California Environmental Protection Agency
Air Resources Board

Ambient Air Monitoring
Key Summaries & References

Knowing the laws, regulations, and key documents that govern ambient air monitoring is essential to produce quality data.

What's inside?

Ambient air quality monitoring is governed by federal, state, and local laws, regulations, and documents. This booklet contains summaries and references to key:

- Laws
- Regulations
- Quality Assurance Documents

Acronyms

Air Resources Board (ARB)
Air Quality Index (AQI)
California Ambient Air Quality Standards (CAAQS)
California Approved Samplers (CAS)
California Code of Regulations (CCR)
Clean Air Act (CAA)
Code of Federal Regulations (CFR)
Data Acquisition Systems (DAS)
Data Quality Objective (DQO)
Federal Equivalent Method (FEM)
Federal Reference Method (FRM)
Health and Safety Code (Division 26) (HSC)
Measurement Quality Objectives (MQO)
Meteorological (MET)
National Air Toxics Trends Network (NATTS)
National Ambient Air Quality Standards (NAAQS)
National Core (NCore) Network
Particulate Matter (PM)
Photochemical Assessment Monitoring Stations (PAMS)
Prevention of Significant Deterioration (PSD)
Primary Quality Assurance Organization (PQAO)
Quality Assurance (QA)
Quality Assurance Project Plan (QAPP)
Quality Control (QC)
Quality Management Plan (QMP)
Standard Operating Procedures (SOP)
State and Local Ambient Monitoring Stations (SLAMS)
State Implementation Plan (SIP)
Special Purpose Monitors (SPM)
Technical Systems Audit (TSA)
United States Environmental Protection Agency (U.S. EPA)

Version 1, May 16, 2014

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Laws and Regulations

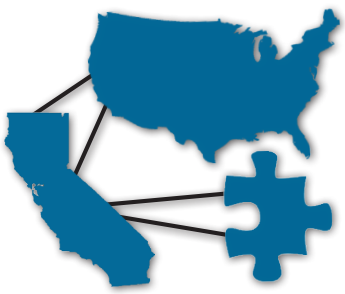
Key Quality Assurance Documents

Authority & Hierarchy

Laws, regulations, and government agencies have a hierarchy.

Laws are broad in scope and contain language that is overarching and general in nature. The Clean Air Act (CAA) is an example of a law which gives the authority to regulate clean air. It is the highest law governing the ambient air monitoring conducted by federal, state, and local agencies.

Regulations are developed to provide guidance to assist in the implementation of laws such as the CAA. For example, Title 40 of the Code of Federal Regulations (CFR), Parts 50, 53, and 58 list the requirements for ambient air standards and air monitoring. These are the regulations that cover the implementation of the CAA.



The three levels of government, federal, state, and local, have defined hierarchical roles and responsibilities. However, when it comes to protecting the air, each successive level of government may create stricter regulations than the level above.

The diagram below shows the relative hierarchy of the federal and state laws and associated regulations governing air monitoring. These laws and regulations will be described in the following pages.

Entity	Laws	Regulations
Federal 	**Clean Air Act** U.S. Code Title 42, Chapter 85 Includes State Implementation Plan, National Ambient Air Quality Standards, Air Quality Index.	**Title 40 Code of Federal Regulations** Parts 50, 53, and 58 Includes quality assurance, federal standards, methods, siting, monitoring, and data reporting requirements.
State 	**Health and Safety Code** Division 26 Defines ARB & District responsibilities.	**Code of Regulations** Title 13 and 17 Includes mobile source regulations, air basins, and State Ambient Air Quality Standards.

Federal Clean Air Act

The Clean Air Act, enacted by Congress in 1970, gives government the authority to regulate air pollution.

The CAA, which was enacted by Congress, is contained in the United States (U.S) Code as Title 42, Chapter 85. The U.S. Environmental Protection Agency (U.S. EPA) promulgates regulations to implement the CAA through the CFRs. State and local air monitoring programs and standards must meet the requirements defined in the CFR.

U.S. EPA's role is to set limits on certain air pollutants in the U.S. ensuring basic health and environmental protection. The CAA gives U.S. EPA the authority to limit emissions of air pollutants coming from sources like chemical plants, utilities, and steel mills. States, local districts, or tribes may establish more stringent air pollution laws than those set by U.S. EPA. In fact, California has more stringent emissions limits than those specified by U.S. EPA.

Amendments

The CAA of 1970 authorized the establishment of State Implementation Plans (SIPs) to achieve the National Ambient Air Quality Standards (NAAQS). States with areas that violate NAAQS need to develop a SIP describing how the State will attain and maintain NAAQS. The amendments of 1977 and 1990 to the CAA strengthened numerous requirements including authorizing provisions related to nonattainment areas, creating programs to control additional toxic pollutants, and expanding provisions related to NAAQS.

Important sections

Two sections in the CAA, 103 and 301(a), authorize research and investigation of the causes, effects, extent, prevention, and control of air pollution and provide U.S. EPA with the authority to develop regulations and establish rulemaking to carry out its mission. Section 319 establishes uniform criteria for measuring air quality and reporting daily air quality using the Air Quality Index (AQI).

Did you know?

U.S. EPA provides a Plain English Guide to the Clean Air Act on their website.

State Implementation Plan

What is it?

It is a plan, including regulations, programs, and policies that a state will use to attain and maintain air quality standards per the CAA.

Who is responsible?

Each state must develop a SIP that outlines how it will control air pollution under the CAA. In California, the Air Resources Board (ARB) and the Districts work together to monitor air quality, conduct inspections, and enforce CAA regulations.

The SIP allows ARB and local Districts to take the lead role in implementing the CAA because they are best situated to develop solutions for pollution problems that require special understanding of local industries, geography, land use, and traffic conditions.

If the SIP does not meet the necessary requirements, U.S. EPA can issue sanctions against the state and, if necessary, take over enforcing the CAA in that area.

What does the SIP include?

The SIP has many elements. The ambient air monitoring component provides for the establishment and operation of devices, methods, systems, and procedures needed to monitor; then compile, analyze, and report data on ambient air quality to U.S. EPA. It also allows agencies to establish control measures, develop inventory, and conduct modeling.

The SIP requires involvement of the public and industries through hearings and other opportunities to comment on the development of each state plan. Learn more about SIPs on page 7.

Code of Federal Regulations

What are they?

CFRs contain the rules adopted by federal agencies and executive departments. All rules that are adopted go through a thorough public review process and are published in the Federal Register when they are proposed and finally adopted. CFRs systematically organize the regulations that are enforceable by U.S. EPA and the regulations that implement the CAA.

CFRs are divided into titles (broad areas), chapters (agencies), and parts (regulatory areas). The regulations for the Ambient Air Monitoring Program are incorporated into the CFRs as follows:

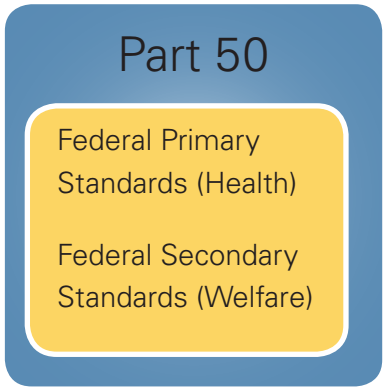
- Title 40 CFR, Part 50 - National Primary and Secondary Ambient Air Quality Standards.
- Title 40 CFR, Part 53 - Ambient Air Monitoring Reference and Equivalency Methods.
- Title 40 CFR, Part 58 - Ambient Air Quality Surveillance.

These Parts cover quality standards, monitoring, and surveillance of criteria pollutants in ambient air: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (PM10 and PM2.5), and sulfur dioxide.

Where can I locate them?

Access E-CFRs through ARB's Quality Assurance (QA) webpage, where there is an additional link to Part 58 that includes indexed appendices.

National Primary and Secondary Ambient Air Quality Standards



What is it?

Part 50 sets forth National Primary and Secondary Ambient Air Quality Standards.

- Federal Primary (health) Standards are set to protect public health, including the most sensitive individuals in the population.
- Federal Secondary (welfare) Standards are set to protect the environment, including crops and other vegetation, soils, water, wildlife, livestock, and buildings.

For areas that are in attainment, these standards do not allow for "significant deterioration of existing air quality in any portion of any state or Indian country." Also NAAQS do not prohibit any state or Indian country from establishing ambient air quality standards which are more stringent than the national standards.

What are the significant sections?

- Reference conditions including measurement units, temperature and pressure (§50.3).
- Primary and Secondary NAAQS for ozone, sulfur dioxide, oxides of nitrogen, lead, carbon monoxide, PM10, and PM2.5 (§50.4 to §50.18).
- Treatment of air quality monitoring data influenced by exceptional events (§50.14).
- Reference methods, measurement principles, calibration procedures, and data handling requirements for determining compliance with the NAAQS are included in 21 Appendices.

Ambient Air Monitoring Reference and Equivalent Methods

What is it?

Part 53 describes the general requirements for reference and equivalent method determination and is useful in determining the instruments to select to meet the requirements for a specific type of air monitoring program. Two important definitions are Federal Reference Methods (FRM) and Federal Equivalent Methods (FEM).

Part 53

Federal Reference Methods

Federal Equivalent Methods

- FRM is a sampling and analysis method for an ambient air pollutant that is specified as a reference method according to Part 50, or a method that has been designated as a reference method in accordance with Part 53. These designations are made by U.S. EPA. For PM, the reference methods are based on manual techniques using filters weighed under specified laboratory conditions.
- FEM is a measurement method that was demonstrated by rigorous field testing in accordance with Part 53 to produce equivalent results to the reference method. Once a method has been designated by U.S. EPA to be equivalent to the reference method, the data produced is usually regarded and utilized similar to data produced by an FRM.

What are the significant sections?

- Requirements for FRM and FEM methods include the application process (§53.5); testing of methods and the right of U.S. EPA to observe those tests (§53.6 and §53.7); the designation and conditions of the designation (§53.8 and §53.9); appeal of rejection, cancellation of reference or equivalent method designation, and hearings regarding cancellation (§53.10 through §53.13).
- Procedures for testing performance of automated methods and comparing methods for criteria pollutants (starting at §53.20).

Code of Federal Regulations
- Continued

Part 58

Includes QA/QC, methods, operations, siting, network (plans, schedule, modifications), SIP, and data reporting requirements. Also defines the PQAO.

Ambient Air Quality Surveillance

What is it?

Part 58 establishes a national ambient air quality monitoring network to provide timely air quality data used as a basis for national assessments, nonattainment designations, and regulatory decisions. This part applies to state air pollution control agencies such as ARB, and local air pollution control agencies of which the State has delegated authority to operate a portion of the State and Local Ambient Monitoring Stations (SLAMS) network, and owners or operators of proposed sources.

Part 58 contains requirements for measuring ambient air quality and for reporting the data including QA procedures, methodology used in monitoring stations, operating schedules, and siting parameters for instruments or instrument probes. Part 58 also lays out the minimum network requirements used to provide support to the SIP, national air quality assessments, and policy decisions. These minimum requirements are described as part of the network design requirements, including minimum numbers and placement of monitors of each type.

What are the significant sections?

Subpart A, C, D, F, and G define the general provisions, Special Purpose Monitors (SPM), comparability of ambient data to the NAAQS, AQI reporting, and federal monitoring, respectively.

Subpart B which is titled Monitoring Network, includes the following criteria and requirements:

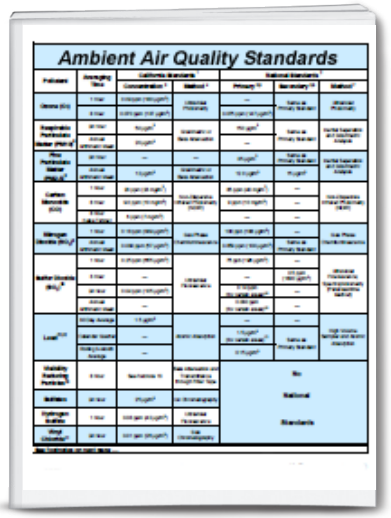
- Annual monitoring network plan and periodic network assessment.
- Network technical requirements.
- Operating schedules.
- Monitoring network completion.
- System modification.
- Annual air monitoring data certification.
- Data submittal and archiving.

Part 58 has important appendices which include:

- Appendix A - QA requirements for SLAMS, SPMs and Prevention of Significant Deterioration (PSD) monitoring, and the Primary Quality Assurance Organization (PQAO) is defined. It also includes requirements for measurement quality checks, calculations for data quality assessments, and reporting of data.
- Appendix C - Monitoring methodology.
- Appendix D - Network design criteria.
- Appendix E - Probe and monitoring path siting criteria.
- Appendix G - Uniform AQI and daily reporting.

Ambient Air Quality Standards

What is it?



An air quality standard is the definition of clean air. More specifically, a standard establishes the concentration above which the pollutant is known to cause adverse health effects. Standards are not meant to be static, but to change over time in response to new science. As a result, U.S. EPA generally reviews federal standards every five years to determine if updates are needed to protect public health.

Federal - The Federal CAA requires U.S. EPA to set NAAQS for seven pollutants (commonly referred to as criteria pollutants): carbon monoxide, lead, nitrogen dioxide, ozone, PM10, PM2.5, and sulfur dioxide. NAAQS include Primary Standards which are intended to protect human health and Secondary Standards to prevent environmental and property damage.

California - ARB established more stringent air quality standards for ten pollutants (commonly referred to as the California Ambient Air Quality Standards, or CAAQS): carbon monoxide, nitrogen dioxide, ozone, PM10, PM2.5, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles. California standards have historically been more stringent, but recently U.S. EPA strengthened several federal standards so that they are now generally comparable.

Where do the requirements originate?

- The Federal CAA.
- Title 40, CFR, Part 50.
- California Health and Safety Code (HSC), Section 39606.

Who does it apply to?

- U.S. EPA, ARB, and local air districts or agencies.

When is it valid or effective?

Federal - Once a standard is finalized, the first step is to evaluate the air quality data to determine which areas violate the standard. The next step is to develop air quality plans or SIPs (described on page 3) as required by the CAA to attain and maintain the ambient air quality standard for each area designated as nonattainment for NAAQS.

California- HSC section 39607(e) requires ARB to establish and periodically review area designation criteria. These designation criteria provide the basis for ARB to designate areas of California as attainment, nonattainment, or unclassified for the California standards.

Where can I locate it?

- Information related to NAAQS is available at: www.epa.gov/air/criteria.html
- Information related to CAAQS is available at: www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm
- An air quality standards chart (National and California) is available at: www.arb.ca.gov/research/aaqs/aaqs2.pdf
- California SIP information is available at: www.arb.ca.gov/planning/sip/sip.htm

California Health and Safety Code

What is it?

The California Legislature passes laws that are carried out by Executive Branch agencies, such as ARB, through the implementation of regulations developed in accordance with those laws. The laws which govern ARB and district activities related to ambient air quality are included in Division 26 of the California HSC. These laws delegate authority from the State to the local air districts (Districts) to collect emissions inventory data and prepare local air quality plans. However, section 39002 provides ARB with the ability to take corrective action if a District is not able to comply with State or federal requirements.

The laws define ARB as the State agency responsible for coordinating efforts to attain and maintain ambient air quality standards throughout the State. ARB made the first area designations for CAAQS in 1989. Since then, ARB has reviewed the designations annually, making changes as needed. ARB makes area designations for the ten pollutants included in the CAAQS: carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, PM10, PM2.5, sulfates, lead, hydrogen sulfide, and visibility reducing particles.

What are the significant sections?

HSC sections that pertain to the relationship and duties of ARB and Districts include:

- **39002 -** This section gives the local Districts the primary responsibility for control of air pollution from all sources other than vehicular sources.
- **39003 -** ARB is the state agency charged with coordinating efforts to attain and maintain ambient air quality standards, to conduct research into causes and solutions to air pollution issues, and to systematically tackle air pollution issues caused by motor vehicles.
- **39607 -** Describes how ARB and Districts will gather air pollution information. ARB must establish a program to secure data on air quality in each air basin, inventory sources of air pollution, and determine the type and quantity of air pollutants. To the extent possible, ARB must use the data generated by local, state, and federal agencies for the inventory, and must collaborate with Districts on air monitoring activities. ARB must adopt test procedures to measure compliance with emission standards and periodically review the criteria used for determining the designation of air basins as attainment, nonattainment, or unclassified for any CAAQS. The section also describes ARB and District collaboration to evaluate air quality indicators and establish uniform methodology which may be used by Districts in assessing population exposure.

Where can I locate it?

Division 26 of HSC is available at: www.arb.ca.gov/bluebook/bb07/hea/hea.htm

California Code of Regulations

What is it?

The California Code of Regulations (CCR), are the official publication of regulations adopted by State agencies. CCRs are divided into Titles (1-28) which contain divisions that include the regulations for various State agencies. Title 13, Division 3 (Mobile Sources and Fuels), and Title 17, Division 3 (Public Health) contain the regulations adopted by ARB. Air monitoring is associated primarily with Title 17.

What are the significant sections related to air monitoring?

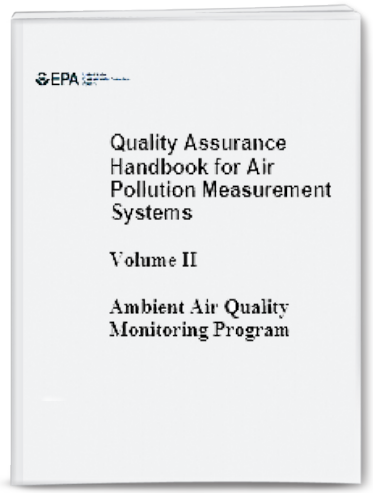
Title 17, Division 3, Subchapter 1.5 contains criteria for regulations related to the air basins in California, including criteria for area pollutant designations. Sections that pertain to air monitoring include:

- Article 3, section 70200 contains the CAAQS (ARB provides an expanded version of the Ambient Air Quality Standards table that lists both State and Federal standards on ARB's website).
- Section 70100.1 gives ARB's Executive Officer the authority to add samplers, methods, or instruments to the California Approved Samplers list.
- Section 70301, establishes compliance with 40 CFR, Part 58 for data to be considered "data-for-record" for designations.

Where can I locate it?

- California Code of Regulations is available at the following State website: www.dir.ca.gov/dlse/CCR.htm

U.S. EPA QA Handbooks



Volume II -- Air Pollution Measurements

What is it?

Volume II provides additional information and guidance on the material covered in 40 CFR, part 58 pertaining to the Ambient Air Quality Monitoring Program. U.S. EPA wrote this handbook in a style similar to a Quality Assurance Project Plan (QAPP) to assist with the document preparation while simultaneously providing monitoring information. This volume is helpful for monitoring organizations to develop and implement a quality management system that:

- Provides data of sufficient quality to meet program objectives.
- Establishes consistency with programs nationwide.

The handbook focuses on the six criteria pollutants (carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, PM10, PM2.5) monitored in the SLAMS, Photochemical Assessment Monitoring Stations (PAMS), open path monitoring, PM2.5 Chemical Speciation Network, National Air Toxics Trends Network (NATTS), and National Core (NCore) Network.

What are the significant sections?

Guidance is provided for:

- Program organization.
- Data Quality Objective (DQO) process.
- Qualifications and training.
- Documentation and records.
- Monitoring network design.
- Sampling and analytical methods.
- Quality Control (QC).
- Equipment maintenance and calibration .
- Assessment and corrective action.
- Data review, validation, and verification.
- Useful tables, graphs, photos, and diagrams such as those pictured at right.

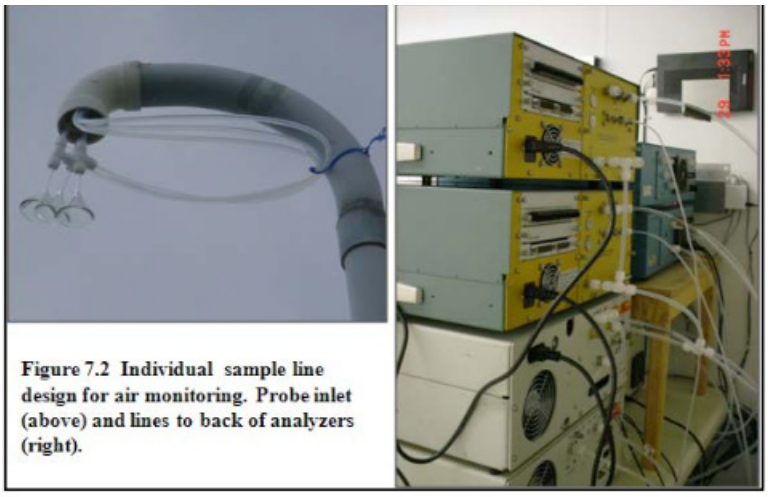


Figure 7.2 Individual sample line design for air monitoring. Probe inlet (above) and lines to back of analyzers (right).

Appendices include:

- Description of monitoring programs (PAMS, SLAMS, NATTS, etc.) and resources.
- Description of graded approach to developing quality managment documents.
- Measurement Quality Objectives (MQO) and data validation templates - Appendix D.
- Spatial scales per pollutant and manifold designs.
- Technical Systems Audit (TSA) checklist - Appendix H.

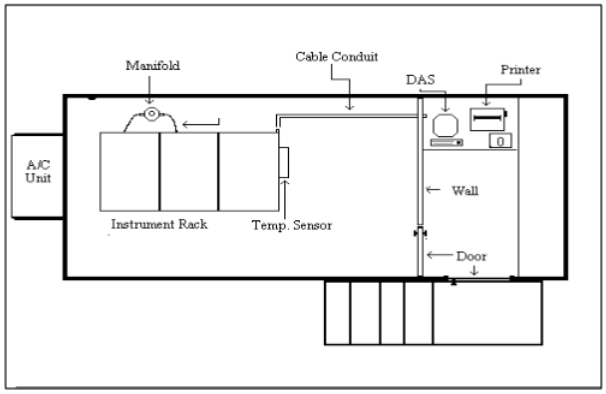
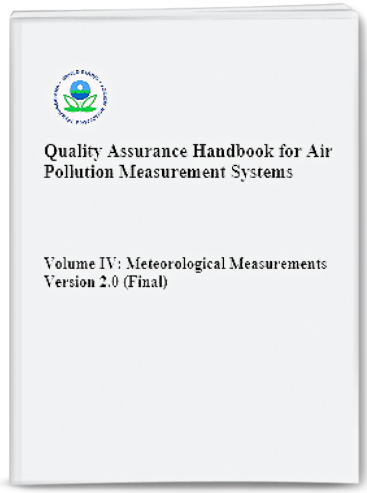


Figure 7.1 Example Design for Shelter

Volume IV -- Meteorological Measurements



What is it?

Volume IV provides information and guidance for planning meteorological (MET) programs, operating the equipment and systems, and developing MQOs. Program specific tables (PAMS, NCore, PSD) contain MQOs for operating range, resolution, calibration criteria, and other information that may be useful during purchase or upgrade of MET equipment. Additionally, the online version has links to calibration videos.

What are the significant sections?

- Installation and siting of MET towers.
- Types of weather instruments currently available including information on acceptance testing, installation, and wiring; calibration and alignment; operation and maintenance; and auditing.
- MET data acquisition systems (DAS) procedures and MET data verification and validation methods.
- Useful tables, diagrams, photos, and graphs such as those pictured below.

The appendices contain important forms and guidance:

- MET systems audit form (useful QA/QC tool for documenting MET device and equipment operation).
- Example sensor calibration forms.
- Example MET measurement method tables containing criteria and acceptance ranges.

Where can I locate them?

- U.S. EPA Handbooks Volume II and IV are linked from ARB's QA webpage: www.arb.ca.gov/aaqm/qa/qa.htm
- These and other handbooks are located on U.S. EPA's Air Monitoring Technology Information Center webpage: www.epa.gov/ttn/amtic/qalist.html

Figure 1.14 Temperature Cable Installation and Expanded/Close-Up Views

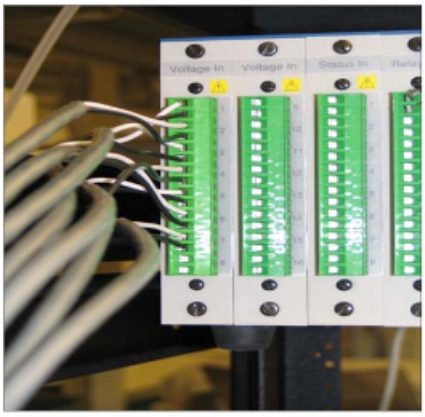
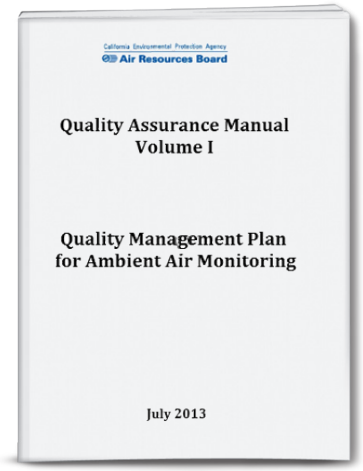


Figure 9.1 DAS Rear Panel with 8-Channel Differential Analog Terminal Strip

Quality Management Documents



Quality Management Plan

What is it?

A Quality Management Plan (QMP) ensures that environmental data collected is scientifically and legally valid and of sufficient quantity and quality to meet or exceed all applicable federal, state, and local data reporting requirements. The plan describes a quality system in terms of the organizational structure, policies and procedures, functional responsibilities of management and staff, lines of authority, and required interfaces for those planning, implementing, documenting, and assessing air monitoring measurement activities.

Where does the requirement originate?

- Title 40, CFR, Part 58, Appendix A, Section 2.1.
- U.S. EPA Requirements for Quality Management Plans, EPA QA/R-2.

Who does it apply to?

- All organizations conducting environmental programs funded by U.S. EPA.
- All staff within ARB, air monitoring organizations in ARB's PQAO, or anyone conducting work on behalf of ARB, shall comply with QA policies and procedures specified in ARB's QMP. If a monitoring organization within ARB's PQAO chooses to utilize its own QMP, prior written approval shall be obtained concurrently and collaboratively from ARB and U.S. EPA.

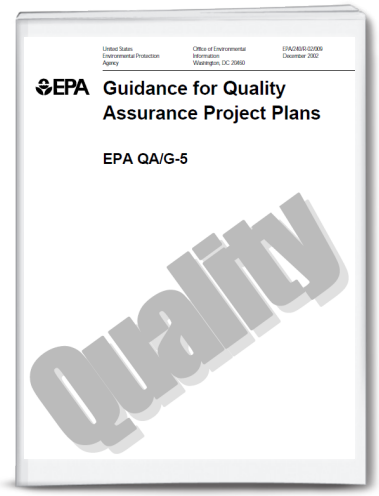
When is it valid or effective?

ARB's QMP is valid for a period of up to five years from the official date of publication. However, it may be reviewed and revised sooner, based on program changes or whenever a significant change is required.

Where can I locate it?

- Quality management documents, including ARB's QMP, are available at: www.arb.ca.gov/aaqm/qa/pqao/repository/qm_docs.htm
- U.S. EPA's quality management guidance documents are available at: www.epa.gov/quality/qa_docs.html

Quality Assurance Project Plan



What is it?

A QAPP integrates all technical and quality aspects of a project, including planning, implementation, and assessment. It is a project-specific "blueprint" that documents how QA and QC are applied to environmental data operations to assure that the results obtained are of the type and quality needed and expected.

It includes the following elements**:**

- Mission, objectives, and policies.
- Purpose and background.
- Distribution and approval signatures.
- Roles and responsibilities.
- Resource requirements.
- Measurement, sampling, analysis, and chain of custody specifics.
- Instrument requirements.
- Data acquisition and management specifics.
- QA/QC activities.
- Assessment activities and responsibilities.
- Reports produced for management.
- Data validation and DQO reconciliation specifics.

Where does the requirement originate?

- Title 40, CFR, Part 58, Appendix A, Section 2.1.
- U.S. EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5 (2001/2006).

Who does it apply to?

- All organizations conducting environmental programs that are funded by U.S. EPA.
- All staff within ARB, monitoring organizations in ARB's PQAO, or anyone conducting work on behalf of ARB shall comply with the QA policies and procedures specified in ARB's QAPPs. If a monitoring organization within ARB's PQAO chooses to utilize its own QAPPs, prior written approval shall be obtained from ARB.

When is it valid or effective?

ARB's QAPPs are valid for a period of up to five years, but may be reviewed and revised sooner, based on project or program changes.

Where can I locate it?

- Quality management documents, including ARB's QAPPs, are available at: www.arb.ca.gov/aaqm/qa/pqao/repository/qm_docs.htm
- Quality management guidance documents are available at: www.epa.gov/quality/qa_docs.html

Quality Management Documents
- Continued

Standard Operating Procedures

What is it?

Standard Operating Procedures (SOPs) are an integral part of a quality system and help ensure the following:

- Tasks are performed properly.
- Consistency of operations.
- Quality and integrity of results.

SOPs describe the detailed procedures for specific activities including:

- Sample collection.
- Instrument operation and maintenance.
- Preparation and analysis of samples.
- Data management procedures.

SOPs should be written:

- In a concise, step-by-step, easy-to-read format.
- In an unambiguous and not overly complicated manner.
- In an active voice and present verb tense.
- Contain the key elements identified in ARB's SOP checklist.

Time Saving Tip!

When writing an SOP, save time and effort by reviewing examples in the PQAO Document Repository. You can use other monitoring organizations' SOPs as a reference for writing your own, or write an addendum to an existing SOP. This saves time and shares knowledge! Take a look at the SOP development process on the right.

Who does it apply to?

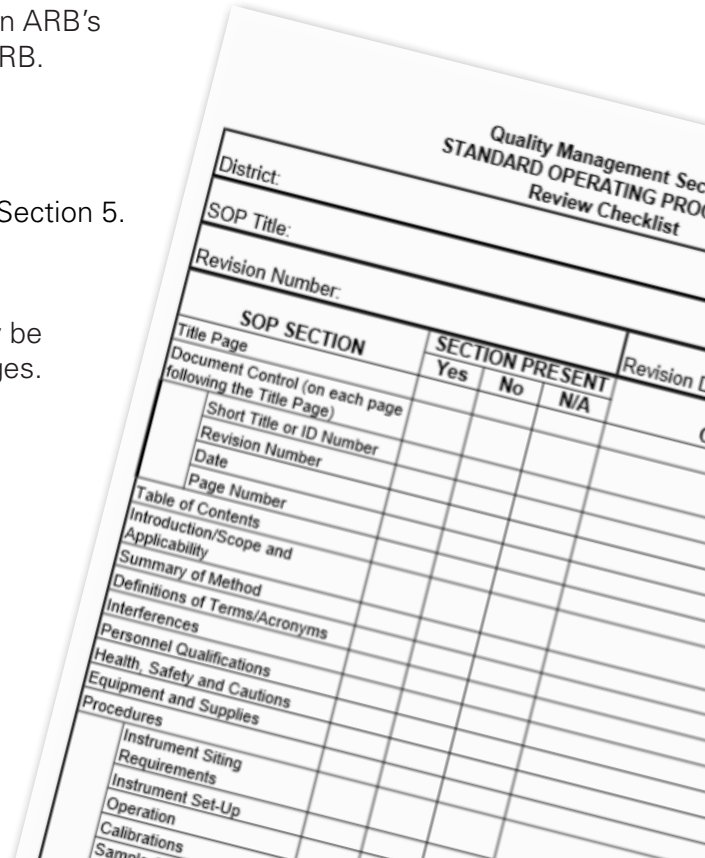
- All organizations conducting environmental programs funded by U.S. EPA.
- All staff within ARB, air monitoring organizations in ARB's PQAO, or anyone conducting work on behalf of ARB.

Where does the requirement originate?

- Title 40, CFR, Part 58, Appendix A.
- U.S. EPA Quality Assurance Handbook Volume II, Section 5.

When is it valid or effective?

SOPs are valid for a period of up to three years, but may be reviewed and revised sooner based on procedural changes.


Quality Management Sec
STANDARD OPERATING PRO
Review Checklist
District:
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Revision Number:
SOP SECTION
SECTION PRESENT
Yes
No
N/A
Revision D
Title Page
Document Control (on each page following the Title Page)
Short Title or ID Number
Revision Number
Date
Page Number
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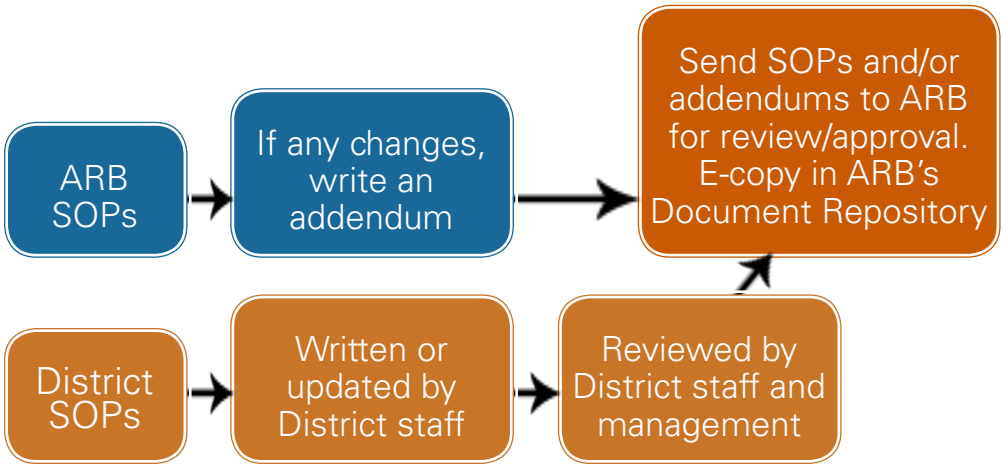
Personnel Qualifications
Health, Safety and Cautions
Equipment and Supplies
Procedures
Instrument Siting Requirements
Instrument Set-Up
Operation
Calibrations

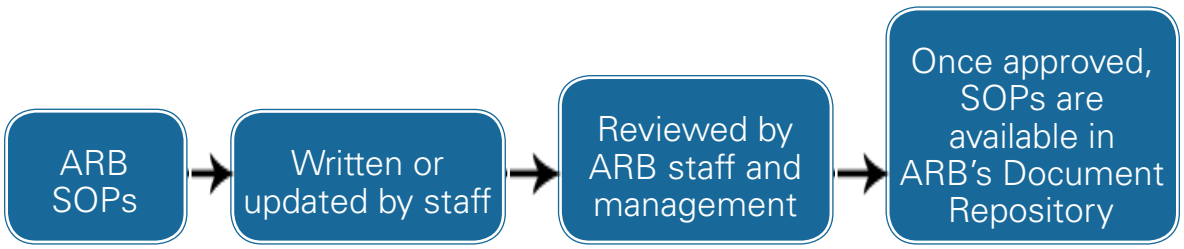
What is the SOP process for Districts in ARB's PQAO?

Districts can write their own SOP or use ARB or another District's SOPs.



Note: If you choose to write an addendum, ARB has a easy to use form in the document repository: www.arb.ca.gov/aaqm/qa/pqao/repository/qm_docs.htm

What is the process for ARB?



Where can I locate it?

- SOPs for ARB, Districts in ARB's PQAO, and other PQAOs in California are posted at: www.arb.ca.gov/aaqm/qa/pqao/repository/qm_docs.htm
- ARB's SOP checklist and a convenient link to U.S. EPA's SOP guidance is available at: www.arb.ca.gov/aaqm/qa/qa.htm
- U.S. EPA's SOP guidance document is available at: www.epa.gov/quality/qs-docs/g6-final.pdf

Quality Management Documents
- Continued

PQAO Roles and Responsibilities

What is it?
ARB and monitoring organizations within its PQAO collaborate to formalize roles and responsibilities associated with the operation of the ambient air monitoring network. The responsibilities of each agency are described in terms of the five common factors of a PQAO, as identified by U.S. EPA. The elements covered in each Roles and Responsibilities Document include quality management documents, calibration and standard services, data management, assessments, and corrective action to ensure generation of high quality, legally defensible data.

Who does it apply to?
ARB and monitoring organizations within its PQAO.

Where does the requirement originate?
- U.S EPA Region 9 Procedure for Implementation of the Primary Quality Assurance Organization Structure for Ambient Air Monitoring Organization, August 3, 2012.
- U.S. EPA's TSA of ARB in 2011, which identified the need to define and formalize roles and responsibilities for ambient air monitoring activities within ARB's PQAO.

When is it valid or effective?
ARB will conduct periodic assessments and will collaborate with monitoring organizations in its PQAO to make modifications, as appropriate.

Where can I locate it?
Finalized Roles and Responsibilities Documents are available at:
www.arb.ca.gov/aaqm/qa/pqao/repository/rr_docs.htm

QA Mobile Webpage for Station Operators

The QA Mobile webpage for station operators is a simplified version of the Quality Assurance Program webpage. The links included on the mobile page are those most frequently used by field staff and include hyperlinked indexes to get the needed information more quickly on a smart phone or similar device. We also recommend that you add short-cuts or browser toolbar links for this webpage to air monitoring station computers for convenient access to information.

1. **Scan the QR code.**

After scanning the QR code, open the webpage in your device's browser by clicking the appropriate icon button. This will ensure that the webpage functions properly.

OR

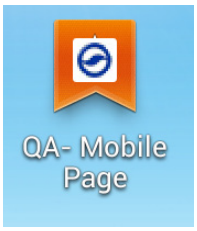
Type in the web address.

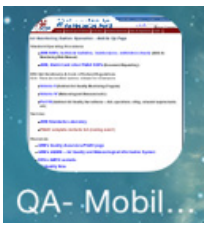
www.arb.ca.gov/aaqm/qa/qamobl.htm

You can also navigate to the Quality Assurance Program webpage from ARB's home page and then click on the link for the new mobile webpage.

2. Once the page is open in your device's browser, click on the "add to home screen," "add to menu," or similar button to place an icon on the home-screen or menu. Once this is completed, you will have information pertaining to the operation and QA of ambient air monitoring stations at your fingertips.

3. The icons on your device may look like the following images.





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