10 CSR 10-6.030 Sampling Methods for Air Pollution Sources

(1) Samples and velocity traverses for source sampling shall be conducted using Method 1 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(2) The velocity of stack gases shall be determined by measuring velocity head using a Type "S" (Stauscheibe or reverse type) pitot tube using Method 2 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(3) The carbon dioxide, oxygen, excess air, and dry molecular weight contained in stack gases shall be determined using Method 3 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(4) The moisture content in stack gases shall be determined using Method 4 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(5) Particulate Matter Emissions.

(A) The concentration of particulate matter emissions in stack gases shall be determined using Method 5 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(B) The quantity of particulate matter emissions from certain industrial processes as determined by the director shall be determined using Method 17 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(C) The concentration of particulates of PM_{10} shall be determined using Method 201 as specified by 40 CFR part 51, Appendix M in section (21) of this rule. When water droplets are known to exist in emissions, use Method 5 as defined in subsection (5)(A) of this rule and consider the particulate catch to be PM_{10} emissions.

(D) The concentration of particulates of PM_{10} shall be determined using Method 201A as specified by 40 CFR part 51, Appendix M in section (21) of this rule. When water droplets are known to exist in emissions, use Method 5 as defined in subsection (5)(A) of this rule and consider the particulate catch to be PM_{10} emissions.

(E) The concentration of condensable particulate matter (CPM) emissions in stack gases shall be determined using Method 202 and Conditional Test Method 039 as specified by 40 CFR part 51, Appendix M in section (21) of this rule may be used to determine the total PM_{10} and $PM_{2.5}$ fraction of filterable particulate matter including condensables.

(F) The concentration of $PM_{2.5}$ emissions in stack gases shall be determined using Method 202 and Conditional Test Method 040 as specified by 40 CFR part 51, Appendix M in section (21) of this rule. EPA Conditional Test Method 039 as specified in 40 CFR part 51, Appendix M in section (21) of this rule may be used to determine the total PM_{10} and $PM_{2.5}$ fraction of filterable particulate matter including condensables.

(6) The sulfur dioxide emissions from air pollution sources shall be determined using Method 6 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(7) The nitrogen oxide emissions from air pollution sources shall be determined using Method 7 as specified by 40 CFR part 60, Appendix A in section 22 of this rule.

(8) The sulfuric acid mist and sulfur dioxide emissions from air pollution sources shall be determined using Method 8 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(9) Visible Emissions.

(A) The visible emissions from air pollution sources shall be evaluated using Method 9 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(B) Visible fugitive emissions shall be evaluated using Method 22 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(10) The carbon monoxide emissions from air pollution sources shall be determined using Method 10 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(11) The hydrogen sulfide emissions from air pollution sources shall be determined using Method 11 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(12) The lead emissions from air pollution sources shall be determined using Method 12 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(13) The total fluoride emissions and the associated moisture content from air pollution sources shall be determined using Method 13A and 13B as specified by 40 CFR part 60, Appendix A in section (22) of this rule. For Method 13A or 13B, the sampling time for each run shall be at least sixty (60) minutes and the minimum sample volume shall be at least 0.85 standard dry cubic meter (thirty (30) standard dry cubic foot) except that shorter sampling times or smaller volumes, when necessitated by process variables or other factors, may be approved by the director.

(14) Volatile organic compound emissions from air pollution sources shall be determined—

(A) Using Method 25 as specified by 40 CFR part 60, Appendix A in section (22) of this rule;

(B) Using Method 27 as specified by 40 CFR part 60, Appendix A in section (22) of this rule;

(C) Using Method 24 as specified by 40 CFR part 60, Appendix A in section (22) of this rule;

(D) Using Method 24A as specified by 40 CFR part 60, Appendix A in section (22) of this rule; or

(E) Using Method 21 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(15) The hydrogen chloride emissions from air pollution sources shall be determined using Method 26 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(16) Dioxin and furan emissions from air pollution sources shall be determined using Method 23 as specified by 40 CFR part 60, Appendix A in section (22) of this rule.

(17) The mercury emissions, both particulate and gaseous, from air pollution sources shall be determined using Method 101A as specified by 40 CFR part 61, Appendix B in section (23) of this rule.

(18) The latest effective date of any 40 CFR part 60, Appendix A—Test Methods shall be as designated in 10 CSR 10-6.070 New Source Performance Regulations.

(19) Alternative Sampling Method. An alternative sampling method to any method referenced in this rule may be used provided it is in accordance with good professional practice, provides results of at least the same accuracy and precision as the replaced method and receives the approval of the director for its use.

(20) The capture efficiency of air pollution control devices shall be determined as specified by the U.S. Environmental Protection Agency's (EPA's) February 7, 1995 memorandum entitled, "Revised Capture Efficiency Guidance for Control of Volatile Organic Compound Emission" (GD 36) and the U.S. EPA's January 9, 1994 technical document entitled, "Guidelines for Determining Capture Efficiency." (GD 35) as published by EPA and hereby incorporated by reference in this rule. Copies can be obtained from the Office of Air Quality Planning and Standards, Leader, Measurement Technology Group, (Mail Code E143-02), Research Triangle Park, NC 27711. This rule does not incorporate any subsequent amendments or additions. For automobile and light-duty truck topcoat operations, the capture efficiency of air pollution control devices shall be determined as specified in U.S. EPA's document entitled, "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" (US EPA-453/R-08-002), as published by EPA September 2008 and hereby incorporated by reference in this rule. Copies can be obtained from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield VA 22161. This rule does not incorporate any subsequent amendments or additions.

(21) 40 CFR 51, Appendix M promulgated as of July 1, 2018 is hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

(22) 40 CFR 60, Appendices A, B, and F promulgated as of July 1, 2018 are hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

(23) 40 CFR 61, Appendix B promulgated as of July 1, 2018 is hereby incorporated by reference in this rule, as published by the Office of the Federal Register. Copies can be obtained from the U.S. Publishing Office Bookstore, 710 N. Capitol Street NW, Washington DC 20401. This rule does not incorporate any subsequent amendments or additions.

EPA Rulemakings

CFR: 40 C.F.R. 52.1320(c)
FRM: 85 FR 4229 (1/24/2020)
PRM: 84 FR 66096 (12/3/2019)
State Submission: 10/25/2019
State Final: 10 C.S.R. 10-6 (10/31/19); effective 11/30/19
APDB File: MO-441; EPA-R07-OAR-2019-0656 effective 2/24/2020
Description: This revision provides a more efficient way to perform emissions sampling by incorporating by reference (IBR) federally promulgated methods. Section (1) subsection (1) through (5)(b) and (6) through (16) remove the title of the sampling method and add a reference to the IBR at section (22). Subsection (5)(c) through (5)(f) remove the title of the sampling method and add a reference to the IBR at section (21).Section (17) removes the title of the sampling method and adds a reference to the IBR section (23). Section (20) updates its IBR information and documentation identification. Sections (21), (22) and (23) are added.

CFR: 40 C.F.R. 52.1320(c)
FRM: 71 FR 70468 (12/5/2006)
PRM: 71 FR 70476 (12/5/2006
State Submission: 3/30/2006
State Final: 10 C.S.R. 10-6 (01/29/2006); effective 02/28/2006
APDB File: MO-242; EPA-R07-OAR-2006-0900
Description: This revision updates adopted Federal reference methods for the $PM_{2.5}$ NAAQS finalized on July 18, 1997 and mandated by the CAA.

CFR: 40 C.F.R. 52.1320(c)(112)
FRM: 64 FR 15688 (4/1/99)
PRM: 64 FR 15711 (4/1/99)
State Submission: 12/7/98
State Proposal: 23 MR 952 (5/15/98)
State Final: 10 C.S.R. 10-6 18 (10/31/98)
APDB File: MO-152
Description: This revision is to clarify the meaning and intent of the reference method citations and to add certain Federal reference sampling methods (methods 202 and 22) to the rule.

CFR: 40 C.F.R. 52.1320(c)(106)
FRM: 63 FR 36852 (7/8/98)
PRM: 63 FR 36870 (7/8/98)
State Submission: 12/17/96
State Proposal: 21 MR 1238 (5/15/96)
State Final: 10 C.S.R. 10-6 18 (10/31/96)
APDB File: MO-114
Description: This revision incorporates the most current EPA guidance on capture efficiency methods for volatile organic compound emission control systems.

CFR: 40 C.F.R. 52.1320(c)(84)(I)(B)
FRM: 58 FR 45451 (8/30/93)
PRM: 58 FR 30730 (4/27/93)
State Submission: 9/23/92-
State Proposal: 16 MR 361 (9/16/91)
State Final: 10 C.S.R. 10-6 (3/30/92)
APDB File: MO-99
Description: This revision approved test methods used to determine control device capture and destruction efficiency, and test methods to determine volatile matter content and density of printing inks.

CFR: 40 C.F.R. 52.1320(c)(79)(I)(A)
FRM: 59 FR 43480 (8/24/94), Correction notice 60 FR 16806 (4/3/95)
PRM: 57 FR 32191 (7/21/92)
State Submission: 11/20/91
State Proposal: 16 MR 288 (2/19/91)
State Final: 10 C.S.R. 10-6 (9/20/91)
APDB File: MO-100
Description: This revision administratively renumbers many of the previously approved sampling methods in this rule and the changes represent significant changes in the rule organization but not the rule content.

CFR: 40 C.F.R. 52.1320(c)(65)(I)(E)
FRM: 54 FR 10322 (3/13/89)
PRM: 53 FR 24735 (6/30/88)
State Submission: 12/18/87
State Proposal: 12 MR 996 (7/13/87), 12 MR 1386 (9/14/87)
State Final: 12 MR 1718 (11/13/87), 12 MR 1957 (12/14/87)
APDB File: MO-49
Description: The EPA approved changes relating to VOC test methods.

CFR: 40 C.F.R. 52.1320(c)(47)
FRM: 49 FR 44998 (11/14/84)
PRM: None
State Submission: 8/14/84
State Proposal: 9 MR 326 (2/1/84), 9 MR 670 (4/2/84)
State Final: 9 MR 423 (3/1/84), 9 MR 1134 (7/2/84)
APDB File: MO-53
Description: The EPA approved revisions which: (1) updated references to sampling methods, (2) added VOC test methods, and (3) made other administrative changes.

CFR: 40 C.F.R. 52.1320(c)(25)(iii)
FRM: 46 FR 20172 (4/3/81)
PRM: 45 FR 84099 (12/22/80)
State Submission: 9/2/80
State Proposal: 5 MR 385 (4/1/80)
State Final: 5 MR 1148 (9/2/80)
APDB File: MO-12
Description: The EPA approved a revision which added VOC test methods.

CFR: 40 C.F.R. 52.1320(c)(13)(ii)
FRM: 45 FR 17145 (3/18/80)
PRM: 44 FR 52001 (9/6/79)
State Submission: 8/28/78
State Proposal: 2 MR 512 (9/1/77)
State Final: 3 MR 90 (2/1/78)
APDB File: MO-03
Description: The EPA approved a new regulation setting out sampling methods for air pollution sources.

Difference Between the State and EPA-Approved Regulation

None.