

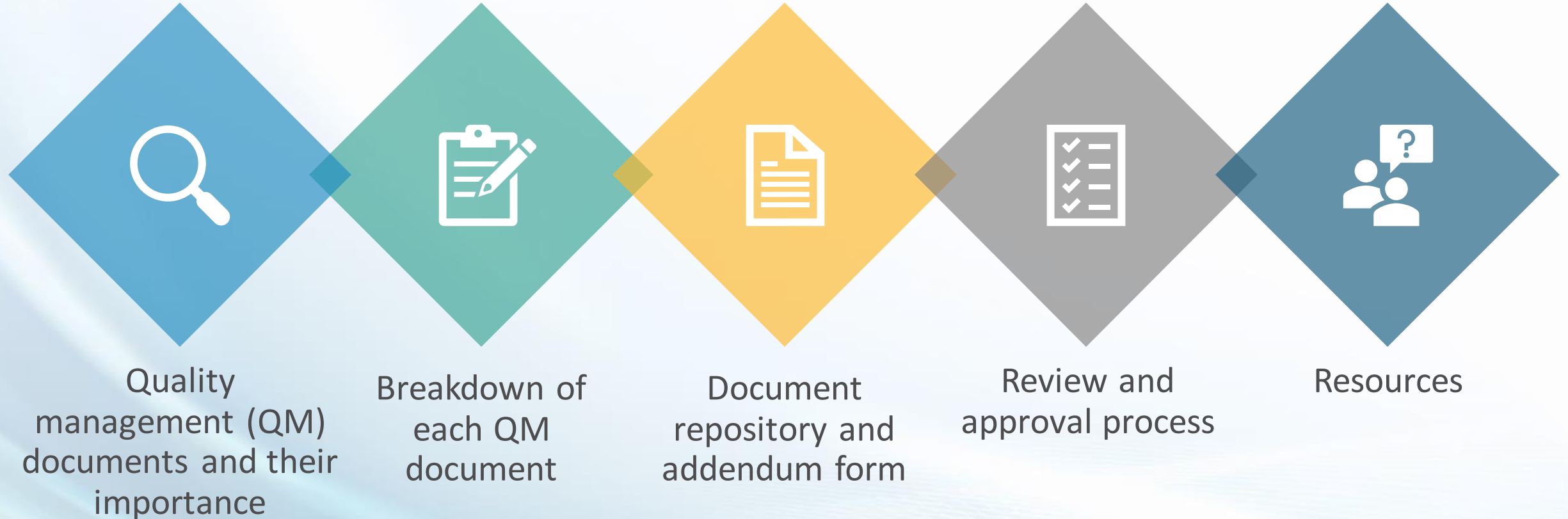


Quality Management Documents

Grace Tuazon, California Air Resources Board

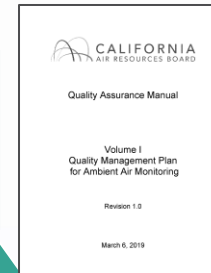
2024 PQAQO Training, February 27-28, 2024

Presentation Overview

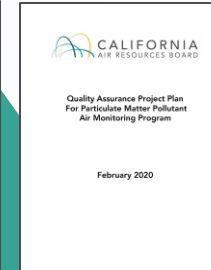


Quality Management (QM) Documents

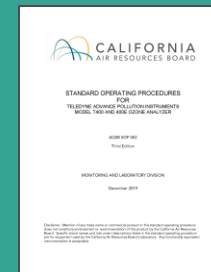
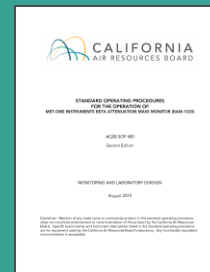
Quality Management Plan (QMP)



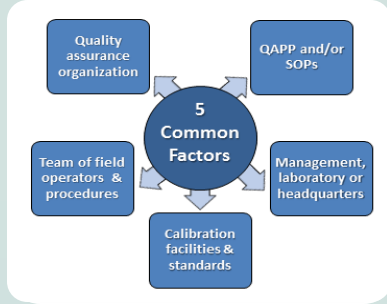
Quality Assurance Project Plan (QAPP)



Standard Operating Procedures (SOP)



QM Document Importance



Laws and regulations

PQAO common factor (consistency)

Data defensibility

Technical Systems Audit (TSA)

Training

Quality Management Plan (QMP)

Documents how an organization will:

plan, implement, and assess the effectiveness of its quality assurance (QA) and quality control (QC) operations.

Describes how an organization structures its:

- quality program,
- quality policies and procedures,
- areas of application,
- and roles, responsibilities, and authorities.

QMP continued

Origins

- Title 40, CFR, Part 58, Appendix A, Section 2.1

Tips/Resources for Development

- Addendum recommended, or can write your own
- CARB Checklist
- U.S. EPA Requirements (QA/R-2) and Standard

Frequency

- Every 5 years, or sooner

Quality Assurance Project Plan (QAPP)

Documents the:

- planning,
- implementation,
- and assessment procedures for a particular project, as well as any specific QA/QC activities.

Integrates:

all the technical and quality aspects of the project to provide a "blueprint" for obtaining the type and quality of environmental information needed for a specific decision or use.

QAPP continued

Origins

- Title 40, CFR, Part 58, Appendix A, Section 2.1

Tips/Resources for Development

- Addendum recommended, or can write your own
- U.S. EPA Example Checklist
- U.S. EPA Guidance (QA-G5), Requirements (QA-R5), and Standard

Frequency

- Every 5 years, or sooner

Standard Operating Procedures (SOP)

Describes in great detail:

the routine procedures to be followed for a specific

- operation,
- analysis,
- or action.

Ensures:

- conformance with organizational practices,
- reduced work effort,
- reduction in error occurrences,
- and improved data comparability, credibility, and defensibility.

SOP continued

Origins

- 40 CFR, Part 58, Appendix A, Section 2.1.2

Tips/Resources for Development

- Addendum or can write your own
- CARB Checklist
- U.S. EPA Guidance (QA-G6)
- Instrument manual

Frequency

- Every 3 years, or sooner

CARB Document Repository

The screenshot shows the CARB website's Quality Assurance section. A yellow arrow on the left points to the 'QM Document Repository' link in the left-hand navigation menu. Another yellow arrow on the right points to the 'Quality Management Document Repository' tile in the bottom section of the page. The page content includes a header with the CARB logo and navigation links, a main heading for 'Quality Assurance', a descriptive paragraph about the program, a 'PQAO Liaisons' section with a 'CONTACT US' button, and a grid of three tiles: 'Quality Assurance Manual', 'Quality Management Document Repository', and 'PQAO Training Resources'. The browser's address bar shows the URL: https://ww2.arb.ca.gov/our-work/programs/quality-assurance.

CARB Addendum Form

State of California
California Environmental Protection Agency
Air Resources Board
MLD/QMS-066 (NEW 4/14)

QUALITY MANAGEMENT DOCUMENT ADDENDUM

(District completes Sections 1 through 6 -- please type)

Section 1. ARB Document
<input type="checkbox"/> Quality Management Plan (QMP)
<input type="checkbox"/> Quality Assurance Project Plan (QAPP)
<input type="checkbox"/> Standard Operating Procedure (SOP)

Section 2. District Information	
District Name:	
District Address:	
District Contact Name/Phone Number:	
District Signature/Date:	

Section 3. Document Title <i>(specify exact title, revision #, and date of ARB Document(s) that your District proposes to modify)</i>	Date

Section 4. Proposed Deviation(s) <i>(specify exact section(s), page number(s) and language in existing ARB document that your District proposes to modify and then specify proposed modification (including any spreadsheets or forms).)</i>

Section 4. Proposed Deviation(s)
(specify exact section(s), page number(s) and language in existing ARB document that your District proposes to modify and then specify proposed modification (including any spreadsheets or forms).)

State of California
California Environmental Protection Agency
Air Resources Board
MLD/QMS-066 (NEW 4/14)

Section 5. Justification for Deviation(s) <i>(provide explanation of why modification(s) to existing ARB document is necessary)</i>

Section 5. Justification for Deviation(s)
(provide explanation of why modification(s) to existing ARB document is necessary)

Section 6. Attachment(s) <input type="checkbox"/>	# of Pages
<i>(specify attachment titles and number of pages, include modified spreadsheets or forms)</i>	

Section 7. ARB Approval <i>(completed by ARB)</i>	
Name/Phone Number:	
Title:	
Signature/Date:	
Addendum Number	

Completed form must be scanned/emailed or mailed to:
Quality Management Section 1927 13 th Street, P.O. Box 2815 Sacramento, California 95811 qa@arb.ca.gov or the email of your PQAO liaison

CARB Review and Approval Process



CARB Review

Applicable regulations and criteria

Relevant QM documents and/or guidance documents

Documents referenced within QM document

Any prior versions and any addenda

Any TSA findings that note specific items be covered

QM document checklist

SOP Checklist

SOP SECTION	YES	NO	N/A	COMMENTS
Title Page				
Document Control (on each page following the Title Page)				
Short Title or ID Number				
Revision Number				
Date				
Page Number				
Table of Contents				
Introduction/Scope and Applicability				
Summary of Method				
Definitions of Terms/Acronyms				
Interferences				
Personnel Qualifications				
Health, Safety and Cautions				
Equipment and Supplies				
Procedures				
Instrument Siting Requirements				
Instrument Set-Up				
Operation				
Calibrations				
Sample Collection and Handling				
Routine Service Checks				

**Quality Management Section
STANDARD OPERATING PROCEDURE
Review Checklist**

Agency:				
SOP Title:				
Revision Number:			Revision Date:	
SOP SECTION	SECTION PRESENT			COMMENTS
	YES	NO	N/A	
Title Page				
Document Control (on each page following the Title Page)				
Short Title or ID Number				
Revision Number				
Date				
Page Number				
Table of Contents				
Introduction/Scope and Applicability				
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Sample Collection and Handling				
Routine Service Checks				

California Air Resources Board MLD/QMS-065 (Rev. 1/23)

**Quality Management Section
STANDARD OPERATING PROCEDURE
Review Checklist**

SOP SECTION	SECTION PRESENT			COMMENTS
	YES	NO	N/A	
Procedures continued				
Preventative Maintenance and Repairs				
Troubleshooting				
Data Management and Record				
Data Acquisition				
Calculations				
Data Storage/Transmittal				
Quality Control and Quality Assurance				
Reference Section				
ADDITIONAL ITEMS	YES	NO	COMMENTS	
Is the SOP updated to reflect current instrument model or process being used?				
Has the SOP been revised within required frequency?				
Have items in addendum been added to new version?				
Recommendation: Approve as is: Request amendment:				
Reviewer Signature: _____			Date: _____	
Peer Reviewer Signature: _____			Date: _____	
Management Signature: _____			Date: _____	

California Air Resources Board MLD/QMS-065 (Rev. 1/23)

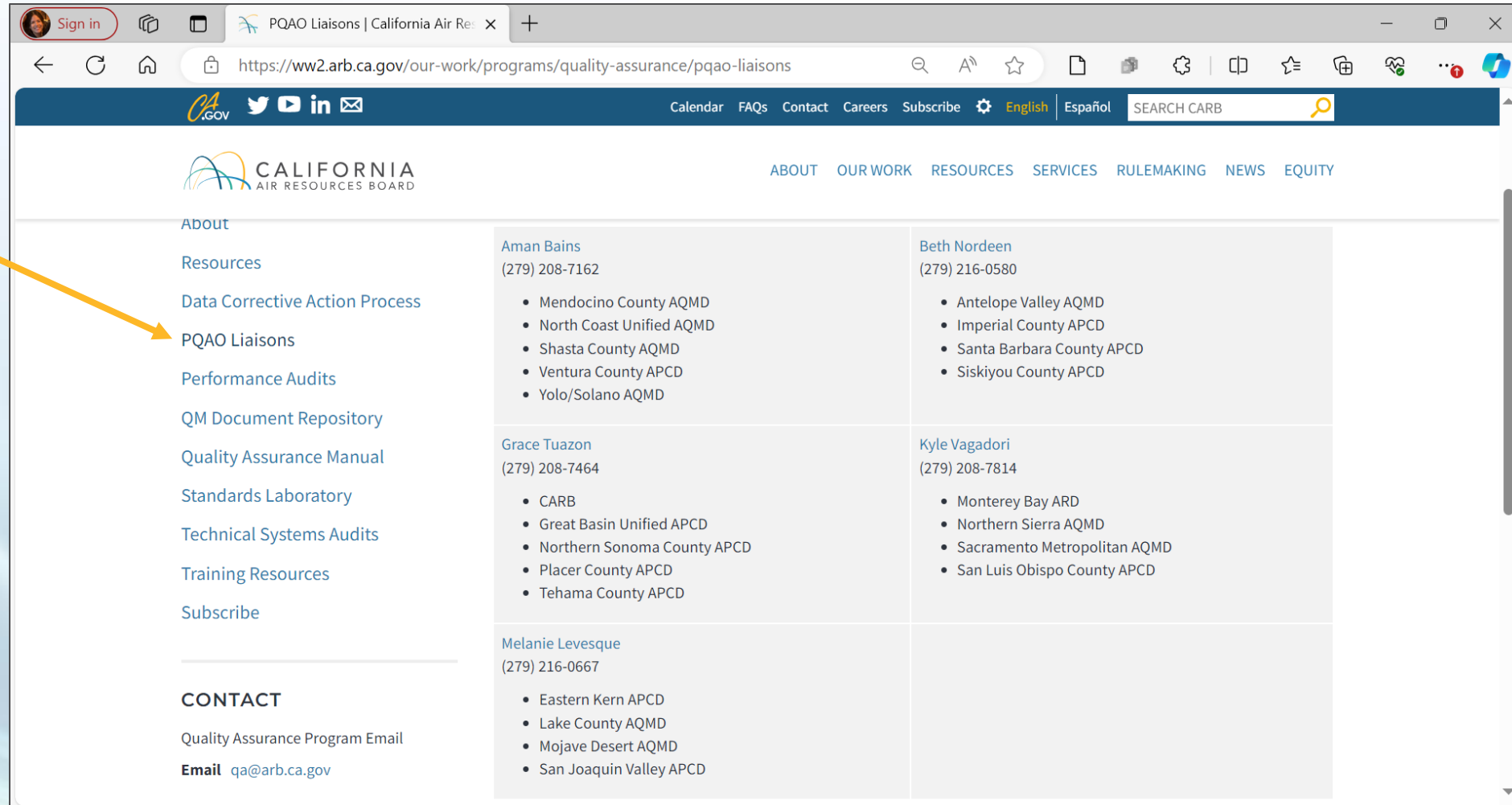
Common Review Findings

Missing sections or components

QA/QC acceptance criteria missing or inaccurate

Inconsistent use of terminology

Resources – PQAO Liaisons



The screenshot shows the California Air Resources Board (CARB) website page for PQAO Liaisons. The page is viewed in a browser with the URL <https://ww2.arb.ca.gov/our-work/programs/quality-assurance/pqao-liaisons>. The top navigation bar includes links for Calendar, FAQs, Contact, Careers, and Subscribe, along with language options for English and Español, and a search bar labeled 'SEARCH CARB'. The main content area is divided into a left sidebar and a main grid. The sidebar contains links for About, Resources, Data Corrective Action Process, PQAO Liaisons (highlighted by a yellow arrow), Performance Audits, QM Document Repository, Quality Assurance Manual, Standards Laboratory, Technical Systems Audits, Training Resources, and Subscribe. The main grid lists three liaison officers: Aman Bains, Beth Nordeen, and Grace Tuazon, each with their contact information and a list of the Air Quality Management Districts (AQMD) or Air Pollution Control Districts (APCD) they serve. A fourth officer, Melanie Levesque, is listed at the bottom of the grid. The 'CONTACT' section at the bottom left provides the Quality Assurance Program Email and the email address qa@arb.ca.gov.

Liaison Officer	Contact Information	Served Districts
Aman Bains	(279) 208-7162	<ul style="list-style-type: none">Mendocino County AQMDNorth Coast Unified AQMDShasta County AQMDVentura County APCDYolo/Solano AQMD
Beth Nordeen	(279) 216-0580	<ul style="list-style-type: none">Antelope Valley AQMDImperial County APCDSanta Barbara County APCDSiskiyou County APCD
Grace Tuazon	(279) 208-7464	<ul style="list-style-type: none">CARBGreat Basin Unified APCDNorthern Sonoma County APCDPlacer County APCDTehama County APCD
Kyle Vagadori	(279) 208-7814	<ul style="list-style-type: none">Monterey Bay ARDNorthern Sierra AQMDSacramento Metropolitan AQMDSan Luis Obispo County APCD
Melanie Levesque	(279) 216-0667	<ul style="list-style-type: none">Eastern Kern APCDLake County AQMDMojave Desert AQMDSan Joaquin Valley APCD

Resources – Links

- **CARB Quality Assurance:** <https://ww2.arb.ca.gov/our-work/programs/quality-assurance>
- **CARB Document Repository:** <https://ww2.arb.ca.gov/our-work/programs/quality-assurance/quality-management-document-repository>
- **CARB Addendum Form:** please contact your PQAO liaison
- **QMP**
 - CARB Checklist: <https://ww2.arb.ca.gov/sites/default/files/2018-09/qmp-checklist.pdf>
 - U.S. EPA Requirements: <https://www.epa.gov/quality/epa-qar-2-epa-requirements-quality-management-plans>
 - U.S. EPA Standard: https://www.epa.gov/system/files/documents/2023-01/quality_management_plan_standard.pdf
- **QAPP**
 - U.S. EPA Example Checklist: <https://www.epa.gov/sites/default/files/2015-06/documents/g5-final.pdf#page=77>
 - U.S. EPA Guidance: <https://www.epa.gov/quality/guidance-quality-assurance-project-plans-epa-qag-5>
 - U.S. EPA Requirements: <https://www.epa.gov/quality/epa-qar-5-epa-requirements-quality-assurance-project-plans>
 - U.S. EPA Standard: https://www.epa.gov/system/files/documents/2023-07/quality_assurance_project_plan_standard.pdf
- **SOP**
 - CARB Checklist: https://ww2.arb.ca.gov/sites/default/files/2023-01/MLD_QMB_065.pdf
 - U.S. EPA Guidance: <https://www.epa.gov/sites/default/files/2015-06/documents/g6-final.pdf>

Questions?

Grace Tuazon

grace.tuazon@arb.ca.gov

(279) 208-7464

