

# PQAO UPDATES

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Michael Miguel, CARB

and

Andrea McStocker, CARB

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# PQAO Updates

## Technical System Audit Updates

- ❖ 2018 EPA findings
- ❖ CARB TSAs
- ❖ New questionnaire

## Major Accomplishments

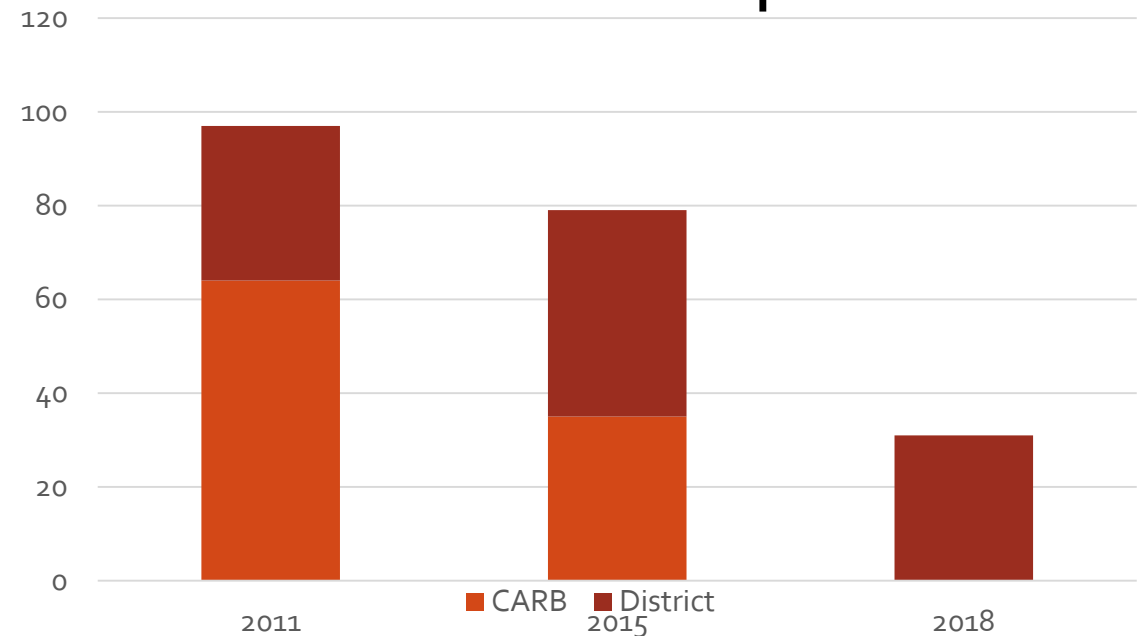
- ❖ CARB QMP, gaseous and PM QAPP updates
- ❖ 2017 DQ Report highlights

## Monitoring Roles and Responsibilities

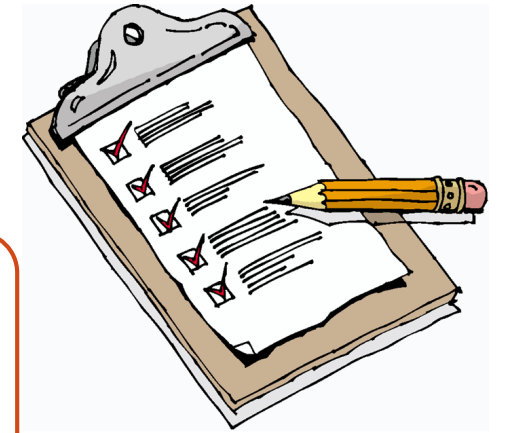
## CARB QA Webpage Tour

# 2018 EPA TSA Findings

- Zero, span, and 1pt QC checks for ozone
  - Range and frequency
- Verifications or calibrations of the shelter temperature probes
- Use of the CAN process
- Change of culture
- Training



# CARB TSAs



- 5 TSAs performed 2017-2018 – average of 14 findings

- Common findings

- 2019 - Northern Sonoma and Mendocino

# EPA TSA Questionnaire Update

Improved flow and formatting

Topics grouped together

Reflect current regulations & guidance

## 1) General

Monitoring Organization/Agency/PQAO audited : \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, and Zip Code: \_\_\_\_\_  
 Date of Technical Systems Audit: \_\_\_\_\_

### a) Key Individuals:

Title	Name

**\*Attach an Organizational Chart** (use Attachment tab or send separately )

*Key position staffing. Number of personnel available to each of the following program areas:*

Program Area	Number of People (Primary)	Number of People (Backup)	Vacancies
Network Management (site setup, siting, ANP, etc.)			
Field Operation (QC checks, site visits, site maintenance, etc.)			
Quality management (audits, QA documentation, certifications etc.)			
Data and Data Management (data review, validation and acquisition system, AQS, etc.)			
Technical support (equipment repair and maintenance)			

**Comment below on the need for additional personnel, if applicable:**

Enter text here.

### b) Facilities

Identify the principal facilities where the agency conducts work that is related to air monitoring. Do not include monitoring stations but do include facilities where work is performed by contractors or other organizations.

Ambient Air Monitoring Function	Facility Location	Comment on any significant changes to be implemented within the next one to two years.
Instrument repair		
Certification of Standards (e.g. gases, flow transfers, MFCs)		
PM filter weighing		
Pb analysis		
Data verification and processing		
General office space		

1) General

# Updated Quality Management Documents



Quality Assurance Manual

Volume I  
Quality Management Plan  
for Ambient Air Monitoring

Revision 1.0

March 6, 2019



Quality Assurance Program Plan  
For Particulate Matter Pollutant  
Air Monitoring Program

March 2019

California Air Resources Board  
QAPP for Gaseous Pollutant Air Monitoring Program  
Revision #0; September 2018



Quality Assurance Program Plan  
For Gaseous Pollutant  
Air Monitoring Program

September 2018

QMP

Particulate  
Matter QAPP

Gaseous  
QAPP

# Gaseous QAPP Significant Updates

## SUB-SECTION B5 – Quality Control

- ❖ Gaseous 1-point QC - updated (Table B.2) to reflect EPA HB Vol II Critical Criteria.

Ozone	<± 7.1% difference
Carbon Monoxide	<± 10.1% difference
Sulfur Dioxide	<± 10.1% difference
Nitrogen Dioxide	<± 15.1% difference

## SUB-SECTION B6 – Calibration

- ❖ Calibration Criteria (Table B.4) –

All points <± 2.1% or range ( $\leq \pm 1.5$  ppb O<sub>3</sub>, SO<sub>2</sub>, NO<sub>2</sub>;  $\leq \pm 0.030$  ppm CO) difference of best fit straight line, whichever is greater, and slope  $1 \pm .05$ . More stringent criteria may be applied.

# QAPP Sub-Sections with Expected Deviations

	Group A - Project Management		Group B - Data Generation and Acquisition		Group C - Data Validation and Verification
A1	Title and Approval Sheet	B1	Sampling Process Design (Experimental Design)	C1	Data Review, Verification, and Validation
A2	Table of Contents	B2	Sampling Methods	C2	Verification and Validation Methods
A3	Distribution List	B3	Sample Handling and Custody		
A4	Project/Task Organization	B4	Analytical Methods		Group D - Assessment, Oversight, and Usability
A5	Problem Definition and Background	B5	Quality Control	D1	Assessment and Response Actions
A6	Project/Task Description	B6	Instrument/Equipment Calibration and Frequency	D2	Reports to Management
A7	Quality Objectives and Criteria	B7	Instrument/Equipment Testing, Inspection, and Maintenance	D3	Reconciliation with User Requirements
A8	Special Training/Certifications	B8	Instrument/Acceptance of Supplies and Consumables		
A9	Documentation and Records	B9	Data Management		
		B10	Non-Direct Measurements		



# 2017 Data Quality Report Highlights

> 95% data capture rate

The reporting of flow rate verifications for PM<sub>2.5</sub> has increased from 75% to 97%

PM Collocation requirements were met



Number of site specific data-related issues increased from 2016 (from 40 to 70)



2017  
Annual Data Quality Report

Monitoring and Laboratory Division  
Quality Management Branch

# Monitoring Roles and Responsibilities



Consistent and reliable field operations



Coordinate all site changes



Participate in CAPCOA Monitoring Committee meetings



Review data in AQS on a quarterly basis

# CARB QA Webpage Tour

Liaison contact  
information

Quality  
management  
document  
repository

QAPP and SOP  
checklists

Data corrective  
action process

Training resources