

**TITLE 45  
PROCEDURAL RULE  
DIVISION OF ENVIRONMENTAL PROTECTION  
OFFICE OF AIR QUALITY**

**SERIES 7A  
COMPLIANCE TEST PROCEDURES FOR 45CSR7 - "TO PREVENT AND CONTROL  
PARTICULATE AIR POLLUTION FROM MANUFACTURING  
PROCESS OPERATIONS"**

**§45-7A-1. General.**

1.1. Scope. -- It is the intent and purpose of this procedural rule to establish test procedures to determine compliance with 45CSR7 - "To Prevent and Control Particulate Air Pollution From Manufacturing Process Operations".

1.2. Authority. -- W. Va. Code §§22-5-1 et seq, 29A-1-2(g); and WV45CSR7.

1.3. Filing Date. -- December 22, 1998.

1.4. Effective Date. -- February 1, 1999.

**§45-7A-2. Visible Emission Test Procedures.**

2.1.

2.1.a. Tests to determine compliance with the visible emission standards of sections 3.1., 3.2., 3.3.b., 3.3.c., 3.4.b., 3.4.c., 3.5.d., 3.5.e., and 3.6. of 45CSR7 shall be determined in accordance with the following:

2.1.a.1. The opacity or Ringelmann number of emissions from manufacturing process operations shall be determined visually by a qualified observer.

2.1.a.2. The observer qualified in accordance with section 2.1.a.3. shall use the following procedures for visually determining the opacity or Ringelmann numbers of emissions unless otherwise specified under sections 2.1.b. through 2.1.f.

2.1.a.2.A. The qualified observer shall stand at a distance sufficient to provide a

clear view of the emissions with the sun oriented in the 140 degree sector to his back. Consistent with maintaining the above requirement, the observer shall, as much as possible, make his observations from a position such that his line of vision is approximately perpendicular to the plume direction, and when observing opacity of emissions from rectangular outlets (e.g. roof monitors, open baghouses, noncircular stacks), approximately perpendicular to the longer axis of the outlet. The observer's line of sight should not include more than one plume at a time when multiple stacks are involved, and in any case the observer should make his observations with his line of sight approximately perpendicular to the longer axis of such a set of multiple stacks (e.g. stub stacks on baghouses).

2.1.a.2.B. The observer shall record the name of the plant, emission location, type facility, observer's name and title, and the date on a field data sheet. The time, estimated distance to the emission location, approximate wind direction, estimated wind speed, description of the sky condition (presence and color of clouds), and plume background are recorded on a field data sheet at the time opacity readings are initiated and completed.

2.1.a.2.C. Opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. The observer shall not look continuously at the plume, but instead shall observe the plume momentarily at fifteen (15) second intervals.

2.1.a.2.C.1. When condensed water vapor is present within the plume as it

emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible. The observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

2.1.a.2.C.2. When water vapor in the plume condenses and becomes visible at a distinct distance from the emission outlet, the opacity of emissions should be evaluated at the emission outlet prior to the condensation of water vapor and the formation of the steam plume.

2.1.a.2.D. The minimum number of observations which must be taken is to be determined in accordance with sections 2.1.b. through 2.1.f.

2.1.a.3. Observers shall be certified in accordance with 40 CFR, Part 60, Appendix A, Method 9, Section 3, as published on July 1, 1997.

2.1.b. Compliance with the visible emission standards of sections 3.1. and 3.2. of 45CSR7 shall be determined in accordance with the following:

2.1.b.1. Each visible emission observed shall be deemed to represent the visible emissions for a fifteen (15) second period.

2.1.b.2. Visible emissions observations shall not be averaged.

2.1.c. Compliance with visible emissions standards of sections 3.3. and 3.4. of 45CSR7 for by-product coke production facilities shall be determined in accordance with the following:

2.1.c.1. Charging.

Observation of 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 shall 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 shall not be added individually to the total time. Charging emissions 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 briefly 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 consecutive charges for comparison with the emission standard. The charge immediately preceding the interrupted charge and the charge immediately following the interrupted charge shall constitute consecutive charges. Compliance shall be determined by summing the seconds of charging emissions observed during all combinations of the four consecutive charges, as appropriate. Any one charge may be included in only one set of consecutive charges.

2.1.c.2. Doors.

Observations of door area emissions shall be made from a minimum distance of twenty-five (25) feet from each door. Each door 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 while the observer walks along the side of the battery. If the observer's view of a door area is more than momentarily obstructed, as, for example, by door machinery, pushing machinery, coke guide, luter truck, or opaque steam plumes, he shall record the door 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 traverse or immediately thereafter he shall attempt to observe those doors which were obstructed from view previously. Compliance with this section 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:

$$\frac{a-2}{b-c} \times 100 = \text{_____}\%$$

Where,

a= # of door areas in operating ovens with visible emissions

b= # of door areas on operating ovens in the battery

c= # of door areas obstructed from view

Doors under a shed are considered obstructed doors and must be excluded from the denominator of the formula.

2.1.c.3. Topside.

2.1.c.3.A. Charging Ports.

Observations of any visible emissions from the charging ports shall be made and recorded during the time an observer walks the topside of a battery from one end to the other. Each oven shall be observed in sequence. The observer may also observe offtake piping leaks during this traverse of the battery. The observer shall record the battery identification, the points of emissions from each oven, the oven number and whether an oven was dampered off. Compliance shall be determined by application of the

following formula which excludes the charging ports representing the last oven charged from the numerator and charging ports on operating dampered off ovens with visible emissions not to exceed three (3) ovens from both the numerator and the denominator:

$$\frac{(a)-(b + c)}{d-c} \times 100 = \text{_____}\%$$

Where,

a= # of charging ports on operating ovens with visible emissions

b= # of charging ports on last oven charged with visible emissions

c= # of charging ports on operating dampered off ovens with visible emissions not to exceed three (3) ovens

d= # of charging ports on operating ovens

2.1.c.3.B. Offtake Piping.

Observations of any visible emissions from the offtake piping shall be made traversing the topside of the battery near the centerline. During the traverse, the observer may stray from near the centerline of the battery and walk as close as possible to the offtake piping to determine whether an observed emission is emanating from the offtake piping. The observer shall traverse the battery once per each collector main. Therefore, to observe a battery with two collector mains, one observer may traverse the battery in one direction for one offtake system and traverse the battery in the other direction for the second offtake system or two observers can traverse in sequence. An observer may also observe charging port emissions during this traverse of the battery. The observer shall record the battery identification, the points of offtake piping emission from any oven, the oven number and whether an oven was dampered off. Compliance shall be determined by application of the following formula which excludes the offtake piping on operating dampered off ovens with

visible emissions, not to exceed three (3) ovens, from both the numerator and the denominator:

$$\frac{a-b}{c-b} \times 100 = \text{_____}\%$$

Where,

a= # of offtake piping with visible emissions on operating ovens

b= # of offtake piping with visible emissions on operating dampered off ovens not to exceed three (3) ovens

c= # of offtake piping on operating ovens

2.1.c.4. Pushing.

2.1.c.4.A. Visible emissions from the pushing operation shall be determined in accordance with the following:

2.1.c.4.A.1. In making observations of any pushing emission control device outlet, the observer shall be positioned in accordance with section 2.1.a.2.A., except that if the sky is overcast the observer need not position himself with his back to the sun.

2.1.c.4.A.2. The average of six (6) consecutive observations beginning with the movement of coke into the coke guide shall be used to determine the visible emissions from each pushing operation. In the event that six (6) readings cannot be obtained during the pushing operation, the compliance determination shall be based upon the number of readings that can be recorded. An average opacity of the readings obtained during the pushing operation in excess of twenty percent (20%) shall constitute a violation for that pushing operation.

2.1.c.4.A.3. Any observation recorded during the transport of hot coke in an enclosed quench car that exceeds twenty percent (20%) opacity shall constitute a violation. Any observation recorded during the transport of hot coke in an unenclosed quench car that exceeds ten

percent (10%) opacity shall constitute a violation. Additional observations beyond the first recorded observation to exceed twenty percent (20%) opacity in the case of an enclosed quench car or ten percent (10%) opacity in the case of an unenclosed quench car shall not constitute additional violations during one pushing operation, but shall constitute evidence of the gravity of the individual violation during that pushing operation. Transport emissions shall be considered to occur when the quench car begins to move toward the quench tower after the coke mass ceases to fall into the quench car.

2.1.c.4.B. In viewing the pushing operation, the observer shall stand on the coke side of the battery where a clear view of the push can be obtained. This generally should be a location on the ground, in the coke side yard, outside the hot car tracks. The observer is not restricted to the ground level, but may make the observation from some elevated level. The observer's line of sight should be approximately perpendicular to the line of travel of the quench car.

2.1.c.4.C. During the pushing operation, the reader(s) shall observe all the pushing emissions including, but not limited to, uncaptured emissions from the cokeguide and pushing emission control device, stack emissions, and uncaptured emissions from quench cars.

2.1.d. Compliance with the visible emission standards of section 3.5 of 45CSR7 for non-recovery coke production facilities shall be determined in accordance with the following:

2.1.d.1. Charging.

Observation of charging emissions shall be made from any point or points near or on the coke oven battery from which an observer can obtain an unobstructed view of the charging operation. The observer shall 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 charging emissions from more than one emission point, other than the battery stack, shall be timed and recorded as one emission and shall not be added individually to the total time. Charging emissions shall not include any emissions observed after all the charging port covers or oven doors have been firmly seated following completion of the charging and the removal of the oven charging machinery. 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 observation 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 consecutive charges for comparison with the emission standard. The charge immediately preceding the interrupted charge and the charge immediately following the interrupted charge shall constitute consecutive charges. Compliance shall be determined by summing the seconds of charging emission observed during all combinations of the five (5) consecutive charges, as appropriate. Any one charge may be included in only one set of consecutive charges.

2.1.d.2. Doors/charging Ports.

Each door or charging port shall be observed in sequence for only that period necessary to determine whether or not, at the time, there are visible emissions from the charging port or any point on the door while the observer walks along the side or top of the battery. If the observer's view of a charging port/door area is more than momentarily obstructed, as, for example, by door machinery, oven charging/machinery, or opaque steam plumes, he shall record the identification number of the charging port or door obstructed and the nature of the obstruction and continue the observations with

the next charging port or door area in sequence which is not obstructed. The observer shall continue this procedure along the entire length of the battery, for both sides in the case of doors, and shall record the battery identification, battery side and oven door or charging port identification number of each door area or charging port exhibiting visible emissions. Before completing the traverse or immediately thereafter he shall attempt to observe those doors or charging ports which were obstructed from view previously.

Compliance with this section shall be calculated by application of the following formula:

$$\frac{a}{b-c} \times 100 = \text{_____} \%$$

Where,

a= # of door areas or charging ports on operating ovens with visible emissions

b= # of door areas or charging ports on operating ovens in the battery

c= \$ of door areas or charging ports obstructed from view

Doors under a shed are considered obstructed doors and are to be excluded from the denominator of the formula.

2.1.d.3. Pushing.

2.1.d.3.A. Visible emissions from the pushing operation shall be determined in accordance with the following:

2.1.d.3.A.1. In making observations of any pushing emission control devices outlet, the observer shall be positioned in accordance with section 1(A) 2(a), except that if the sky is overcast the observer need not position himself with his back to the sun.

2.1.d.3.A.2. The average of six (6) consecutive readings beginning with the

movement of coke into the coke guide shall be used to determine the visible emissions from each pushing operation. In the event that six readings cannot be obtained during the pushing operation, the compliance determination shall be based upon the number of readings that can be recorded. An average opacity of the readings obtained during the pushing operation in excess of twenty percent (20%) shall constitute a violation for that pushing operation.

2.1.d.3.A.3. Any observation recorded during the transport of hot coke in an enclosed quench car that exceeds twenty percent (20%) opacity shall constitute a violation. Any observation recorded during the transport of hot coke in an unenclosed quench car that exceeds ten percent (10%) opacity shall constitute a violation. Additional observations beyond the first recorded observation to exceed twenty percent (20%) opacity in the case of an enclosed quench car or ten percent (10%) opacity in the case of an unenclosed quench car shall not constitute additional violations during one pushing operation, but shall constitute evidence of the gravity of the individual violation during that pushing operation. Transport emissions shall be considered to occur when the quench car begins to move toward the quench tower after the coke mass ceases to fall into the quench car.

2.1.d.3.B. In viewing the pushing operation, the observer shall stand on the coke side of the battery where a clear view of the push can be obtained. This generally should be a location on the ground, in the coke side yard, outside the hot car tracks. The observer is not restricted to the ground level, but may make the observation from some elevated level. The observer's line of sight should be approximately perpendicular to the line of travel of the quench car.

2.1.d.3.C. During the pushing operation, the observer(s) shall observe all the pushing emissions including, but not limited to, uncaptured emissions from quench cars.

2.1.e. Compliance with the visible emission standards of section 3.6(a) of 45CSR7

for basic oxygen process roof monitors shall be determined in accordance with the following:

2.1.e.1. Averaging of visible emissions observations shall only be applied to visible emissions from the basic oxygen furnace building occurring during the three (3) minute exception period. Each opacity observation that is recorded shall be deemed to represent the opacity of emissions for a fifteen (15) second period. Only twelve (12) observations in any sixty (60) minute period shall exceed twenty percent (20%) opacity. Thirteen (13) observations recorded to be greater than twenty percent (20%) opacity in any sixty (60) minute period shall constitute a violation in and for that sixty (60) minute period. Additional observations beyond the thirteenth (13th) recorded to be greater than twenty percent (20%) opacity in any sixty (60) minute period shall not constitute additional violations, but shall constitute evidence of the gravity of the individual violation in that sixty (60) minute period. An average opacity of the highest twelve (12) observations for any sixty (60) minute period exceeding forty percent (40%) shall also constitute a violation in and for that sixty (60) minute period. Any observation may be counted in only one sixty (60) minute period. There may be only one violation per sixty (60) minute period.

2.1.e.2. If the sky is overcast, the observer need not follow the requirement about positioning his back to the sun.

2.1.e.3. If the source is emitting from the roof monitor and another point in the building, the reader may read the most opaque plume. If he reads the plume at a point other than the roof monitor, he shall follow the procedure set out above and he must note the location of the plume and its opacity on the observation sheet.

2.1.f. Compliance with the visible emission standards of section 3.6.b. of 45CSR7 for blast furnace casthouses shall be determined in accordance with the following:

2.1.f.1. Averaging of visible emissions observations shall only be applied to visible emissions from blast furnace casthouses

occurring during the five (5) minute exception period. Each opacity observation that is recorded shall be deemed to represent the opacity of emissions for a fifteen (15) second period. Only twenty (20) observations in any sixty (60) minute period shall exceed twenty percent (20%) opacity. Twenty-one (21) observations recorded to be greater than twenty percent (20%) opacity in any sixty (60) minute period shall constitute a violation in and for that sixty (60) minute period. Additional observations beyond the twenty-first (21st) recorded to be greater than twenty percent (20%) opacity in any sixty (60) minute period shall not constitute additional violations, but shall constitute evidence of the gravity of the individual violation in that sixty (60) minute period. An average opacity of the highest twenty (20) observations in any sixty (60) minute period exceeding forty percent (40%) shall also constitute a violation in and for that sixty (60) minute period. Any observation may be counted in only one sixty (60) minute period. There may be only one violation per sixty (60) minute period.

2.1.f.2. If the sky is overcast, the observer need not follow the requirement about positioning his back to the sun.

2.1.f.3. If the source is emitting from the roof monitor and another point in the building or casthouse, the observer may read the most opaque plume. If he reads the plume at a point other than the roof monitor, the observer shall follow the procedure set out above and he must note the location of the plume and its opacity on the observation sheet.

### **§45-7A-3. Mass Emission Test Procedures.**

3.1. Compliance with the mass emission standards set forth in sections 3 and 4 of 45CSR7 shall be determined in accordance with the following:

3.1.a. Except as otherwise provided in section 3.1., stack testing to determine particulate mass emissions shall be performed using the methodology set forth in 40 CFR, Part 60, Appendix A, Methods 1 through 5, as published July 1, 1997, unless the Director determines that

some aspect of the methods are not appropriate or adaptable to a particular manufacturing process source operation due to process parameters, access to test location, or other factors.

In the event that Methods 1-5 cannot be employed for a particular process operation, the Director may specify or approve alternative methods or variances to these reference methods that have been demonstrated to be equivalent. Such alternative methods may include the methodology set forth in 40 CFR, Part 60, Appendix A, Method 17, as published July 1, 1997.

3.1.a.1. Compliance shall be determined by taking the average of the mass emission rates determined from three (3) consecutive test runs conducted during a seven (7) day period.

3.1.a.2. Unless otherwise approved or specified by the Director, a minimum volume of thirty (30) standard cubic feet (SCF) of gas must be sampled per test run.

3.1.b. Unless otherwise approved or specified by the Director, all mass emission compliance tests shall be conducted during periods of maximum production rates and under conditions which are otherwise representative of normal operation. Maximum production rates shall be the maximum design capacity of the emitting source or unit, unless the Director has determined that the equipment can be and is routinely operated at production rates above the design rate or it is demonstrated to the satisfaction of the Director that the equipment cannot be operated at design capacity.

3.1.c. At least thirty (30) days prior to each compliance test, a test protocol must be furnished to the Director for his review and approval and providing as a minimum, the following information:

3.1.c.1. Identification and description of the process operation that is to be tested;

3.1.c.2. A discussion of the manner in

which the process operation will be operated during the test periods with respect to production or process weight rates, representativeness of feed or raw materials to be used, operating temperatures, and other factors which may affect emissions;

3.1.c.3. A description or listing of process and control equipment data that will be monitored and recorded during the tests runs;

3.1.c.4. A description of test methods and equipment that will be employed with requests for approval of any variances to the reference test methods. If sampling is to be non-continuous as a result of the cyclical nature of the process or other factors, this must be fully described;

3.1.c.5. A drawing of the stack or duct sections where samples will be taken showing distances to upstream and downstream gas flow disturbances or bends and changes in duct or stack cross sections;

3.1.c.6. A drawing of the test plane(s) showing dimensions and number and location of sampling (traverse) points;

3.1.c.7. The sampling time at each traverse point and total sampling time for each test run. If the sampling time per traverse point is to be less than two minutes, comments must be written concerning the variability of gas flow and temperatures during the short sampling time and how the sampling rate will be monitored and adjusted to maintain isokinetic conditions;

3.1.c.8. The minimum volume (SCF) of gas that will be sampled per test run; and

3.1.c.9. Name of the person to contact concerning the scheduled tests and affiliation of personnel who will actually conduct the tests.

3.1.d. Notification of the dates upon which compliance testing will be conducted must be provided to the Director, in writing, no later than fifteen (15) days prior to the date of the first test run so that he may, at his option, have an

observer present during the test runs and sample analyses. Sampling data, operating parameters and other information relevant to the emissions tests, are to be made available to the Director's test observers, on request, during the test periods. Any such data or other information so made available to the Director shall also be made available to the public in accordance with W.Va. Code §§22-5-1 et seq., 29B-1-1 et seq., and 45CSR31.

3.1.e. A compliance test report providing the following information and any additional information that the Director may require shall be submitted to the Director within sixty (60) days of the completion of the compliance testing.

3.1.e.1. General Information.

3.1.e.1.A. Plant name and location;

3.1.e.1.B. Units/stack tested;

3.1.e.1.C. Name and address of company performing the tests; and

3.1.e.1.D. Test dates and times.

3.1.e.2. Report Certification. The following persons shall certify that the test report contains true and accurate information:

3.1.e.2.A. Test team supervisor;

3.1.e.2.B. Reviewer of test report (if applicable); and

3.1.e.2.C. If test is performed by source owner, the report shall also be certified by plant manager or corporate official.

3.1.e.3. Test Summary.

3.1.e.3.A. Description of emissions sources/stacks tested;

3.1.e.3.B. Purpose of test;

3.1.e.3.C. Pollutants measured;



3.1.e.3.D. Process data;

3.1.e.3.D.1. Process and air pollution control equipment flow diagram;

3.1.e.3.D.2. Summary of process parameters including production rates, process weight rates and other relevant parameters measured and recorded and/or calculated for the test periods. Any calculations shall be attached to the report; and

3.1.e.3.D.3. Description of any unusual or non-typical operating mode, raw materials, fuels, etc. occurring or used during the tests.

3.1.e.4. Test Results.

3.1.e.4.A. Mass emission results with emissions reported in units of the applicable standard and in pounds per hour;

3.1.e.4.B. Visible emissions results, if applicable, as measured by observer or transmissometer. If observed by personnel from test company or plant, evidence of observer's certification shall be attached to the report;

3.1.e.4.C. Description of collected samples (if such information is deemed to be useful); and

3.1.e.4.D. Description and discussion of real or apparent errors involved in test or process measurements, analysis, etc.

3.1.e.5. Test Procedures.

3.1.e.5.A. Description of test equipment including drawing of sampling train;

3.1.e.5.B. Description of test procedures employed with detailed documentation of deviations from reference methods;

3.1.e.5.C. Description of analytical procedures employed with detailed documentation of deviations from reference methods;

3.1.e.5.D. Dimensioned drawing of sampling port location showing distances to upstream and downstream gas flow disturbances; and

3.1.e.5.E. Cross-sectional drawing of sampling plane showing location and numbers or other designations of sampling points.

3.1.e.6. Appendix.

3.1.e.6.A. Copies of original field data sheets from test runs;

3.1.e.6.B. Copies or original log sheets, strip charts and other process or control equipment data recorded during tests. These attachments shall be certified by a responsible plant official;

3.1.e.6.C. Laboratory report including chain of custody;

3.1.e.6.D. Description of test equipment calibration procedures and calibration results for test equipment used;

3.1.e.6.E. Description of calibration performed on devices recording important process data during the tests;

3.1.e.6.F. Copies of strip charts or other original outputs from continuous emission monitoring (CEM) equipment on the tested source and description of CEM system calibration and operation prior to and/or during tests;

3.1.e.6.G. Copies of relevant correspondence such as letters approving test method variances; and

3.1.e.6.H. Names and titles of persons involved in the test including sampling team members, company personnel, and outside observers.

3.1.f. The following provisions apply to compliance tests on pushing emissions control systems at by-product and non-recovery coke production facilities:

3.1.f.1. When testing pushing emissions control systems that capture/control emissions during hot coke transport, sampling shall start when the coke mass begins to move into the coke guide and shall stop when the hot coke transfer (quench) car enters the quench station.

3.1.f.2. When testing pushing emissions control systems that do not capture/control emissions during hot coke transport, sampling shall start when the coke mass begins to move into the coke guide and shall stop when either the hot coke transfer (quench) car has moved completely from under the hood or at the time the pushing emissions capture/control system ceases capturing emissions following completion of the transfer of hot coke from the oven to the hot coke transport (quench) car.

3.1.f.3. When mobile pushing emissions control devices are tested, a stainless steel probe, liner and filter holder may be used.

3.1.f.4. A cyclone may be used in the sampling train between the probe and filter holder.

3.1.g. The following provisions apply to compliance tests or primary system control device outlets of basic oxygen furnaces:

3.1.g.1. Each test run shall consist of sampling continuously during each of four (4) complete steel production cycles.

3.1.g.2. A steel production cycle shall be defined as the time from the start of the hot metal charge until the end of the tap.

3.1.g.3. Calculation of the allowable emissions shall be based upon the total tons of raw steel produced during the four (4) steel production cycles that compose each run.

3.1.h. Except as provided in section 3.1.h.4., stack sampling procedures for determining compliance with applicable emission standards for facilities equipped with modular baghouses shall be as follows:

3.1.h.1. The methods described in

section 3.1.a. shall be used except as provided in sections 3.1.h.2. and 3.1.h.3.

3.1.h.2. Compliance shall be determined from the results of at least one (1) test run performed on each stack or exhaust vent. For the purpose of determining compliance with a mass emission rate standard expressed in pounds per hour, the results of the tests performed on each stack or exhaust vent shall be summed. Compliance with a mass concentration standard shall be determined by using a gas flow-weighted average of the concentrations measured from all stacks or vents.

3.1.h.3. The compliance demonstration shall be based upon a minimum of three (3) test runs. If more than one test run is performed on one stack or exhaust vent the results of the test runs on that stack shall be averaged prior to summing or determining weighted averages in accordance with section 3.1.h.2.

3.1.h.4. The Director may approve compliance determinations based upon fewer test runs than required in section 3.1.h.2. if he determines that the requirements of section 3.1.h.2. place excessive demands upon the process source owner to demonstrate compliance.

3.1.i. For the purpose of determining compliance with the standards set forth in sections 4.8.b. and 4.8.c.1. of 45CSR7 for fluorides, the test methods and procedures set forth in 40 CFR 60 Appendix A, Methods 1, 2, 3, 13A, 13B, and 14, as published on July 1, 1997, shall be used unless the Director determines that some aspect of those methods are not appropriate or adaptable to an affected facility. In the event that the referenced methods cannot be employed, the Director may specify or approve alternative methods or variances to the reference methods that have been demonstrated to be equivalent. The sampling time and sample volume for each test run shall be at least 8 hours and 6.80 dscm (240 dscf). Each compliance test shall be based on the arithmetic average of the results of at least three consecutive test runs.

3.1.j. Compliance with the emissions

standards of section 4.2. of 45CSR7 for mineral acids shall be determined in accordance with the following unless the Director determines that alternative methods are required due to interferences or other factors:

3.1.j.1. For sulfuric acid mist: 40 CFR 60.85 (a) and (b) and 40 CFR 60 Appendix A, Methods 1, 2, 3, and 8, as published on July 1, 1997, except that the SO<sub>2</sub> emission rate does not necessarily have to be determined. The sulfuric acid mist concentration shall be expressed in milligrams per dry standard cubic meter.

3.1.j.2. For hydrochloric acid mist and/or vapor: 40 CFR 60, Appendix A, Method 26 or, if the source exhausts through a wet scrubber, Method 26A of Appendix A, as published on July 1, 1997.

3.1.j.3. For nitric acid mist and/or vapor and phosphoric acid mist and/or vapor: methods approved by the Director. The Director shall give preference to the use of methods promulgated by the U.S. EPA for these acids if available and adaptable to a specific source.

3.1.j.4. Tests to determine compliance with mineral acid concentration limits shall be based on the arithmetic average of the results of at least three consecutive test runs.