**Section 219.105 Test Methods and Procedures**

a) Coatings, Inks and Fountain Solutions

The following test methods and procedures must be used to determine compliance of as applied coatings, inks, and fountain solutions with the limitations set forth in this Part.

1) Sampling: Samples collected for analyses must be one-liter taken into a one-liter container at a location and time such that the sample will be representative of the coating as applied (i.e., the sample must include any dilution solvent or other VOM added during the manufacturing process). The container must be tightly sealed immediately after the sample is taken. Any solvent or other VOM added after the sample is taken must be measured and accounted for in the calculations in subsection (a)(3). For multiple package coatings, separate samples of each component must be obtained. A mixed sample must not be obtained as it will cure in the container. Sampling procedures must follow the guidelines presented in:

A) ASTM D 3925-81 (1985) standard practice for sampling liquid paints and related pigment coating. This practice is incorporated by reference in Section 219.112.

B) ASTM E 300-86 standard practice for sampling industrial chemicals. This practice is incorporated by reference in Section 219.112.

2) Analyses: The applicable analytical methods specified in this subsection (a)(2) must be used to determine the composition of coatings, inks, or fountain solutions as applied.

A) Method 24 of 40 CFR 60, appendix A, incorporated by reference in Section 219.112, must be used to determine the VOM content and density of coatings. If it is demonstrated to the satisfaction of the Agency and the USEPA that plant coating formulation data are equivalent to Method 24 results, formulation data may be used. In the event of any inconsistency between a Method 24 test and a facility's formulation data, the Method 24 test will govern.

B) Method 24A of 40 CFR 60, appendix A, incorporated by reference in Section 219.112, must be used to determine the VOM content and density of rotogravure printing inks and related coatings. If it is demonstrated to the satisfaction of the Agency and USEPA that the plant coating formulation data are equivalent to Method 24A results, formulation data may be used. In the event of any inconsistency between a Method 24A test and formulation data, the Method 24A test will govern.

C) The following ASTM methods are the analytical procedures for determining VOM:

i) ASTM D 1475-85: Standard test method for density of paint, varnish, lacquer and related products. This test method is incorporated by reference in Section 219.112.

ii) ASTM D 2369-87: Standard test method for volatile content of a coating. This test method is incorporated by reference in Section 219.112.

iii) ASTM D 3792-86: Standard test method for water content of water-reducible paints by direct injection into a gas chromatograph. This test method is incorporated by reference in Section 219.112.

iv) ASTM D 4017-81 (1987): Standard test method for water content in paints and paint materials by the Karl Fischer method. This test method is incorporated by reference in Section 219.112.

v) ASTM D 4457-85: Standard test method for determination of dichloromethane and 1,1,1, trichloroethane in paints and coatings by direct injection into a gas chromatograph. (The procedure delineated above can be used to develop protocols for any compounds specifically exempted from the definition of VOM.) This test method is incorporated by reference in Section 219.112.

vi) ASTM D 2697-86: Standard test method for volume non-volatile matter in clear or pigmented coatings. This test method is incorporated by reference in Section 219.112.

vii) ASTM D 3980-87: Standard practice for interlaboratory testing of paint and related materials. This practice is incorporated by reference in Section 219.112.

viii) ASTM E 180-85: Standard practice for determining the precision of ASTM methods for analysis of and testing of industrial chemicals. This practice is incorporated by reference in Section 219.112.

ix) ASTM D 2372-85: Standard method of separation of vehicle from solvent-reducible paints. This method is incorporated by reference in Section 219.112.

D) Use of an adaptation to any of the analytical methods specified in subsections (a)(2)(A), (B), and (C) may not be used unless approved by the Agency and USEPA. An owner or operator must submit sufficient documentation for the Agency and USEPA to find that the analytical methods specified in subsections (a)(2)(A), (B), and (C) will yield inaccurate results and that the proposed adaptation is appropriate.

3) Calculations: Calculations for determining the VOM content, water content and the content of any compounds which are specifically exempted from the definition of VOM of coatings, inks and fountain solutions as applied must follow the guidance provided in the following documents:

A) "A Guide for Surface Coating Calculation", EPA-340/1-86-016, incorporated by reference in Section 219.112.

B) "Procedures for Certifying Quantity of Volatile Organic Compounds Emitted by Paint, Ink and Other Coatings" (revised June 1986), EPA-450/3-84-019, incorporated by reference in Section 219.112.

C) "A Guide for Graphic Arts Calculations", August 1988, EPA-340/1-88-003, incorporated by reference in Section 219.112.

b) Automobile or Light-Duty Truck Test Protocol

1) The protocol for testing, including determining the transfer efficiency of coating applicators, at primer surfacer operations and topcoat operations at an automobile or light-duty truck assembly source must follow the procedures in the following:

A) Prior to May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Topcoat Operations" ("topcoat protocol"), December 1988, EPA-450/3-88-018, incorporated by reference in Section 219.112.

B) On and after May 1, 2012: "Protocol for Determining the Daily Volatile Organic Compound Emission Rate of Automobile and Light-Duty Truck Primer-Surfacer and Topcoat Operations" (topcoat protocol), September 2008, EPA-453/R-08-002, incorporated by reference in Section 219.112.

2) Prior to testing pursuant to the applicable topcoat protocol, the owner or operator of a coating operation subject to the topcoat or primer surfacer limit in Section 219.204(a)(1)(B), (a)(1)(C), (a)(2)(B), (a)(2)(C), or (a)(2)(E) must submit a detailed testing proposal specifying the method by which testing will be conducted and how compliance will be demonstrated consistent with the applicable topcoat protocol. The proposal must include, at a minimum, a comprehensive plan (including a rationale) for determining the transfer efficiency at each booth through the use of in-plant or pilot testing, the selection of coatings to be tested (for the purpose of determining transfer efficiency) including the rationale for coating groupings, the method for determining the analytic VOM content of as applied coatings and the formulation solvent content of as applied coatings, and a description of the records of coating VOM content as applied and coating's usage that will be kept to demonstrate compliance. Upon approval of the proposal by the Agency and USEPA, the compliance demonstration for a coating line may proceed.

c) Capture System Efficiency Test Protocols

1) Applicability

The requirements of subsection (c)(2) must apply to all VOM emitting process emission units employing capture equipment (e.g., hoods, ducts), except those cases noted in this subsection (c)(1).

A) If an emission unit is equipped with (or uses) a permanent total enclosure (PTE) that meets Agency and USEPA specifications, and which directs all VOM to a control device, then the emission unit is exempted from the requirements described in subsection (c)(2). The Agency and USEPA specifications to determine whether a structure is considered a PTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112. In this instance, the capture efficiency is assumed to be 100 percent and the emission unit is still required to measure control efficiency using appropriate test methods as specified in subsection (d).

B) If an emission unit is equipped with (or uses) a control device designed to collect and recover VOM (e.g., carbon adsorber), an explicit measurement of capture efficiency is not necessary provided that the conditions given below are met. The overall control of the system can be determined by directly comparing the input liquid VOM to the recovered liquid VOM. The general procedure for use in this situation is given in 40 CFR 60.433, incorporated by reference in Section 219.112, with the following additional restrictions:

i) The source owner or operator must obtain data each operating day for the solvent usage and solvent recovery to permit the determination of the solvent recovery efficiency of the system each operating day using a 7-day rolling period. The recovery efficiency for each operating day is computed as the ratio of the total recovered solvent for that day and the most recent prior 6 operating days to the total solvent usage for the same 7-day period used for the recovered solvent, rather than a 30-day weighted average as given in 40 CFR 60.433 incorporated by reference in Section 219.112. This ratio must be expressed as a percentage. The ratio must be computed within 72 hours following each 7-day period. A source that believes that the 7-day rolling period is not appropriate may use an alternative multi-day rolling period not to exceed 30 days, with the approval of the Agency and USEPA. In addition, the criteria in subsection (c)(1)(B)(ii) or (c)(1)(B)(iii) must be met.

ii) The solvent recovery system (i.e., capture and control system) must be dedicated to a single coating line, printing line, or other discrete activity that by itself is subject to an applicable VOM emission standard.

iii) However if the solvent recovery system controls more than one coating line, printing line or other discrete activity that by itself is subject to an applicable VOM emission standard, the overall control (i.e., the total recovered VOM divided by the sum of liquid VOM input from all lines and other activities venting to the control system) must meet or exceed the most stringent standard applicable to any line or other discrete activity venting to the control system.

2) Capture Efficiency Protocols

The capture efficiency of an emission unit must be measured using one of the protocols given below. Appropriate test methods to be utilized in each of the capture efficiency protocols are described in appendix M of 40 CFR 51, incorporated by reference in Section 219.112. Any error margin associated with a test method or protocol may not be incorporated into the results of a capture efficiency test. If these techniques are not suitable for a particular process, then an alternative capture efficiency protocol may be used, pursuant to the provisions of Section 219.108(b).

A) Gas/gas method using temporary total enclosure (TTE). The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112. The capture efficiency equation to be used for this protocol is:



where:

|  |  |  |
| --- | --- | --- |
| CE | = | capture efficiency, decimal fraction; |
|  |  |  |
| Gw | = | mass of VOM captured and delivered to control device using a TTE; |
|  |  |  |
| Fw | = | mass of uncaptured VOM that escapes from a TTE. |

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain Gw. Method 204D in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain Fw.

B) Liquid/gas method using TTE. The Agency and USEPA specifications to determine whether a temporary enclosure is considered a TTE are given in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112. The capture efficiency equation to be used for this protocol is:



where:

|  |  |  |
| --- | --- | --- |
| CE | = | capture efficiency, decimal fraction; |
|  |  |  |
| L | = | mass of liquid VOM input to process emission unit; |
|  |  |  |
| Fw | = | mass of uncaptured VOM that escapes from a TTE. |

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain L. Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain Fw.

C) Gas/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure, as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112, and in which "FB" and "G" are measured while operating only the affected line or emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:



where:

|  |  |  |
| --- | --- | --- |
| CE | = | capture efficiency, decimal fraction; |
|  |  |  |
| G | = | mass of VOM captured and delivered to control device; |
|  |  |  |
| FB | = | mass of uncaptured VOM that escapes from building enclosure. |

Method 204B or 204C contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain G. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain FB.

D) Liquid/gas method using the building or room (building or room enclosure), in which the affected coating line, printing line or other emission unit is located, as the enclosure as determined by Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112, and in which "FB" and "L" are measured while operating only the affected line emission unit. All fans and blowers in the building or room must be operated as they would under normal production. The capture efficiency equation to be used for this protocol is:



where:

|  |  |  |
| --- | --- | --- |
| CE | = | capture efficiency, decimal fraction; |
|  |  |  |
| L | = | mass of liquid VOM input to process emission unit; |
|  |  |  |
| FB | = | mass of uncaptured VOM that escapes from building enclosure. |

Method 204A or 204F contained in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain L. Method 204E in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, is used to obtain FB.

E) Mass balance using Data Quality Objective (DQO) or Lower Confidence Limit (LCL) protocol. For a liquid/gas input where an owner or operator is using the DQO/LCL protocol and not using an enclosure as described in Method 204 of appendix M of 40 CFR 51, incorporated by reference in Section 219.112, the VOM content of the liquid input (L) must be determined using Method 204A or 204F in appendix M of 40 CFR 51, incorporated by reference in Section 219.112. The VOM content of the captured gas stream (G) to the control device must be determined using Method 204B or 204C in appendix M of 40 CFR 51, incorporated by reference in Section 219.112. The results of capture efficiency calculations (G/L) must satisfy the DQO or LCL statistical analysis methodology as described in Section 3 of USEPA's "Guidelines for Determining Capture Efficiency", incorporated by reference at Section 219.112 of this Part. Where capture efficiency testing is done to determine emission reductions for the purpose of establishing emission credits for offsets, shutdowns, and trading, the LCL protocol cannot be used for these applications. In enforcement cases, the LCL protocol cannot confirm non-compliance; capture efficiency must be determined using a protocol under subsection (c)(2)(A), (B), (C) or (D), the DQO protocol of this subsection (c)(2)(E), or an alternative protocol pursuant to Section 219.108(b).

BOARD NOTE: Where LCL was used in testing emission units that are the subject of later requests for establishing emission credits for offsets, shutdowns, and trading, prior LCL results may not be relied upon to determine the appropriate amount of credits. Instead, to establish the appropriate amount of credits, additional testing may be required that would satisfy the protocol of Section 219.105(c)(2)(A), (B), (C) or (D), the DQO protocol of Section 219.105(c)(2)(E), or an alternative protocol pursuant to Section 219.108(b).

3) Simultaneous testing of multiple lines or emission units with a common control device. If an owner or operator has multiple lines sharing a common control device, the capture efficiency of the lines may be tested simultaneously, subject to the following provisions:

A) Multiple line testing must meet the criteria of Section 4 of USEPA's "Guidelines for Determining Capture Efficiency", incorporated by reference at Section 219.112;

B) The most stringent capture efficiency required for any individual line or unit must be met by the aggregate of lines or units; and

C) Testing of all the lines of emission units must be performed with the same capture efficiency test protocol.

4) Recordkeeping and Reporting

A) All owners or operators affected by this subsection must maintain a copy of the capture efficiency protocol submitted to the Agency and the USEPA on file. All results of the appropriate test methods and capture efficiency protocols must be reported to the Agency within 60 days after the test date. A copy of the results must be kept on file with the source for a period of 3 years.

B) If any changes are made to capture or control equipment, then the source is required to notify the Agency and the USEPA of these changes and a new test may be required by the Agency or the USEPA.

C) The source must notify the Agency 30 days prior to performing any capture efficiency or control test. At that time, the source must notify the Agency which capture efficiency protocol and control device test methods will be used. Notification of the actual date and expected time of testing must be submitted a minimum of 5 working days prior to the actual date of the test. The Agency may at its discretion accept notification with shorter advance notice provided that such arrangements do not interfere with the Agency's ability to review the protocol and/or observe testing.

D) Sources utilizing a PTE must demonstrate that this enclosure meets the requirement given in Method 204 in appendix M of 40 CFR 51, incorporated by reference in Section 219.112, for a PTE during any testing of their control device.

E) Sources utilizing a TTE must demonstrate that their TTE meets the requirements given in Method 204 in appendix M or 40 CFR 51, incorporated by reference in Section 219.112, for a TTE during any testing of their control device. The source must also provide documentation that the quality assurance criteria for a TTE have been achieved.

F) Any source utilizing the DQO or LCL protocol must submit the following information to the Agency with each test report:

i) A copy of all test methods, Quality Assurance/Quality Control procedures, and calibration procedures to be used from those described in appendix M of 40 CFR 51, incorporated by reference in Section 219.112;

ii) A table with information on each sample taken, including the sample identification and the VOM content of the sample;

iii) The quantity of material used for each test run;

iv) The quantity of captured VOM for each test run;

v) The capture efficiency calculations and results for each test run;

vi) The DQO and/or LCL calculations and results; and

vii) The Quality Assurance/Quality Control results, including how often the instruments were calibrated, the calibration results, and the calibration gases used.

d) Control Device Efficiency Testing and Monitoring

1) The control device efficiency must be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in subsection (f).

2) An owner or operator:

A) That uses an afterburner or carbon adsorber to comply with any Section of this Part must use Agency and USEPA approved continuous monitoring equipment which is installed, calibrated, maintained, and operated according to vendor specifications at all times the control device is in use except as provided in subsection (d)(3). The continuous monitoring equipment must monitor the following parameters:

i) For each afterburner which does not have a catalyst bed, the combustion chamber temperature of each afterburner.

ii) For each afterburner which has a catalyst bed, commonly known as a catalytic afterburner, the temperature rise across each catalytic afterburner bed or VOM concentration of exhaust.

iii) For each carbon adsorber, the VOM concentration of each carbon adsorption bed exhaust or the exhaust of the bed next in sequence to be desorbed.

B) Must install, calibrate, operate and maintain, in accordance with manufacturer's specifications, a continuous recorder on the temperature monitoring device, such as a strip chart, recorder or computer, having an accuracy of ± 1 percent of the temperature measured, expressed in degrees Celsius or ± 0.5° C, whichever is greater.

C) Of an automobile or light-duty truck primer surfacer operation or topcoat operation subject to subsection (d)(2)(A) must keep a separate record of the following data for the control devices, unless alternative provisions are stated in a permit pursuant to Title V of the Clean Air Act:

i) For thermal afterburners for which combustion chamber temperature is monitored, all 3-hour periods of operation in which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature measured during the most recent performance test that demonstrated that the operation was in compliance.

ii) For catalytic afterburners for which temperature rise is monitored, all 3-hour periods of operation in which the average gas temperature before the catalyst bed is more than 28 °C (50 °F) below the average gas temperature immediately before the catalyst bed measured during the most recent performance test that demonstrated that the operation was in compliance.

iii) For catalytic afterburners and carbon adsorbers for which VOM concentration is monitored, all 3-hour periods of operation during which the average VOM concentration or the reading of organics in the exhaust gases is more than 20 percent greater than the average exhaust gas concentration or reading measured by the organic monitoring device during the most recent determination of the recovery efficiency of a carbon adsorber or performance test for a catalytic afterburner, which determination or test that demonstrated that the operation was in compliance.

3) An owner or operator that uses a carbon adsorber to comply with Section 219.401 may operate the adsorber during periods of monitoring equipment malfunction, provided that:

A) The owner or operator notifies in writing the Agency and USEPA, within 10 days after the conclusion of any 72 hour period during which the adsorber is operated and the associated monitoring equipment is not operational, of such monitoring equipment failure and provides the duration of the malfunction, a description of the repairs made to the equipment, and the total to date of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational;

B) During such period of malfunction the adsorber is operated using timed sequences as the basis for periodic regeneration of the adsorber;

C) The period of such adsorber operation does not exceed 360 hours in any calendar year without the approval of the Agency and USEPA; and

D) The total of all hours in the calendar year during which the adsorber was operated and the associated monitoring equipment was not operational must be reported, in writing, to the Agency and USEPA by January 31 of the following calendar year.

e) Overall Efficiency

1) The overall efficiency of the emission control system must be determined as the product of the capture system efficiency and the control device efficiency or by the liquid/liquid test protocol as specified in 40 CFR 60.433, incorporated by reference in Section 219.112, (and revised by subsection (c)(1)(B)) for each solvent recovery system. In those cases in which the overall efficiency is being determined for an entire line, the capture efficiency used to calculate the product of the capture and control efficiency is the total capture efficiency over the entire line.

2) For coating lines which are both chosen by the owner or operator to comply with Section 219.207(a), (d), (e), (f), (g), (l), (m), or (n) by the alternative in Section 219.207(b)(2) and meet the criteria allowing them to comply with Section 219.207 instead of Section 219.204, the overall efficiency of the capture system and control device, as determined by the test methods and procedures specified in subsections (c), (d) and (e)(1), must be no less than the equivalent overall efficiency that must be calculated by the following equation:



where:

|  |  |  |
| --- | --- | --- |
| E | = | Equivalent overall efficiency of the capture system and control device as a percentage; |
|  |  |  |
| VOMa | = | Actual VOM content of a coating, or the daily-weighted average VOM content of two or more coatings (if more than one coating is used), as applied to the subject coating line as determined by the applicable test methods and procedures specified in subsection (a)(4)(i) of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied; |
|  |  |  |
| VOM1 | = | The VOM emission limit specified in Sections 219.204 or 219.205 of this Part in units of kg VOM/1 (lb VOM/gal) of coating solids as applied. |
|  |  |  |

f) Volatile Organic Material Gas Phase Source Test Methods

The methods in 40 CFR 60, appendix A, incorporated by reference in Section 219.112 of this Part delineated in this subsection (f) must be used to determine control device efficiencies.

1) 40 CFR 60, appendix A, Method 18, 25 or 25A, incorporated by reference in Section 219.112 as appropriate to the conditions at the site, must be used to determine VOM concentration. Method selection must be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. Except as indicated in subsections (f)(1)(A) and (B) below, the test must consist of three separate runs, each lasting a minimum of 60 min, unless the Agency and the USEPA determine that process variables dictate shorter sampling times.

A) When the method is to be used to determine the efficiency of a carbon adsorption system with a common exhaust stack for all the individual adsorber vessels, the test must consist of three separate runs, each coinciding with one or more complete sequences through the adsorption cycles of all the individual adsorber vessels.

B) When the method is to be used to determine the efficiency of a carbon adsorption system with individual exhaust stacks for each adsorber vessel, each adsorber vessel must be tested individually. The test for each adsorber vessel must consist of three separate runs. Each run must coincide with one or more complete adsorption cycles.

2) 40 CFR 60, appendix A, Method 1 or 1A, incorporated by reference in Section 219.112, must be used for sample and velocity traverses.

3) 40 CFR 60, appendix A, Method 2, 2A, 2C or 2D, incorporated by reference in Section 219.112, must be used for velocity and volumetric flow rates.

4) 40 CFR 60, appendix A, Method 3, incorporated by reference in Section 219.112, must be used for gas analysis.

5) 40 CFR 60, appendix A, Method 4, incorporated by reference in Section 219.112, must be used for stack gas moisture.

6) 40 CFR 60, appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, incorporated by reference in Section 219.112, must be performed, as applicable, at least twice during each test run.

7) Use of an adaptation to any of the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) may not be used unless approved by the Agency and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Agency and the USEPA to find that the test methods specified in subsections (f)(1), (2), (3), (4), (5) and (6) will yield inaccurate results and that the proposed adaptation is appropriate.

g) Leak Detection Methods for Volatile Organic Material

Owners or operators required by this Part to carry out a leak detection monitoring program must comply with the following requirements:

1) Leak Detection Monitoring

A) Monitoring must comply with 40 CFR 60, appendix A, Method 21, incorporated by reference in Section 219.112.

B) The detection instrument must meet the performance criteria of Method 21.

C) The instrument must be calibrated before use on each day of its use by the methods specified in Method 21.

D) Calibration gases must be:

i) Zero air (less than 10 ppm of hydrocarbon in air); and

ii) A mixture of methane or n-hexane and air at a concentration of approximately, but no less than, 10,000 ppm methane or n-hexane.

E) The instrument probe must be traversed around all potential leak interfaces as close to the interface as possible as described in Method 21.

2) When equipment is tested for compliance with no detectable emissions as required, the test must comply with the following requirements:

A) The requirements of subsections (g)(1)(A) through (g)(1)(E) must apply.

B) The background level must be determined as stated in Method 21.

3) Leak detection tests must be performed consistent with:

A) "APTI Course SI 417 controlling Volatile Organic Compound Emissions from Leaking Process Equipment", EPA-450/2-82-015, incorporated by reference in Section 219.112.

B) "Portable Instrument User's Manual for Monitoring VOM Sources", EPA-340/1-86-015, incorporated by reference in Section 219.112.

C) "Protocols for Generating Unit-Specific Emission Estimates for Equipment Leaks of VOM and VHAP", EPA-450/3-88-010, incorporated by reference in Section 219.112.

D) "Petroleum Refinery Enforcement Manual", EPA-340/1-80-008, incorporated by reference in Section 219.112.

h) Bulk Gasoline Delivery System Test Protocol

1) The method for determining the emissions of gasoline from a vapor recovery system are delineated in 40 CFR 60, subpart XX, section 60.503, incorporated by reference in Section 219.112.

2) Other tests must be performed consistent with:

A) "Inspection Manual for Control of Volatile Organic Emissions from Gasoline Marketing Operations: Appendix D", EPA-340/1-80-012, incorporated by reference in Section 219.112.

B) "Control of Hydrocarbons from Tank Truck Gasoline Loading Terminals: Appendix A", EPA-450/2-77-026, incorporated by reference in Section 219.112.

i) Notwithstanding other requirements of this Part, upon request of the Agency where it is necessary to demonstrate compliance, an owner or operator of an emission unit which is subject to this Part must, at his own expense, conduct tests in accordance with the applicable test methods and procedures specific in this Part. Nothing in this Section limits the authority of the USEPA under the Clean Air Act, as amended, to require testing.

j) Cleaning Solvents Subject to Section 219.219(g)

1) For aqueous and semiaqueous cleaning solvents, manufacturers' supplied data must be used to determine the water content.

2) For hand-wipe cleaning solvents required in Section 219.219(g)(2), manufacturers' supplied data or standard engineering reference texts or other equivalent methods must be used to determine the vapor pressure or VOM composite vapor pressure for blended cleaning solvents.

(Source: Amended at 45 Ill. Reg. 3553, effective March 4, 2021)