



Air Resources Board



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PM10 Lo-Vol Validation Criteria November 2014

Introduction

Monitoring organizations within the California Air Resources Board's (CARB) Primary Quality Assurance Organization are utilizing low-volume filter-based particulate matter (PM10 Lo-Vol) samplers for the monitoring of PM10 concentrations. Appendix J of Title 40 Code of Federal Regulations, Part 50 (40 CFR) – “Reference Method for the Determination of Particulate Matter as PM10 in the Atmosphere”, which describes the requirements for operation and maintenance of PM10 filter-based samplers, was promulgated for high-volume and dichot sampling methods. Since the low-volume samplers are designed to be operated and maintained within tighter operational criteria and the data from the low-volume methods may be used for multiple uses (PM10-coarse, PM10-lead, etc.), the Data Validation Template in Appendix D of the Environmental Protection Agency's (U.S. EPA) *Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II* (QA Handbook, Volume II) suggests that the validation criteria for the low-volume PM10 method follow the method requirements associated with PM2.5 which are in Appendix L of 40 CFR, Part 50 – “Reference Method for the Determination of Fine Particulate Matter as PM2.5 in the Atmosphere”.

Issue

Validation criteria for the PM10 Lo-Vol method in Appendix D of U.S. EPA's QA Handbook, Volume II (07/14) are not the requirements associated with Appendix J of 40 CFR. U.S. EPA suggests that the validation criteria for the PM10 Lo-Vol method follow the requirements associated with Appendix L of 40 CFR, Part 50.

Resolution

In order to add standardization and consistency across the PQAQO, it is CARB's policy that monitoring organizations utilizing PM10 Lo-Vol samplers follow the critical, operational, and systematic validation criteria for the PM10 Lo-Vol method in Appendix D of the U.S. EPA QA Handbook, Volume II (07/14). Air monitoring districts within the CARB PQAQO that operate and/or analyze filters from a PM10 Lo-Vol sampler(s) should also utilize and follow these operational and validation criteria.

Note: Where there are particular requirements directly related to the National Ambient Air Quality Standards, evaluation of Appendix J of 40 CFR, Part 58 will be used.

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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