Air Issues & Regulations Committee

A Committee of the Bay Area Clean Water Agencies

Quarterly Meeting

September 27, 2017

Agenda

1. Introductions
2. BAAQMD Rule Updates
3. Statewide Updates
4. Upcoming Air Issues and Regulations
5. Member Updates (Lunch)
6. Tour: SVCW New Cogeneration and BioForceTech (Biodryer/Pyrolysis) Facilities
7. Upcoming Meetings

BAAQMD Rule Updates

- Proposed Regulation 11, Rule 18:
  Reduction of Risk from Air Toxic Emissions at Existing Facilities
- Regulation 2, Rule 2:
  Permits – New Source Review (GHGs) and impact of AB 398
- Regulation 9, Rule 2:
  Inorganic Gaseous Pollutants – Hydrogen Sulfide
- Regulation 6, Rule 1:
  Particulate Matter – General/Visible Emission Requirements

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Draft Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

- Purpose:
  Protect public from toxic air contaminants at existing facilities
- Sources at POTWs:
  - Process emissions
  - Engines and incineration
  - Standby generators (Generator only facilities exempt if RAL<250)
- Requires:
  - BAAQMD conduct Health Risk Assessments (30-day review)
  - Risk Reduction Plan development
  - Implementation of Risk Reduction Measures (5 years to implement)
  - Phased Implementation based on cancer prioritization number

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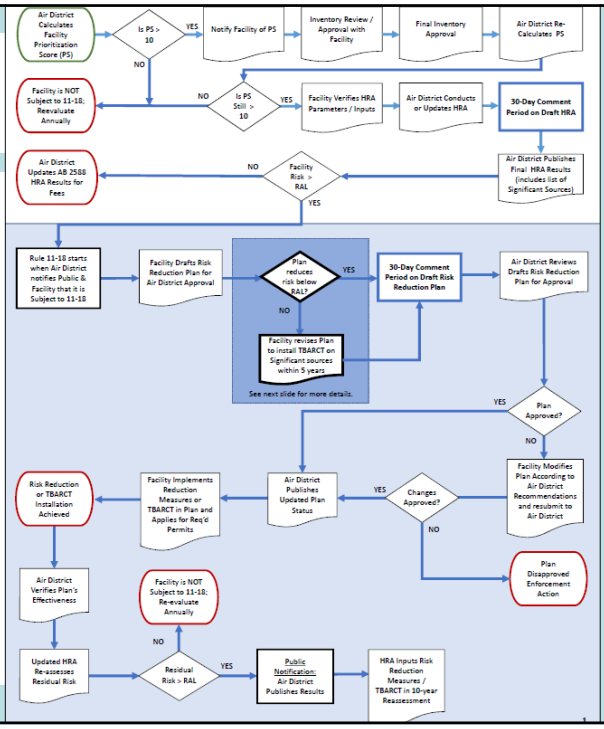
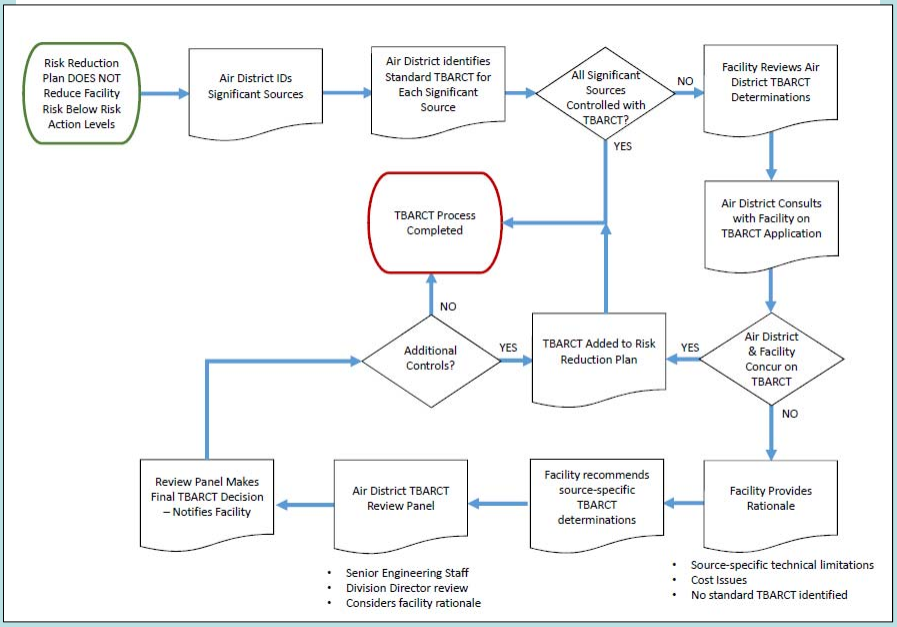
Rule 11-18 Process Flowchart



TBARCT Process Flowchart



Draft Rule 11-18: Risk Reduction from Air Toxic Emissions at Existing Facilities

- Currently working to update Prioritization Scores:
  - Collecting influent flow and concentration data
  - Collecting Proximity Adjustment Factor data

Plan to deliver to BAAQMD By September 29th

- Potential remaining actions/issues:
  - TBARCT determinations
  - Updating emissions factors through source tests (if needed)
  - Potential barrier to POTW projects that increase biogas production
- Rule adoption expected November

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BAAQMD Data Collection "Pilot Study"

- BAAQMD requested data from 11 POTWs (to build a database)
  - Emission source data – point vs area source, abatement device, etc.
  - Stack characteristics – exhaust flows, direction, temperature, etc.
- Data can be used for preliminary HRA
  - Intended to help BAAQMD identify best data management
  - Can be updated by facility
- Ongoing
  - Original submittal request by August 31

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Draft Rule 11-18: Comment Letter due October 16

- Working collaboratively with BAAQMD
- Reiterate concerns about:
  Cross media impacts, Cost effectiveness, and Planning horizons
- Red text has been deleted
  11-18-226 Toxic Risk Facility: Any facility that manufactures, formulates, uses, or releases any toxic air contaminant or any other substance that reacts to form a TAC or has the potential to release total organic gases, particulates, or oxides of nitrogen or sulfur in amounts of 10 tons per year or greater.

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Draft Rule 11-18: Comment Letter due October 16

- Highlighted text has been added
  11-18-406 Updated Risk Reduction Plan: If information becomes available after the initial APCO approval of a Plan regarding health risks posed by a facility or emissions reduction technologies that may be used by a facility that would significantly impact health risks to exposed persons or the feasibility of a Plan, the APCO may require or, upon request by a facility owner/operator and approval by the APCO, allow the facility owner/operator to update the Plan to reflect the information and resubmit the Plan to the APCO for approval pursuant to Section 11-18-403.

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Proposed Revisions to Rule 2-2: New Source Review

- Proposed decrease in GHG emissions threshold preempted by AB 398 (75,000 mt CO_2e/year)
- Regulation is silent on biogenic sources (i.e., biogas)
  - Biogenic vs. Anthropogenic CO_2 Emissions
    - EPA - large, fossil-fueled combustion units were found to be the principle cause for ''anyway sources''
  - GHG Emissions Reduction vs Exposure to Toxics
    - If GHG emissions from combustion of digester gas count toward the threshold, likely to trigger BACT
    - Cost of BACT & generation of formaldehyde threaten feasibility of diverting organics to POTWs as a methane reducing strategy

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AB 398: Cap-and-Trade bill signed

- Extends Cap-and-Trade program to 2030
- From 2021 to 2030, requires ARB to:
  - Establish a price ceiling on GHG emission allowances
  - Add conditions governing the management and allocation of allowances
  - Reduce limits on compliance offsets
  - Update the scoping plan (by January 1, 2018)
  - Designate the regulation as the GHG emission reduction rule for petroleum refineries and oil and gas production facilities
  - **Prohibit an air district** from adopting or implementing an emission reduction rule for carbon dioxide from stationary sources that are also subject to the cap-and-trade regulation

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AB 398: Cap-and-Trade bill signed

- Establishes priorities for expenditure of cap-and-trade auction revenue through 2030:
  1. Air toxic and criteria air pollutants from stationary and mobile sources
  2. Low- and zero-carbon transportation alternatives
  3. Sustainable agricultural practices that promote the transitions to clean technology, water efficiency, and improved air quality
  4. Healthy forests and urban greening
  5. Short-lived climate pollutants
  6. Climate adaptation and resiliency
  7. Climate and clean energy research

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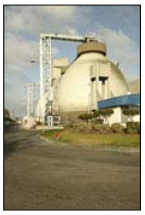
Rule 9-2: Inorganic Gaseous Pollutants - Hydrogen Sulfide

- Prohibits H_2S emissions that result in ground level concentrations > 0.06 ppm averaged over 3 minutes OR 0.03 ppm averaged over 60 minutes
- Including source emission concentrations in permit conditions, based on modeling results
- Currently impacting Authority to Construct (ATC) permits for new projects



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Amendments to Rule 6-1: Particulate Matter

Total Suspended Particulates (TSP) Rule includes PM_{10} & $PM_{2.5}$

Proposed changes:

- Continue exemption for process heaters / boilers
  - Combustion is a significant source, but no technology to prevent or control
- Limits apply to sources with significant TSP emissions (> 6 lbs per day) - **Most WWTP sources emit <6 lbs per day**
- Tighten general PM emissions limits
  - Concentration & mass limits to match most stringent req't in CA
  - Translation of TSP to PM_{10} and/or $PM_{2.5}$ requirements is dependent on the specific solids
- Specify test methods
- Require periodic compliance testing

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Statewide Updates

- SB 1383 Regulation: Statewide Methane Reduction, Organic Waste Diversion, & Biogas Production
- AB 617: Non-Vehicular Air Pollution - Criteria Air Pollutants and Toxic Air Contaminants

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SB 1383: SLCP Reduction Strategy Implementation

- Methane Reduction:
  - 40% by 2030 (relative to 2013)

- Organics Diversion from Landfills:
  - 50% by 2020 (relative to 2014)
  - 75% by 2025 (relative to 2014)
- Increase in Production/Use of Biogas:
  - State agencies to consider/adopt policies and incentives
  - CEC to incorporate in the 2017 Integrated Energy Policy Report
  - CPUC to consider policies in support of in-State biogas production/use
- Formal rule development begins Oct 30th
- Rule becomes effective in 2022

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AB 617: Non-vehicular air pollution (criteria air pollutants/toxic air contaminants)

- Requires ARB to:
  - Develop statewide system to annually report emissions of CAPs & TACs (in consultation with air districts, OEHHA, EJ, etc.)
  - Make data available online for GHGs, CAPs, & TACs
  - By October 1, 2018:
    - Prepare monitoring plan for CAPs & TACs
    - Identify needs/benefits of additional community air monitoring systems
    - Prepare strategy to reduce TACs & CAPs (update every 5 years)
  - By July 1, 2019:
    - Air districts deploy monitoring systems to priority communities/locations (evaluated annually)
    - Air district to adopt community emissions reduction programs w/in one year
    - Expedited schedule for nonattainment locations (no later than Dec 31, 2023)

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AB 617: Non-vehicular air pollution (criteria air pollutants & toxic air contaminants)

- Requires ARB to:
  - Establish/maintain a statewide clearinghouse of best available control technologies (BACT) and best available retrofit control technologies (BARCT) for CAPs and TACs
- Authorizes Air Districts to:
  - Establish their own BARCT
  - Implement and enforce community emissions reduction programs

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Upcoming Air Issues and Regulations: BAAQMD 2017 Clean Air Plan

- Key Priorities:
  - Reduce Criteria Air Pollutants and Toxic Air Contaminants
  - Reduce Emission of Super-GHGs
  - Reduce Demand for Fossil Fuels
  - Decarbonize the Energy System
- Control Strategies (see handout)
  - Stationary Sources: Rule 11-18, Biogas Flares
  - Waste & Super-GHGs: Organics Diversion
  - Natural & Working Lands: Carbon Sequestration
  - Water: Promoting biogas recovery
  - Further Studies: Lower ICE NOx, Investigate POTWs

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Implementation Timeline

CM #	2017 Control Measures
SS 15	Natural Gas Processing and Distribution *[CPUC Leak Abatement Program Phase I; June, 2017]*
SS 16	Basin-Wide Methane Strategy *[Implementation planning]*

CM #	2018 Control Measures
SS 16	General Methane Mega-leak Prohibition (Rule 13-2)
SS 13	Oil and Gas (Rule 8-37)
WA 2	Composting Operations

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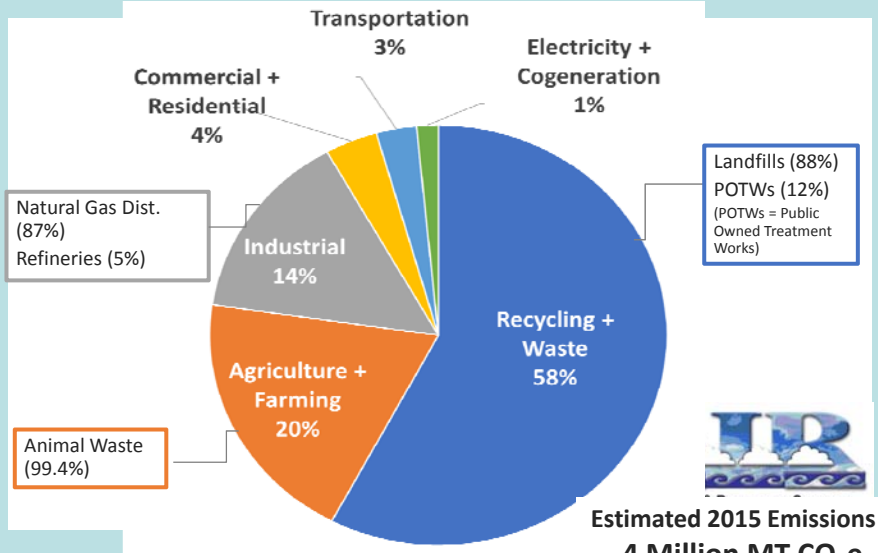
Invited as member of BAAQMD Methane Expert Panel

Methane in the Bay Area
Current Inventory



Estimated 2015 Emissions = 4 Million MT CO_2e

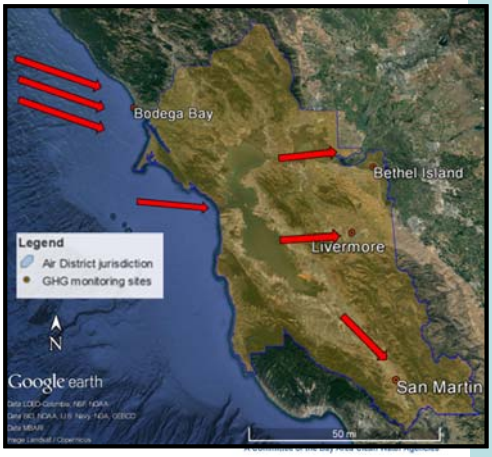
Methane Research Efforts
Led by the Air District

Track long-term regional patterns of GHG concentrations

Fixed-site GHG monitoring network

- Four monitoring sites
- Measure CO_2, CH_4, CO & H_2O
- Data available through Air District's webpage:

http://www.baaqmd.gov/ghgdata



Methane Research Efforts
Led by the Air District

Identify emission 'hotspots', perform source attribution, and improve the emissions inventory

GHG Research Van

- Fast measurements of CO_2, CH_4, & N_2O
- Source apportionment using chemical tracers
- Currently conducting preliminary leak surveys
  - fine-tune equipment
  - refine source attribution and data collection methodologies

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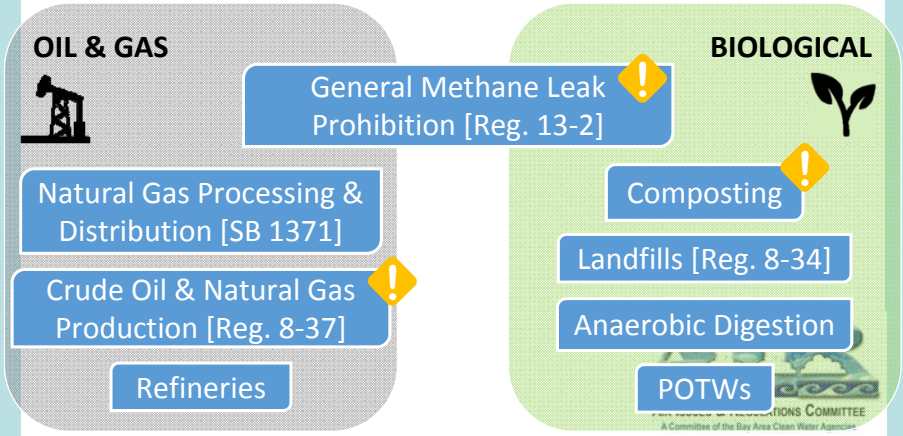
Basin-Wide Methane Strategy
Regulatory Efforts

METHANE RULE DEVELOPMENT MAP



Regulation 13, Rule 2: General Methane Leak Prohibition

Establish limit for methane leaks across *all* Bay Area sources

Background

- Aliso Canyon leak released ~2.4MMTCO$_2$e during 2015-2016
- Air District Rule 8-2 prohibits large leaks of organic emissions (15 lbs/day) throughout District *but exempts natural gas*

Purpose

- To allow Air District to take prompt action in case of large leaks
- To serve as a **backstop** while source-specific rules are adopted

How will it work?

- Operators will need to fix leaks > 10,000 ppm and 10 lb/hr

What do POTWs consider a "large" leak?

New Rule: Composting Operations

Control methane and VOC emissions from composting (WA 2)

Background

- State goal of 75% waste diversion by 2020 is increasing composting, etc.
- Increase in odor complaints from facilities handling organic waste

Facilities

Composting operations (both stand-alone and at landfills)

Wood chipping & grinding facilities

Organic waste handling (e.g., material stockpiling)

How will it work?

- Implement BMPs for smaller operations
- Emissions control equipment for larger operations

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LUNCH & MEMBER UPDATES

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Upcoming AIR Committee Meetings

- 2017
  - November 29th – Location/Tour TBD
- 2018
  - March 21st – Location/Tour TBD
  - June 6th – BAAQMD Office

- **JOIN US FOR THE TOUR!**

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THANK YOU!

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