeting
October 5, 2023

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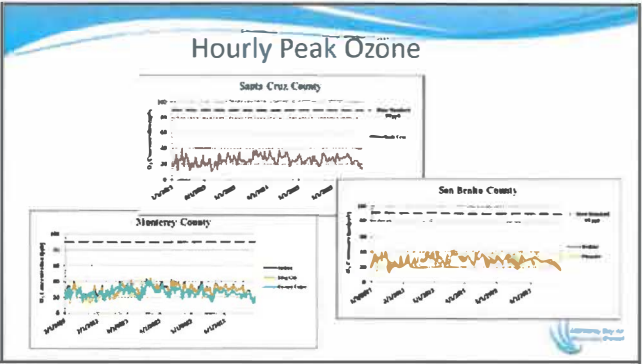


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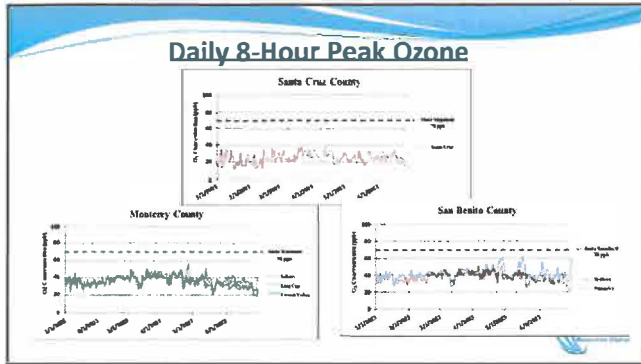
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Primary Concentration ³	Secondary Concentration ⁴	
Ozone	1 hour	0.090 ppm	---	---	
	8 hour	0.070 ppm	0.070 ppm	0.070 ppm	
PM _{2.5}	24 hour	---	35 µg/m ³	Same	
PM ₁₀	24 hour	50 µg/m ³	150 µg/m ³	Same	

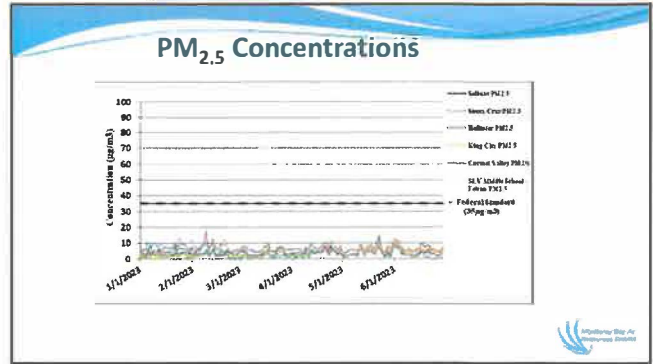
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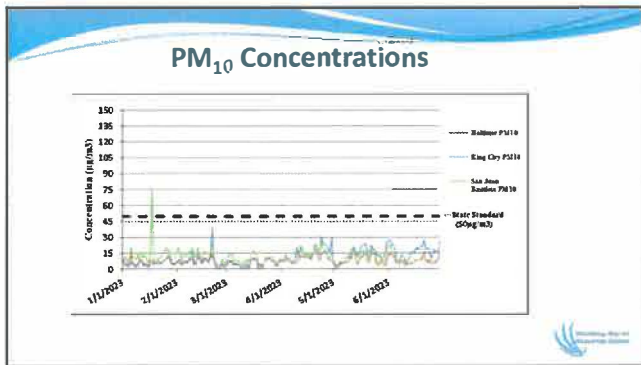
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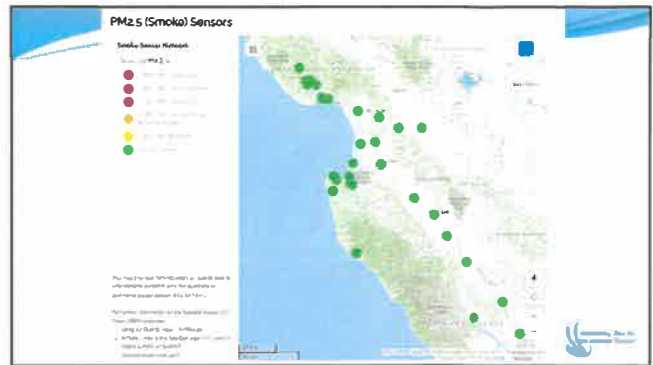
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Discussion and Questions...

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