



# EQUATE WORKING GROUP #3

EMISSIONS QUANTIFICATION AND TESTING EEVALUATION

FEBRUARY 13, 2020

## Purpose of Today's Meeting

- Summarize the Source Test Tracking System Plan
- Discuss Considerations for Comments Received in Previous WGMs
- Provide Status of Statewide Efforts for Default Emission Factors
- Discuss Toxic Default Emission Factors Used for AER
- Discuss Potential Recommendations for Updates & Next Steps

## SOURCE TEST TRACKING SYSTEM PLAN

- Working Group recommendations presented to Governing Board at November 15 2019 Stationary Source Committee
  - Committee agreed with recommendation for electronic portal and tracking systems
- Staff will develop portal and tracking systems while proceeding with EQUATE Part 2
- An informal subgroup may be created for input on portal and tracking system once it is initially drafted
- Query Working Group for interest in participation in subgroup

## COMMENTS FOR CONSIDERATION RECEIVED IN 1<sup>ST</sup> AND 2<sup>ND</sup> WORKING GROUP MEETING

1. South Coast AQMD should consider working with refineries to develop source test and emission factors
2. Request that in-house data be pooled as default emission factors for small business
3. Develop policy when adding toxic compounds for reporting purposes
4. Define specific toxics by industry sector that need to be reported/tested
5. Other CARB and CAPCOA emission factor development and linkage to South Coast AQMD efforts

## DEVELOP REFINERY DEFAULT EMISSION FACTORS WITH INDUSTRY

- South Coast AQMD can work with petroleum refining representatives regarding development of default toxic emission factors
  - Would be specific to petroleum refining in the South Coast jurisdiction
  - CARB participation required if establishing for statewide defaults
  - Need to evaluate resources and any related costs (i.e., testing)

## USE POOLED SOURCE TEST RESULTS TO DEVELOP DEFAULT EMISSION FACTORS FOR SMALL BUSINESSES

- South Coast AQMD can review what source testing data is currently available for small businesses in its jurisdiction
- Will need to develop criteria for parameters such as:
  - Representative facilities
  - Minimum number of source tests results needed
  - Qualifying source test methods
  - Qualifying material usage
- South Coast has also reached out to CARB to participate in efforts to pool a larger set of source test data for small businesses statewide
- Consideration of resource constraints given existing workload

## DEVELOP POLICY WHEN ADDING TOXIC COMPOUNDS FOR REPORTING PURPOSES

- Toxic compounds will be added per CARB's CTR Regulation so policies would be more appropriately developed by CARB
- CARB is also in the process of updates to the Toxics Hot Spots Emission Inventory Criteria and Guidelines (EICG)
  - This amendment will update current list of toxic in addition to other supplementary documents
- Will work with CARB for joint outreach and development of guidance documents regarding policies for adding toxic compounds for both the CTR and AB 2588 program

## DEFINE SPECIFIC TOXICS NECESSARY FOR REPORTING BY INDUSTRY SECTOR

- South Coast AQMD has requested that CARB include in its Criteria and Toxics Reporting (CTR) Regulation a list of expected toxics for all sector phases listed in Appendix A, Table A-3
  - List to be consistent with updated EICG
- CARB's goal is to update main toxics expected for larger sectors (e.g., petroleum refining, electrical generation) by 4<sup>th</sup> quarter of 2020
  - CARB will then focus on main toxics expected for Phase I sectors (reporting 2021 data year)

# CARB AND CAPCOA EMISSION FACTOR DEVELOPMENT LINK WITH SOUTH COAST AQMD EFFORTS

- Three statewide efforts for developing guidelines for emissions calculations and a repository of available default emission factors
  1. **AB617 (CTR) Uniform Reporting Guidelines** – (per sector) a description of sources, expected criteria and toxic pollutants, and methodologies for what kind of data should be used for emissions calculation
  2. **Statewide BACT/BARCT Clearinghouse** – Develop statewide database of all existing rules, rule limits and BACT determinations and create portal for air district updates
  3. **TARMAC Emission Factor Clearinghouse** – repository for toxic emission factors used by local air districts
- Guidelines developed under effort #1 will be applicable statewide, however, defer to local air districts if more stringent or if there are nuances for a given sector
- Emission factors updated or developed through EQUATE will be provided in efforts #2 and #3 above
- Public process pending



# STATEWIDE EFFORTS FOR DEFAULT EMISSION FACTORS

	<b>AB617 (CTR) Uniform Reporting Guidelines</b>	<b>Statewide BACT/BARCT Clearinghouse</b>	<b>TARMAC Emission Factor Clearinghouse</b>	<b>Rule 301 – Review of Default Emission Factor</b>
<b>Agency</b>	CARB w/ CAPCOA	CARB w/ Air Districts	CAPCOA (TARMAC)	South Coast AQMD
<b>Direction</b>	CARB CTR (Article 2)	AB 617 (H&S Code Section 40920.8(a))	CAPCOA Board Goals	R301 Resolution (July 2019)
<b>Objective</b>	Establish uniform methods to report emissions for facility operators statewide	Identify BACT/BARCT for criteria and toxic pollutants	Provide central lookup for default toxic emission factors used by multiple air districts by equipment type	Initiate review of default emission factors used for emissions reporting; update guidelines as appropriate
<b>Status</b>	Drafting guidelines for landfills, refineries, and electric generating facilities	Ongoing development	Developing database/spreadsheet content and design	1 <sup>st</sup> meeting February 2020; report status to stationary source committee in June 2020

# AER DEFAULT TOXIC EMISSION FACTORS FOR COMBUSTION EQUIPMENT

- Default toxic emission factors (benzene, formaldehyde, PAHs, metals, etc.) available for following internal and external combustion equipment
  - Equipment: afterburners, boilers, dryers, furnaces, heaters, ic engines, non-refinery flares, ovens, turbines
  - Fuels: butane, diesel/distillate oil, digester gas, gasoline, jet fuel, landfill gas, lpg, natural gas, propane
- Sources for emissions factors are:
  - AP-42
  - CARB Speciation Profiles
  - EPA's Development and Selection of Ammonia Emission Factors
  - South Coast AQMD BACT Guidelines and Rule Limits
  - Ventura County APCD
  - AB 2588 Guidelines

# AER DEFAULT TOXIC EMISSION FACTORS FOR SELECT INDUSTRIAL PROCESSES

- 15 guidelines available on how to calculate emissions for select industries/processes
  - Mostly criteria air pollutants
  - 3 guidelines provide toxic default emissions factors

	Toxic Pollutant	Source of Default Emission Factor
<i>Emissions from Polyester Resin Operations</i>	Styrene	• EPA AP 42
	Methyl Ethyl Ketone	
	Methyl Methacrylate	
<i>Liquid Organic Storage Tanks (Service Stations)</i>	Benzene	• South Coast AQMD Risk Assessment Procedures for Rules 1401, 1401.1, and 212
	Ethylbenzene	
	Naphthalene	
<i>Plating Emissions</i>	Hexavalent Chromium	• South Coast AQMD Permitting Evaluation
	Nickel	
	Cadmium	

# POTENTIAL RECOMMENDATIONS FOR UPDATES TO AER DEFAULT TOXIC EMISSION FACTORS

- Currently, most all toxic default emission factors used are those found in:
  - U.S. EPA Guidance Documents (AP 42)
  - CARB Speciation Profiles
  - Air District (South Coast and Ventura) Source Tests, Rule Limits and Permit Evaluations
  - AB 2588 Guidelines
  - BACT Guidelines
- Potential methods to establish or update toxic default emission factors:
  - Research of other studies by academia or other literature
  - Pooled Source Tests
  - Joint Source Testing with CARB/Air Districts/Trade Groups
  - Others?
- Discussion/feedback

# CONTACTS

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