



# **Bay Area Air Quality Management District Board of Directors Regular Meeting**

**April 20, 2016**

## **Wood Stove and Fireplace Replacement Incentive Program**

**Damian Breen  
Deputy Air Pollution Control Officer**

# Overview

- Background
- Program Status
- Proposed Program Implementation
- Proposed Timeline
- Recommendation



# Background

- During Winter, more than 30% of PM<sub>2.5</sub> is from wood burning.
- 1.4 million fireplaces and wood-burning devices in Bay Area
- October 21, 2015: Board adopted Regulation 6-3 Wood-burning Devices
  - ✓ Bans wood burning during Spare the Air Alerts
  - ✓ Limits excess visible smoke
  - ✓ Prohibits burning garbage
  - ✓ Restricts sale & installation of non-EPA certified wood-burning devices
  - ✓ Requires labeling on firewood and solid fuels sold
  - ✓ Adopts EPA standards for wood heaters
- September 2, 2015: Board approved \$3 million for Wood Stove and Fireplace Replacement Incentive Program (Program)

# Program Status

- August 2015: District conducted Request for Proposals process for contractor to administer the Program.
- November 2015: Public Hearing on Proposed Amendments to Regulation 6, Rule 3: Wood Burning Devices and Board provided direction to inform development of incentive program.
- February 17, 2016: Board authorized \$390,000 (13% of \$3 million) for administration and award of contract to Center for Sustainable Energy (CSE) to develop/implement program.
- During contract negotiations, the Air District determined that the CSE's proposal cannot be modified to meet a program launch date of August 2016 within the authorized budget.



# Proposed Program Implementation

- Contract with Trinity Technology Group (up to \$200,000) to build an Air District operated online application portal:
  - ✓ Trinity has assisted with the design, development, and testing of the Production System and online incentive systems
  - ✓ Trinity has a proven track record at the Air District, delivering projects on time and within the budget
- Utilize Air District staff to oversee the program:
  - ✓ Strategic Incentives Division
  - ✓ Communications and Community Engagement
  - ✓ Compliance and Enforcement

# Proposed Schedule

- March 16, 2016:  
Air District launched Program webpage.
  - ✓ ~90 residents to date have already signed up.
- May – July 2016:
  - ✓ Develop online system and test.
  - ✓ Develop outreach campaign and materials.
  - ✓ Train staff on program implementation.
- August 2016:  
Launch outreach campaign and begin accepting applications.
- Program is anticipated to run for 8 – 12 months.

# Recommendation

## **Recommend the Board of Directors:**

Authorize the Executive Officer/APCO to execute amendment to the contract with Trinity Technology Group in an amount not to exceed \$200,000, to develop software for the wood stove and fireplace incentive program.





AGENDA: 19

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# Proposed Amendments to Regulation 3: Fees

Board of Directors Regular Meeting  
April 20, 2016

**Jaime A. Williams**  
Director of Engineering





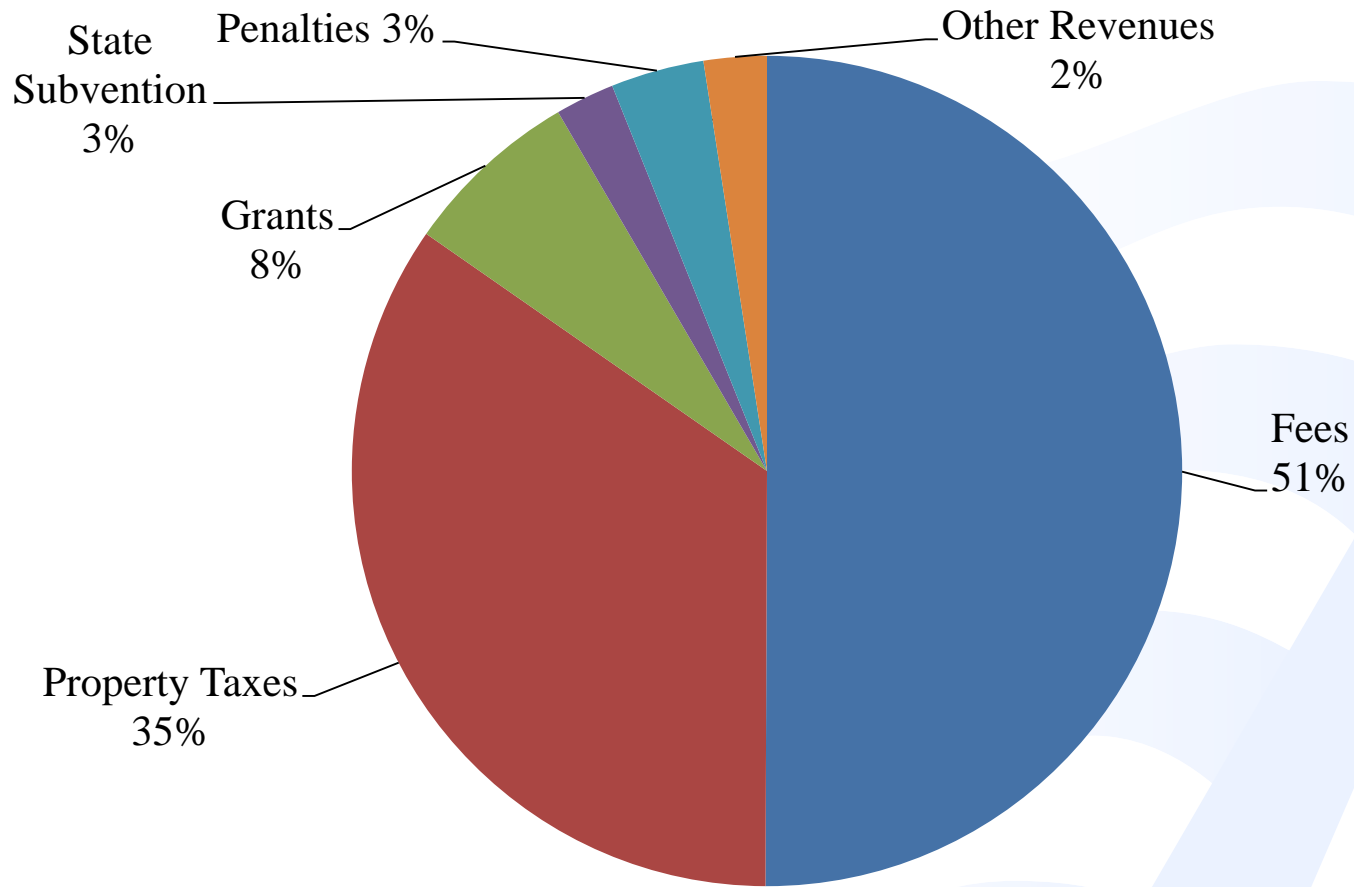
# Presentation Outline

1. Cost Recovery Background
2. Draft Fee Amendments
3. Public Comments Received
4. Rule Development Schedule





# Revenue Sources - FYE 2015





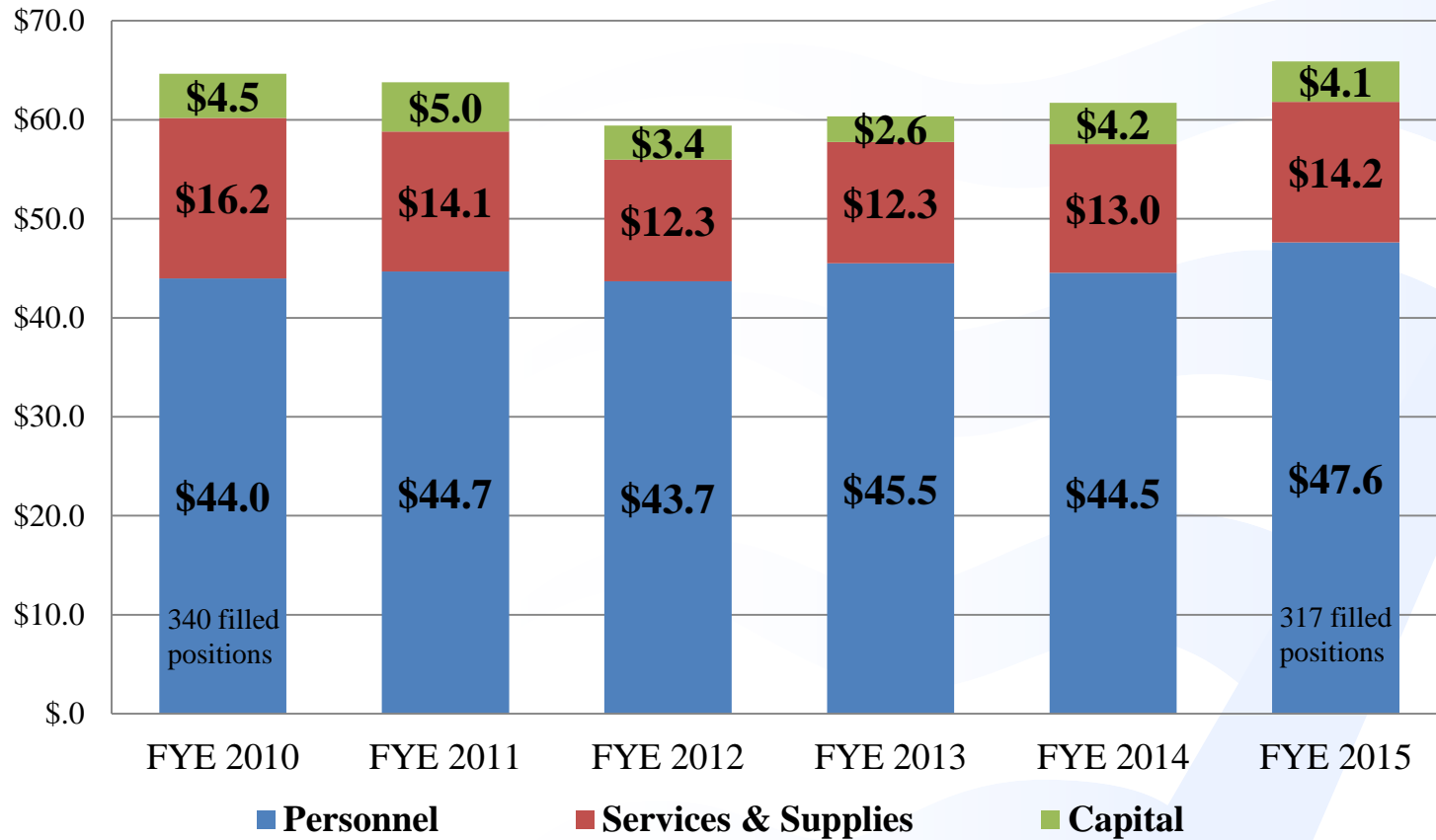
# Trends in Cost Recovery

- Sets goal of increasing cost recovery to **85%** over four years FYE 2013 through FYE 2016.
- Fee revenue falls short of overall full cost recovery
  - FYE 2011: Cost recovery = 65%
  - FYE 2012: Cost recovery = 75%
  - FYE 2013: Cost recovery = 80%
  - FYE 2014: Cost recovery = 80%
  - FYE 2015: Cost recovery = 83%
  - *FYE 2016: Cost recovery = 76% Projected*
- Cost recovery gap is filled by county tax revenue.



# Trends in Cost Containment

## Audited General Fund Expenditures (millions)





# Proposed Changes to Fee Schedules

Revenue from Fee Schedule	Change in Fees	Fee Schedules
<b>Exceeds 95% of costs</b>	2.2% increase (CPI-W)*	B, C, G-5, L, M, N, Q, U
<b>85% – 95% of costs</b>	7% increase	T
<b>75% – 84% of costs</b>	8% increase	F, G-3, P
<b>Less than 75% of costs</b>	9% increase	A, D, E, G-1, G-2, G-4, H, I, K, R, S, V

- The annual Consumer Price Index for Bay Area Urban Wage Earners and Clerical Workers (CPI-W) increased 2.2% from 2014 to 2015.

# Petroleum Refining Emissions Tracking Fees – Schedule W

## Proposed Schedule W

- Applies to the five Bay Area refineries and five support facilities
- To help recover the District's costs associated with proposed Regulation 12, Rule 15
- Emissions inventory and crude slate report evaluation & review
  - Refineries: \$54,000 initially and \$27,000 annually thereafter
  - Support Facilities: \$3,300 initially and \$1,650 annually thereafter
- Air monitoring plans
  - \$7,500 initially



# Major Facility Community Air Monitoring Fees

## New Schedule X

- Applies to major facilities emitting > 35 TPY criteria pollutants within the vicinity of District proposed community air monitor locations.
- To help recover the District's costs of the community air monitoring program.
- To start, the District is proposing community air monitor locations within the vicinities of each of the refineries.
- The fee is \$60.61 per ton of organic compounds, sulfur oxides, NO<sub>x</sub>, CO, and/or PM<sub>10</sub>.



# Other Proposed Amendments

## Section 3-302.3: Fees for Abatement Devices

- A maximum cap of \$10,000 is proposed for these applications.

## Section 3-304: Alterations

- For alteration applications, gasoline dispensing facilities will pay 1.75 times the filing fee (approximately \$800 total).

## Schedule T: Greenhouse Gas Fees

- Update the Global Warming Potential Values per the IPCC 5<sup>th</sup> Assessment Report
- Add several GHG compounds from ARB's most recent list of GHGs and that we currently track





# Impact on Large Facilities: Petroleum Refineries

	Annual % Permit Fee Increase (Fiscal Year Ending)					Current Permit Fee (in millions)
	2014	2015	2016	2017 Projected Without Schedule X	2017 Projected With Schedule X	
Chevron	3.4	12.1	9.3	7.2	14.7	\$2.90
Shell	1.2	12.4	5.8	7.6	15.0	\$2.51
Phillips 66	1.2	9.3	3.4	10.1	15.0	\$1.34
Valero	7.2	8.4	11.9	9.4	15.0	\$1.38
Tesoro	5.5	13.0	21.7	7.9	15.0	\$1.76



# Impact on Small Businesses

## ➤ Proposed FYE 2017 fee increases:

Facility Type	Facility Description	Fee Increase	Total Fee
Gas Station	10 multi-product gasoline nozzles	\$272	\$3,402
Dry Cleaner (permitted)	One machine: 1,400 lb/yr Perc emissions	\$42	\$627
Dry Cleaner (registered)	One machine: 800 lb/yr VOC emissions	\$17	\$206
Auto Body Shop	One spray booth: 400 gal/yr paint	\$42	\$576
Back-up Generator	One 365 hp engine	\$7	\$330





# Rule Development Schedule

- **February 18, 2016**
  - Public workshop
- **March 16, 2016**
  - Written comments due
- **March 23, 2016**
  - Budget & Finance Committee briefing
- **April 20, 2016**
  - Board of Directors first public hearing to receive testimony only
- **June 15, 2016**
  - Board of Directors second public hearing to consider adoption
- **July 1, 2016**
  - Proposed effective date of fee amendments







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**AGENDA: 20**

**Proposed  
Regulation 12, Rule 15:  
Petroleum Refining Emissions Tracking**

**Board of Directors Regular Meeting  
April 20, 2016**

**Greg Nudd  
Rule Development Manager**





# Overview

- Background and Purpose
- Rule Provisions
- Rule Changes
- Rule Development Process
- Responses to Comments
- Costs and Socio-Economic Impacts
- Environmental Impacts
- Recommendations



# Background

- On Dec. 15, 2015, the Board approved three regulations reducing refinery emissions by 14%, at a cost of less than 0.5% of estimated refinery profits.
- Regulation 12, Rule 15: Refinery Emission Tracking and Regulation 12, Rule 16: Refinery Emission Limits were delayed so that staff could address stakeholder comments.
- Regulation 9, Rule 14: Petroleum Coke calcining was also delayed so that staff could take steps to improve it's economic feasibility.
- Regulation 12, Rule 15 and Regulation 9, Rule 14 are being considered today.
- Regulation 12, Rule 16 will focus on greenhouse gas reductions and staff will present evaluations of options at the Stationary Source Committee meeting on June 1, 2016.



A scenic view of the Golden Gate Bridge in San Francisco, California, spanning across the water under a clear blue sky. The bridge's iconic orange-red towers and suspension cables are prominent. In the foreground, a building and some greenery are visible on the left side.

# Purpose

## **Regulation 12, Rule 15 was prompted by concern that:**

Changing crude slates (or other factors) may lead to an increasing air emission trend at refineries because:

- More energy is needed to refine heavier, more sour crudes.
- Sulfur or other contaminants, if not removed, could be emitted.
- Some new crude sources are more volatile, potentially causing additional emissions from leaks.





# Rule Provisions

The proposed rule will address these concerns by improving the Air District's understanding of refinery processes, and also increase public availability of emissions data through:

- Improved and expanded emissions inventories from five Bay Area refineries and five refinery Support Facilities based on standard Air District requirements.
- Review of composition and property data for crude oil and other feedstocks processed at each refinery.
- Expanded fence-line air monitoring at five refineries.







# Rule Changes

- PREP (historical baseline inventory) removed:
  - Not needed to support current rule requirements.
- Community monitoring requirement removed:
  - Air District will perform this monitoring.
- Energy utilization report requirement removed:
  - Staff will determine necessary information to collect as part of refinery GHG reduction rule development.
- Cargo carrier emissions estimates:
  - Air District will estimate emissions from cargo carriers in transit.
- Crude slate data:
  - Requires the refinery to make available summary crude slate data, rather than provide raw data about crude slates.





# Rule Development Process

- October 2012: District Board adopts “*Work Plan for Action Items Related to Accidental Releases from Industrial Facilities*”, including development of a Refinery Emissions Tracking Rule.
- March & April 2013: Initial draft Regulation 12-15 and workshop report released, and three public workshops held.
- July 2013: Air monitoring reports issued by DRI & expert panel.





# Rule Development Process (continued)

- 2013 & 2014: Stationary Source Committee updated three times; multiple meetings with stakeholders.
- March 2015: Four public workshops held.
- September 2015: Draft staff report and revised draft rule released.
- March 2016: Draft rule released after additional public comment.
- April 2016: Board of Directors Public Hearing



# Areas of Controversy

- Necessity and reasonableness of the proposed rule
- Adequacy of California Environmental Quality Act (CEQA) process
- Sufficiency of EPA requirements for fence-line monitoring
- Sufficiency of Air Resources Board greenhouse gas reporting requirements
- Adequacy of time allowed to prepare inventories, monitoring plans and to install new fence-line monitors
- Appropriate crude slate data to include







# Costs & Socio-Economic Impacts

- Regulation 12-15 would impose the following costs:
  - Capital and one-time costs for preparation of Air Monitoring Plans and installation of air fence-line monitors: **\$315,000 (annualized) for 10 years per refinery.**
  - Ongoing costs for inventories & crude reports, and operation & maintenance of air monitors: **\$140,000 per year per refinery.**
- Total cost for Regulation 12-15 and three refinery-related rules (6-5, 8-18 and 11-10) adopted in December 2015 are estimated to be less than 1% of profits for each refinery.
- The five Bay Area refineries employ over 5,000 people and are estimated to generate over \$2 billion in net profits each year.





# Environmental Impacts

**The implementation of Regulation 12, Rule 15 is not expected to have adverse environmental impacts.**



# Recommendations

- Approve CEQA Initial Study / Negative Declaration.
- Adopt proposed, new Regulation 12, Rule 15.
- Adopt Air Monitoring Guidance document.







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# Proposed Regulation 9, Rule 14: Petroleum Coke Calcining Operations

Board of Directors Regular Meeting  
April 20th, 2016

Greg Nudd  
Rule Development Manager







# Overview

- Petroleum Coke Calcining Process
- Proposed Rule
- Emissions and Estimated Emission Reductions
- Costs, Cost Effectiveness and Socioeconomic Impact of Rule
- Environmental Impact of Rule
- Rule Development Process
- Conclusions
- Recommendations

# Petroleum Coke Calcining Process



April 20, 2016  
Slide 3



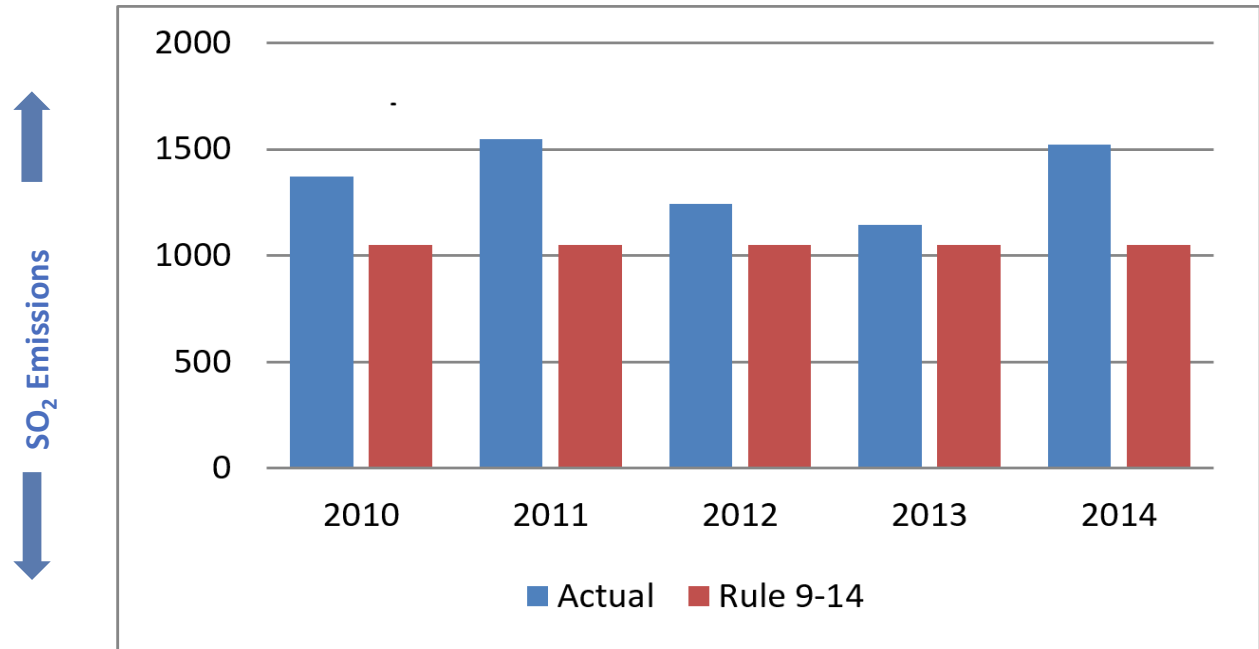
# Rule 9-14: Major Provisions

Rule Section	Description
§ 9-14-200	Creation of definitions for the new rule especially for the new standards, administrative requirements and monitoring requirements.
§ 9-14-301	Requires the Carbon Plant to meet an SO <sub>2</sub> emission limit of 320 pounds per hour for both kilns combined and to meet a combined annual emission limit of 1,050 tpy for both kilns.
§ 9-14-501	Emissions monitoring and recordkeeping requirements.
§ 9-14-502.1.1	Recordkeeping requirements for amount of sorbent used annually in each kiln.
§ 9-14-502.1.2	Requires the Carbon Plant to install a load cell on each kiln to measure the rate of sorbent injection on an hourly basis. Installation to be completed by January 1, 2019.
§ 9-14-601	Manual of Procedures requirements for the use of continuous emission monitors.



# SO<sub>2</sub> Emissions

	2010	2011	2012	2013	2014
Actual Emissions (TPY)	1372	1548	1242	1142	1519
Rule 9-14 Limit	1050	1050	1050	1050	1050



**3 – Year Average SO<sub>2</sub> Emissions = 1,479.8 TPY**

**Expected Yearly SO<sub>2</sub> Emission Reductions = 430 tons**

April 20, 2016

Slide 5





# Costs, Cost Effectiveness and Socioeconomic Impact

<b>Estimated Net Profits After Tax</b>	\$2M to \$6M
<b>Cost to comply with current version of rule</b>	\$1,870,000
<b>Cost to comply with original version of the rule</b>	\$2,380,000
<b>Cost Effectiveness</b>	\$4,300/ton of SO <sub>2</sub>



# Environmental Impact

- The implementation of Regulation 9, Rule 14 is not expected to have adverse environmental impacts.



# Rule Development Process

- Included as control measure in 2010 Clean Air Plan
- Several in-person meetings with Carbon Plant representatives from January 2014 through 2015
- Sep. 15-28, 2015: Open Houses in Martinez, Benicia and Richmond to gather public input.
- Staff conducted source tests and multiple sight visits to verify SO<sub>2</sub> emissions data and operational parameters
- February 25, 2016: Hearing package published for comments
- March 30, 2016 – April 18, 2016: Evaluated and responded to comments



# Conclusions

## Proposal:

- A step toward 20% reduction of refinery emissions
- Necessary to achieve and maintain ambient air quality standards
- Cost effective
- Addresses significant socioeconomic impact on the facility
- No significant environmental impacts





# Recommendations

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- Approve CEQA Initial Study / Negative Declaration
- Adopt proposed new, Regulation 9, Rule 14