Air Resources Board

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

Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

MAILED
3.17.15

March 13, 2015

Mr. Douglas Gearhart
Lake County Air Quality Management District
885 Lakeport Boulevard
Lakeport, California 95453

Dear Mr. Gearhart:

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 (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 Lake County Air Quality Management District (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 attachment). 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. Elizabeth Knight
Air Quality Program Coordinator
Lake County Air Quality Management District
885 Lakeport Boulevard
Lakeport, California 95453

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

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

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

Patrick Rainey, Manager
Monitoring and Laboratory Division

Carissa Ganapathy
Monitoring and Laboratory Division

Attachment

PRIMARY QUALITY ASSURANCE ORGANIZATION ROLES AND RESPONSIBILITIES FOR THE AIR RESOURCES BOARD AND LAKE 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 organizations (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 ambient air monitoring network in order to ensure the generation of high quality, legally defensible data.

1. <u>Operation by a common team of field operators or according to a common set of procedures</u>

   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. Continue to provide MOs with updates of significant issues discussed.
   g) Participate in the California Air Pollution Control Officers Association (CAPCOA) air monitoring committee meetings and other informational forums.

   Lake 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.

Note- Operations performed under the Geysers Air Monitoring Program are covered under a separate memorandum of understanding.

b) Provide a supervisory level (or designee if non-supervisory level) PQAO Point-of-Contact to ARB. 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.

Lake County AQMD Responsibilities:

a) Utilize and follow Lake County AQMD's QAPP for particulate matter (PM2.5, PM10 and PM laboratory) and ARB's QAPPs for ozone (O3), and meteorological air monitoring projects. 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 PM2.5, PM10, O3, and meteorological air monitoring projects. AQMD will follow the District's laboratory SOPs that are attached to the QAPP. 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 QAPPs and SOPs on an established schedule to ensure consistency with AQMD's operating practices and notify ARB of any required updates or revisions.
d) Make available to ARB a record or list of quality management documents (QMP, QAPP, SOP, training plan, etc.) utilized by AQMD's ambient air monitoring network.

If Lake County AQMD conducts a special purpose monitoring program funded by U.S. EPA, the District 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 (information on available services can be found at http://www.arb.ca.gov/aaqm/qa/stdslab/stdslab.htm).

Lake County AQMD Responsibilities:

a) Utilize ARB's certification, calibration, and verification services for O3 transfer standards, barometric pressure, compressed gas and relative humidity/temperature probe.
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, balance and low and high volume flow standards.
c) 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 Lake 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 for O3, meteorological parameters and semi-annual flow rate audits for PM2.5 and PM10, as required in

40 CFR Part 58, Appendix A, including Sections 3.2.2 and 3.2.4. Also, ARB will conduct an annual PE audit of the Lake County AQMD's PM mass laboratory.

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 technical systems audits (TSA) of all MOs within ARB's PQAO on a schedule of every 3-5 years.
f) Maintain a 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 that appropriate action was taken to close the CAN and 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 performed prior to upload to AQS.
i) Provide training on data verification and validation procedures as part of the PQAO Air Monitoring Training.
j) Upload MO validated data (PM2.5, PM10, O3, and meteorological) to AQS within 90 days following the end of each quarter.
k) Perform post-AQS screening of submitted data to identify any issues.
l) Perform annual certification of 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 for all MOs in ARB's PQAO and distribute results.

Lake County AQMD Responsibilities:

a) Review and verify pollutants on an annual basis that are included in ARB's PQAO.
b) Participate in annual PE audits for O3 and meteorological instruments, and semi-annual flow rate audits for particulate matter (PM2.5, PM10) conducted by ARB.
c) Participate in PM2.5 and PM10 mass analysis laboratory PE audits. For laboratory programs not supported by ARB, the District 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 for validating PM2.5, PM10, O3, and meteorological air monitoring data prior to submission to ARB for upload to AQS.
f) Submit validated PM2.5, PM10, O3, and meteorological air monitoring data to ARB in an AQS compatible text format (see Appendix 1) within 75 days following the end of each quarter and provide a letter stating validation was 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 on a quarterly basis to verify accuracy and completeness (AMP 256 and 430 reports).
i) Review data in AQS (AMP 600 and 450 NC reports) on an annual basis to verify accuracy and completeness of data for certification purposes. Provide a letter to ARB verifying data quality by April 15th of each year (see Appendix 3).
j) Utilize ARB's CAN process to notify ARB's Quality Management Branch of instrument malfunctions, operational problems, data quality issues, and/or any items needing corrective action or investigation. Management will use appropriate discretion to determine issues deemed to be anomalous verses routine occurrences.
k) Resolve AQDAs and CANs, and develop corrective action plan as appropriate, within 45 days of issuance.
l) Utilize the CAN process to communicate to ARB when data is altered or modified after submittal so that 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 will be evaluated against the 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 annual 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.

Lake County AQMD 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. 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 Lake 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.

Appendix 1

APPENDIX 1

LCAQMD
Lakeport PM2.5 AIRS 3rd Qtr 2014

TYPE	ACTION	STATE	COUNTY	SITE	PARAMETER	POC	INTERVAL	UNIT	METHOD	DATE	START HOUR	VALUE	NULL CODE	SAMPLE FREQ.	MP-ID	Q01	Q02	Q03	Q04	Q05	Q06	Q07	Q08	Q09	Q10	ALT_METHOD DETECTION	UNCERTAINTY
RD	I	06	033	3001	88101	1	7	105	117	20140704	00:00	5.0		6													
RD	I	06	033	3001	88101	1	7	107	780	20140704	00:00	0.3		6													
RD	I	06	033	3001	88102	1	7	085	780	20140704	00:00	24.0		6													
RD	I	06	033	3001	88103	1	7	017	780	20140704	00:00	13.2		6													
RD	I	06	033	3001	88104	1	7	017	780	20140704	00:00	36.6		6													
RD	I	06	033	3001	88105	1	7	017	780	20140704	00:00	24.0		6													
RD	I	06	033	3001	88106	1	7	059	780	20140704	00:00	719		6													
RD	I	06	033	3001	88107	1	7	059	780	20140704	00:00	724		6													
RD	I	06	033	3001	88108	1	7	059	780	20140704	00:00	721		6													
RD	I	06	033	3001	88109	1	7	106	780	20140704	00:00	1440		6													
RD	I	06	033	3001	88101	1	7	105	117	20140710	00:00	3.8															
RD	I	06	033	3001	88101	1	7	107	780	20140710	00:00	0.1															
RD	I	06	033	3001	88102	1	7	085	780	20140710	00:00	24.0															
RD	I	06	033	3001	88103	1	7	017	780	20140710	00:00	16		6													
RD	I	06	033	3001	88104	1	7	017	780	20140710	00:00	[illegible]		6													
RD	I	06	033	3001	88105	1	7	017	780	20140710	00:00	22															
RD	I	06	033	3001	88106	1	7	059	780	20140710	00:00	718		6													
RD	I	06	033	3001	88107	1	7	059	780	20140710	00:00	722		6													
RD	I	06	033	3001	88108	1	7	059	780	20140710	00:00	720		6													
RD	I	06	033	3001	88109	1	7	106	780	20140710	00:00	1440		6													
RD	I	06	033	3001	88101	1	7	105	117	20140716	00:00	4.0		6													
RD	I	06	033	3001	88101	1	7	107	780	20140716	00:00	0.[illegible]		6													
RD	I	06	033	3001	88102	1	7	085	780	20140716	00:00	[illegible]		6													
RD	I	06	033	3001	88103	1	7	017	780	20140716	00:00	18.7		6													
RD	I	06	033	3001	88104	1	7	017	780	20140716	00:00	29.8		6													
RD	I	06	033	3001	88105	1	7	017	780	20140716	00:00	23.3		6													
RD	I	06	033	3001	88106	1	7	059	780	20140716	00:00	720		6													
RD	I	06	033	3001	88107	1	7	059	780	20140716	00:00	724		6													
RD	I	06	033	3001	88108	1	7	059	780	20140716	00:00	722		6													
RD	I	06	033	3001	88109	1	7	106	780	20140716	00:00	1440		6													

Example Format

Appendix 2

APPENDIX 2

LAKE COUNTY AIR QUALITY
MANAGEMENT DISTRICT
885 Lakeport Boulevard
Lakeport, CA 95453
Phone (707) 263-7000 Fax (707) 263-0421

Douglas G. Gearhart
Air Pollution Control Officer
dougg@lcaqmd.net

(Insert Date)

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

Subject: Lake County AQMD *(Insert quarter, year)* AIRS Data Validation Letter

Dear Ms. Sweigert,

I have reviewed the appropriate quality control documents used by the Lake County Air Quality Management District (LCAQMD) and attest that the air monitoring data for the time period of *(Insert time period covering)* for Anderson Springs PM10, Glenbrook PM10, Lakeport PM10, and Lakeport PM2.5 have been validated in accordance with the criteria established in the LCAQMD's QAPP and SOP for data validation and are acceptable for upload to AQS.

Sincerely,

Douglas Gearhart, APCO

TEMPLATE

Appendix 3

APPENDIX 3

LAKE COUNTY AIR QUALITY
MANAGEMENT DISTRICT
885 Lakeport Boulevard
Lakeport, CA 95453
Phone (707) 263-7000 Fax (707) 263-0421

Douglas G. Gearhart
Air Pollution Control Officer
dougg@lcaqmd.net

(Insert Date)

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

Subject: Lake County AQMD *(Insert year)* Data Certification Letter

Dear Ms. Sweigert,

The Lake County Air Quality Management District (LCAQMD) is responsible for submitting air quality and precision data to the Air Resources Board (ARB) for submittal to the Air Quality System (AQS) for monitors that are under the control of the LCAQMD. In support of the requirements in Title 40, Code of Federal Regulation (40 CFR), Part 58, this letter certifies that the LCAQMD 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 LCAQMD is not recommending certification of the following data: *(specify pollutants, site name, AQS #, and reason for not recommending certification)*

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

Sincerely,

Douglas Gearhart, APCO

TEMPLATE