

Clarifications and Interpretations Concerning the Comparability Tests for Class II and III Candidate Equivalent Methods for PM_{2.5} and PM_{10-2.5} (40 CFR 53.35 and related sections)

January 18, 2007

Test Sites

1.1 Q. **Is a test site located in Canada or Mexico acceptable?**

A. No, §53.35(b)(1) clearly requires testing "...at each of the applicable U.S. test sites..." so all test sites must be in the United States.

1.2. Q. **How is a "midwestern city" defined?** [§53.35(b)(i)(C), §53.35(b)(ii)(C)]

A. A city located in the northern region of the central United States east of the Rocky Mountains, in the area comprising the states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

1.3. Q. **What is a "western" city?** [§53.35(b)(i)(B), §53.35(b)(ii)(B)]

A. A city located in the western U. S. (but not the Pacific Coast states) in the area comprising the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

1.4. Q. **A "northeastern" city?** [§53.35(b)(i)(D)]

A. A city located in the northeastern U.S., in the area comprising the states of Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

1.5. Q. **A "mid-Atlantic" city?** [§53.35(b)(i)(D)]

A. A city in the mid-Atlantic section of the U.S., in the area comprising the states of Delaware, Maryland, North Carolina, Virginia, West Virginia and the District of Columbia.

1.6. Q. **How should "...characteristic wintertime temperatures of 0° C or lower" be determined regarding a proposed test site?** [§53.35(b)(ii)]

A. The site should be in an area where climatologic records for the area show an average temperature (average of the daily high and low temperature or similar average) of 0° C (32 °F) or lower for the month in which testing occurred or is planned to occur. (Many web sites provide average temperature data; one site that is particularly easy to use is www.weatherbase.com.)

Test Seasons

2.1. Q. To complete testing this winter [in Bakersfield, CA], I need to know the calendar sampling window. That is, what is the latest date we can sample and fall within the approved test period window? (This question applies to all test locations and not just Bakersfield.)

A. The winter season is defined in §53.35(b)(2) as the "...coolest three or four months of the year at the site." For example, according to our research, the coolest 4 months for Bakersfield (30 year average, 1961-1990) are December (average temperature 47.5° F), January (47.8° F), February (53.3° F) and November (55.8° F). Therefore, the latest test sampling day (of that particular season) would be February 28 (for 2007). (If the testing were started in February, a few days of sampling that carried over into early March (57.4° F) would not necessarily be disallowed if there were "extenuating circumstances.") Note that those four months may not necessarily be the coolest 4 months of the year at another test site. *However*, if a test site has been selected as one that must have a "characteristic wintertime temperature of 0° C (32°F) or lower ([53.35(b)(ii)]; see question 1.6 under **Test Sites** above), then the latest test sampling day (for that particular season) would be the last day of the month for which the average temperature is 0° C (32°F) or lower.

2.2. Q. Do we need to sample at the two winter sites during the same year and season? Or, if the logistics do not work out, can the samples be collected at the different sites during different years/seasons?

A. There is no requirement that test samples have to be collected in the same year. Thus, for example, Bakersfield samples could be collected in December of one year and January of the next year in the same winter season. Further, there is no requirement that seasonal test measurements must be obtained contiguously. Thus, winter test sampling could be started in, for example, February and completed in November. Tests at different sites are not required to be carried out in the same year or in the same specific calendar-year season.

Test Procedures

3.1. Q. May sequential, multi-filter type reference method (FRM) samplers be used for the Comparability tests?

A. No, §53.35(c) clearly requires that the FRM samplers must be "...of single-filter design (not multi-filter, sequential sample design)." Further, operation of a multi-filter, sequential sampler in a manual, "single-filter" mode, where collected filter samples are retrieved after each test day, does not meet the "single-filter design" requirement. Note, however, that there is no requirement that the daily measurements start an any particular time of day, as long as they meet the 22 to 25 hour duration requirement of §53.35(c)(4).