



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

March 18, 2014

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3/18/14 ag

Mr. Craig Tallman
Northern Sonoma County Air Pollution Control District
150 Matheson Street
Healdsburg, California 95448

Dear Mr. Tallman:

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 ARB's 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 (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.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

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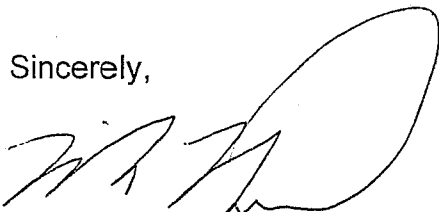
- b) Use of a common Quality Assurance Project Plan and Standard Operating Procedures for State and federally mandated air monitoring projects.
- c) Common calibration facilities and standards.
- d) Oversight by a common quality assurance organization.
- e) Support by a common management, laboratory, or headquarters.

In order to address these common factors, ARB has worked collaboratively with the Northern Sonoma County Air Pollution Control District and 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

Mr. Craig Tallman

March 18, 2014

Page 3 of 3

cc. Barbara Lee, APCO
Northern Sonoma County Air Pollution Control District
150 Matheson Street
Healdsburg, California 95448

Meredith Kurpius, Ph.D.
U.S. EPA Region 9
Air Quality Analysis Office, Manager
75 Hawthorne St., AIR-7
San Francisco, California 94105

Gwen Yoshimura
U.S. EPA Region 9
Air Quality Analysis Office, Air Monitoring Team Lead
75 Hawthorne St., AIR-7
San Francisco, California 94105

Dr. Michael T. Benjamin, Chief
Monitoring and Laboratory Division

Patrick Rainey
Monitoring and Laboratory Division

**PRIMARY QUALITY ASSURANCE ORGANIZATION
ROLES AND RESPONSIBILITIES
FOR THE AIR RESOURCES BOARD AND
NORTHERN SONOMA COUNTY AIR POLLUTION CONTROL DISTRICT**

Five common factors have been identified by the United States Environmental Protection Agency (U.S. EPA) that should be considered in defining a Primary Quality Assurance Organization (PQAO). Under the Air Resources Board (ARB) PQAO, ARB and Monitoring Organizations (MOs) will strive to collaboratively address the following common factors to the extent practical. ARB has defined the roles and responsibilities of ARB's PQAO in regard to operation of the 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 that field operations by a common team may not be feasible. ARB and the 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 EPA approval.
- c) Maintain a PQAO contact list and 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 California Air Pollution Control Officers (CAPCOA) Monitoring Committee meetings and other informational forums.

Northern Sonoma County APCD Responsibilities:

- a) Utilize and follow ARB's QMP. Any modifications to ARB's QMP will be specified in an addendum and submitted to ARB for review and approval.

- b) Provide a supervisory level or designee PQAO Point-of-Contact to ARB. The contact will receive list serve notices to provide effective and timely dissemination of information.
- c) Participate in ARB and 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, to QAPPs and SOPs via the PQAO point-of-contact list.
- d) Review and approve alternative QAPPs and SOPs prepared by MOs.

Northern Sonoma County APCD Responsibilities:

- a) Utilize and follow ARB's QAPP for ozone (O3) and particulate matter (PM10). Any deviations to ARB's QAPPs will be specified in an addendum and submitted to ARB for review and approval.
- b) Utilize and follow ARB SOPs for O3, PM10 continuous (BAM 1020), PM10 (Hi-Vol) and for PM10 mass analysis until the district develops their own. Any deviations to ARB's SOPs will be specified in an addendum and submitted to ARB for review and approval.
- c) Management will review SOPs periodically to ensure they are consistent with district practices and notify ARB of any revisions as they occur.
- d) Make available to ARB a record or list of quality assurance related documents (QMP, QAPP, SOP, training plan, etc.) utilized for the ambient air monitoring network.

If NSCAPCD conducts a special purpose monitoring (SPM) program funded by U.S. EPA, the district will seek quality assurance assistance from the U.S. EPA or ARB Quality Management Branch. Such monitoring is required to be covered by appropriate 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 to ensure uniformity and consistency. 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.

Northern Sonoma County APCD Responsibilities:

- a) Utilize ARB services for certification, calibration and verification of the O3 transfer standard and analyzers, and high and low-volume flow devices.
- b) Utilize a qualified vendor using National Institute of Standards and Technology (NIST) traceable standards for the certification, calibration and verification of the temperature sensor, relative humidity sensor, mass analysis lab weights and balance.

Additionally, ARB can provide equipment acceptance testing, repair, and field calibration services to MOs upon agreement, which may depend upon budget feasibility and staff availability.

4. Oversight by a common quality assurance organization

ARB Responsibilities:

- a) Identify pollutants monitored by NSCAPCD that are included in the ARB PQAO.
- b) Conduct Performance Evaluation (PE) audits of NSCAPCD for ozone monitoring sites as required in 40 CFR Part 58, Appendix A, including Section 3.2.2 and Section 3.2.4, and semiannual flow rate audit for Particulate Matter (PM10 high-volume and PM10 continuous samplers).
- 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 outside acceptable limits, ARB will initiate Air Quality Data Action (AQDA). The AQDA will request the NSCAPCD 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 recommended data action was taken (i.e., flagging, invalidation, etc.).
- e) Conduct technical systems audits (TSA) of all MOs within ARB's PQAO on a schedule of every 3-5 years.
 - f) Maintain the Corrective Action Notification (CAN) database 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 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 procedures to be performed by the MO prior to data being sent to ARB for upload to Air Quality System (AQS).
 - i) Provide training on data verification and validation procedures during the PQAO air monitoring training.
 - j) Perform upload of MO validated data for O3 and PM10 to AQS within 90 days following the end of each quarter.
 - k) Perform post-AQS screening of data to identify possible issues.
 - l) Perform annual certification of MO's O3 and PM10 data for which ARB has AQS submittal authority by May 1st of each year.
 - m) Perform an annual evaluation of the statistical summaries of quality assurance and quality control data from all MOs in ARB's PQAO, and distribute the results.

Northern Sonoma County APCD Responsibilities:

- a) Review and verify pollutants on an annual basis that are included in the ARB PQAO.
- b) Participate in O3 and PM10 PE audits.
- c) Participate in PM10 mass analysis laboratory PE audits. For laboratory programs not supported by ARB, NSCAPCD agrees to participate in a U.S. EPA or ARB approved alternative audit program, if available.
- d) Participate in U.S. EPA required technical system audits conducted either by ARB or U.S. EPA.
- e) Utilize and follow ARB's procedures to validate O3 and PM10 data quality against ARB or U.S. EPA established acceptance criteria prior to submittal to AQS. Any deviations to ARB's procedure will be specific in an addendum and submitted to ARB for review and approval. (The District may develop an SOP for data validation in the future).

- f) Submit validated data for O3 and PM10 to ARB in an AQS compatible .txt format (See Appendix 1) within 75 days of the end of each quarter, and provide a letter stating that validation has been performed (See Appendix 2).
- g) Participate in data verification and validation training provided by ARB and/or U.S. EPA.
- h) Review data in AQS (AMP 255 and 430) on a quarterly basis to verify accuracy and completeness.
- i) Review data in AQS (AMP 600 and 450 reports) on an annual basis to verify the accuracy and completeness of data for certification purposes. Provide a letter verifying the data quality by April 15th of each year (See appendix 3).
- j) Utilize ARB's CAN process report instrument malfunctions, operational problems, any items needing corrective action or investigation, and/or impending data actions in U.S. EPA's AQS within 45 days of determination of issue. District management will use discretion to determine issues deemed to be anomalous versus routine occurrences and report appropriately.
- k) Utilize the ARB's CAN process to notify ARB's Quality Management Branch of issues regarding data quality as well as impending data actions in U.S. EPA's AQS within 45 days of determination of issue.
- l) Resolve AQDAs, CANs and TSA findings, or develop corrective action plan as appropriate, within 45 days of issuance.
- m) Utilize ARB's CAN process to communicate to ARB when data have been altered or modified after it has been submitted to AQS, so ARB can review the justification and adjust data in AQS accordingly.

Data collected from SPM sites using Federal Reference Methods, Federal Equivalent Methods, or approved regional methods should be evaluated against the requirements in 40 CFR 58.11, 58.12, and Appendix A, and submitted to AQS according to 40 CFR 58.16.

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 MOs 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 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 plan as required in 40 CFR, Part 58.10. ARB will review completed

questionnaires within 30 days of receipt and provide feedback regarding network changes.

- b) Participate in annual meeting/teleconference during the network review period to discuss ARB PQAQO monitoring network status.
- c) Provide laboratory analytical support as required upon agreement.

Northern Sonoma County APCD Responsibilities:

- a) Complete the annual questionnaire regarding monitoring network changes within 30 days of receipt from ARB.
- b) Coordinate all site changes (i.e., openings, closures, relocations) not mentioned in the annual questionnaire to ARB. NSCAPCD will 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 PQAQO monitoring network status meetings/teleconferences.

If circumstances should arise that prevent either ARB and/or NSCAPCD 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 the PQAQO monitoring network is met. As needed, the agencies will work with U.S. EPA Region 9 to assist in meeting the PQAQO requirements.

Appendix 1

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CONFIDENTIAL

Appendix 2



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
1001 I Street • P.O. Box 2815
Sacramento, California 95812 • www.arb.ca.gov

Edmund G. Brown Jr.
Governor

(Insert Date)

Ms. Gayle Sweigert
California Air Resources Board
1001 I Street
Sacramento, California 95812

Dear Ms. Sweigert:

I have reviewed the appropriate quality control documents used by *(specify monitoring organization)* and attest that the air monitoring data for the time period of *(provide applicable date)* for *(specify applicable sites)* have been validated in accordance with the criteria established in the ARB procedures *(or specify district approved procedures if applicable)* for data validation and are acceptable for upload to AQS.

(This letter does not validate the following data as noted below)

Examples:

Jerseydale

The 8800 data logger at Jerseydale was replaced with an 8832 on June 2, 2013. There were some initial setup problems with regard to configuring the ozone channels on the 8832 causing a loss of ozone data. This resulted in a loss of the ozone data for the period June 2, 2013 hour 1700 through June 7, 2013 hour 1500 *(include total hours impacted)*.

(Data exceptions may include, but are not limited to, instrument downtime, missing or invalid data, calibration/audit events, maintenance, and other events impacting data capture or quality. Documentation should include notation of required flags and justification for data flagging)

Sincerely,

(District monitoring manager or APCO)

cc: *(District monitoring staff or management)*

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

Appendix 3



Air Resources Board



Matthew Rodriguez
Secretary for
Environmental Protection

Mary D. Nichols, Chairman
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Edmund G. Brown Jr.
Governor

(Insert Date)

Ms. Gayle Sweigert
California Air Resources Board
1001 I Street
Sacramento, California 95812

Dear Ms. Sweigert:

The *(specify district)* is responsible for submitting air quality and precision data to the Air Resources Board (ARB) for submittal to the Air Quality System (AQS) for those monitors that are under the control of the District. In support of the requirements in Title 40, Code of Federal Regulation (40 CFR), Part 58, this letter certifies that the District has reviewed the ambient concentration data and the quality assurance data for the *(specify year)* and attests that the ambient data are accurate and complete to the best of our knowledge taking into consideration the quality assurance findings. We recommend the data for certification.

At this time the District is not recommending certification of the following data: (specify pollutants, site name, AQS #, and reason for not recommending certification)

Specify any other data that the District has partial/shared responsibility for generating (filter-based PM10, PM2.5, toxics, etc.) and identify the agency responsible for generating and submitting the data to AQS.

Copies of the AQS data certification report (AMP 600) and the AQS Quick Look Report (AMP 450NC, if applicable) are attached.

Sincerely,

(Authorized District monitoring manager or APCO)

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency