

ARTICLE 3. MONITORING REQUIREMENTS

Rule 6. Source Sampling Procedures

326 IAC 3-6-1 Applicability; test procedures

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-14-4-3; IC 13-15; IC 13-17

Sec. 1. This rule applies to any emissions unit emissions testing performed to determine compliance with applicable emission limitations contained in this title, or for any other purpose requiring review and approval by the department. The owner or operator of an emissions unit shall conduct emission tests subject to this rule in accordance with any applicable procedures and analysis methods specified in 40 CFR 51*, 40 CFR 60*, 40 CFR 61*, 40 CFR 63*, 40 CFR 75*, or other procedures approved by the department and U.S. EPA.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Air Quality, Indiana Government Center North, Tenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204. (*Air Pollution Control Division; 326 IAC 3-6-1; filed Jan 30, 1998, 4:00 p.m.: 21 IR 2072; errata filed Dec 12, 2002, 3:35 p.m.: 26 IR 1567; filed Aug 26, 2004, 11:30 a.m.: 28 IR 36; filed Aug 11, 2011, 1:54 p.m.: 20110907-IR-326050330FRA*)

326 IAC 3-6-2 Source sampling protocols

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-14-4-3; IC 13-15; IC 13-17

Sec. 2. (a) When an emissions test is to be performed by any person other than the department, the source or emissions unit owner or operator shall complete a test protocol form and submit the test protocol form to the department not later than thirty-five (35) days prior to the intended test date unless the applicable rule requires additional notice. The test protocol shall:

- (1) be on a form approved by the department; or
- (2) contain information equivalent to that required on the form approved by the department.

The department shall evaluate and approve the test protocol prior to it being implemented. If the department does not notify the owner or operator prior to the test date that the protocol has not been approved, the protocol is deemed approved.

(b) After evaluating the completed test protocol form, the department may:

- (1) inspect the test site; or
- (2) require additional conditions, including, but not limited to:
 - (A) requiring reasonable modifications to the stack or duct to obtain acceptable test conditions;
 - (B) requiring additional tests to allow for adverse conditions;
 - (C) keeping process operating parameter records, operating logs, or charts during the test;
 - (D) placing conditions on control equipment operation to make the operation of control equipment representative of normal operation; or
 - (E) recording specified control equipment operating parameters during the test.

(c) If the department requires modification to:

- (1) test methods;
- (2) analytical methods;
- (3) operational parameters; or
- (4) other matters included in the emissions test protocol;

the department shall notify the source or emissions unit owner or operator and the testing firm by letter or telephone not later than twenty-one (21) days prior to the test date.

(d) If the source or emissions unit owner or operator or test firm desires to make a change to previously submitted procedures or conditions, the department shall be notified of the change as soon as practicable prior to the intended emissions test date. The changes shall not be made unless approved by the department prior to the emission test.

(e) Reasonable changes in the emissions test protocol that result from emergency conditions during the test shall be approved by the department if a department staff person is available at the test site, before the test may proceed.

(f) Post-test approval may be granted based on reasonable changes resulting from emergency or reasonably unforeseeable conditions during the test.

(g) The department reserves the right to conduct any portion of the reference method tests using equipment supplied by the department. Notice of acceptable test procedures shall be given to the owner or operator of the source or emissions unit and its testing representative.

(h) The source or emissions unit owner or operator shall schedule an actual test date and time period and notify the department not later than fourteen (14) days prior to the actual test date. In the event that a previously scheduled test must be canceled and rescheduled, the owner or operator of the source or emissions unit shall notify the department no less than fourteen (14) days in advance of the rescheduled test date. Tests rescheduled for less than fourteen (14) days after notifying the department of the rescheduled test date must be approved by the department. (*Air Pollution Control Division; 326 IAC 3-6-2; filed Jan 30, 1998, 4:00 p.m.: 21 IR 2072; filed Aug 11, 2011, 1:54 p.m.: 20110907-IR-326050330FRA*)

326 IAC 3-6-3 Emission testing

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-14-4-3; IC 13-15; IC 13-17

Sec. 3. (a) Department staff may observe field test procedures and source or emissions unit operation during the emission test.

(b) The owner or operator of a source or emissions unit shall conduct all emission tests as follows:

(1) The emissions unit being tested shall be operating according to clause (A) or (B), except as allowed under clause (C), as follows:

(A) At a minimum, ninety-five percent (95%) of the permitted maximum emissions unit operating capacity description.

(B) Under conditions of worst case emissions, and if the worst case emission condition is not known, then the worst case emission condition shall be assumed to be the maximum process or operating rate of the emissions unit as listed in the permit's emissions unit description.

(C) Under other capacities or conditions as specified in an applicable requirement or approved by the department. As used in this clause, "capacity" means the design capacity of the emissions unit or other operating capacities agreed to by the owner or operator of the emissions unit and the department, including, but not limited to, process conditions when the department believes that changes in the operating capacities or operating conditions have the potential to affect emission levels.

(2) All test runs for a given pollutant shall be conducted within forty-eight (48) hours unless process variables or mandatory test lengths of greater than two (2) hours make this impracticable. In these cases, the testing shall be conducted on consecutive days. Other periods or duration may be approved by the commissioner if specific testing circumstances require a longer testing time frame.

(c) Emissions units subject to 326 IAC 12, 326 IAC 14, or 326 IAC 20 shall be tested under conditions as specified in the applicable provision for that emissions unit in 40 CFR 60*, 40 CFR 61*, or 40 CFR 63* and this rule where appropriate.

(d) The owner or operator of a source or emissions unit shall make available at the test site calibration results of the various sampling components. The information shall include the following:

(1) The date or dates the test was performed.

(2) The methods used.

(3) The calibration data.

(4) The results.

All components requiring calibration shall be calibrated within sixty (60) days prior to the actual test date. Post-test calibrations shall be performed on the components not later than forty-five (45) days after the actual test date. Components requiring calibration are listed in the federal test methods specified in section 5 of this rule.

(e) The department may perform or require the performance of audits of equipment or procedures associated with the test series up to the time of the actual performance of the test, between test runs, or following the test series. The department reserves the right to perform or observe all associated analyses.

(f) The original or a photocopy of the raw field data generated during the test series shall be provided to the department observer upon request if the request may be reasonably met under the existing circumstances.

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326 IAC 3-6-4 Reporting

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-14-4-3; IC 13-15; IC 13-17

Sec. 4. (a) All emission tests for which a test protocol form was submitted to the department under section 2 of this rule shall be reported to the department in the form of an emission test report containing the following information:

- (1) The reported testing methods and results certified as true and accurate and in compliance with this rule by the person responsible for conducting the emissions test.
- (2) Information regarding the test, including the following:
 - (A) A stack test result summary table that compares the measured emissions, in units consistent with the applicable emissions limitations, to the emissions limitations.
 - (B) A description of the emissions unit or units being tested.
 - (C) The date or dates on which the test was performed.
 - (D) The type of tests conducted.
 - (E) The type of process and control equipment utilized.
 - (F) The source name and location.
 - (G) The purpose of the tests.
 - (H) The test participants and their titles.
- (3) Tabulated data and results, including the following:
 - (A) The process weight rate or heat input rate.
 - (B) The referenced or derived conversion factors.
 - (C) The stack gas flow rate.
 - (D) Measured emissions given in units consistent with the applicable emission limitations.
 - (E) The average value of emissions from any continuous gaseous emissions monitoring system in units consistent with the applicable emission limitations if applicable to the pollutant being tested.
 - (F) If applicable, visible emissions observations or six (6) minute average continuous opacity monitor readings.
- (4) A description of process and control devices, including the following:
 - (A) A process flow diagram.
 - (B) The maximum design capacities.
 - (C) A fuel analysis and heat value for heat input rate determinations.
 - (D) The process and control equipment operating conditions.
 - (E) A discussion of variations from normal plant operations.
 - (F) The stack height.
 - (G) The exit diameter.
 - (H) The volumetric flow rate (cubic feet per minute).
 - (I) The exit temperature.
 - (J) The exit velocity.
- (5) A description of sampling methods used, including the following:
 - (A) A brief discussion of the analytical procedures with justifications for any variance from reference method procedures.
 - (B) Specification of the following:
 - (i) The number of sampling points.
 - (ii) The time per point.
 - (iii) The total sampling time per run.
 - (C) A cross-sectional diagram of the sampling site showing sampling points.
 - (D) A diagram showing the following:
 - (i) The stack dimensions.
 - (ii) The sampling location.
 - (iii) The distance from the nearest flow disturbance upstream and downstream of the sampling points.
 - (iv) The diagram of the sampling train.
- (6) Sampling and analytical procedures used, including the following:

- (A) Results and calculations, including the following:
 - (i) Units consistent with the applicable emission limitation.
 - (ii) One (1) complete calculation using actual data for each type of test performed.
 - (iii) Raw production data signed by the source official.
 - (iv) Photocopies of all actual field data.
- (B) A laboratory report, including the following:
 - (i) The chain of custody.
 - (ii) Copies of all calibration data for equipment used in sampling as described in section 3(d) of this rule.
- (C) Applicable rules and regulations showing the emission limitations.
- (D) If applicable, copies of visible emissions evaluations or opacity monitor readings.
- (E) Copies of any continuous gaseous emissions monitoring system readings for gaseous pollutant tests.

(b) The owner or operator of a source or emissions unit shall submit all emission test reports to the department not later than forty-five (45) days after the completion of the testing. An extension may be granted by the department if the owner or operator of the source or emissions unit submits to the department a reasonable written explanation for the requested extension not later than five (5) days prior to the end of the initial forty-five (45) day period. (*Air Pollution Control Division; 326 IAC 3-6-4; filed Jan 30, 1998, 4:00 p.m.: 21 IR 2073; filed Aug 11, 2011, 1:54 p.m.: 20110907-IR-326050330FRA*)

326 IAC 3-6-5 Specific testing procedures; particulate matter; PM₁₀; PM_{2.5}; sulfur dioxide; nitrogen oxides; volatile organic compounds

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-14-4-3; IC 13-15; IC 13-17

Sec. 5. (a) Tests for particulate matter (PM), PM₁₀, and PM_{2.5} shall be conducted in accordance with the following procedures:

(1) For PM: 40 CFR 60, Appendix A, Method 5*, 5A*, 5B*, 5C*, 5D*, 5E*, or 5F*, or Method 17*, as applicable, or other procedures approved by the department and U.S. EPA.

(2) For PM₁₀ and PM_{2.5}: 40 CFR 51, Appendix M, Method 201* or 201A*, and 202*. The measurement of condensable PM₁₀ using the procedures described in Method 202* is not required if the applicable emission limitation is contained at 326 IAC 6.8-2, unless otherwise specified by 326 IAC 6.5 or 326 IAC 6.8. 40 CFR 60, Appendix A, Method 5*, in conjunction with Method 202*, may also be used, subject to the approval of the department and U.S. EPA. Other procedures to measure PM₁₀ and PM_{2.5} may be approved by the department and U.S. EPA.

(3) Visible emissions (VE) evaluations shall be performed in conjunction with a PM, PM₁₀, PM_{2.5}, or other mass emission rate test of air pollutants, as required by the department. The VE evaluations shall be conducted by a qualified observer in accordance with the procedures contained in 326 IAC 5-1-4. VE readings shall be continuously recorded for at least thirty (30) minutes per hour of sampling time for each sampling repetition, unless a longer time is otherwise mandated by federal regulation. A waiver from this requirement may be granted by the department or on-site department staff person if adverse conditions exist that would invalidate the VE readings. Complete waivers from the requirement to conduct VE readings during a compliance test may not be granted for the emissions unit required to complete opacity testing pursuant to 40 CFR 60.8* or 40 CFR 63*. VE readings are not required for units when operating a certified PM CEMS. Emissions units equipped with continuous opacity monitors may submit the six (6) minute integrated readings of the monitors during the sampling period, instead of performing VE evaluations, provided:

(A) the monitoring system meets the performance specifications as specified in 40 CFR 60, Appendix B*, and is, or will be, certified by the department;

(B) the monitor readings submitted with the test include a zero (0) and upscale calibration check before the first test run and following the end of the final run; and

(C) if more than one (1) day of testing is required to complete the three (3) runs, the zero (0) and span checks shall be performed at the beginning of each day's testing and at the conclusion of each day's final run.

(4) At least three (3) repetitions of the test shall be performed under consistent emissions unit operating conditions unless otherwise allowed by the department. For boiler emissions testing, at least one (1) of the three (3) repetitions shall be conducted during a normal sootblowing cycle that is consistent with frequency and duration normally experienced.

(5) At Richmond Power and Light's Whitewater Generating Station, when sootblowing occurs during one (1) of the three (3) repetitions, emission test results shall be evaluated using either a time weighted averaging period (TWAP) or a straight averaging technique. When using TWAP, the following equation shall be used to ensure proper weighting of an intermittent

cleaning cycle performance test run regardless of the length of the cleaning cycle and regardless of the number and duration of the test runs made on the unit. When using TWAP, the representative pounds per hour of particulate emissions shall be calculated using the following equation:

$$E = E_{cc} \frac{(A + B)}{AR} S + E_{ncc} \frac{(R - S)}{R} - \frac{BS}{AR}$$

Where:

- E = Pounds per hour of particulate emissions.
- E_{cc} = Average E of sample containing cleaning cycle.
- E_{ncc} = Average E of sample containing no cleaning cycle.
- A = Hours of cleaning cycle operation during sample.
- B = Hours with no cleaning cycle operation during sample.
- R = Average hours of operation per twenty-four (24) hours.
- S = Average hours of cleaning cycle operation per twenty-four (24) hours.

- (6) Only those fuels representative of normal fuel quality used during normal operations shall be combusted.
- (7) During each repetition, each sampling point shall be sampled for a minimum of two (2) minutes.
- (8) The total test time per repetition shall be no less than sixty (60) minutes.
- (9) The total sample volume per repetition shall be no less than thirty (30) dry standard cubic feet (dscf).
- (10) The total particulate weight collected from the sampling nozzle, probe, cyclone (if used), filter holder (front half), filter, connecting glassware, and, if required in subdivision (2), the impinger catch, shall be reported to the department.
- (b) The owner or operator shall conduct sulfur dioxide (SO₂) tests in accordance with the following procedures:
 - (1) 40 CFR 60, Appendix A, Method 6*, 6A*, 6C*, or 8*, as applicable, or other procedures approved by the department and U.S. EPA.
 - (2) At least three (3) repetitions of two (2) samples, each according to 40 CFR 60, Appendix A, Method 6* or 6A*, or three (3) repetitions according to 40 CFR 60, Appendix A, Method 6C* or 8*, performed under identical emissions unit operating conditions, shall constitute a test. For boiler emissions testing, only those fuels representative of fuel quality during normal operations shall be combusted.
 - (3) The total test time per repetition shall be as follows:
 - (A) For tests using 40 CFR 60, Appendix A, Method 6* or 6A*, a minimum of twenty (20) minutes per run with a thirty (30) minute interval between each run.
 - (B) For tests using 40 CFR 60, Appendix A, Method 6C*, a minimum of sixty (60) minutes per run.
 - (C) For tests using 40 CFR 60, Appendix A, Method 8*, a minimum of sixty (60) minutes per run, with the following criteria:
 - (i) During each of the repetitions, each sampling point shall be sampled for a minimum of two (2) minutes.
 - (ii) The total sample volume per repetition shall be no less than forty (40) dry standard cubic feet (dscf).
 - (iii) During each of the repetitions, the sample rate shall not exceed one (1) cubic foot per minute (cfm).
 - (c) The owner or operator shall conduct nitrogen oxide (NO_x) tests according to the following procedures:
 - (1) 40 CFR 60, Appendix A, Method 7*, 7A*, 7B*, 7C*, or 7E*, as applicable, or other procedures approved by the department and U.S. EPA.
 - (2) For Methods 7*, 7A*, 7B*, or 7C*, at least three (3) repetitions of four (4) samples each shall constitute a test.
 - (3) For Method 7E*, three (3) test runs, each a minimum of sixty (60) minutes, shall constitute a test.
 - (d) The owner or operator shall conduct volatile organic compounds (VOC) emissions tests in accordance with the following procedures:
 - (1) 40 CFR 60, Appendix A, Method 25*, or other procedures approved by the department and U.S. EPA, shall be used for the total nonmethane organic emissions.
 - (2) At least three (3) samples shall be collected and analyzed.
 - (3) The total test time per repetition shall be a minimum of sixty (60) minutes.
 - (4) Bulk gasoline terminals subject to 326 IAC 20-10 shall be tested in accordance with 40 CFR 63, Subpart R*. All other bulk gasoline terminals shall be tested in accordance with the New Source Performance Standards (NSPS) at 40 CFR 60, Subpart XX*. During all compliance tests, 40 CFR 60, Appendix A, Method 21* shall be used for determining whether there are any leaks from the hatches or flanges of the gasoline transports. If any leak is detected, the transport shall not be used for

the capacity of the compliance test of the bulk gasoline terminal. The threshold for leaks shall be as follows:

(A) Five hundred (500) parts per million methane for all bulk gasoline terminals subject to 40 CFR 63, Subpart R*.

(B) Ten thousand (10,000) parts per million (as methane) for all bulk gasoline terminals subject to 40 CFR 60, Subpart XX* and for all other bulk gasoline terminals.

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