Chapter 123 -- Standards for Contaminants

VISIBLE EMISSIONS

§123.41. Limitations.

A person may not permit the emission into the outdoor atmosphere of visible air contaminants in such a manner that the opacity of the emission is either of the following:

(1) Equal to or greater than 20% for a period or periods aggregating more than three minutes in any 1 hour.

(2) Equal to or greater than 60% at any time.

§123.42. Exceptions.

The limitations of §123.41 (relating to limitations) shall not apply to a visible emission in any of the following instances:

(1) when the presence of uncombined water is the only reason for failure of the emission to meet the limitations.

(2) When the emission results from the operation of equipment used solely to train and test persons in observing the opacity of visible emissions.

(3) When the emission results from sources specified in §§123.1(a)(1) -- (9) (relating to prohibition of certain fugitive emissions).

(4) When arising from the production of agricultural commodities in their unmanufactured state on the premises of the farm operation.

§123.43. Measuring techniques.

Visible emissions may be measured using using either of the following:

(1) A device approved by the Department and maintained to provide accurate opacity measurements.

(2) Observers, trained and qualified to measure plume opacity with the naked eye or with the aid of any devices approved by the Department.

§123.44. Limitations of visible fugitive air contaminants from operation of any coke oven battery.

(a) A person may not permit the operation of a coke oven battery in such a manner that visible fugitive air contaminants are emitted in excess of the emissions allowed by the following limitations:

(1) The following open charging limitation applies to all existing batteries listed in Section 121.1 (relating to definitions). The following closed charging limitation applies to any existing battery on which a closed charging system is installed:

(i) Open charging. At no time shall the aggregated times of visible open charging emissions during any four consecutive charges equal more than 75 seconds.

(ii) Closed charging. At no time shall there be closed charging emissions during more than one charge out of any ten consecutive charges.

(2) At no time may door area emissions from any coke oven exceed 40% opacity 15 minutes no longer after the last charge to that oven.

(3) At no time shall there be any visible door area emissions from more than 10% of the door area of operating coke ovens, excluding the two-door area representing the last oven charged on any battery and any door areas obstructed from view.

(4) At no time may there be visible topside emissions from more than 2.0% of the charging port seals on operating coke ovens in any battery, excluding visible emissions from no more than three ovens which may be dampered off.

(5) At no time may there be topside emissions from more than 5.0% of the offtake piping on operating coke ovens in any battery, excluding visible emissions from open standpipe caps on no more than three ovens which may be dampered off.

(6) At no time shall there be a topside emissions from any point on the topside other than allowed emissions from charging port seals and offtake piping under paragraphs (4) and (5).

(7) At no time may there be any visible emissions from the coke oven gas collector main.

(b) The following techniques shall be used for measuring and recording visible fugitive air contaminants from a coke oven battery:

(1) Observations of open and closed charging emissions shall be made from any point or points on the topside of a coke oven battery from which an observer can obtain an unobstructed view of the charging operation. The observer will determine and record the total number of seconds that charging emissions are visible during the charging of coal to the coke oven. The observer shall time the visible charging emissions with a stopwatch while observing

the charging operation. Simultaneous emissions from more than one emission point shall be timed and recorded as one emission and may not be added individually to the total time. Open charging emissions shall not include any emissions observed after all the charging port covers have been firmly seated following the removal of the larry car, such as emissions occurring when a cover is temporarily removed to permit the sweep-in of spilled coal. The total number of seconds of visible emissions observed, clock time for the initiation and completion of the charging operation, battery identification, and oven number for each charge shall be recorded by the observer. In the event that observations of emissions from a charge are interrupted due to events beyond the control of observer, the data from that charge shall be invalidated and the observer shall note on his observation sheet the reason for invalidating the data. The observer shall then resume observation of the next consecutive charge or charges, and continue until he has obtained a set of four charges for comparison with the emission standard. Compliance with subsection (a)(1) shall be determined by summing the seconds of charging emissions observed during each of the four charges.

(2) Observation of door area emissions for the purpose of determining compliance with subsection (a)(2) shall be made at a point above the top of the door but below the battery top, or at the top of any local door area emission control hood. The observer shall place himself no less than 25 feet from the face of the door in a location where his view of the door area is unobstructed.

(3) Observations of door area emissions for determining compliance with subsection (a)(3) shall be made from a minimum distance of 25 feet from each door. Each door area shall be observed in sequence for only that period necessary to determine whether or not, at the time, there are visible emissions from any point on the door area while the observer walks along the side of the battery. If the observer's view of a door area is more than momentarily obstructed, for example, by door machinery, pushing machinery, coke guide, luter truck, or opaque steam plumes, he shall record the door area obstructed and the nature of the obstruction and continue the observations with the next door area in sequence which is not obstructed. The observer shall continue this procedure along the entire length of the battery for both sides and shall record the battery identification, battery side, and oven door identification number of each door area exhibiting visible emissions. Before completing the observation of door area emissions, the observer shall attempt to reobserve the obstructed doors. Compliance with subsection (a)(3) shall be calculated by application of the following formula, which excludes two door areas representing the last oven charged from the numerator and obstructed door areas from the denominator:

$$\frac{(\text{\# of door areas with visible emissions}) - 2}{(\text{\# of door areas on operating ovens in the battery}) - (\text{\# of door areas obstructed from view})} \times (100 = 10\% \text{ or less.}$$

(4) Observations of visible emissions from a coke oven topside, other than emissions from the topside defined as open or closed charging emissions or pushing emissions, shall be made and recorded during the time an observer walks the topside of a battery from one end to the other, April 4, 2003positioning himself near the center line. During the traverse, the observer may stray from near the center line of the battery and walk as close to offtake piping as is necessary to determine whether an observed emission is emanating from the offtake piping. Each oven shall be observed in sequence. The observer shall record the battery identification, the points of topside emission from each oven, the oven number, and whether an oven was dampered off. Compliance with subsection (a)(4) shall be determined by application of the following formula:

(# of charging ports with visible emissions - (# of charging ports with visible emissions dampered off ovens, not to exceed three ovens)) / (# of charging ports on operating ovens - (# of charging ports on dampered off ovens, not to exceed three ovens)) x(100)=2% or less.

Compliance with subsection (a)(5) of this section shall be determined by application of the following formula:

(# of off-take piping with visible emissions - (# of off-take piping with visible emissions on dampered off ovens, not to exceed three ovens)) / (# of off-take piping operating ovens - (# of off-take piping on dampered off ovens, on not to exceed three ovens)) x(100)=5% or less.

§123.45. Alternative opacity limitations.

(a) Coverage: Coverage shall comply with the following:

(1) This section applies to any source:

(i) That is covered under §123.41 (relating to limitations) and is also covered by an emission limitation in the form of a mass rate or a stack gas concentration or a fuel requirement.

(ii) That is not a fugitive air contaminant.

(iii) For which the mass rate or concentration can be determined:

(A) Using techniques specified in §§139.11-139.16.

(B) By any other method approved by the Department that is consistent with accepted air pollution testing practices and with obtaining accurate results that are representative of the conditions evaluated.

(2) Appendix D presents the applicability of this section for various emission limitation formats.

(b) Procedure for application. The procedure for application shall comply with the following:

(1) The owner or operator of a source may request the Department to determine the opacity of emissions from the source during a demonstration of compliance with the applicable mass rate standard or stack gas concentration standard or fuel requirement. The request must be made in the form of a plan approval application under Chapter 127, Subchapter A (relating to plan approval and permits).

(2) The owner or operator shall provide for any test the Department deems necessary for determining compliance with the applicable emission limitation.

(3) The owner or operator shall provide sufficient notification to the Department so that the proposed test methods can be reviewed and approved by the Department. No test will be considered by the Department for the purpose of establishing an alternative opacity limitation unless the test methods have been first approved by the Department and a trained and qualified observer is present during the test.

(c) Eligibility. A source is eligible for an alternative opacity limitation (AOL) if the following conditions are met:

(1) The Department finds that the source is in compliance with this article except §123.41. The Department will specify the method of demonstrating compliance.

(2) During the time the determination of compliance and AOL is conducted, the source fails to meet any applicable opacity limitation.

(3) The Department finds:

(i) That the source has not discontinued measures to minimize opacity of emissions, within the bounds of good engineering and good economic practice.

(ii) That the source and associated air pollution control equipment are operated and maintained in a manner to minimize the opacity of emissions, within the bounds of good engineering and good economic practice.

(4) The demonstration of compliance and the alternative opacity tests are performed under the conditions established by the Department.

(5) The Department determines that the AOL would not create or contribute to a public nuisance nor cause air pollution as defined under the act.

(d) Level of the alternative standard. The Department will set the AOL at the opacity levels measured during the performance test, even if the emissions were substantially less than those allowed under the regulations or permit conditions of the Department. The Department will enter the AOL as a condition of the operating permit of the source.

(e) Operating conditions. The Department will specify the operating conditions under which the determination of compliance and AOL will be made. The conditions must be based on technical knowledge of the process concerning normal operation and the effects of deviations from normal operations.

(f) Timing of test. The Department will specify the day, time of day, and time of year for conducting the determination of compliance and AOL where these factors may substantially affect the determination of source opacity. Where the source exhibits high opacity only under certain specified conditions or during certain times, the Department may limit the applicability of the AOL to operation during these conditions or times. These conditions or times must be specified in the permit.

(g) Continuous monitoring. Continuous monitoring shall consist of the following:

(1) A source that requests an AOL must install, operate and maintain a continuous opacity monitor before the determination of compliance and AOL is made.

(2) The Department will use the data from the monitor during the determination of compliance and AOL to set the AOL. After the AOL is entered on the operating permit of the source, the Department will use the data from the monitor to enforce the AOL.

(3) The Department may exempt a source from the requirement of paragraph (1) if the Department determines that the monitor would not give representative opacity readings for that source. The Department may require such an exempted source to:

(i) Use trained and qualified observers to measure the opacity;

(ii) Monitor and report operating parameters of the process and of air pollution control equipment.

(iii) Perform such activities on a specified schedule maintaining relevant records for inspection by the Department.

(h) Granting and quantifying the AOL. Granting and quantifying the AOL shall include the following:

(1) The Department will issue a permit establishing the AOL for the source or will deny the application for plan approval if the Department determines that the source is not eligible for, or entitled to, an AOL.

(2) The Department will use the procedure of §§139.17 and 139.18 (relating to general requirements; and calculation of alternative opacity limitations) to quantify the AOL.

(i) Special situations. Special situations shall include the following:

(1) For sources that make several products of varying opacity-producing capabilities, the Department may establish an overall AOL independent of the product. The Department may, however, establish a separate AOL for each product where the Department determines that the opacities from the products differ to such extent that enforcement of the mass rate standard or stack gas concentration standard or fuel requirement may be hampered with only one AOL.

(2) For cases in which several processes vent to a single stack, the Department will set an AOL at the opacity level produced after each process is determined to be in compliance with the appropriate mass rate standard or stack gas concentration standard or fuel requirement.

(j) Revocation of AOL. Revocation of AOL shall be as follows:

(1) The Department may revoke a source's AOL if the Department determines that:

(i) The source is not in compliance with this article.

(ii) The source has discontinued measures to minimize opacity of emissions, within the bounds of good engineering and good economic practice.

(iii) The plume opacity of the source creates or contributes to a public nuisance or causes air pollution as defined under the act.

(2) If the Department revokes a source's AOL, the opacity of the source will be regulated by §123.47. The Department may reinstate a revoked AOL if it determines that the conditions which caused the revocation no longer exist.

(k) Maintenance of continuous monitor; reestablishment of AOL. Reestablishment of AOL

shall be as follows:

(1) The Department may require the owner or operator of a source with an approved AOL and a continuous opacity monitor to do any or all of the following if a trained observer of the Department determines that the source is violating an AOL:

(i) Adjust or replace the continuous opacity monitor.

(ii) Retest opacity with monitor and trained and qualified observer.

(iii) Perform a test to determine compliance with the appropriate mass rate standard or stack gas concentration standard or fuel requirement.

(2) For a source with an AOL established by use of continuous opacity monitor, the Department may establish a new AOL based on opacity readings by a ttained and qualified observer if:

(i) The Department determines that the source complies with the applicable mass rate standard or stack gas concentration standard or fuel requirement.

(ii) The trained and qualified observer of the Department notifies the source that it does not comply with the existing AOL.

(iii) The data from the continuous opacity monitor indicate that the source complies with the existing AOL.

§123.46. Monitoring requirements.

(a) The following sources are subject to this section:

(1) Fossil fuel-fired steam generators with an annual average capacity factor of greater than 30%, as demonstrated to the Department by the owner or operator, and of greater than 250 million Btu per hour heat input except where:

(i) Natural gas is the only fuel burned.

(ii) Oil or a mixture of gas and oil are the fuels burned and the source is able to comply with the applicable particulate matter and opacity regulations without utilization of particulate matter collection equipment and the source has not been found, within the 5 years previous to the applicability of this section, through any administrative or judicial proceedings, to be in violation of any visible emissions standard.

(2) Catalyst regenerators for fluid bed catalytic cracking units at petroleum refineries, if the unit is of greater than 20,000 barrels per day fresh feed capacity.

(b) All sources subject to the provisions of this section shall install, operate, and maintain continuous opacity monitoring devices in compliance with Chapter 139, Subchapter C (relating to requirements for continuous in-stack monitoring for stationary sources). Results of opacity monitoring shall be submitted to the Department on a regular basis in compliance with the requirements of Chapter 139, Subchapter C.

(c) The Department may exempt a source from the requirements of subsection (b) if the Department determines that the installation of a continuous emission monitoring system would not provide accurate determination of emissions or that installation of a continuous emission monitoring system may not be implemented by a source due to physical plant limitations or to extreme economic reasons. The Department will require such an exempted source to fulfill alternative emission monitoring and reporting requirements.

(d) The Department may use the data from the monitoring devices or from the alternative monitoring systems required by this section to enforce the visible emission limitations defined in this article.

(e) Compliance with this section shall be obtained no later than 18 months after the effective date of the listing of any source identified in subsection (a). The Department may grant orders providing reasonable extension of time for sources that have made good faith efforts to install, operate and maintain continuous monitoring devices but have been unable to complete such operations within the time period provided.