Air Resources Board

Mary D. Nichols, Chairman
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Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

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SHASTA COUNTY AQMD

May 20, 2014

Mr. Ross Bell
Shasta County Air Quality Management District
1855 Placer Street, Suite 101
Redding, CA 96001

Dear Mr. Bell:

The purpose of this letter is to formalize the roles and responsibilities of both the California Air Resources Board (ARB) and local monitoring organizations (MO) that are under the auspices of the ARB Primary Quality Assurance Organization (PQAO) to ensure compliance with State and federal air monitoring requirements.

As defined in the U.S. Environmental Protection Agency's (U.S. EPA) Title 40 Code of Federal Regulations (40 CFR) Part 58, a PQAO is a monitoring organization or a coordinated aggregation of such organizations that is responsible for a set of stations that monitors the same pollutant(s) and for which data quality assessments can logically be pooled. Each criteria pollutant sampler/monitor at a monitoring station in the State and Local Air Monitoring Stations network must be associated with one, and only one, PQAO.

ARB is the governmental agency delegated under federal law with the authority and responsibility for collecting ambient air quality data as directed by the Clean Air Act. The ambient air monitoring network in California is operated by a combination of ARB and local MOs. It is critical that ARB and local MOs work together, through formalized roles and responsibilities, to collect consistent and reliable ambient air quality data.

Under ARB's PQAO, ARB and MOs should strive to collaboratively address the following common factors to the extent practical:

a) Operation by a common team of field operators according to a common set of procedures.

b) Use of a common Quality Assurance Project Plan and Standard Operating Procedures for State and federally mandated air monitoring projects.

c) Common calibration facilities and standards.

d) Oversight by a common quality assurance organization.

e) Support by a common management, laboratory, or headquarters.

In order to address these common factors, ARB has worked collaboratively with the Shasta County Air Quality Management District and U.S. EPA to define each agency's roles and responsibilities with regard to the operation of the State's ambient air monitoring network (see attached). The goal of the roles and responsibilities document is to ensure the generation of high quality, legally defensible data in a collaborative manner.

ARB appreciates the collaborative efforts of the District to define the roles and responsibilities and looks forward to working with them to ensure their effective implementation.

Please contact Mr. Patrick Rainey at (916) 327-4756 or prainey@arb.ca.gov or myself at (916) 322-0960 or mmiguel@arb.ca.gov, if you have any questions.

Sincerely,

Michael Miguel, Chief
Quality Management Branch
Monitoring and Laboratory Division

Attachment

cc. see next page

cc. Richard W. Simon, Air Pollution Control Officer
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Redding, CA 96001

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Dr. Michael T. Benjamin, Chief
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Patrick Rainey, Manager
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Attachment

PRIMARY QUALITY ASSURANCE ORGANIZATION ROLES AND RESPONSIBILITIES FOR AIR RESOURCES BOARD AND SHASTA COUNTY AIR QUALITY MANAGEMENT DISTRICT

Five common factors have been identified by U.S. Environmental Protection Agency (U.S. EPA) that should be considered in defining a Primary Quality Assurance Program (PQAO). Under the Air Resources Board (ARB) PQAO, ARB and Monitoring Organization (MOs) will strive to collaboratively address the following common factors to the extent practical. ARB has defined the roles and responsibilities of ARB and MOs within ARB's PQAO in regard to operation of the PQAO ambient air monitoring network in order to ensure the generation of high quality, legally defensible data.

1. Operation by a common team of field operators or according to a common set of procedures

ARB recognizes the unique air monitoring challenges that face California and that field operations by a common team may not be feasible. ARB and MOs acknowledge the need to strive for uniformity of procedures, thus both parties agree to work together toward employing consistent and reliable field operations.

ARB Responsibilities:

a) Maintain and disseminate a Quality Management Plan (QMP). ARB will regularly request input from MOs within ARB's PQAO and agrees to review and update the QMP as needed. ARB will communicate updates to MOs accordingly.
b) Review and approve alternative QMPs prepared by MOs seeking ARB and/or U.S. EPA approval.
c) Maintain a PQAO contact list and working webpage to disseminate information.
d) Serve as a liaison between MOs within ARB's PQAO.
e) Provide adequate training on key air monitoring fundamentals related to operations, maintenance, quality assurance/quality control, and data management procedures.
f) Facilitate Ambient Monitoring Technical Advisory Committee (AMTAC) meetings and information updates. Topics may include field, laboratory, quality assurance, and data management related items.
g) Participate in the California Air Pollution Control Officers Association (CAPCOA) air monitoring committee meetings and other informational forums.

Shasta County Air Quality Management District (AQMD) Responsibilities:

a) Utilize and follow ARB's QMP. Any deviations from ARB's QMP will be specified in an addendum and submitted to ARB for review and approval.
b) Provide a supervisory level PQAO Point-of- Contact to ARB (or designee if non-supervisory level). The PQAO contact will be added to a list serve to allow for effective and timely dissemination of information.

c) Participate in ARB and U.S. EPA sponsored ambient air monitoring training.
d) Participate in AMTAC meetings and review information updates.
e) Participate in CAPCOA Monitoring Committee meetings and other informational forums.

2. Use of a common Quality Assurance Project Plan (QAPP) and Standard Operating Procedures (SOP) for state and federally mandated air monitoring projects.

ARB Responsibilities:

a) Maintain and disseminate an ARB and/or U.S. EPA QAPP for state and federally mandated air monitoring projects or programs.
b) Maintain and disseminate SOPs for monitoring and analysis. These SOPs may also include forms (i.e., check sheets, calibration forms, maintenance forms, etc.).
c) Provide notification of updates/revisions, as they occur, to ARB's QAPPs and SOPs via the PQAO point-of-contact list.
d) Review and approve alternative QAPPs and SOPs prepared by MOs.

Shasta County AQMD Responsibilities:

a) Utilize and follow ARB's QAPPs for ozone (O3) and particulate matter (PM10 and PM2.5) air monitoring programs. Any deviations from ARB's QAPPs will be specified in an addendum and submitted to ARB for review and approval.
b) Utilize and follow ARB's SOPs for O3, PM10, and PM2.5 air monitoring programs. Any deviations from ARB's SOPs will be specified in an addendum and submitted to ARB for review and approval.
c) District management will review ARB's SOPs periodically to ensure they are consistent with MO practices.
d) Make available to ARB a record (or list) of quality management documents (QMP, QAPP, SOP, training plan, etc.) utilized by Shasta County AQMD's ambient air monitoring network.

If Shasta County AQMD conducts a special purpose monitoring (SPM) program funded by U.S. EPA, the MO will seek quality assurance assistance from U.S. EPA or ARB's Quality Management Branch. Such monitoring is required to be covered by quality assurance documents prior to sample collection.

3. Common calibration facilities and standards

MOs within ARB's PQAO are encouraged to utilize the services provided by ARB's Standards Laboratory for certifications, calibrations, and verifications. Organizations choosing to utilize external calibration facilities or vendor produced standard materials will provide documentation of traceability upon request by ARB or U.S. EPA.

ARB Responsibilities:

a) Provide timely certification, calibration, and verification services that meet or exceed Title 40, Code of Federal Regulations (40 CFR), Part 58 requirements via ARB's Standards Laboratory upon request.

Shasta County AQMD Responsibilities:

a) Utilize ARB's certification, calibration, and verification services for O3 transfer standards, low-volume and high-volume flow standards, temperature sensors, and barometric sensors.
b) Maintain a schedule and record of certification dates that are available to ARB or U.S. EPA upon request.

Additionally, ARB may provide equipment acceptance testing, repair, and field calibration services to Shasta County AQMD upon prior or mutual agreement, which may depend upon budget feasibility and staff availability.

4. Oversight by a common quality assurance organization

ARB Responsibilities:

a) Identify pollutants that are included in ARB's PQAO.
b) Conduct annual Performance Evaluation (PE) audits of MO monitoring sites as required in 40 CFR Part 58, Appendix A, including Section 3.2.2 (PE audits for O3) and 3.2.4 (semiannual flow rate audit for PM10 and PM2.5).
c) Conduct annual siting evaluations at each air monitoring station to determine compliance with 40 CFR Part 58, Appendix E, and consistency with current Air Quality System (AQS) pollutants.
d) If an instrument or analyzer is found to be outside acceptable limits, ARB will initiate an Air Quality Data Action (AQDA). The AQDA will request the MO to correct the identified deficiencies and ensure associated ambient air data are verified to be good quality data. To ensure compliance, ARB will conduct a re-audit to verify the corrective action once the problem has been resolved and will

review data in AQS to ensure any recommended data action has been taken (i.e., flagging, invalidation, etc.).

e) Conduct a technical systems audits (TSA) of all MOs within ARB's PQAO on a schedule of every 3-5 years.
f) Maintain a database, Corrective Action Notification (CAN), to be used by monitoring agencies to report operational problems, instrument malfunctions, and/or any items needing corrective action or investigation. ARB will follow-up to verify that appropriate action was taken to close the CAN, and will perform an annual review of the CAN database for systematic issues.
g) Provide procedures and criteria for data acceptability and corrective action determination.
h) Provide procedures and criteria for data verification and validation to be performed prior to upload to AQS.
i) Provide training on data verification and validation procedures during the PQAO air monitoring training.
j) Perform upload of MO validated data for PM10 and PM2.5 to AQS within 90 days following the end of each quarter. ARB performs mass analysis determination and data upload for PM10 and PM2.5 filter-based samples.
k) Perform post-AQS screening of MO data submitted by ARB to identify possible issues.
l) Perform annual certification of data for which ARB has AQS submittal authority (PM10 and PM2.5) by May 1 of each year.
m) Perform an annual evaluation of the statistical summaries of quality assurance and quality control data for all MOs in ARB's PQAO, and distribute results to the MOs.

Shasta County AQMD Responsibilities:

a) Review and verify pollutant-specific parameters on an annual basis that are included in ARB's PQAO.
b) Participate in O3, PM10, and PM2.5 PE audits conducted by ARB.
c) Participate in U.S. EPA required technical system audits conducted either by ARB or U.S. EPA.
d) Utilize and follow ARB's procedures to validate O3, PM10, and PM2.5 data quality against ARB or U.S. EPA acceptance criteria prior to submittal to AQS. Any deviations from ARB's procedures will be specified in an addendum and submitted to ARB for review and approval.
e) Participate in data verification and validation training provided by ARB and/or U.S. EPA.
f) Upload validated data for O3 to AQS in accordance to U.S. EPA requirements within 90 days following the end of each quarter.
g) Review O3 data in AQS on a quarterly basis to verify accuracy and completeness (AMP 255 and 430 reports).

h) Review O3 data in AQS (AMP 600) on an annual basis to verify accuracy and completeness of data for certification purposes.
i) Submit a data certification package to U.S. EPA by May 1 of each year for O3.
j) Utilize ARB's CAN process to report instrument malfunctions, operational problems, impending data actions in AQS, and/or any items needing corrective action or investigation within 45 days of determination of issue. Management will use appropriate discretion to determine issues deemed to be anomalous versus routine occurrences.
k) Resolve AQDAs, CANs and TSA findings, and develop corrective action plan as appropriate, within 45 days of issuance.
l) Utilize the CAN process to communicate to ARB when data have been altered or modified after it has been submitted so ARB can review the justification and adjust data in AQS accordingly.

Data collected from SPM sites using a federal reference method (FRM), federal equivalent method (FEM), or approved regional methods (ARM) should be evaluated against requirements in 40 CFR Part 58.11, 58.12, and Appendix A; and submitted to AQS according to 40 CFR Part 58.16, as applicable.

5. Support by a common management, laboratory or headquarters

Operating California's complex ambient air monitoring network requires ARB to work collaboratively with each MO. In order to accurately assess the MO's monitoring network, both parties will document and evaluate potential or scheduled modifications to the air monitoring network.

ARB Responsibilities:

a) Provide and review an annual survey questionnaire regarding planned changes to the air monitoring network (i.e., new/removed instruments, site closures, new sites, contracted services, etc.) for MOs in ARB's PQAO that are not drafting their own network plans as required by 40 CFR Part 58.10. ARB will review completed questionnaires within 30 days of receipt and provide feedback, as necessary.
b) Participate in annual meeting/teleconference during the network review period to discuss ARB's PQAO monitoring network status.
c) Provide laboratory analytical support as required (i.e., PM2.5 and PM10 mass analysis, toxics analysis, speciation, etc.) upon prior or mutual agreement.

Shasta County AQMD Responsibilities:

a) Complete the annual questionnaire regarding monitoring network changes within 30 day of receipt from ARB.
b) Coordinate all site changes (i.e., openings, closures, relocations), not mentioned in the annual questionnaire to ARB. Notify ARB of anticipated changes before they occur and obtain prior approval of the change before executing it, barring exceptional circumstances.
c) Participate in ARB's PQAO monitoring network status meetings/teleconferences.
d) Provide sample return and proper documentation of field sample collection activities (i.e., chain-of-custody, sample collection dates and times, etc.), within established timeframes.

If circumstances should arise that prevent either ARB and/or Shasta County AQMD from meeting the above mentioned responsibilities, the agencies will work collaboratively to ensure that the common goal of generating legally and scientifically defensible data throughout ARB's PQAO monitoring network is met. As needed, the agencies will work with U.S. EPA Region 9 to assist in meeting all applicable PQAO requirements.