



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**AGENDA: 14**



# **Update on Refinery Rulemaking**

**Eric Stevenson, Director  
Meteorology, Measurements and Rules  
July 20, 2016**

# Board Direction



Direction from June 15, 2016 Board of Directors meeting:

- Study all four options presented
- Move expeditiously to evaluate and present:
  - Staff proposal
  - CBE proposed numeric emissions caps
- Carefully consider rulemaking priorities



# Actions Taken

- Meetings with stakeholders
- ARB has proposed Cap and Trade amendments
  - Extend beyond 2020
  - Cap decline of 3.5% per year
  - Link with Ontario, Canada





# Proposed Approach

## **Expediently Evaluate:**

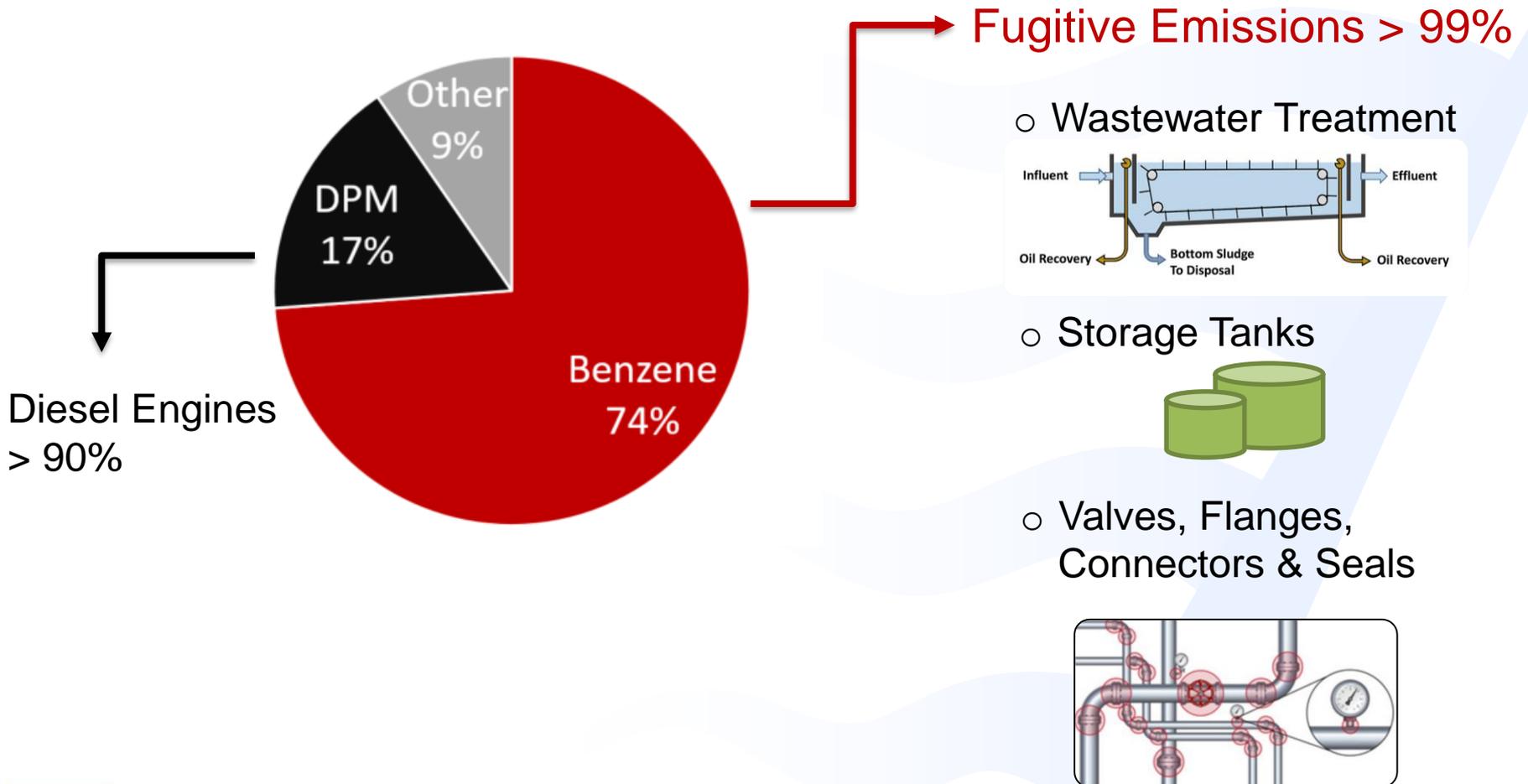
- Staff proposed toxic risk cap and reduction rule (Rule 11-18)
  - Addresses localized impacts from all Bay Area facilities
- CBE proposed numeric emissions caps at Bay Area refineries (Rule 12-16)
  - Caps greenhouse gases (GHG) and criteria pollutants

## **Evaluate other options within the Clean Air Plan**

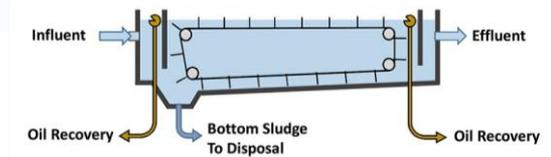


# Cancer Risk Drivers for Typical Large Refinery

Source: Preliminary HRA Findings



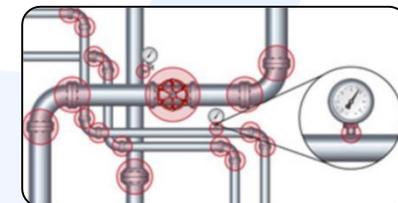
## ○ Wastewater Treatment



## ○ Storage Tanks

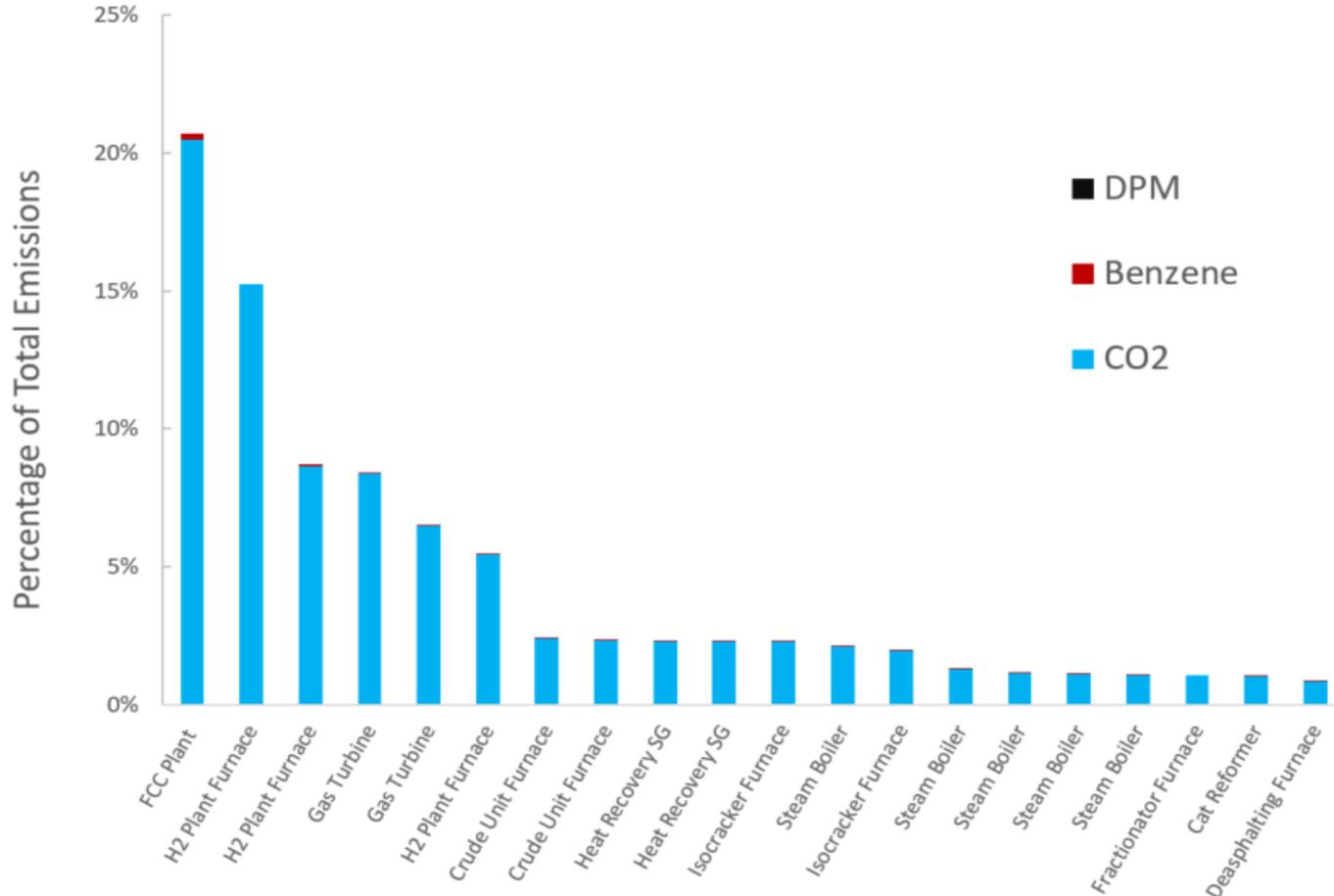


## ○ Valves, Flanges, Connectors & Seals



# Top Sources of GHG Emissions at Typical Large Refinery

Source: Air District Emissions Inventory, Year 2014



- 88% of CO<sub>2</sub> emissions
- 0.45% of Benzene emissions
- 0% of DPM emissions



# Why Focus on Toxic Risk?

- Best way to cap and reduce localized air toxics impacts
- Incorporate new, more health-protective OEHHA Guidance
- Will incorporate OEHHA risk factors for  $PM_{2.5}$  where available





# Staff Proposed Toxic Risks Cap

## Cap and reduce risk in two phases for all Bay Area facilities

### Phase 1:

Reduce Risk Action to 25 per million (25/M)

- » Reduce risk below 25/M or “TBARCT” on all significant sources throughout the facility

### Phase 2:

Risk Action further reduced to 10/M

- » Reduce risk below 10/M or “TBARCT” on all significant sources throughout the facility



# CBE Proposed Emissions Caps

- **Criteria Pollutants capped at 2011-2013 levels**
  - NO<sub>x</sub>, SO<sub>2</sub>, PM
  - Actuals + 7%
- **Climate Pollutants capped at 2011-2013 levels**
  - CO<sub>2</sub> & Methane
  - Actuals + 10,000 metric tons

NO<sub>x</sub> PM SO<sub>x</sub> GHGs





# Deliverables

- Toxics Risk Cap and Reduction Regulatory Language
- Emissions Cap Regulatory Language
- Staff Report
  - Emission Impact Analyses
  - Cost Impacts and Cost Effectiveness Analyses
  - Comparative Economic and Health Risk / Benefit Projections
- CEQA Comparative Environmental Impacts Analysis
- Socioeconomic Analyses



# Schedule

Milestones / Deliverables	Date
<b>Notice of Preparation Issued</b>	August 19, 2016
Draft Regulation and Workshop Report Released	October 15, 2016
Workshops Held	November 2016
CEQA NOP / Initial Study Comment Deadline	November 23, 2016
<b>NOP Comments Received and Initial Tasks completed</b>	December 2016
<b>Stationary Source Committee Update Meeting</b>	January 2017
<b>Board Hearing / CEQA EIR Review Process</b> Final Regulatory Language and Staff Report, Socioeconomic Analyses, CEQA Draft EIR released Comment deadline Public meetings held Public comments received and responded to <b>Board of Directors Meeting to Consider Adoption</b>	March 3, 2017 April 17, 2017 April 19, 2017 May 1, 2017 May 17, 2017



# Summary of Ozone Seasons

Year	National 8-Hour	State 1-Hour	State 8-Hour
2013*	3	3	3
2014*	5	3	10
2015*	5	4	11
2016	6	2	6

**Spare the Air Alerts: 6/2, 6/3, 6/4, 6/21, 6/28, 7/13, 7/14, 7/15**

**Days > 0.070 ppm 8-hour NAAQS: 6/2, 6/3, 6/4, 6/30, 7/14, 7/15**

\*Based on NAAQS of 0.075 ppm that was in place during those years