

CHAPTER 25  
MEASUREMENT OF EMISSIONS

[Prior to 7/1/83, DEQ Ch 7]

[Prior to 12/3/86, Water, Air and Waste Management[900]]

**567—25.1(455B) Testing and sampling of new and existing equipment.**

**25.1(1)** *Continuous monitoring of opacity from coal-fired steam generating units.* The owner or operator of any coal-fired or coal-gas-fired steam generating unit with a rated capacity of greater than 250 million Btus per hour heat input shall install, calibrate, maintain, and operate continuous monitoring equipment to monitor opacity. If an exhaust services more than one steam generating unit as defined in the preceding sentence, the owner has the option of installing opacity monitoring equipment on each unit or on the common stack. Such monitoring equipment shall conform to performance specifications specified in 25.1(9) and shall be operational within 18 months of the date these rules become effective. The director may require the owner or operator of any coal-fired or coal-gas-fired steam generating unit to install, calibrate, maintain and operate continuous monitoring equipment to monitor opacity whenever the compliance status, history of operations, ambient air quality in the vicinity surrounding the generator or the type of control equipment utilized would warrant such monitoring.

**25.1(2)** Reserved.

**25.1(3)** Reserved.

**25.1(4)** *Continuous monitoring of sulfur dioxide from sulfuric acid plants.* The owner or operator of any sulfuric acid plant of greater than 300 tons per day production capacity, the production being expressed as 100 percent acid, shall install, calibrate, maintain and operate continuous monitoring equipment to monitor sulfur dioxide emissions. Said monitoring equipment shall conform to the minimum performance specifications specified in 25.1(9) and shall be operational within 18 months of the date these rules become effective.

**25.1(5)** *Maintenance of records of continuous monitors.* The owner or operator of any facility which is required to install, calibrate, maintain and operate continuous monitoring equipment shall maintain, for a minimum of two years, a file of all information pertinent to each monitoring system present at the facility. Such information must include but is not limited to all emissions data (raw data, adjusted data, and any or all adjusted factors used to convert emissions from units of measurement to units of the applicable standard), performance evaluations, calibrations and zero checks, and records of all malfunctions of monitoring equipment or source and repair procedures performed.

**25.1(6)** *Reporting of continuous monitoring information.* The owner or operator of any facility required to install a continuous monitoring system or systems shall provide quarterly reports to the director, no later than 30 calendar days following the end of the calendar quarter, on forms provided by the director. This provision shall not excuse compliance with more stringent applicable reporting requirements. All periods of recorded emissions in excess of the applicable standards, the results of all calibrations and zero checks and performance evaluations occurring during the reporting period, and any periods of monitoring equipment malfunctions or source upsets and any apparent reasons for these malfunctions and upsets shall be included in the report.

**25.1(7)** *Tests by owner.* The owner of new or existing equipment or the owner's authorized agent shall conduct emission tests to determine compliance with applicable rules in accordance with these requirements.

*a. General.* The owner of new or existing equipment or the owner's authorized agent shall notify the department in writing not less than 30 days before a required test or before a performance evaluation of a continuous emission monitor to determine compliance with applicable requirements of 567—Chapter 23 or a permit condition. Such notice shall include the time, the place, the name of the person who will conduct the tests and other information as required by the department. If the owner or operator does not provide timely notice to the department, the department shall not consider the test results or performance evaluation results to be a valid demonstration of compliance with applicable rules or permit conditions. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held not later than 15 days

before the owner or operator conducts the compliance demonstration. A testing protocol shall be submitted to the department no later than 15 days before the owner or operator conducts the compliance demonstration. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the director in the form of a comprehensive report within six weeks of the completion of the testing.

*b. New equipment.* Unless otherwise specified by the department, all new equipment shall be tested by the owner or the owner's authorized agent to determine compliance with applicable emission limits. Tests conducted to demonstrate compliance with the requirements of the rules or a permit shall be conducted within 60 days of achieving maximum production but no later than 180 days of startup, unless a shorter time frame is specified in the permit.

*c. Existing equipment.* The director may require the owner or the owner's authorized agent to conduct an emission test on any equipment if the director has reason to believe that the equipment does not comply with applicable requirements. Grounds for requiring such a demonstration of compliance include a modification of control or process equipment, age of equipment, or observation of opacities or other parameters outside the range of those indicative of properly maintained and operated equipment. Testing may be required as necessary to determine actual emissions from a source where that source is believed to have a significant impact on the public health or ambient air quality of an area. The director shall provide the owner or agent not less than 30 days to perform the compliance demonstration and shall provide written notice of the requirement.

**25.1(8) Tests by department.** Representatives of the department may conduct separate and additional air contaminant emission tests and continuous monitor performance tests of an installation on behalf of the state and at the expense of the state. Sampling holes, safe scaffolding and pertinent allied facilities, but not instruments or sensing devices, as needed, shall be requested in writing by the director and shall be provided by and at the expense of the owner of the installation at such points as specified in the request. The owner shall provide a suitable power source to the point or points of testing so that sampling instruments can be operated as required. Analytical results shall be furnished to the owner.

**25.1(9) Methods and procedures.** Stack sampling and associated analytical methods used to evaluate compliance with emission limitations of 567—Chapter 23 or a permit condition are as follows:

*a. Performance test (stack test).* A stack test shall be conducted according to EPA reference methods as specified in 40 CFR 51, Appendix M (as amended through December 21, 2010); 40 CFR 60, Appendix A (as amended through September 9, 2010); 40 CFR 61, Appendix B (as amended through October 17, 2000); and 40 CFR 63, Appendix A (as amended through August 20, 2010). The owner of the equipment or the owner's authorized agent may use an alternative methodology if approved by the department in writing before testing. Each test shall consist of at least three separate test runs. Unless otherwise specified by the department, compliance shall be assessed on the basis of the arithmetic mean of the emissions measured in the three test runs.

*b. Continuous monitoring systems.* Minimum performance specifications and quality assurance procedures for performance evaluations of continuous monitoring systems are as specified in 40 CFR 60, Appendix B (as amended through September 9, 2010); 40 CFR 60, Appendix F (as amended through September 9, 2010); 40 CFR 75, Appendix A (as amended through March 28, 2011); 40 CFR 75, Appendix B (as amended through March 28, 2011); and 40 CFR 75, Appendix F (as amended through March 28, 2011). The owner of the equipment or the owner's authorized agent may use an alternative methodology for continuous monitoring systems if approved by the department in writing prior to conducting the minimum performance specification and quality assurance procedures.

*c. Permit and compliance demonstration requirements.* After October 24, 2012, all stack sampling and associated analytical methods used to evaluate compliance with emission limitations of 567—Chapter 23 or required in a permit issued by the department pursuant to 567—Chapter 22 or 33 shall be conducted using the methodology referenced in this rule. If stack sampling was required for a compliance demonstration pursuant to 567—Chapter 23 or for a performance test required in a permit issued by the department pursuant to 567—Chapter 22 or 33 before October 24, 2012, and the demonstration or test was not required to be completed before October 24, 2012, then the methodology referenced in this subrule applies retroactively.

**25.1(10) Exemptions from continuous monitoring requirements.** The owner or operator of any source is exempt if it can be demonstrated that any of the conditions set forth in this subrule are met with the provision that periodic recertification of the existence of these conditions can be requested.

*a.* An affected source is subject to a new source performance standard promulgated in 40 CFR Part 60 as amended through September 28, 2007.

*b.* An affected steam generator had an annual capacity factor for calendar year 1974, as reported to the Federal Power Commission, of less than 30 percent or the projected use of the unit indicates the annual capacity factor will not be increased above 30 percent in the future.

*c.* An affected steam generator is scheduled to be retired from service within five years of the date these rules become effective.

*d.* Rescinded IAB 1/20/93, effective 2/24/93.

*e.* The director may provide a temporary exemption from the monitoring and reporting requirements during any period of monitoring system malfunction, provided that the source owner or operator shows, to the satisfaction of the director, that the malfunction was unavoidable and is being repaired as expeditiously as practical.

**25.1(11) Extensions.** The owner or operator of any source may request an extension of time provided for installation of the required monitor by demonstrating to the director that good faith efforts have been made to obtain and install the monitor in the prescribed time.

**25.1(12) Continuous monitoring of sulfur dioxide from emission points involved in an alternative emission control program.** The owner or operator of any facility applying for an alternative emission control program under 567—subrule 22.7(1) that involves the trade-off of sulfur dioxide emissions shall install, calibrate, maintain and operate continuous sulfur dioxide monitoring equipment consistent with EPA reference methods (40 CFR Part 60, Appendix B, as amended through September 28, 2007). The equipment shall be operational within three months of EPA approval of an alternative emission control program.

[ARC 8215B, IAB 10/7/09, effective 11/11/09; ARC 0330C, IAB 9/19/12, effective 10/24/12]

**567—25.2(455B) Continuous emission monitoring under the acid rain program.** The continuous emission monitoring requirements for affected units under the acid rain program as provided in 40 CFR Part 75, including Appendices A, B, F and K as amended through January 24, 2008 (Appendix F also was corrected on February 13, 2008), are adopted by reference.

**567—25.3(455B) Mercury emissions testing and monitoring.** Any stationary, coal-fired boiler or stationary, coal-fired combustion turbine serving, at any time since the later of November 15, 1990, or the start-up of the unit's combustion chamber, a generator with a nameplate capacity of more than 25 megawatt electrical (MWe) producing electricity for sale is an affected source under the provisions of this rule.

**25.3(1) Testing frequency and methods.** The owner or operator of an affected source shall complete one stack test for mercury in each calendar quarter for four consecutive calendar quarters. Testing shall commence no later than the third calendar quarter in 2010 (July 1 – September 30). At such time as four consecutive quarterly stack tests are completed and the test results are approved in writing by the department, the owner or operator of an affected source shall complete one stack test for mercury in each subsequent calendar year. Stack testing to fulfill the requirements of this subrule shall meet the following conditions:

*a.* Stack testing shall be conducted according to U.S. EPA Method 29 or according to ASTM Method D6784-02 (Ontario Hydro Method) and shall quantify both vapor phase and particulate bound mercury. Each stack test shall consist of a minimum of three runs at the normal operating load while combusting coal, and the minimum time per run shall be two hours.

*b.* The owner or operator or the owner's authorized agent shall notify the department in writing not less than 30 days before each stack test. The notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Upon written request, the department may allow a notification period of less than 30 days. At the department's request,

a pretest meeting shall be held no later than 15 days before the scheduled test date. A testing protocol shall be submitted to the department no later than 15 days before the scheduled test date. A representative of the department shall be permitted to witness the tests. Within six weeks of the completion of the testing, the results of the tests shall be submitted in writing to the department in the form of a comprehensive test report.

**25.3(2) *Low mass emitter (LME).*** In lieu of complying with the requirements of 25.3(1), the owner or operator of an affected source may submit a written request to the department to be classified as a low mass emitter (LME) for mercury. To be eligible for LME classification by the department, the owner or operator shall meet the following conditions:

*a.* The owner or operator shall complete at least one stack test prior to July 1, 2010, according to U.S. EPA Method 29 or according to ASTM Method D6784-02 (Ontario Hydro Method) and shall quantify both vapor phase and particulate bound mercury. Each stack test shall consist of a minimum of three runs at the normal operating load while combusting coal, and the minimum time per run shall be two hours.

*b.* The owner or operator or the owner's authorized agent shall notify the department in writing not less than 30 days before each stack test. The notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Upon written request, the department may allow a notification period of less than 30 days. At the department's request, a pretest meeting shall be held no later than 15 days before the scheduled test date. A testing protocol shall be submitted to the department no later than 15 days before the scheduled test date. A representative of the department shall be permitted to witness the tests. Within six weeks of the completion of the testing, the results of the tests shall be submitted in writing to the department in the form of a comprehensive test report.

*c.* Using the highest mercury concentration measured from any of the stack test runs, the owner or operator shall submit documentation to the department sufficient to demonstrate that the potential annual mercury emissions from the affected source are less than or equal to 29 pounds (464 ounces) per year.

*d.* Upon written notification of LME classification by the department, the owner or operator of an affected source shall be exempt from the requirements of 25.3(1).

*e.* If at any time the potential annual mercury emissions from the affected source exceed 29 pounds per year, it shall be the responsibility of the owner or operator of the affected source to notify the department in writing within 30 days.

**25.3(3) *Continuous emission monitoring systems (CEMS).*** In lieu of complying with the requirements of 25.3(1), the owner or operator of an affected source may submit a request to the department to record mercury emissions data using a continuous emission monitoring system (CEMS). To be eligible for department approval to use CEMS, the owner or operator shall meet the following conditions:

*a.* The owner or operator shall complete at least one stack test concurrently with operating and recording data from the CEMS prior to September 30, 2010, and thereafter on an annual basis, to demonstrate that the CEMS are providing accurate emissions data, as follows:

(1) The stack test conducted concurrently with the CEMS shall be conducted according to U.S. EPA Method 29 or according to ASTM Method D6784-02 (Ontario Hydro Method) and shall quantify both vapor phase and particulate bound mercury. Each stack test shall consist of a minimum of three runs at the normal operating load while combusting coal, and the minimum time per run shall be two hours.

(2) While conducting the concurrent stack test, the owner and operator shall perform a relative accuracy test audit (RATA) and other CEMS certification procedures according to an approved EPA performance protocol. If an approved EPA performance protocol is not available, the owner or operator may submit an alternative CEMS certification protocol in writing to the department for approval. Department approval must be received before the owner or operator conducts the CEMS certification.

*b.* The owner or operator or the owner's authorized agent shall notify the department in writing not less than 30 days before each stack test conducted concurrently with CEMS. The notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Upon written request, the department may allow a notification period of less than 30 days.

At the department's request, a pretest meeting shall be held no later than 15 days before the scheduled test date. Protocols for the stack testing and for the concurrent CEMS operation and data collection shall be submitted to the department no later than 15 days before the scheduled test date. A representative of the department shall be permitted to witness the tests. Results of the tests and CEMS certification shall be submitted in writing to the department in the form of a comprehensive test and CEMS certification report within six weeks of the completion of the testing.

*c.* The owner or operator of an affected source shall comply with the provisions of 25.3(1) until such time as the department approves use of CEMS.

*d.* Upon receiving department approval for CEMS use, the owner or operator of an affected source shall operate and record CEMS data, including calibrating each individual CEMS for zero and span on a daily basis, and shall provide all CEMS data to the department upon written request. CEMS certification shall be completed on an annual basis according to the procedures specified in paragraph 25.3(3) "a."

**25.3(4)** *EPA-required stack testing for mercury.* If the owner or operator of an affected source is required by EPA to complete stack testing for mercury, the owner or operator may submit a written request to the department that the EPA-required stack test be allowed to fulfill all or part of the testing requirements specified in 25.3(1). The department shall consider each such request on a case-by-case basis.

**25.3(5)** *Affected sources subject to Section 112(g).* The owner or operator of an affected source subject to the requirements of Clean Air Act Section 112(g) shall comply with the requirements contained in permits issued by the department under 567—Chapters 22 and 33.

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