NEW HAMPSHIRE CODE OF ADMINISTRATIVE RULES

TABLE OF CONTENTS

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* * * NOTE: EPA did not approve PART Env-A 810 AIR POLLUTION CONTROL EQUIPMENT MONITORING PLAN; ADDITIONAL TESTING AND MONITORING into the New Hampshire State Implementation Plan.

STATE OF NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES

AIR RESOURCES DIVISION

CHAPTER ENV-A 800 TESTING AND MONITORING PROCEDURES

CHAPTER ENV-A 800 TESTING AND MONITORING PROCEDDURES

Statutory Authority: RSA 125-C:6, XI, XII

PART Env-A 801 PURPOSE AND APPLICABILITY

Env-A 801.01 Purpose. The purpose of this chapter is to establish minimum testing and monitoring procedures, calculation procedures, standards, and requirements in order to determine compliance with applicable state and federal statutes and rules.

Env-A 801.02 Applicability.

(a) The owner or operator of a stationary source, area source, or device, required to perform testing or monitoring to determine compliance with RSA 125-C, any permit issued by the division, or the requirements of other provisions of Env-A 300 et seq., NH Rules Governing the Control of Air Pollution, shall follow the procedures specified herein.

(b) The owner or operator of a source subject to Env-A 3200, NOx Budget Trading Program, shall comply with the testing and monitoring requirements specified in this chapter and in Env-A 3200, but shall follow the requirements of Env-A 3200 in case of conflict between the 2 chapters.

PART Env-A 802 COMPLIANCE STACK TESTING FOR STATIONARY SOURCES

Env-A 802.01 Purpose. The purpose of this part is to establish minimum standards and requirements for performing compliance stack tests to ensure that the collected data are accurate and representative of source operations.

Env-A 802.02 Stack Testing Requirements.

(a) A compliance stack emissions test shall conform to the following:

(1) The general requirements of 40 CFR 60.8(a), (b), (d), (e), and (f); and

(2) The test methods contained in 40 CFR 60, Appendix A, 40 CFR 51, Appendix M, or any other EPA-promulgated stack test method.

(b) An owner or operator shall sample emissions at locations and sampling points that will provide representative measurements of the actual emissions during source operation at the time of the test.

(c) The owner or operator shall perform a stratification check at each measurement location where a determination of a gas concentration is required.

(d) A stratification check shall be accomplished by measuring the pollutant or diluent, oxygen or carbon dioxide gas concentration in accordance with the EPA Emission Measurement Technical Information Center Guideline Document, GD-025, Determination of the Presence of Stratification of Gaseous Pollutant and Diluent Emissions for Continuous Emission Monitor or Reference Method Relative Accuracy Locations, June 21, 1994.

(e) If stratification does not exist, a single point gas/diluent measurement location shall be acceptable within the inner 50 percent area of the duct or stack cross section .

(f) If stratification exists, the owner or operator shall obtain samples either at locations across the stack diameter equivalent to those specified in 40 CFR 60, Appendix B, Performance Specification 2, paragraph 3.2, or the locations specified in 40 CFR 60, Appendix A, Method l .

Env-A 802.03 Pre-test Notice.

(a) At least 30 days prior to the commencement of source testing, the owner or operator shall notify the division of the date(s) of any planned compliance stack testing.

(b) The division shall require the rescheduling of any compliance stack emissions test if the staff necessary to observe the test is not available.

Env-A 802.04 Pre-test Protocol. At least 30 days prior to the commencement of source testing, the owner or operator shall submit to the division a pre-test protocol with the following information:

(a) The facility name, address, telephone number, and contact;

(b) The name of the contractor testing company, company contact, and telephone number;

(c) The reasons for performing the compliance stack test;

(d) A complete test program description;

(e) A description of the process or device to be tested;

(f) A description of the operational mode of the process during the testing period;

(g) A list of operational and process data to be collected;

(h) A list of test methods to be used;

(i) A description of any requested alternatives or deviations from standard EPA testing methods or from the requirements of this part;

(j) A list of calibration methods and sample data sheets;

(k) A description of pre-test preparation procedures;

(l) A list of sample collection and analysis methods;

(m) A description of quality assurance procedures specific to the testing;

(n) A description of standard operating procedures (SOPs) for laboratory analysis of samples, or reference to SOPs already on file with the division; and

(o) A description of facility safety/emergency response procedures applicable to the area of the facility in which the test will occur.

Env-A 802.05 Pre-test Meeting.

(a) At least 15 days prior to the test date, the owner or operator and any contractor retained by the owner or operator to conduct the test shall meet with a department representative in person or over the telephone.

(b) The details of the test, the testing schedule, and the process conditions under which the data shall be collected, shall be finalized at the pre-test meeting.

(c) A pre-test meeting may be held less than 15 days prior to the test date so long as implementation of any testing or operation changes resulting from the meeting can be carried out prior to the scheduled test date and the scheduled test integrity is not jeopardized.

Env-A 802.06 Repeating a Compliance Stack Test. An owner or operator that repeats a compliance stack test on the same source shall not be required to submit another pre-test protocol or attend another pre-test meeting as specified in Env-A 802.04 and Env-A 802.05, provided that the following conditions are met:

(a) The owner or operator uses the same stack testing contractor;

(b) The owner or operator follows all stack test and plant operating conditions specified in the previously accepted pre-test protocol or any deviations from the previously accepted pre-test protocol are specified in detail in the letter described in (d) below;

(c) The division approved the previous stack test as submitted by the owner or operator and the stack testing contractor; and

(d) The owner, operator, or stack testing contractor shall submit a letter to the division referencing the previously approved pre-test protocol and pre-test meeting and identifying in detail any deviations from the previously accepted pre-test protocol or pre-test meeting.

Env-A 802.07 Scheduling Changes.

(a) The owner or operator shall notify the division by telephone, fax, or electronic mail prior to any changes in the testing schedule for a compliance stack test.

(b) The owner or operator shall obtain prior approval from the division, which shall be based on staff availability, of any new date for a compliance stack test.

Env-A 802.08 Calibration Data for Stack Sampling Equipment.

(a) The owner or operator shall provide calibration data for any sampling equipment used during the compliance stack testing to the division upon request during the day of testing.

(b) The owner or operator shall provide copies of all calibration and field test data taken during the testing, including failed runs, to the division upon request.

Env-A 802.09 Alternative Testing Methods During a Test. The division shall approve deviations from the agreed-upon test method or pre-test protocol if the following criteria are met:

(a) The owner or operator informs division personnel assigned to the stack test of the following:

(1) The deviation from the testing method or planned operational mode of the source;

(2) The reason(s) for the deviation; and

(3) The implications of such a deviation; and

(b) The owner or operator provides technical justification showing that allowance of such deviation will not affect the accuracy of the compliance stack emissions test.

Env-A 802.10 Operating Conditions During a Stack Emissions Test. A compliance test shall be conducted under one of the following operating conditions:

(a) Between 90 and 100 percent, inclusive, of maximum production rate or rated

capacity;

(b) A production rate at which maximum emissions occur; or

(c) At such operating conditions agreed upon during a pre-test meeting conducted pursuant to Env-A 802.05.

Env-A 802.11 Report Submission Requirements.

(a) Except as provided in (b), below, the owner or operator shall submit a report to the division documenting the results of the compliance stack emissions test no more than 60 days after completion of testing.

(b) When conducting a quality assurance/quality control audit in accordance with Env-A 808, the owner or operator of the source shall submit a report to the division documenting those results in accordance with Env-A 808.07(b).

(c) The compliance stack emissions test report shall contain the following information:

(1) All the information required for the pre-test protocol as described in Env-A 802.04;

(2) All test data;

(3) All calibration data;

(4) Process data agreed by the division and the owner or operator to be collected;

(5) All test results;

(6) A description of any discrepancies or problems that occurred during testing or sample analysis;

(7) An explanation of how discrepancies or problems were treated and the effect on the final results; and

(8) A list and description of all equations used in the test report, including sample calculations for each equation used.

PART Env-A 803 NOx RACT TESTING REQUIREMENTS

Env-A 803.01 Purpose. The purpose of this part is to specify oxides of nitrogen (NOx) testing requirements for demonstrating of compliance with Env-A 1211.

Env-A 803.02 Compliance Stack Testing for NOx.

(a) Except for those devices specified in Env-A 803.03 and those sources whose owners or operators opted out of the NOx RACT regulation in accordance with Env-A 1211.01(n), owners and operators of all sources subject to Env-A 1211 shall conduct an initial compliance stack test in accordance with Env-A 802 to demonstrate compliance with the NOx RACT emission limits or NOx RACT air pollution control technology requirements specified in Env-A 1211.03 through Env-A 1211.13.

(b) An owner or operator subject to (a) above, shall conduct the initial compliance stack test by the following date:

(1) For an existing device, such testing shall be performed within 120 calendar days of the date when the device becomes subject to Env-A 1211; or

(2) For a new source or device, such testing shall be performed within 60 days of achieving the maximum production rate but no later than 180 days from startup.

(c) Except for those devices specified in Env-A 803.03, those sources whose owners or operators opted out of the NOx RACT regulation in accordance with Env-A 1211 .01(n), and those sources with a NOx continuous emission monitoring system certified, operated, and maintained in accordance with Env-A 808, all owners or operators of stationary sources subject to Env-A 1211 shall conduct periodic compliance stack testing in accordance with Env-A 802.

(d) An owner or operator subject to (c) above, shall conduct periodic compliance stack testing at least once every 3 years after the date of the initial compliance stack test to demonstrate compliance with the NOx RACT air pollution control requirements specified in Env-A 1211.03 through Env-A 1211.13.

(e) For a stationary source meeting the applicability requirements of (a) and (c) above, the following test methods shall be used as applicable:

(1) Method 7, 7A, 7C, 7D or 7E as described in 40 CFR 60, Appendix A, to determine NOx concentrations in stack gases;

(2) Method 10 as described in 40 CFR 60, Appendix A, to determine carbon monoxide concentrations in stack gases;

(3) Methods 1 and 2, 2C, 2F, 2G, or 2H, as described in 40 CFR 60, Appendix A, to determine the exit flow rate of stack gases;

(4) Method 3 or 3A as described in 40 CFR 60, Appendix A, to determine carbon dioxide, oxygen, excess air and molecular weight, dry basis, of stack gases; and

(5) Method 4 as described in 40 CFR 60, Appendix A, to determine the volume fraction of water vapor in stack gases.

(f) The owner or operator may use Method 20 as described in 40 CFR 60, Appendix A, in lieu of the methods identified in (e) above, to determine NOx concentrations in stationary gas turbine stack gases.

Env-A 803.03 Testing for Small Boilers and Emergency Generators. An owner or operator of any of the following boilers or emergency generators shall comply with the requirements of Env-A 803.04 and Env-A 807.03:

(a) Utility boilers subject to Env-A 1211.03(b) with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour;

(b) Steam electric boilers subject to Env-A 1211.04(b) with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour;

(c) Industrial boilers subject to Env-A 1211.05(b) with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour;

(d) Emergency generators subject to Env-A 1211.11; and

(e) Auxiliary boilers subject to Env-A 1211.12(b) with heat input rates of at least 5,000,000 Btu per hour but less than 50,000,000 Btu per hour.

Env-A 803.04 Gaseous Concentration Measurements for Small Boilers and Emergency Generators. Following the performance of tuneup activities as specified in Env-A 1211, the owner or operator of a small boiler or an emergency generator as specified in Env-A 803.03 shall perform applicable gaseous concentration measurements for nitrogen oxides (NOx), carbon monoxide (CO), and oxygen (O_2) as specified below:

(a) Any of the following monitors shall be acceptable for making the gaseous concentration measurements:

(1) All analyzers meeting the specifications set forth in the applicable sections of 40 CFR 60, Appendix B, Performance Specifications 2 through 4;

(2) Portable extractive monitors using an electrochemical sensor for performing the gas concentration measurement; and

(3) Alternative monitors, if written technical information is provided to the division demonstrating that the analyzer in the alternative monitor is at least as accurate as the analyzer using the electrochemical sensor;

(b) A concentration monitor shall be operated following the operating procedures specified by the manufacturer;

(c) Measurements shall be taken at one minute intervals at each representative operation

condition over a minimum of a 15-minute period following achievement of stable operation;

(d) All measurements shall be documented and averaged over the period of testing;

(e) Prior to and following measurement, the owner or operator shall perform, following the manufacturer's recommended procedures, 2 calibrations as follows:

(1) A calibration with a gas containing between 0% and 20% of the expected concentration of the gas being measured, based on manufacturer's data or EPA-published emission factors for the device; and

(2) A calibration with a gas containing between 80% and 150% of the expected concentration of the gas being measured, based on manufacturer's data or EPA-published emission factors for the device;

(f) All calibration data shall be recorded and kept on-site;

(g) Concentration measurements shall be reported on a dry basis; and

(h) If a direct measurement is on a wet basis, the basis for the percentage moisture used and the correction calculation to dry basis shall be documented.

PART Env-A 804 VOLATILE ORGANIC COMPOUND TESTING

Env-A 804.01 Purpose. The purpose of this part is to specify volatile organic compound (VOC) liquid and VOC gas testing, measurement, and calculation requirements.

Env-A 804.02 Applicability. This part shall apply to all sources subject to Env-A 1204, Stationary Sources of VOC.

Env-A 804.03 Indication of the VOC Content of a Coating.

(a) VOC coating information based upon supplier or stationary source formulation data shall be prima facie evidence of the actual VOC content of the coating.

(b) An owner or operator relying on supplier formulation data to determine the actual VOC content of a coating shall record all of the information required by the VOC data sheet found on page II-2 of EPA document EPA-450/3-84-019, Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings, 1984.

(c) An owner or operator relying on stationary source formulation data to determine the actual VOC content of a coating shall record all of the information required by the VOC data sheet found on page III-2 of EPA document EPA-450/3-84-019,

Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink, and Other Coatings, 1984.

Env-A 804.04 Determination of Compliance for VOC Coatings.

(a) To determine a facility's compliance with Env-A 1204, the owner or operator shall use one of the following methods, as applicable:

(1) Method 24 as described in 40 CFR 60, Appendix A, using the 60-minute bake time procedure for test ASTM D 2369-01; or

(2) Method 24A as described in 40 CFR 60, Appendix A.

(b) Where one or more coating or diluent of the coating formulation chemically reacts with another coating or diluent, in lieu of the methods specified in (a) above, the owner or operator shall:

(1) Obtain separate samples of each coating or diluent;

(2) Mix the coatings or diluents in a container in the same proportions as those in the formulation, as applied;

(3) Keep the container in which mixing takes place closed between additions and during mixing;

(4) Hold approximately 100 ml of the mixture in a container designed and chosen to minimize headspace prior to withdrawing a sample;

(5) Withdraw a sample from the mixture, transfer the sample to a tared dish, and allow it to stand for a minimum of one hour, but not more than 24 hours, prior to conducting a Method 24 or 24A analysis; and

(6) Conduct a Method 24 or 24A analysis of the coating sample.

Env-A 804.05 Calculation of VOC Content of a Coating Formulation. The owner or operator of a VOC source subject to a pounds VOC per gallon of coating standard as specified in Env-A 1204, which uses a coating that contains more than one VOC component, shall calculate the VOC content of the coating using the following formula, provided no chemical reaction occurs during the formulation process:

(a) "Pounds per gallon of coating (PPGC)" means the VOC content of the coating formulation, as applied, used on a coating line or operation in units of pounds (lb) of VOC per gallon (gal) of coating or kilograms (kg) of VOC per liter (l) of coating, minus water and exempt VOC compounds;

(b) "n" means the number of different coatings or diluents, as applied, used in the

coating formulation;

(c) "i" means the subscript denoting an individual coating or diluent;

(d) "V_i" means the volume of the coating or diluent i, as applied, used in the coating formulation in units of gallons or liters, minus water and exempt VOC compounds;

(e) "C_i" means the VOC content of the coating or diluent i, as applied, used in the coating formulation in units of lb of VOC/gal of coating, or kg of VOC/l of coating less water and exempt VOC compounds, as determined from the Method 24 or 24A analysis and the calculation procedures in Section 2.2 of EPA-340/1-86-016, A Guideline for Surface Coating Calculations, July, 1986;

(f) "V_T" means the total volume of the coating formulation, as applied, in units of gallons or liters, minus water and exempt VOC compounds; and

(g) PPGC shall be equal to the sum of the products of V_i and C_i for coatings or diluents one through n divided by V_T , as in the following equation:

$$PPGC = \frac{\sum_{i=1}^{n} (ViCi)}{V_T}$$

Env-A 804.06 Calculation of Daily-Weighted Average for a Coating Line Using Multiple Coatings. The owner or operator of a coating source subject to a pounds VOC/gallon coating standard as specified in Env-A 1204, using multiple coatings on a single line, may choose to demonstrate compliance with such standard by calculating a daily-weighted average as follows:

(a) "Pounds per gallon of coating, daily-weighted ($PPGC_{DW}$)" means the daily-weighted average VOC content of the coatings, as applied, used on a coating line or operation in units of lb VOC per gal of coating or kg VOC per l of coating, minus water and exempt VOC compounds;

(b) "n" means the number of different coatings or diluents, as applied, used each day on a coating line or operation;

(c) "i" means the subscript denoting an individual coating or diluent;

(d) "V_i" means the volume of the coating or diluent i, as applied, used each day on a coating line or operation in units of gal or l, minus water and exempt VOC compounds;

(e) "C_i" means the VOC content of the coating or diluent i, as applied, used each day on a coating line or operation in units of lb VOC/gal of coating, or kg VOC/l of coating less water and exempt VOC compounds, as determined from the Method 24 or 24A

analysis and the calculation procedures in section 2.2 of EPA-340/1-86-016, A Guideline for Surface Coating Calculations, July, 1986;

(f) "V_T" means the total volume of all coatings, as applied, used each day on a coating line or operation in units of gal or l, minus water and exempt VOC compounds; and

(g) The $PPGC_{dw}$ shall be equal to the sum of the products of V_i and C_i for coatings or diluents one through n, divided by V_T, as in the following equation:

$$PPGC_{DW} = \frac{\sum_{i=1}^{n} (ViCi)}{V_T}$$

Env-A 804.07 Calculation of Emission Standard for Sources Complying with VOC RACT Using Either a Bubble or Add-On Controls. For a coating source that uses add-on control equipment or a bubble to achieve compliance with Env-A 1204, the overall emission standard shall be calculated as follows:

(a) "Pounds VOC per gallon of solids, emission standard ($PPGS_{ES}$)" means the VOC emission standard in terms of lb VOC/gal of coating solids, or kg VOC/l of coating solids, as applied;

(b) "Pounds VOC per gallon of coating, emission standard ($PPGC_{ES}$)" means the VOC emission standard in terms of lb VOC/gal of coating, or kg VOC/l of coating, as applied, minus water and exempt compounds, obtained from the appropriate section of Env-A 1204;

(c) "d_A" means the actual mass density of the VOC in the applied surface coating formulation in terms of lb/gal or kg/l. For those stationary sources that have multiple coating lines feeding the add-on control equipment, d_A means the weighted average actual mass density of the VOC in the applied surface coatings in terms of lb/gal or kg/l; and

(d) $PPGS_{ES}$ shall be equal to $PPGC_{ES}$ divided by the difference between one and the quotient of $PPGC_{ES}$ and d_A, as in the following equation:

$$PPGS_{ES} = \frac{PPGC_{ES}}{1 - (\frac{PPGC_{ES}}{d_A})}$$

Env-A 804.08 Calculation of Daily-Weighted Average for Coating Lines With Bubble or Control Device. The owner or operator of a coating source that complies with Env-A 1204, by using add-on control equipment or a bubble and which is subject to a pounds VOC/gallon of coating solids standard shall demonstrate compliance with such standard by calculating a daily-weighted average in pounds VOC/gallon solids as follows:

(a) "Pounds VOC per gallon of solids, daily-weighted (PPGSDW)" means the daily weighted average VOC content, as applied, of the coatings used on multiple coating lines or operation in units of lb VOC/gal of coating solids or kg/l of coating solids;

(b) "n" means the number of different coatings and dilution solvents, as applied, used in a day on a coating line or operation;

(c) "i" means the subscript denoting an individual coating or dilution solvent;

(d) "V_i" means the volume of the coating or dilution solvent i as applied, used in a day on a coating line or operation in units of gal or l;

(e) "$WVOC_i$" means the weight fraction of VOC of the coating or dilution solvent i as applied, minus water and exempt VOC compounds, used in a day on a coating line or operation in units of lb VOC/lb coating, or kg VOC/kg coating as determined from Method 24 or 24A analysis;

(f) "Di" means the density of the coating or dilution solvent i in units of lbs/gal coating or kg/l coating as determined from Method 24 or 24A analysis;

(g) "VS_i" means the volume fraction solids content of each coating i, as applied, used in a day on a coating line, in units of gal solids/gal coating or liter (l) solids/l coating as determined by calculation using the formulation; and

(h) "$PPGS_{DW}$" shall be equal to the sum of the products of V_i, $WVOC_i$, and D_i for coatings or dilution solvents one through n, divided by the sum of the products of V_i and VS_i for coatings or dilution solvents one through n, as in the following equation:

$$PPGS_{DW} = \frac{\sum_{i=1}^{n} Vi(WVOCi)Di}{\sum_{i=1}^{n} ViVSi}$$

Env-A 804.09 Calculation of Required Overall Emission Reduction Efficiency of a Control System. The owner or operator of a coating source using add-on control equipment or a bubble to achieve compliance with Env-A 1204 shall calculate the required emission reduction efficiency of the control system as follows:

(a) "E_{REQ}" means the required overall emission reduction efficiency of the control system for the day, expressed as a percentage;

(b) "$PPGS_{MAX}$" means the maximum VOC content of the coatings, as applied, used each day on the subject coating line or operation, in units of lbs of VOC/gal of coating solids, as determined by the applicable test methods and procedures specified in this section and the calculation examples presented in section 2 of EPA Document

Number EPA-340/1-86-016, A Guideline for Surface Coating Calculations, July, 1986;

(c) "$PPGS_{ES}$" means the VOC emission standard in terms of lb/gal, or kg/l, of coating solids as calculated in accordance with Env-A 804.07; and

(d) E_{REQ} shall be equal to the difference between $PPGS_{MAX}$ and $PPGS_{ES}$, multiplied by 100 and divided by $PPGS_{MAX}$, as in the following equation:

$$E_{REQ} = \frac{(PPGS_{MAX} - PPGS_{ES})}{(PPGS_{MAX})} x100$$

Env-A 804.10 Calculation of Actual Overall Emission Reduction Efficiency of a Control System. The owner or operator of a coating source using add-on control equipment to achieve compliance with Env-A 1204 shall determine the measured overall emission reduction efficiency of the control system as follows:

(a) "E_{MEAS}" means the measured overall emission reduction efficiency of the control system for the day, expressed as a percentage;

(b) "CE" means the most recent capture efficiency test results, in percentage of VOC captured, as determined in accordance with Env-A 805;

(c) "RE" means the measured VOC removal efficiency of the control device, in percentage of VOC removed;

(d) The E_{MEAS} shall be equal to the product of CE divided by 100, RE divided by 100, and 100, as in the following equation:

$$E_{MEAS} = \frac{(CE)}{100} x \frac{(RE)}{100} x100$$

Env-A 804.11 Compliance Determination of a Control System. For a coating source using add-on control equipment, the control system shall be determined to be in compliance with its overall emission standard when, on a daily basis, E_{MEAS} is greater than or equal to the E_{REQ}, as those terms are defined in Env-A 804.10.

Env-A 804.12 Compliance Stack Testing for VOCs.

(a) The owner or operator of a stationary source that achieves compliance with Env-A 1204 through the operation of an add-on control system shall perform compliance stack testing in accordance with this section and Env-A 802 to determine the control efficiency of the add-on control system.

(b) Compliance stack testing required by this section shall be performed within 180 days

of the date that the source becomes subject to Env-A 1204 or within 60 days of startup of the control device, whichever is later.

(c) For an owner or operator of a stationary source performing compliance stack testing in order to demonstrate compliance with Env-A 1204, the following test methods as applicable shall be used:

(1) Methods 1-4 in 40 CFR 60, Appendix A, for determining flow rates; and

(2) Methods 18, 25, 25A or 25B in 40 CFR 60, Appendix A, for determining gaseous organic concentrations.

(d) For purposes of this section, parts per million by volume (ppmv) shall be expressed:

(1) In terms of the calibration gas used during the stack test or as the actual constituent measured; and

(2) On the same basis as the outlet concentration.

(e) Measurements made pursuant to this section may be on a wet or dry basis but shall be consistent with the basis of all concentration and volumetric flow values used in the formula in (f) below.

(f) The removal efficiency of the add-on control system shall be determined, as applicable, by simultaneously measuring the inlet and outlet gas-phase VOC concentrations and gas volumetric flow rates using the testing methods specified above and the following formula:

(1) "RE" means the VOC removal efficiency of the control device in percentage;

(2) "Qi" means the volumetric flow rate of the inlet gas flowing into the control device, in standard cubic feet per hour (SCFH);

(3) "Ci" means the concentration of VOC flowing into the control device, ppmv;

(4) "n" means the number of input gaseous streams feeding the control device;

(5) "Qo" means the volumetric flow rate of the outlet gas exiting the control device, in SCFH;

(6) "Co" means the concentration of VOC exiting the control device, ppmv;

(7) "m" means the number of emission vents leaving the control device; and

(8) RE shall be equal to the sum of the products of Qi and Ci for input gaseous

streams one through n, minus the sum of the products of Qo and Co for emission vents one through n, divided by the sum of the products of Qi and Ci for input gaseous streams one through n, the entire quantity multiplied by 100 to convert to percentage, as in the following equation:

$$RE = \frac{\sum_{i=1}^{n} QiCi - \sum_{o=1}^{n} QoCo}{\sum_{i=1}^{n} QiCi} \text{ X } 100$$

(g) The owner or operator of a stationary source that achieves compliance with Env-A 1204 through the operation of an add-on control system shall also be required to perform capture efficiency testing as applicable in accordance with Env-A 805.

Env-A 804.13 Env-A 804.15 Mass Balance Alternative to Compliance Stack Testing for VOC. For a stationary source using a control device designed to collect and recover VOC, such as a carbon adsorber, the mass balance alternative test as specified in Env-A 805.06 for the combined capture efficiency and control efficiency may be performed in place of compliance stack testing specified in Env-A 804.12.

Env-A 804.14 Rotogravure and Flexographic Printing and Graphics.

(a) For rotogravure and flexographic printing and graphics operations compliance shall be determined using the test methods specified in either (b) or (c), below.

(b) For an operation using low solvent inks to achieve compliance with Env-A 1204.36, the applicable test method in Env-A 804.04 shall apply as follows:

(1) Compliance shall be determined for each ink or each ink blend on an instantaneous basis; and

(2) For ink blends containing multiple constituents, the average percentage VOC shall be determined as follows:

a. "$V\%VOC_{AVE}$" means the average volume percentage VOC content in the ink formulation used minus water and exempt VOC compounds;

b. "n" means the number of different constituents, used in the ink formulation;

c. "$V\%VOC_i$" means the volume percentage VOC content in the ink constituent "i" minus water and exempt VOC compounds;

d. "VF_i" means the volume fraction of constituent "i" used in the ink formulation; and

e. The $V\%VOC_{AVE}$ shall be equal to the sum of the products of VF_i and $V\%VOC_i$ for ink constituents one through n, as in the following equation:

$$V\%VOC_{AVE} = \sum_{i=1}^{n} (VFi)(V\%VOCi)$$

(c) For an operation using a control system to achieve compliance with Env-A 1204.36, the following test methods and procedures, as applicable, shall apply:

(1) Env-A 802, Compliance Stack Testing for Stationary Sources;

(2) Env-A 804.12, Compliance Stack Testing for VOCs;

(3) Env-A 804.15, Mass Balance Alternative to Compliance Stack Testing for VOC; and

(4) Env-A 805, Capture Efficiency.

Env-A 804.15 Testing Fountain Solutions in Offset Lithography. To determine compliance with Env-A 1204.37(c)(4), an owner or operator of a business that operates an offset lithographic printing press shall use the methods prescribed below:

(a) The VOC content of the fountain solution, which is the mixture used to maintain the quality of the printing plate, shall be determined by one of the following procedures:

(1) The applicable test method specified in Env-A 804.04;

(2) Measurement of an in-use sample of fountain solution with a hydrometer or refractometer that has been standardized using the procedures of (3)c.1. or (3)c.2., below, which demonstrates that the value so obtained is not more than 10% greater than the value determined in accordance with the procedures specified in (a)(1), above;

(3) Monitoring with a refractometer, in accordance with the following procedure:

a. The refractometer shall be corrected for temperature at least once per 8-hour shift or once per batch, whichever is longer;

b. The refractometer shall have a visual, analog, or digital readout with an accuracy of +0.5%;

c. The refractometer shall be calibrated by one of the following methods:

1. Using a standard solution to calibrate the refractometer for the type of alcohol used in the fountain solution; or

2. Standardizing the refractometer against measurements and calculations

performed in accordance with Env-A 804.04;

(4) Monitoring with a hydrometer, according to the following procedure:

a. Temperature correction shall be achieved as follows:

1. The hydrometer shall be equipped with temperature correction; or

2. Readings shall be adjusted for temperature;

b. Hydrometer monitoring shall be performed at least once per 8-hour shift or once per batch, whichever is longer;

c. The hydrometer shall have a visual, analog, or digital readout with an accuracy of +0.5%; and

d. The hydrometer shall be calibrated by one of the following methods:

1. Using a standard solution to calibrate the hydrometer for the type of alcohol used in the fountain; or

2. Standardizing the hydrometer against measurements or calculations performed in accordance with Env-A 804.04; or

(5) Where a refractometer or hydrometer cannot be used to monitor the type of VOCs in the fountain solution, monitoring with a conductivity meter in accordance with the following:

a. The reading of the conductivity meter shall be referenced to the conductivity of the incoming water; and

b. The conductivity meter shall be calibrated by one of the following methods:

1. Using a standard solution to calibrate the conductivity meter for the type of alcohol used in the fountain; or

2. Standardizing the conductivity meter against measurements or calculations performed in accordance with Env-A 804.04; and

(b) Compliance with the fountain solution temperature requirements imposed by the options of Env-A 1204.37(c)(4)a.2. for web-fed heatset operations, where heat is used to set the printing ink on a continuous roll of paper, or Env-A 1204.37(c)(4)b.2. for sheet-fed operations, shall be demonstrated by:

(1) Using a thermometer or other temperature detection device capable of reading to within ±0.5 degrees F; and

(2) Reading and recording the output of the temperature instrument at least once per operating day to verify proper operation of the refrigeration system.

Env-A 804.16 Testing Cleaning Solutions in Offset Lithography. To determine compliance with Env-A 1204.37(c)(1), an owner or operator of a business that operates an offset lithographic printing press shall use the methods prescribed below:

(a) The VOC content of the cleaning solution shall be determined by the applicable test methods specified in Env-A 804.04;

(b) The VOC composite partial vapor pressure of the cleaning solution pursuant to the option specified in Env-A 1204.37(c)(1)b. shall be determined using one of the following procedures:

(1) An alternate analytical method approved by the director in accordance with Env-A 809; or

(2) A calculation which combines on a volumetric basis the analytical VOC vapor pressure data for the constituents of the cleaning solution based on records of the proportions in which they are mixed to make the press-ready cleaning solution; and

(c) An owner or operator of a business that operates an offset lithographic printing press choosing to demonstrate compliance with the VOC limitations specified in Env-A 1204.37(c)(1)a. and equipped with automatic devices that mix cleaning solution at the point of application shall employ flow meters or fixed-volume spray systems to monitor water and cleaning solution application rates.

Env-A 804.17 Determining Control Efficiencies in Offset Lithography. Compliance with the control efficiency requirements for an add-on control device used to reduce VOC emissions from the dryer exhaust of heatset inks used in offset lithography, pursuant to Env-A 1204.37(c)(3), shall be demonstrated using the test methods and procedures described in the following rules, as applicable:

(a) Env-A 802, Compliance Stack Testing for Stationary Sources;

(b) Env-A 804.12, Compliance Stack Testing for VOCs;

(c) Env-A 804.13 Mass Balance Alternative to Compliance Stack Testing for VOC; and

(d) Env-A 805, Capture Efficiency.

Env-A 804.18 Fixed-roof VOC Storage Tanks. When performing a visual inspection of the internal floating roof and its closure seal(s) as required by Env-A 1204.38, the owner or operator of a fixed-roof VOC storage tank shall inspect for all of the following:

(a) The cover shall be uniformly floating on or above the liquid;

(b) The surface of the cover shall have no visible defects;

(c) The cover shall have no accumulated liquid; and

(d) The seal shall be intact and uniformly in place around the circumference of the cover between the cover and tank wall.

Env-A 804.19 External Floating Roof VOC Storage Tanks. The owner or operator of a VOC storage tank with an external floating roof shall perform the following actions:

(a) A visual inspection of the secondary seal gap during semi-annual inspections; and

(b) When the roof is equipped with a vapor-mounted primary seal, annual measurement of the secondary seal gap in accordance with the following procedure:

(1) The length and width of all gaps around the entire circumference of the secondary seal shall be measured in each place where a 0.32 cm or 0.125 in. uniform diameter probe passes freely, without forcing or binding against the seal, between the seal and tank wall; and

(2) The sum of the areas of the individual gaps shall be calculated.

Env-A 804.20 Bulk Gasoline Loading Terminals. The owner or operator of a bulk gasoline loading terminal shall use the following test methods:

(a) The test methods and procedures specified for vapor control units in 40 CFR 60.503; and

(b) Method 27 as described in 40 CFR 60, Appendix A, for vapor tightness of gasoline delivery.

Env-A 804.21 Solvent Metal Cold Cleaners, Open Top Degreasing and Conveyorized Degreasing. The owner or operator of a solvent metal cold cleaner, open top vapor degreasing operation, or conveyorized degreasing operation shall use the following test methods:

(a) Visual inspection for compliance with equipment specifications and operating procedures; and

(b) When compliance is by add-on control systems:

(1) Methods 1-4 in 40 CFR 60, Appendix A, for determining flow rates;

(2) Methods 18, 25, 25A or 25B in 40 CFR 60, Appendix A, for determining gaseous organic concentrations; and

(3) ASTM D323-99a for measuring solvent true vapor pressure.

PART Env-A 805 CAPTURE EFFICIENCY (CE)

Env-A 805.01 Scope. The capture efficiency (CE) testing requirements of this section shall apply to all VOC-emitting processes that are subject to the provisions of Env-A 1204.09 through Env-A 1204.51, where it has been determined by the director that CE testing is required to demonstrate compliance with those provisions.

Env-A 805.02 Definitions. For the purposes of this part, the following definitions shall apply:

(a) "Average face velocity" means the velocity at an emissions collection point as calculated by dividing the average volumetric flow rate by the total of the face of the collection;

(b) "Building enclosure" (BE) means a structure that:

(1) Contains a VOC-emitting process; and

(2) Meets the specifications given in 40 CFR 51, Appendix M, Method 204;

(c) "Capture" means the containment or recovery of emissions from a process for direction into an exhaust duct which leads to a stack or a control device;

(d) "Capture efficiency" (CE) means the weight per unit of time of VOC entering a capture system and delivered to a control device divided by the weight per unit time of total VOC emitted by an emission source of VOC expressed as a percentage;

(e) "Capture system" means any other equipment that contains, collects and/or transports an air pollutant to a control device, such as hoods, ducts, fans, booths, ovens, and dryers;

(f) "Control device" means equipment used to reduce, by destruction or removal, the amount of air pollutant(s) in an air stream prior to discharge into the ambient air, such as an incinerator or carbon adsorber;

(g) "Control system" means a combination of one or more capture system(s) and control device(s);

(h) "Destruction or removal efficiency" means the efficiency, expressed as a percentage,

of a control device in destroying or removing contaminants calculated as one minus the ratio of the amount of VOC exiting the control device to the amount of VOC entering the control device;

(i) "Gas/gas method" means a method for determining capture efficiency which relies only on gas phase measurements, either by:

(1) Construction of a temporary total enclosure (TTE) to assure all would-be fugitive emissions are measured; or

(2) Use of a building or room that houses the emission source as a BE;

(j) "Hood" means a partial enclosure or canopy for capturing and exhausting, by means of a draft, the organic vapors or other fumes rising from a coating process or other source;

(k) "Liquid/gas method" means a method for determining capture efficiency which requires both gas phase and liquid phase measurements and analysis, either by:

(1) Construction of a temporary total enclosure (TTE); or

(2) Use of a building or room that houses the emission source as a BE;

(l) "Method 204" means the criteria for and verification of a permanent or temporary total enclosure as specified in 40 CFR 51, Appendix M;

(m) "Method 204A" means the procedure for determining the VOC content in a liquid input stream as specified in 40 CFR 51, Appendix M;

(n) "Method 204B" means the procedure for determining the VOC emissions in a captured stream as specified in 40 CFR 51, Appendix M;

(o) "Method 204C" means the procedure for determining the VOC emissions in a captured stream as specified in 40 CFR 51, Appendix M;

(p) "Method 204D" means the procedure for determining the VOC emissions in a fugitive stream from a temporary total enclosure as specified in 40 CFR 51, Appendix M;

(q) "Method 204E" means the procedure for determining the VOC emissions in a fugitive stream from a building enclosure as specified in 40 CFR 51, Appendix M;

(r) "Method 204F" means the procedure for determining the VOC content in a liquid input stream, such as the distillation approach, as specified in 40 CFR 51, Appendix M;

(s) "Overall control" means, for a solvent recovery system, the ratio of the total recovered solvent VOC in a control device to the sum of the liquid VOC input to all process lines venting to the control system;

(t) "Overall emission reduction efficiency" means the weight per unit time of VOC removed or destroyed by a control device divided by the weight per unit time of VOC emitted by an emission source, expressed as a percentage, and is the product of the capture efficiency and the control equipment destruction or removal efficiency;

(u) "Permanent total enclosure" (PTE) means a structure that:

(1) Contains a process that emits VOC; and

(2) Meets the specifications given in Method 204; and

(v) "Temporary total enclosure" (TTE) means a structure that:

(1) Is built around a process that emits VOC; and

(4) Meets the specifications given in Method 204.

Env-A 805.03 Requirements for CE Testing.

(a) Detailed requirements for CE testing shall be as specified in this section and in the Guidelines for Determining Capture Efficiency (GFDCE), Candace Sorrell, Source Characterization Group A (MD-19), Emission Monitoring and Analysis Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, January 9, 1995.

(b) An owner or operator of a source that uses a control device in order to comply with Env-A 1204 shall perform CE testing whenever compliance stack testing is required to be performed in accordance with Env-A 804.

(c) An owner or operator required to perform CE tests shall:

(1) Perform one of the CE test procedures specified in Env-A 805.04;

(2) Use one of the alternative CE test procedures specified in Env-A 805.05; or

(3) Use an alternative CE test procedure in accordance with Env-A 809.

Env-A 805.04 CE Procedures.

(a) For the gas/gas method using a TTE, as described in Method 204, the CE shall be determined by the following procedure:

(1) "CE" means the capture efficiency calculated as a decimal fraction;

(2) "G" means the mass of VOC captured and delivered using TTE, obtained using Method 204C, or if a single flame ionization analyzer (FIA) device cannot be used simultaneously for Method 204D and Method 204C, Method 204B may be used for the determination of G;

(3) "F" means the mass of fugitive VOC that escapes from TTE, obtained using Method 204D; and

(4) CE shall be obtained by dividing G by the sum of G and F, as in the following equation:

$$CE = G/(G + F)$$

(b) For the liquid/gas method using TTE, as described in Method 204, the CE shall be determined by the following procedure:

(1) "CE" means the capture efficiency calculated as a decimal fraction;

(2) "L" means the mass of liquid VOC input to process, obtained using Method 204A or Method 204F;

(3) "F" means the mass of fugitive VOC that escapes from a TTE, obtained using Method 204D; and

(4) CE shall be obtained by dividing the difference between L and F by L, as in the following equation:

$$CE = (L - F)/L$$

(c) For the gas/gas method using as the enclosure the BE in which the affected source is located and in which G and F_B, as defined in (c)(2), below, are measured while operating only the affected facility:

(1) All fans and blowers in the BE shall be operated as they would under normal production; and

(2) The CE shall be determined as follows:

a. "CE" means the capture efficiency calculated as a decimal fraction;

b. "G" means the mass of VOC captured and delivered to a control device, obtained using Method 204C, or if a single FIA device cannot be used simultaneously for Method 204E and Method 204C, Method 204B may be used for the determination of G;

c. "F_B" means the mass of fugitive VOC that escapes from the BE, obtained using Method 204E; and

d. CE shall be obtained by dividing G by the sum of G and F_B, as in the following equation:

$$CE = G/(G + F_B)$$

(d) For the liquid/gas method using as the enclosure the BE in which the affected source is located and in which L and F_B, as defined in (d)(2), below, are measured while operating only the affected facility:

(1) All fans and blowers in the BE shall be operated as they would under normal production; and

(2) The CE shall be determined as follows:

a. "CE" means the capture efficiency calculated as a decimal fraction;

b. "L" means the mass of liquid VOC input to process, obtained using Method 204A or Method 204F;

c. "F_B" means the mass of fugitive VOC that escapes from the BE, obtained using Method 204E; and

d. The CE shall be obtained by dividing the difference between L and F_B by L, as in the following equation:

$$CE = (L - F_B)/L$$

Env-A 805.05 Alternative CE Procedures for Control Devices Other Than Solvent Recovery Systems.

(a) If a source installs a PTE that meets EPA specifications as described in Method 204 and which directs all VOC to a control device, the CE shall be assumed to be 100%, and the source shall be exempt from the CE testing requirements described in this part. A source that has installed a PTE shall not be exempt from the compliance stack testing requirements of any control device required under these or any other rules.

(b) A source choosing to demonstrate that it meets the criteria for a PTE shall submit the following to the division:

(1) Documentation showing that all Method 204 criteria for a PTE were met during the testing for control efficiency of the add-on control device; or

(2) For any time period other than during testing of the add-on control device for control efficiency, documentation which demonstrates that the operation of the control system occurred under the same conditions experienced during the control device compliance stack test.

(c) The data quality objective (DQO) approach as specified in the GFDCE, Section 3.1, may be used as an alternative method for determining CE using the Method 204 through Method 204F test series, in conjunction with the additional criteria specified in Section 3.3 of the GFDCE and the reporting and recordkeeping requirements of Section 3.4 and 3.5 of the GFDCE.

(d) The lower confidence limit (LCL) approach as specified in the GFDCE, Section 3.2, may be used as an alternative method for determining CE, using the following:

(1) The Method 204 through Method 204F test series;

(2) Additional criteria specified in Section 3.3 of the GFDCE; and

(3) The reporting and recordkeeping requirements of Section 3.4 and 3.5 of the GFDCE.

(e) Multiple line CE testing may be used if the requirements in the GFDCE, Section 4.0, are followed.

Env-A 805.06 Alternate CE Procedures for Solvent Recovery Systems. For a source that uses a control device, such as a carbon adsorber, designed to collect and recover VOC in accordance with the criteria in Env-A 805.07, the following alternative to CE testing may be used:

(a) The overall control efficiency of the system shall be determined over a minimum of a 24-hour period;

(b) The testing procedures shall be as described in 40 CFR 60.433, with the following additional restrictions for VOC sources subject to RACT:

(1) The owner or operator of the source shall compare solvent usage to solvent recovery on a 24-hour basis, rather than a 30-day weighted average as specified in 40 CFR 60.433; or

(2) If the overall emission reduction efficiency required by the applicable rule is met, as determined by the initial 24-hour test, the owner or operator of the source may compare solvent usage to solvent recovery over an alternative time period subject to the following:

a. The owner or operator seeking approval of an alternative time period shall submit the following information in writing to the director:

1. The identity and description of the facility, including a description of the process and the solvent recovery control device;

2. The proposed alternative time period, not to exceed 30 days; and

3. Technical data and information demonstrating that the control device designed to collect and recover VOC will be operated in a manner consistent with the manner in which it was operated during the initial 24-hour period of the test, and that the results produced over the proposed time period are no less precise and accurate than those produced during the initial 24-hour time period;

b. The director shall review the information submitted pursuant to (b)(2)a., above;

c. The director shall approve the proposed alternative time period if all of the information required in (b)(2)a., above, has been submitted to the division and the information demonstrates that:

1. The control device shall be operated in a manner consistent with the manner in which it was operated during the initial 24-hour time period of the test; and

2. The results produced over the proposed time period shall be no less precise and accurate than those produced during the initial 24-hour time period; and

d. The department shall notify the applicant and the EPA of the decision within 60 days of receipt of the required information;

(c) Each demonstration as specified in (b)(1), above, relating solvent usage with solvent recovery, including the initial 24-hour time period, shall be performed by the source within 72 hours of the end of each established time period; and

(d) Any recovery rates calculated using the procedure specified in this section, which result in a lower rate than that needed to comply with the applicable rule, shall be reported to the division within 7 calendar days.

Env-A 805.07 Solvent Recovery System Requirements. An owner or operator of a source using a solvent recovery system may use the alternate CE testing procedure described in Env-A 805.06 if the solvent recovery system meets one of the following criteria:

(a) The solvent recovery system is dedicated to a single process line, for example, one process line venting to a carbon adsorber system; or

(b) If the solvent recovery system controls multiple process lines, the owner or operator demonstrates by submitting written documentation to the division that the overall control meets or exceeds the most stringent standards applicable for each process line venting to the control system.

Env-A 805.08 Recordkeeping and Reporting. Recordkeeping and reporting requirements for CE testing shall be as follows:

(a) The owner or operator of a source required to perform CE tests shall maintain a copy of the CE test results at the source;

(b) The owner or operator shall notify the division at least 30 days prior to performing any CE or control efficiency tests;

(c) The owner or operator shall report all results of CE testing to the division within 60 days of the test date;

(d) For any source using a PTE, the owner or operator shall demonstrate by submitting written documentation to the division that the enclosure meets the requirements specified in Method 204 for a PTE during any testing of the control device;

(e) For any source using a TTE, the owner or operator shall demonstrate by submitting written documentation to the division that:

(1) Its TTE meets the requirements given in Method 204 for a TTE during testing of their control device; and

(2) The quality assurance criteria for a TTE have been achieved; and

(f) The owner or operator shall notify the division of any changes made to the capture or control equipment, except for any reductions in the air flow at a collection point that occurs because the emission source that the collection point is serving is not being used.

Env-A 805.09 Changes to the Control System.

(a) Measurements of average face velocity shall be done at all collection points whenever any physical changes are made to the control system; and

(b) Any one of the following shall constitute a change to the capture or control equipment, thereby requiring a new CE test:

(1) An increase of more than 10% in the distance between any emission collection point and the emission source that the collection point is serving;

(2) A reduction in the average face velocity at any emission point ducted to the control device to a value less than 90% of the value measured and recorded during a previous CE test, except for reductions occurring at a collection point as a result of a shutdown of the emission point that said collection point is serving; or

(3) A change in the physical structure or operation which causes an increase or decrease in the amount of a specific air pollutant emitted from a device or which results in the emission of any additional air pollutant, and such change is determined by the division to have a significant impact on air quality as determined by modeling conducted in accordance with 40 CFR 51, Appendix W.

PART Env-A 806 SULFUR CONTENT TESTING OF FUELS

Env-A 806.01 Purpose. The purpose of this part is to specify testing procedures for sulfur content in fuels.

Env-A 806.02 Test Methods for Liquid Fuels.

(a) For the purpose of determining the sulfur content, in percent sulfur by weight, for the liquid fuels listed in the left column of Table 8.1, the owner or operator shall use one of the specified test methods, as described in Table 8.1:

Table 8.1 Test Methods for Liquid Fuels

	ASTM D1552-01	ASTM D2622-98	ASTM D5453-00	ASTM D4294-98	ASTM D3120-96
No. 2 Oil	X	X	X	X	
No. 4 Oil	X	X	X	X	
No. 6 Oil	X	X		X	
Off-road Diesel	X	X	X	X	
Crude Oil	X	X		X	
On-road Low Sulfur Diesel		X	X		
Kerosene-1		X			
Kerosene-2		X			
Jet A-1 Aviation Fuel		X	X	X	
Jet B Aviation Fuel		X	X	X	
JP-4 Aviation Fuel		X	X	X	
JP-8 Aviation Fuel	X	X	X	X	
Aviation Gasoline		X	X		
Gasoline		X	X		X

(b) For the purpose of determining the sulfur content, in percent sulfur by weight, for blended liquid fuel, the owner or operator shall use one of the following procedures:

(1) An analysis of the blended product following the applicable methods specified in (a), above; or

(2) An analysis of each blended fuel constituent following the applicable methods specified in (a), above, combined with weight averaging of the constituents.

(c) If the procedure in (b)(2), above, is used, the owner or operator shall:

(1) Calibrate all flow meters and instrumentation used in the weight averaging measurement in accordance with the manufacturer's recommended procedures; and

(2) Document and maintain on file such calibration and date of calibration.

Env-A 806.03 Test Methods for Gaseous Fuels.

(a) For the purpose of determining the sulfur content in grains of sulfur per 100 cubic feet of natural gas, the owner or operator shall use one of the following test methods:

(1) ASTM D 1072-90;

(2) ASTM D 4084-94;

(3) ASTM D 3246-96;

(4) ASTM D 5504-01; or

(5) ASTM D 6228-98.

(b) For the purpose of determining the sulfur content in grains of sulfur per 100 cubic feet of LP gas, the owner or operator shall use one of the following test methods:

(1) ASTM D 2420-91; or

(2) ASTM D 2784-98.

Env-A 806.04 Test Methods for Coal. The owner or operator shall use Method ASTM D 4239-00 determine the sulfur content of coal in pounds of sulfur per million BTU gross heat content.

Env-A 806.05 Recordkeeping Requirements.

(a) For a stationary source combusting liquid fuel or coal, the owner or operator shall maintain the following sulfur analysis records:

(1) Records showing the maximum weight percentage sulfur and quantity of each fuel delivery shipment received; and

(2) Records showing either:

a. The analytical method used and the specific fuel analysis results of the shipment or consignment from which the shipment came; or

b. Delivery records sufficient to allow for traceability of the analytical results corresponding to each shipment received by the stationary source, showing:

1. The date of delivery;

2. The quantity of delivery;

3. The type of fuel;

4. The maximum percent sulfur; and

5. The name, address, and telephone number of the company making the delivery.

(b) In an investigation or for an inspection by the department, the owner or operator shall provide copies of any of the documents generated under paragraph (a) above, to the director or to the director's authorized representative.

PART Env-A 807 TESTING FOR OPACITY OF EMISSIONS

Env-A 807.01 Definitions. For the purposes of this part, "Certified opacity CEM" means an opacity continuous emission monitor that meets all of the requirements of:

(a) 40 CFR 60, Appendix B, Performance Specification 1 – Specifications and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources;

(b) ASTM D 6216-98, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications; and

(c) Env-A 808.

Env-A 807.02 Testing for Opacity from Stationary Sources. The owner or operator shall conduct opacity measurements for a stationary source other than a small boiler or an emergency generator subject to Env-A 1211, by using either of the following:

(a) 40 CFR 60, Appendix A, Method 9 – Visual Determination of the Opacity of Emissions from Stationary Sources; or

(b) A certified opacity CEM installed on the stack for which the opacity is being measured.

Env-A 807.03 Testing for Opacity from Small Boilers and Emergency Generators.

(a) The owner or operator of a small boiler or an emergency generator subject to Env-A 1211.03(b), Env-A 1211.04(b), Env-A 1211.05(b), Env-A 1211.11(c), or Env-A 1211.11(d) shall measure opacity by following one of the 2 procedures identified in (b) and (c) below;

(b) The owner or operator shall make visual determinations of opacity:

(1) As specified in 40 CFR 60, Appendix A, Method 9, Visual Determination of the Opacity of Emissions from Stationary Sources; and

(2) For a period of at least 18 minutes during normal operation of the device.

(c) The owner or operator shall conduct opacity monitor testing as follows;

(1) A portable or permanently installed single or double pass opacity monitor shall be used;

(2) Measurements shall be taken over an 18-minute period during normal operation of the device;

(3) A minimum of one opacity measurement shall be taken every 15 seconds;

(4) The measurements identified in (2) and (3) above, shall be documented with times and averaged over the period of measurement;

(5) Opacity, expressed in terms of percentage, shall be determined as follows:

a. "l exit" means the pathlength through the emission plume at the stack outlet;

b. "l monitor" means the pathlength through the emission plume at the monitor location, but if the monitor is a double pass unit, it means twice the pathlength through the emission plume;

c. "Opacity, monitor" means the opacity as measured by the opacity monitor, and

d. The opacity at the stack exit shall be calculated by subtracting from 1 the quantity of 1 minus the opacity measured by the monitor, divided by 100, that

quantity raised to the power of l exit divided by l monitor, the entire quantity multiplied by 100, as in the following equation:

$$Opacity = 100x\left[1-\left(\left(1-\frac{Opacity,monitor}{100}\right)^{\frac{lexit}{lmonitor}}\right)\right]$$

(6) Prior to the measurement period for single pass opacity monitors, a zero and span calibration shall be performed as follows:

a. The manufacturer's recommended procedures under "zero" stack conditions shall be followed:

b. If a "zero" stack condition cannot be created, the opacity monitor shall be mounted outside the stack at the same path length as that when mounted on the stack for the calibration;

c. A zero filter at 0% opacity, and a span filter, between 20% - and 40% opacity, which have been certified, shall be used; and

d. All calibrations shall be documented; and

(7) Prior to the measurement period for double pass monitors, a zero and span calibration shall be performed as follows:

a. The manufacturer's recommended procedures shall be followed with the monitor in place;

b. A zero filter at 0% opacity, and a span filter, between 20% - and 40% opacity, which have been certified, shall be used;

c. Following the measurements taken, a second calibration check shall be performed;

d. If the difference between the first calibration and the second calibration exceeds 5% opacity, the opacity measurement shall be repeated; and

e. All calibrations shall be documented.

Env-A 807.04 Testing Requirements for Diesel Engines in Motor Vehicles. The owner or operator of a diesel engine in a motor vehicle shall determine compliance with Env-A 1101.03 by following the Society of Automotive Engineers (SAE) snap-acceleration smoke test procedure J 1667, published in 1996.

Env-A 807.05 Determination of Opacity of Fugitive Emissions. The owner or operator shall conduct measurements of the amount of time that any visible fugitive emissions occur during an observation period by following 40 CFR 60, Appendix A, Method 22 –

Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares.

PART Env-A 808 CONTINUOUS EMISSION MONITORING

Env-A 808.01 Definitions. For the purposes of this part, the following definitions shall apply:

(a) "Calendar hour" means any 60-minute period commencing on the hour;

(b) "Facility operating hour" means, for purposes of calculating data availability pursuant to Env-A 808.10, 42 minutes of facility operation during a calendar hour;

(c) "Facility operation" means one of the following:

(1) For a steam generating unit that is required by this part to have a continuous emission monitoring (CEM) system installed, a time period during which any fuel is being combusted in the device or

(2) For any other facility that is required by this part to have a CEM system installed, a time period during which any material is being processed which contributes to the emissions monitored by the CEM system;

(d) "Gaseous excess emission" means:

(1) A CEM system measurement of any of the gases listed in Env-A 808 .01(e), above the emission limit specified in any applicable state or federal standard, based on the averaging time specified in that standard;

(2) A CEM system measurement of any of the gases listed in Env-A 808 .01(e), above the emission limit specified in any facility permit issued by the division, based on the averaging time specified in the permit; or

(3) If neither (1) or (2), above, is applicable, a CEM system measurement of any of the gases listed in Env-A 808.01(e), above any emission limit to which the facility is subject, averaged over a 24-hour period;

(e) "Gaseous measuring CEM system" means a CEM system that measures concentrations of ammonia (NH_3), carbon monoxide (CO), sulfur dioxide (SO_2), NO_x, total reduced sulfur (TRS), hydrogen chloride (HCl), diluent gas, such as oxygen (O_2) or carbon dioxide (CO_2), or VOC;

(f) "Opacity excess emission" means any consecutive 6-minute or 60-minute period, or aggregate 60-minute period of opacity measurement, averaged in accordance with Env-A 808.03 (b), which exceeds any standards for visible emissions specified in

Env-A 1900 through Env-A 2900, excluding any exempted periods specified in Env-A 2000;

(g) "Out of control period" means:

(1) For a CEM system measuring gaseous emissions:

a. The time period beginning with the completion of the daily calibration drift check where the calibration drift (CD), as calculated pursuant to 40 CFR 60.13(d)(1), has exceeded twice the allowable limit for 5 consecutive days and ending with the CD check following corrective action that results in the CD being within the allowable CD limit;

b. The time period beginning with the completion of a daily CD check preceding the daily CD check that results in the CD being greater than 4 times the allowable limit and ending with the CD check following corrective action that results in the CD being within the allowable CD limit; or

c. The time period beginning with the completion of a relative accuracy test audit (RATA), cylinder gas audit (CGA), or relative accuracy audit (RAA) as defined in 40 CFR 60, Appendix F, where the CEM system fails the accuracy criteria established and ending with successful completion of the same audit where the CEM system meets the accuracy criteria established after corrective action has occurred; and

(2) For a CEM system measuring opacity:

a. The time period beginning with the completion of the daily calibration drift check where the CD exceeds 2% opacity for 5 consecutive days, and ending with the CD check after corrective action has occurred that results in the performance specification drift limits being met;

b. The time period beginning with the completion of a daily CD check preceding the daily CD check that results in the CD being greater than 5% opacity and ending with the CD check after corrective action has occurred that results in the performance specification drift limits being met; or

c. The time period beginning with the completion of a quarterly opacity audit where the CEM system fails the calibration error test as specified in 40 CFR 60, Appendix B, Specification 1 and ending with successful completion of the same audit where the CEM system passes the calibration error test established after corrective action has occurred;

(h) "Time-shared system" means a gaseous CEM system that measures the pollutant concentration of more than one gas stream; and

(i) "Valid hour of CEM emission data" means one of the following:

(1) A minimum of 42 minutes of CEM readings taken in any calendar hour, during which time the CEM is not in an out of control period as defined in Env-A 808.01(g), and the facility on which the CEM is installed is in operation; or

(2) For time-shared systems, 75% collection of gaseous CEM concentration readings of the total sampling time available for each emission point being monitored for those periods of time the CEM is not in an out of control period as defined by Env-A 808.01(g), and the facility on which the CEM is installed is in operation.

Env-A 808.02 Applicability.

(a) The owner or operator of a stationary source shall install, operate, maintain, and perform quality assurance testing of a CEM system meeting all of the requirements specified in this part for a stationary source if any of the following conditions exists:

(1) A source is subject to the New Source Performance Standards, 40 CFR 60, National Emission Standards for Hazardous Air Pollutants, 40 CFR 61 or 40 CFR 63, or Continuous Emission Monitoring, 40 CFR 75, which requires the source to comply with a specified opacity or emission limit and to install a specified CEM system;

(2) The owner or operator of a source chooses to limit its potential to emit by accepting federally enforceable permit conditions that restrict its hours of operation, the type or amount of material combusted, stored, or processed, or its level of production, and continuous emission monitoring is determined by the division to be necessary to ensure that these permit conditions are not violated;

(3) A source uses air pollution control equipment in order to maintain compliance with an opacity or emission limit, and continuous emission monitoring is determined by the division to be necessary in order to ensure that this limit is not exceeded and that the control equipment is performing correctly;

(4) Documented and repeated violation of any of the applicable opacity or emission limits specified in other provisions of Env-A 300 et seq., has occurred and the installation of a CEM system is feasible;

(5) Documented and repeated violation of any of the National Ambient Air Quality Standards (NAAQS) specified in Env-A 300 has occurred, the source is determined by the division to be a major contributor to the violation, and the installation of a CEM system is feasible; or

(6) By following the procedures specified in 40 CFR 51, Appendix W, the

division determines that a source's emissions have a significant impact on air quality and continuous monitoring of emissions with a CEM system is necessary to ensure that the ambient air quality standards are achieved and maintained.

(b) A stationary source subject to the continuous emission monitoring requirements specified in 40 CFR 51, Appendix P, as amended at 51 FR 40675, November 7, 1986, shall install, calibrate, operate, and maintain a CEM system in accordance with all requirements set forth and referenced therein.

(c) A facility subject to both this part and the emission monitoring requirements of Env-A 3200 shall comply with:

(1) The NOx monitoring requirements as described in Env-A 3200;

(2) The minimum percentage data availability requirements as described in Env-A 808.10(a) – (d); and

(3) The data reporting requirements as described in Env-A 808.12, or Env-A 808.13 as applicable.

Env-A 808.03 Minimum Specifications for CEM Systems. A CEM system installed after August 31, 1989, shall meet the following minimum specifications, as applicable:

(a) A CEM system for measuring gaseous emissions shall average and record the data for each calendar hour;

(b) An CEM system for measuring opacity emissions shall:

(1) Average the opacity data to result in consecutive, non-overlapping 6-minute averages; and

(2) If subject to the exemption of Env-A 2002.04(b), total the number of minutes in any 8-hour period where the opacity, as averaged in non-overlapping 6-minute periods, exceeds the applicable opacity standard;

(c) All CEM systems, opacity and gaseous measuring included, shall;

(1) Include a means to display instantaneous values of percent opacity and gaseous emission concentrations; and

(2) Complete a minimum of one cycle of operation, which shall include measuring, analyzing, and data recording for each successive 5-minute period for systems measuring gaseous emissions and each 10-second period for systems measuring opacity, unless a longer time period is approved in accordance with Env-A 809;

(d) A stack volumetric flow measuring device required to be installed after January 1,

1992, shall meet the following requirements:

(1) All differential pressure flow monitors shall have an automatic blow-back purge system installed and, in wet stack conditions, shall have the capability for drainage of the sensing lines; and

(2) The stack flow monitoring system shall have the capability for manual calibration of the transducer while the system is on-line and for a zero check; and

(e) Alternatives to in-stack flow monitoring devices for determination of stack volumetric flow rate may be used if the owner or operator provides the division with technical justification that the alternative can meet the same requirements for data availability, data accuracy, and quality assurance as an in-stack device.

Env-A 808.04 CEM Monitoring Plan.

(a) An owner or operator of a source subject to the requirements of this part and required to install, operate, and maintain a CEM system shall submit to the division, at least 90 days prior to the installation of the CEM system, a CEM monitoring plan describing the system.

(b) Upon receipt of the CEM monitoring plan, the division shall:

(1) Review the plan for compliance with all the elements described in this section;

(2) Determine whether the CEM system meets all requirements of this part; and

(3) Issue its decision within 30 days.

(c) The monitoring plan shall provide the following:

(1) A complete description of the emission monitoring system including, but not limited to:

a. The identity of the CEM system vendor, including the company name, address, and telephone number;

b. The identity of the manufacturer, model number, measurement method employed, and range of each of the major components or analyzers being used;

c. A description of the sample gas conditioning system;

d. A description and diagram showing the location of the monitoring system, including sampling probes, sample lines, conditioning system, analyzers, and data acquisition system; and

e. A description of the data acquisition system, including sampling frequency, and data averaging methods;

(2) The mathematical equations used by the data acquisition system, including the value and derivation of any constants, to calculate the emissions in terms of the applicable emission standards;

(3) An example of the data reporting format;

(4) A description of the instrument calibration methods, including the frequency of calibration checks and manual calibrations, and path of the sample gas through the system;

(5) The means used by the data acquisition system of determining and reporting periods of excess emissions, monitor downtime, and out-of-control periods; and

(6) A description of the means used to provide for short-term and long-term emissions data storage;

Env-A 808.05 Performance Specification Testing. The owner or operator of a facility shall conduct performance specification testing for a CEM system installed after August 31, 1989, in accordance with the following:

(a) For a CEM system monitoring opacity or gaseous emissions, the performance specification requirements of 40 CFR 60, Appendix B, shall apply;

(b) For an opacity monitoring system, the calibration error test specified in 40 CFR 60, Appendix B, Performance Specification 1, paragraph 7.1 .4, shall be performed with the monitor installed on the stack or duct that is to be the permanent location for the monitor;

(c) All performance specification testing shall be conducted within 180 days of the CEM equipment initial startup ;

(d) The division shall be notified of the date or dates of the performance specification testing at least 30 days prior to the scheduled dates; and

(e) A written report summarizing the results of the testing shall be submitted to the division within 30 days of the completion of the test.

Env-A 808.06 Quality Assurance/Quality Control Plan Requirements.

(a) The owner or operator of a source required by this part to install, operate, and maintain an opacity or gaseous CEM system shall

(1) Prepare a quality assurance/quality control (QA/QC) plan, which shall contain written procedures for implementation of its QA/QC program for each CEM system;

(2) File the QA/QC plan with the division no later than the time specified in Env-A 808.05 (e) after the initial startup of each CEM system;

(3) Review the QA/QC plan and all data generated by its implementation at least once each year;

(4) Revise or update the QA/QC plan, as necessary, based on the results of the annual review, by:

a. Documenting any changes made to the CEM or changes to any information provided in the monitoring plan;

b. Including a schedule of, and describing, all maintenance activities that are required by the CEM manufacturer or that might have an effect on the operation of the system;

c. Describing how the audits and testing required by this part will be performed; and

d. Including examples of the reports that will be used to document the audits and tests required by this part; .

(5) Make the revised QA/QC plan available for on-site review by the division at any time; and

(6) Within 30 days of completion of the annual QA/QC plan review, certify in writing that the owner or operator will continue to implement the source's existing QA/QC plan or submit in writing any changes to the plan and the reasons for each change;

(b) The division shall request revision of the QA/QC plan if the results of emission report reviews, inspections, audits, review of the QA/QC plan, or any other information available to the division show that the plan does not meet the criteria specified in 40 CFR 60, Appendix F, Procedure 1, section 3; and

(c) The QA/QC plan shall be considered an update to the CEM monitoring plan required by Env-A 808.04.

Env-A 808.07 General Audit Requirements for All CEM Systems.

(a) Required quarterly audits shall be done anytime during each calendar quarter, but successive quarterly audits shall occur no more than 4 months apart.

(b) Within 30 calendar days following the end of each quarter, the owner or operator of the source shall submit to the division a written summary report of the results of all required audits that were performed in that quarter, in accordance with the following:

(1) For gaseous CEM audits, the report format shall conform to that presented in 40 CFR 60, Appendix F, Procedure 1, section 7; and

(2) For opacity CEM audits, the report format shall conform to that presented in EPA-600/8-87-025, April 1992, "Technical Assistance Document: Performance Audit Procedures for Opacity Monitors".

(c) The owner or operator of a source shall notify the division at least 30 days prior to the performance of a RATA.

(d) The division shall require the rescheduling of any RATA if the staff necessary to observe the audit are not available .

(e) The owner or operator of a source shall provide at least 2 weeks' notice prior to any other planned audit or test procedure .

Env-A 808.08 Audit Requirements for Gaseous CEM Systems.

(a) For a system monitoring gaseous emissions of SO_2, NO_x, CO, TRS, H_2S, VOC, O_2 or CO_2, the quality assurance requirements and procedures described in 40 CFR 60, Appendix F, shall apply, with the following additions and clarifications for Procedure 1 of Appendix F:

(1) The owner or operator shall inform the division of all out of control periods, as defined in Appendix F, section 4.3, and Env-A 808 .01(g), in the emission reports required pursuant to Env-A 808.11;

(2) The owner or operator may perform a RAA, as defined in 40 CFR 60, Appendix F, in place of a CGA; and

(3) For CEM systems where CGA audits cannot be performed, the owner or operator shall perform RAA audits in place of the CGA;

(b) The owner or operator of a CEM system that monitors gaseous emissions other than SO_2, NO_x, CO, TRS, H_2S, VOC, O_2 or CO_2 shall:

(1) Request in writing pursuant to Env-A 809 division approval of proposed audit procedures;

(2) Demonstrate that such procedures are consistent with those presented in 40 CFR 60, Appendix B and Appendix F; and

(3) Upon receiving approval by the director of the proposed audit procedures pursuant to Env-A 809, implement such procedures.

(c) For a time-shared gaseous CEM system, the owner or operator shall perform the following audits:

(1) An annual RATA to check the analyzer at any sampling point; and

(2) CGAs or RAAs at all sampling points for each of the remaining 3 quarterly audits.

(d) The owner or operator of a stationary source determining compliance with a mass flow emissions limit by using a stack flow volumetric monitor or a fuel flow meter with O_2/CO_2 measurements to calculate heat input or stack flow rate, shall conduct annually a minimum 9-run RATA with the relative accuracy calculated in the units of the mass emissions measurement as specified in 40 CFR 60, Appendices B and F.

(e) In lieu of (d) above, the owner or operator of a stationary source using a fuel flow meter that meets the certification requirements of 40 CFR 75, Appendix D, may conduct the annual minimum 9-run RATA, as specified in 40 CFR 60, Appendix B, as follows:

(1) The RATA shall be performed on:

a. The pollutant concentration in parts per million or pollutant pounds per million BTU; and

b. The O2/CO2 diluent percentage; and

(2) The relative accuracy requirements shall be:

a. As specified in 40 CFR 60, Appendix B, 40 CFR 75, or ±1 ppm for the pollutant, as applicable; and

b. As specified in 40 CFR 60, Appendix B, or 40 CFR 75, as applicable, for the percentage O2/CO2.

(f) For a stationary source subject to (d) above, and using a stack volumetric flow monitor for the mass flow emissions calculation, the owner or operator of such source shall also perform one of the following audit options:

(1) An audit that shall consist of:

a. A 3-run RAA, which shall be conducted in 2 of the calendar quarters in which the RATA specified in (d) is not conducted:

1. To determine the percentage accuracy of the source's stack flowrate measurement method; and

2. To compare the source's method of determining stack flowrate against the compliance method of measuring the stack flowrate, as follows:

(i) A velocity traverse shall be conducted following Methods 1 and 2 of 40 CFR 60, Appendix A;

(ii) A calculation of average wet standard cubic feet per hour shall be measured for each run using a stack gas molecular weight and percent stack moisture from either the stack flow monitor or the most recent Methods 3 and 4 measurement made at the subject source;

(iii) A leak check shall be performed after completion of the velocity traverse in accordance with 40 CFR 60, Appendix A, Method 2, part 3.1;

(iv) The thermocouple used for measurement of stack gas temperature shall be calibrated annually;

(v) Steps (i) through (iii) shall be repeated 2 more times to result in 3 compliance measurements of the stack volumetric flowrate;

(vi) A percentage accuracy calculation shall be performed as follows:

i. "WSCFH, CEM" means the 3-run average of the wet standard cubic feet per hour flow rate as determined by the stack flow monitor method;

ii. "WSCFH, M2" means the 3-run average of the wet standard cubic feet per hour as measured by the Method 1 and Method 2 procedures;

iii. To calculate the percentage accuracy of the monitor, the owner or operator shall calculate the difference between WSCFH, CEM and WSCFH, M2, divide the difference by the value of WSCFH, M2, and then multiply the result by 100, as in the formula below:

% Accuracy = ((WSCFH,CEM - WSCFH,M2)/(WSCFH,M2)) x 100

(vii) The absolute value of percentage accuracy shall be less than or equal to 10.0% for the monitor to pass the audit; and

(viii) If the percentage accuracy exceeds 10.0%, the monitor shall be

considered "out of control" until necessary repairs/adjustments are performed to the system and the monitor successfully passes the percentage accuracy requirements, as determined by a repeat audit; and

b. In the remaining quarter in which the RATA specified in (d) and the RAA are not performed, a calibration of the transmitter or transducer, as applicable, of the stack flowrate or fuel flow monitor following the manufacturer's recommended calibration procedure; or

(2) An audit, to be performed in each calendar quarter in which the RATA specified in (d) is not conducted, which shall consist of:

a. A flow monitor differential-pressure sensing lines' leak check for low and high-pressure sides;

b. A stack flow probe inspection, including removal and cleaning of the probe as necessary;

c. A differential pressure transmitter/transducer calibration following the manufacturer's recommended calibration procedure ; and

d. A continuous flow-to-load-ratio or gross heat rate evaluation in accordance with 40 CFR 75, Appendix B.

(g) The owner or operator of a stationary source subject to (d) above, and using a fuel flow monitor for the mass flow emissions calculation, shall also perform one of the following audit options:

(1) The quality assurance activities on the fuel flow monitor as specified in 40 CFR 75, Appendix D; or

(2) The audit specified in (f)(1) above.

Env-A 808.09 Audit Requirements for Opacity CEM Systems.

(a) The owner or operator of an opacity CEM system required to meet the criteria of 40 CFR 60, Appendix B, Specification 1, shall:

(1) Perform quarterly audits with the monitor installed in its measurement location for the Calibration Error Test, in accordance with 40 CFR 60, Appendix B, Specification 1, section 7.1.4, and for the System Response Test, in accordance with 40 CFR 60, Appendix B, Specification 1, section 7.1.5;

(2) Use a minimum of 3 calibration attenuators, low, mid, and high, in the audits as specified in 40 CFR 60, Appendix B, Specification 1, section 7.1.2;

(3) Check the values of the calibration attenuators used in the above audits at least once every 6 months with one of the following:

a. A spectrophotometer meeting the specifications of 40 CFR 60, Appendix B, Specification l, section 3 .4; or

b. A secondary instrument as defined and described in 40 CFR 60, Appendix B, Specification 1, section 7.1.3.;

(4) If the measured value of the calibration attenuator differs from the calibrated value by more than + 2% opacity, recalibrate or replace the calibration attenuator until the measured value does not differ from the calibrated value by more than + 2% opacity; and

(5) Perform and report an annual 7-day length zero/upscale drift test, as defined in 40 CFR 60, Appendix B, Specification 1, sections 7.4.1 and 7.4.2, to the division following the procedures set forth therein.

(b) For a source with an opacity CEM system that is not subject to any subpart of 40 CFR 60, the owner or operator shall conduct quarterly audits as specified in (a) above, except that the selected span value, used for the selection of the attenuation values, shall be 40% opacity for those devices subject to a 20% opacity standard and 60% opacity for those devices subject to a 40% opacity standard.

(c) If written documentation is submitted to the division showing stability of the attenuator values, the division shall reduce the frequency of the attenuators check to once per year.

Env-A 808 .10 Data Availability Requirements.

(a) The owner or operator of a source with a CEM shall operate the CEM at all times during operation of the source, except for periods of CEM breakdown, repairs, calibration checks, preventive maintenance, and zero/span adjustments .

(b) The percentage CEM data availability for opacity and all gaseous concentration monitors shall be maintained at a minimum of 90% on a calendar quarter basis.

(c) The percentage CEM data availability for opacity and all gaseous concentration monitors shall be maintained at a minimum of 75% for any calendar month.

(d) The percentage CEM data availability shall be calculated as follows:

(1) "VH" means the number of valid hours of CEM data in a given time period for which the data availability is being calculated when the plant is in operation;

(2) "OH" means the number of facility operating hours during a given time period for which the data availability is being calculated;

(3) "AH" means the number of hours during facility operation when the performance of quarterly audits as required by those procedures specified in Env-A 808.08 or Env-A 808.09, as applicable, require that the CEM be taken out of service in order to conduct the audit;

(4) "CalDT" means the number of hours, not to exceed one hour per day, during facility operation when the CEM is not operating due to the performance of the daily CEM calibrations as required in 40 CFR 60, Appendix F or 40 CFR 75, Appendix B, section 2.1.; and

(5) To calculate the percentage CEM data availability, multiply the sum of VH and Ca1DT by 100, and divide the result by the difference between OH and AH, as in the formula below:

$$PercentageDataAvailability = \frac{(VH + CalDT)x100}{(OH - AH)}$$

(e) If the percentage data availability requirements cannot be met for any calendar quarter, the owner or operator of the source shall:

(1) Submit a plan to the division within 30 days of the end of the quarter of failure to meet the data availability requirements specifying in detail the steps to be taken in order to meet the availability requirements for the current quarter and future quarters; and

(2) Implement the plan to meet the data availability requirements no later than 30 days after the end of the quarter of failure.

(f) If the percentage data availability requirements cannot be met for any 2 consecutive calendar quarters, the owner or operator of the source shall:

(1) Install a replacement CEM system meeting all of the requirements of 40 CFR 60, Appendix B, Specifications 1-6 in accordance with the following deadlines:

a. The replacement CEM system shall be installed and operational no later than 180 days following the end of the second quarter of failure to meet the data availability requirements ; and

b. Certification testing of the replacement CEM system shall be initiated no later than 210 days following the end of the second quarter of failure to meet the data availability requirements ; and

(2) During the period of time from the end of the second quarter of failure to meet

the data availability requirements until the successful certification testing completion of the replacement CEM system:

a. Maintain the quality of data obtained from the currently operating CEM and maximize data availability of the CEM; or

b. Replace the existing CEM with a temporary alternative that shall monitor the compliance status of the emission point of concern.

(g) Alternatives to the replacement of the entire CEM system as required by paragraph (f) above, shall be allowed provided that the facility can provide the division with technical justification that the alternative will ensure that the 90% data availability requirement shall be met on a consistent basis .

Env-A 808.11 Quarterly Emission Reports. Within 30 days of the end of each calendar quarter, an owner or operator of a source with a gaseous or opacity measuring CEM system shall submit an emission report to the division.

Env-A 808.12 Emission Reports for Sources Subject to 40 CFR 60. The owner or operator of a source subject to 40 CFR 60 which is required to install, calibrate, operate, and maintain a CEM system, shall provide the following in each quarterly emission report specified in Env-A 808.11:

(a) The information specified in 40 CFR 60.7(c) and any applicable subpart of 40 CFR 60;

(b) The daily averages of gaseous CEM measurements and calculated emission rates; and

(c) The information required in Env-A 808.13(a)(5) through (9) below.

Env-A 808.16 Emission Reports for Sources Not Subject to 40 CFR 60.

(a) The owner or operator of a source not subject to 40 CFR 60 which is required to install, calibrate, operate, and maintain a CEM system shall provide the following in each quarterly emission report specified in Env-A 808.11:

(1) Excess emission data recorded by the CEM system, including:

a. The date and time of the beginning and ending of each period of excess emission;

b. The magnitude of each excess emission;

d. The specific cause of the excess emission; and

e. The corrective action taken;

(2) If no excess emissions have occurred, a statement to that effect;

(3) For gaseous measuring CEM systems, the daily averages of the measurements made and emission rates calculated;

(4) A statement as to whether the CEM system was inoperative, repaired, or adjusted during the reporting period;

(5) If the CEM system was inoperative, repaired, or adjusted during the reporting period, the following information:

a. The date and time of the beginning and ending of each period when the CEM was inoperative;

b. The reason why the CEM was not operating;

c. The corrective action taken; and

d. The percent data availability calculated in accordance with Env-A 808.10 for each flow, diluent, or polluant analyzer in the CEM system;

(6) For all "out of control periods" as defined in Env-A 808.01(g) and 40 CFR 60, Appendix F, the following information:

a. The times beginning and ending the out of control period;

b. The reason for the out of control period; and

c. The corrective action taken;

(7) The date and time beginning and ending each period when the source of emissions which the CEM system is monitoring was not operating;

(8) The span value, as defined in Env-A 101.176, of each analyzer in the CEM system and units of measurement for each instrument; and;

(9) When calibration gas is used, the following information:

a. The calibration gas concentration;

b. If a gas bottle was changed during the quarter:

1. The date of the calibration gas bottle change;

2. The gas bottle concentration before the change; and

3. The gas bottle concentration after the change; and

c. The expiration date for all calibration gas bottles used; and

(b) If daily averages as specified in (a)(3), above, are not feasible, the owner or operator shall submit to the division a written request containing the following information:

(1) The proposed alternative time period;

(2) Averages based on that alternative time period; and

(3) Documentation showing why daily averages are not feasible.

(c) If the request identified in (b) above, clearly states the alternative time period and provides documentation showing why daily averages are not feasible, the division shall approve an alternative time period.

Env-A 808.14 Valid Averaging Periods. The number of hours of valid CEM data required for determining a valid averaging period for the different emission standard periods shall be:

(a) For a 3-hr emission standard period, 2 hours of valid data;

(b) For a 4-hr standard emission standard period, 3 hours of valid data;

(c) For an 8-hr standard emission standard period, 6 hours of valid data;

(d) For a 12-hr standard emission standard period, 9 hours of valid data; and

(e) For a 24-hr standard emission standard period, 18 hours of valid data.

Env-A 808.15 Use of CEM System Data. The division shall use CEM data either directly or indirectly for the following:

(a) Compliance determinations;

(b) Air quality impact analysis;

(c) Air pollution dispersion modeling;

(d) Control technology review; and

(e) Emissions inventory.

PART Env-A 809 APPROVAL OF ALTERNATE METHODS

Env-A 809.01 Approval of Alternate Methods or Requirements. For any testing or monitoring procedure that is an alternative to a method or requirement specified by these rules, the following procedure shall, apply:

(a) The owner or operator of a source seeking approval of an alternative shall submit to the director the following information:

(1) A description of the proposed alternate method or requirement;

(2) The identity of the compound that is to be tested or controlled or the equipment that is to be maintained by the alternate method or requirement;

(3) The identity and description of the source at which the alternate method or requirement will be implemented; and

(4) Technical data and information demonstrating that the purpose of the specified method or requirement will be achieved by the alternate method or requirement and that the alternative produces results that are no less precise and accurate than those produced by the specified method or requirement; and

(b) Within 60 days of receipt of a complete application that meets the requirements of (a) above, the director shall:

(1) Review the application;

(2) Issue a written decision:

a. Approving the application if the department determines that the alternate method or requirement:

1. Achieves the purpose of the specified method or requirement; and

2. Produces results that are no less precise and accurate than those produced by the specified method or requirement; or

b. Denying the application and specifying the reason(s) for the denial; and

(3) Notify the applicant and EPA of the decision.

Env-A 809.02 Alternate Methods for Federal Standards. Alternate test methods for compliance with federal standards, such as those specified in 40 CFR 60, 61, and 63, shall be submitted by the owner or operator of the source to EPA for approval.

PART Env-A 810 AIR POLLUTION CONTROL EQUIPMENT MONITORING PLAN; ADDITIONAL TESTING AND MONITORING * * *

* * * NOTE: EPA did not approve PART Env-A 810 AIR POLLUTION CONTROL EQUIPMENT MONITORING PLAN; ADDITIONAL TESTING AND MONITORING into the New Hampshire State Implementation Plan.

APPENDIX

Rule Section(s)	State Statute(s) or Federal Statute or Regulation Implemented
Env-A 801	RSA 125-C:6, XI & XII
Env-A 802	RSA 125-C:6, XI
Env-A 803 & 804	RSA 125-C:6, XI; 42 U.S.C. Section 7410 & 7502(c)
Env-A 805 & 806	RSA 125-C:6, XI
Env-A 807	RSA 125-C:6, XI & XII
Env-A 808	RSA 125-C:6, XI; 40 CFR 51 Appendix P, 60, 61, 63 & 75
Env-A 809	RSA 125-C:6, XI & XII