

## **SECTION 4. APPENDICES**

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## SECTION 4. APPENDIX A

### Citation Formats and Glossary of Common Terms

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#### CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

##### Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: “AC” identifies the permit as an Air Construction Permit  
“AO” identifies the permit as an Air Operation Permit  
“123456” identifies the specific permit project number

##### New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: “099” represents the specific county ID number in which the project is located  
“2222” represents the specific facility ID number for that county  
“001” identifies the specific permit project number  
“AC” identifies the permit as an air construction permit  
“AF” identifies the permit as a minor source federally enforceable state operation permit  
“AO” identifies the permit as a minor source air operation permit  
“AV” identifies the permit as a major Title V air operation permit

##### PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: “PSD” means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality  
“FL” means that the permit was issued by the State of Florida  
“317” identifies the specific permit project number

##### Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

##### Code of Federal Regulations (CFR)

Example: [40 CFR 60.7]

Means: Title 40, Part 60, Section 7

#### GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (DEP database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

## SECTION 4. APPENDIX A

### Citation Formats and Glossary of Common Terms

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<b>CFR:</b> Code of Federal Regulations	<b>NO<sub>x</sub>:</b> nitrogen oxides
<b>CAA:</b> Clean Air Act	<b>NSPS:</b> New Source Performance Standards
<b>CMS:</b> continuous monitoring system	<b>O&amp;M:</b> operation and maintenance
<b>CO:</b> carbon monoxide	<b>O<sub>2</sub>:</b> oxygen
<b>CO<sub>2</sub>:</b> carbon dioxide	<b>Pb:</b> lead
<b>COMS:</b> continuous opacity monitoring system	<b>PM:</b> particulate matter
<b>DARM:</b> Division of Air Resource Management	<b>PM<sub>10</sub>:</b> particulate matter with a mean aerodynamic diameter of 10 microns or less
<b>DEP:</b> Department of Environmental Protection	<b>ppm:</b> parts per million
<b>Department:</b> Department of Environmental Protection	<b>ppmv:</b> parts per million by volume
<b>dscf:</b> dry standard cubic feet	<b>ppmvd:</b> parts per million by volume, dry basis
<b>dscfm:</b> dry standard cubic feet per minute	<b>QA:</b> quality assurance
<b>EPA:</b> Environmental Protection Agency	<b>QC:</b> quality control
<b>ESP:</b> electrostatic precipitator (control system for reducing particulate matter)	<b>PSD:</b> prevention of significant deterioration
<b>EU:</b> emissions unit	<b>psi:</b> pounds per square inch
<b>F.A.C.:</b> Florida Administrative Code	<b>PTE:</b> potential to emit
<b>F.A.W.:</b> Florida Administrative Weekly	<b>RACT:</b> reasonably available control technology
<b>F.D.:</b> forced draft	<b>RATA:</b> relative accuracy test audit
<b>F.S.:</b> Florida Statutes	<b>RBLC:</b> EPA's RACT/BACT/LAER Clearinghouse
<b>FGD:</b> flue gas desulfurization	<b>SAM:</b> sulfuric acid mist
<b>FGR:</b> flue gas recirculation	<b>scf:</b> standard cubic feet
<b>Fl:</b> fluoride	<b>scfm:</b> standard cubic feet per minute
<b>ft<sup>2</sup>:</b> square feet	<b>SIC:</b> standard industrial classification code
<b>ft<sup>3</sup>:</b> cubic feet	<b>SIP:</b> State Implementation Plan
<b>gpm:</b> gallons per minute	<b>SNCR:</b> selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)
<b>gr:</b> grains	<b>SO<sub>2</sub>:</b> sulfur dioxide
<b>HAP:</b> hazardous air pollutant	<b>TPD:</b> tons/day
<b>Hg:</b> mercury	<b>TPH:</b> tons per hour
<b>I.D.:</b> induced draft	<b>TPY:</b> tons per year
<b>ID:</b> identification	<b>TRS:</b> total reduced sulfur
<b>kPa:</b> kilopascals	<b>UTM:</b> Universal Transverse Mercator coordinate system
<b>lb:</b> pound	<b>VE:</b> visible emissions
<b>MACT:</b> maximum achievable technology	<b>VOC:</b> volatile organic compounds
<b>MMBtu:</b> million British thermal units	
<b>MSDS:</b> material safety data sheets	
<b>MW:</b> megawatt	
<b>NESHAP:</b> National Emissions Standards for Hazardous Air Pollutants	

## SECTION 4. APPENDIX B

### General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are “permit conditions” and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
  - a. Have access to and copy any records that must be kept under conditions of the permit;
  - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
  - c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.
8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
  - a. A description of, and cause of, noncompliance; and
  - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

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### General Conditions

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
  - a. Determination of Best Available Control Technology (not applicable);
  - b. Determination of Prevention of Significant Deterioration (not applicable); and
  - c. Compliance with New Source Performance Standards (applicable).
14. The permittee shall comply with the following:
  - a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
  - b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
  - c. Records of monitoring information shall include:
    - (a) The date, exact place, and time of sampling or measurements;
    - (b) The person responsible for performing the sampling or measurements;
    - (c) The dates analyses were performed;
    - (d) The person responsible for performing the analyses;
    - (e) The analytical techniques or methods used;
    - (f) The results of such analyses.
15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

## SECTION 4. APPENDIX C

### Common Conditions

Unless otherwise specified in the permit, the following conditions apply to all emissions units and activities at the facility.

#### EMISSIONS AND CONTROLS

1. Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the permittee shall notify each Compliance Authority as soon as possible, but at least within one working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; steps being taken to correct the problem and prevent future recurrence; and, where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit or the regulations. [Rule 62-4.130, F.A.C.]
2. Circumvention: The permittee shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rule 62-210.650, F.A.C.]
3. Excess Emissions Allowed: Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed 2 hours in any 24-hour period unless specifically authorized by the Department for longer duration. Pursuant to Rule 62-210.700(5), F.A.C., the permit subsection may specify more or less stringent requirements for periods of excess emissions. Rule 62-210-700(Excess Emissions), F.A.C., cannot vary or supersede any federal NSPS or NESHAP provision. [Rule 62-210.700(1), F.A.C.]
4. Excess Emissions Prohibited: Excess emissions caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
5. Excess Emissions - Notification: In case of excess emissions resulting from malfunctions, the permittee shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Department. [Rule 62-210.700(6), F.A.C.]
6. VOC or OS Emissions: No person shall store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department. [Rule 62-296.320(1), F.A.C.]
7. Objectionable Odor Prohibited: No person shall cause, suffer, allow or permit the discharge of air pollutants, which cause or contribute to an objectionable odor. An "objectionable odor" means any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [Rules 62-296.320(2) and 62-210.200(Definitions), F.A.C.]
8. General Visible Emissions: No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.]
9. Unconfined Particulate Emissions: During the construction period, unconfined particulate matter emissions shall be minimized by dust suppressing techniques such as covering and/or application of water or chemicals to the affected areas, as necessary. [Rule 62-296.320(4)(c), F.A.C.]

#### RECORDS AND REPORTS

10. Records Retention: All measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least 5 years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request. [Rule 62-213.440(1)(b)2, F.A.C.]
11. Emissions Computation and Reporting:
  - a. Applicability. This rule sets forth required methodologies to be used by the owner or operator of a facility for computing actual emissions, baseline actual emissions, and net emissions increase, as defined at Rule 62-210.200, F.A.C., and for computing emissions for purposes of the reporting requirements of subsection 62-210.370(3) and paragraph 62-212.300(1)(e), F.A.C., or of any permit condition that requires emissions be computed in accordance

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### Common Conditions

with this rule. This rule is not intended to establish methodologies for determining compliance with the emission limitations of any air permit. [Rule 62-210.370(1), F.A.C.]

- b. *Computation of Emissions.* For any of the purposes set forth in subsection 62-210.370(1), F.A.C., the owner or operator of a facility shall compute emissions in accordance with the requirements set forth in this subsection.
- (1) *Basic Approach.* The owner or operator shall employ, on a pollutant-specific basis, the most accurate of the approaches set forth below to compute the emissions of a pollutant from an emissions unit; provided, however, that nothing in this rule shall be construed to require installation and operation of any continuous emissions monitoring system (CEMS), continuous parameter monitoring system (CPMS), or predictive emissions monitoring system (PEMS) not otherwise required by rule or permit, nor shall anything in this rule be construed to require performance of any stack testing not otherwise required by rule or permit.
- (a) If the emissions unit is equipped with a CEMS meeting the requirements of paragraph 62-210.370(2)(b), F.A.C., the owner or operator shall use such CEMS to compute the emissions of the pollutant, unless the owner or operator demonstrates to the department that an alternative approach is more accurate because the CEMS represents still-emerging technology.
- (b) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., but emissions of the pollutant can be computed pursuant to the mass balance methodology of paragraph 62-210.370(2)(c), F.A.C., the owner or operator shall use such methodology, unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (c) If a CEMS is not available or does not meet the requirements of paragraph 62-210.370(2)(b), F.A.C., and emissions cannot be computed pursuant to the mass balance methodology, the owner or operator shall use an emission factor meeting the requirements of paragraph 62-210.370(2)(d), F.A.C., unless the owner or operator demonstrates to the department that an alternative approach is more accurate.
- (2) *Continuous Emissions Monitoring System (CEMS).*
- (a) An owner or operator may use a CEMS to compute emissions of a pollutant for purposes of this rule provided:
- 1) The CEMS complies with the applicable certification and quality assurance requirements of 40 CFR Part 60, Appendices B and F, or, for an acid rain unit, the certification and quality assurance requirements of 40 CFR Part 75, all adopted by reference at Rule 62-204.800, F.A.C.; or
- 2) The owner or operator demonstrates that the CEMS otherwise represents the most accurate means of computing emissions for purposes of this rule.
- (b) Stack gas volumetric flow rates used with the CEMS to compute emissions shall be obtained by the most accurate of the following methods as demonstrated by the owner or operator:
- 1) A calibrated flow meter that records data on a continuous basis, if available; or
- 2) The average flow rate of all valid stack tests conducted during a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
- (c) The owner or operator may use CEMS data in combination with an appropriate f-factor, heat input data, and any other necessary parameters to compute emissions if such method is demonstrated by the owner or operator to be more accurate than using a stack gas volumetric flow rate as set forth at subparagraph 62-210.370(2)(b)2., F.A.C., above.
- (3) *Mass Balance Calculations.*
- (a) An owner or operator may use mass balance calculations to compute emissions of a pollutant for purposes of this rule provided the owner or operator:
- 1) Demonstrates a means of validating the content of the pollutant that is contained in or created by all materials or fuels used in or at the emissions unit; and

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### Common Conditions

- 2) Assumes that the emissions unit emits all of the pollutant that is contained in or created by any material or fuel used in or at the emissions unit if it cannot otherwise be accounted for in the process or in the capture and destruction of the pollutant by the unit's air pollution control equipment.
  - (b) Where the vendor of a raw material or fuel which is used in or at the emissions unit publishes a range of pollutant content from such material or fuel, the owner or operator shall use the highest value of the range to compute the emissions, unless the owner or operator demonstrates using site-specific data that another content within the range is more accurate.
  - (c) In the case of an emissions unit using coatings or solvents, the owner or operator shall document, through purchase receipts, records and sales receipts, the beginning and ending VOC inventories, the amount of VOC purchased during the computational period, and the amount of VOC disposed of in the liquid phase during such period.
- (4) Emission Factors.
  - a. An owner or operator may use an emission factor to compute emissions of a pollutant for purposes of this rule provided the emission factor is based on site-specific data such as stack test data, where available, unless the owner or operator demonstrates to the department that an alternative emission factor is more accurate. An owner or operator using site-specific data to derive an emission factor, or set of factors, shall meet the following requirements.
    - 1) If stack test data are used, the emission factor shall be based on the average emissions per unit of input, output, or gas volume, whichever is appropriate, of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are being computed, provided all stack tests used shall represent the same operational and physical configuration of the unit.
    - 2) Multiple emission factors shall be used as necessary to account for variations in emission rate associated with variations in the emissions unit's operating rate or operating conditions during the period over which emissions are computed.
    - 3) The owner or operator shall compute emissions by multiplying the appropriate emission factor by the appropriate input, output or gas volume value for the period over which the emissions are computed. The owner or operator shall not compute emissions by converting an emission factor to pounds per hour and then multiplying by hours of operation, unless the owner or operator demonstrates that such computation is the most accurate method available.
  - b. If site-specific data are not available to derive an emission factor, the owner or operator may use a published emission factor directly applicable to the process for which emissions are computed. If no directly-applicable emission factor is available, the owner or operator may use a factor based on a similar, but different, process.
- (5) Accounting for Emissions During Periods of Missing Data from CEMS, PEMS, or CPMS. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of missing data from CEMS, PEMS, or CPMS using other site-specific data to generate a reasonable estimate of such emissions.
- (6) Accounting for Emissions During Periods of Startup and Shutdown. In computing the emissions of a pollutant, the owner or operator shall account for the emissions during periods of startup and shutdown of the emissions unit.
- (7) Fugitive Emissions. In computing the emissions of a pollutant from a facility or emissions unit, the owner or operator shall account for the fugitive emissions of the pollutant, to the extent quantifiable, associated with such facility or emissions unit.
- (8) Recordkeeping. The owner or operator shall retain a copy of all records used to compute emissions pursuant to this rule for a period of five years from the date on which such emissions information is submitted to the

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### Common Conditions

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department for any regulatory purpose.

[Rule 62-210.370(2), F.A.C.]

*c. Annual Operating Report for Air Pollutant Emitting Facility*

- (1) The Annual Operating Report for Air Pollutant Emitting Facility (DEP Form No. 62-210.900(5)) shall be completed each year for the following facilities:
  - a. All Title V sources.
  - b. All synthetic non-Title V sources.
  - c. All facilities with the potential to emit ten (10) tons per year or more of volatile organic compounds or twenty-five (25) tons per year or more of nitrogen oxides and located in an ozone nonattainment area or ozone air quality maintenance area.
  - d. All facilities for which an annual operating report is required by rule or permit.
- (2) Notwithstanding paragraph 62-210.370(3)(a), F.A.C., no annual operating report shall be required for any facility operating under an air general permit.
- (3) The annual operating report shall be submitted to the appropriate Department of Environmental Protection (DEP) division, district or DEP-approved local air pollution control program office by April 1 of the following year, except that the annual operating report for year 2008 shall be submitted by May 1, 2009. If the report is submitted using the Department's electronic annual operating report software, there is no requirement to submit a copy to any DEP or local air program office.
- (4) Emissions shall be computed in accordance with the provisions of subsection 62-210.370(2), F.A.C., for purposes of the annual operating report.
- (5) Facility Relocation. Unless otherwise provided by rule or more stringent permit condition, the owner or operator of a relocatable facility must submit a Facility Relocation Notification Form (DEP Form No. 62-210.900(6)) to the Department at least 30 days prior to the relocation. A separate form shall be submitted for each facility in the case of the relocation of multiple facilities which are jointly owned or operated.

[Rule 62-210.370(3), F.A.C.]

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## SECTION 4. APPENDIX D

### Common Testing Requirements

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Unless otherwise specified in the permit, the following testing requirements apply to all emissions units at the facility.

#### COMPLIANCE TESTING REQUIREMENTS

1. Operating Rate During Testing: Testing of emissions shall be conducted with the emissions unit operating at permitted capacity. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. [Rule 62-297.310(2), F.A.C.]
2. Applicable Test Procedures - Opacity Compliance Tests: When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:
  - a. For batch, cyclical processes, or other operations which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.
  - b. The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.
  - c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.[Rule 62-297.310(4), F.A.C.]
3. Determination of Process Variables:
  - a. *Required Equipment*. The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
  - b. *Accuracy of Equipment*. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.[Rule 62-297.310(5), F.A.C.]
4. Frequency of Compliance Tests: The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.
  - a. *General Compliance Testing*.
    1. The owner or operator of a new or modified emissions unit that is subject to an emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining an operation permit for such emissions unit.
    2. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing

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**Common Testing Requirements**

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an air operation permit pursuant to sub-subparagraph 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- (a) Did not operate; or
  - (b) In the case of a fuel burning emissions unit, burned liquid and/or solid fuel for a total of no more than 400 hours,
3. During each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for visible emissions, if there is an applicable standard.
4. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.
- b. *Special Compliance Tests.* When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions unit and to provide a report on the results of said tests to the Department.

[Rule 62-297.310(7), F.A.C.]

**RECORDS AND REPORTS**

5. Test Reports: The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Department on the results of each such test. The required test report shall be filed with the Department as soon as practical but no later than 45 days after the last sampling run of each test is completed. The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report shall provide the following information.
- a. The type, location, and designation of the emissions unit tested.
  - b. The facility at which the emissions unit is located.
  - c. The owner or operator of the emissions unit.
  - d. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
  - e. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
  - f. The date, starting time and end time of the observation.
  - g. The test procedures used.
  - h. The names of individuals who furnished the process variable data, conducted the test, and prepared the report.
  - i. The applicable emission standard and the resulting maximum allowable emission rate for the emissions unit plus the test result in the same form and unit of measure.
  - j. A certification that, to the knowledge of the owner or his authorized agent, all data submitted is true and correct. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rule 62-297.310(8), F.A.C.]

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## SECTION 4. APPENDIX E

### 40 CFR Part 60, Subpart A – General Provisions

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#### FEDERAL REGULATIONS ADOPTED BY REFERENCE

IN ACCORDANCE WITH RULE 62-204.800, F.A.C., THE FOLLOWING FEDERAL REGULATION IN TITLE 40 OF THE CODE OF FEDERAL REGULATIONS (CFR) WAS ADOPTED BY REFERENCE. THE ORIGINAL FEDERAL RULE NUMBERING HAS BEEN RETAINED.

*FEDERAL REVISION DATE: JANUARY 28, 2009*

*STATE RULE EFFECTIVE DATE: NOVEMBER 18, 2009*

*STANDARDIZED CONDITIONS REVISION DATE: FEBRUARY 5, 2010*

#### SUBPART A—GENERAL PROVISIONS

##### § 60.1 Applicability.

- (a) Except as provided in subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (b) Any new or revised standard of performance promulgated pursuant to section 111(b) of the Act shall apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of such new or revised standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
- (c) In addition to complying with the provisions of this part, the owner or operator of an affected facility may be required to obtain an operating permit issued to stationary sources by an authorized State air pollution control agency or by the Administrator of the U.S. Environmental Protection Agency (EPA) pursuant to Title V of the Clean Air Act (Act) as amended November 15, 1990 (42 U.S.C. 7661). For more information about obtaining an operating permit see part 70 of this chapter.
- (d) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia. {Not Applicable}*

[40 FR 53346, Nov. 17, 1975, as amended at 55 FR 51382, Dec. 13, 1990; 59 FR 12427, Mar. 16, 1994; 62 FR 52641, Oct. 8, 1997]

##### § 60.2 Definitions.

The terms used in this part are defined in the Act or in this section as follows:

*Act* means the Clean Air Act (42 U.S.C. 7401 *et seq.* )

*Administrator* means the Administrator of the Environmental Protection Agency or his authorized representative.

*Affected facility* means, with reference to a stationary source, any apparatus to which a standard is applicable.

*Alternative method* means any method of sampling and analyzing for an air pollutant which is not a reference or equivalent method but which has been demonstrated to the Administrator's satisfaction to, in specific cases, produce results adequate for his determination of compliance.

*Approved permit program* means a State permit program approved by the Administrator as meeting the requirements of part 70 of this chapter or a Federal permit program established in this chapter pursuant to Title V of the Act (42 U.S.C. 7661).

*Capital expenditure* means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable “annual asset guideline repair allowance percentage” specified in the latest edition of Internal Revenue Service (IRS) Publication 534 and the existing facility's basis, as defined by section 1012 of the Internal Revenue Code. However, the total expenditure for a physical or operational change to an existing facility must not be reduced by any “excluded additions” as defined in IRS Publication 534, as would be done for tax purposes.

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*Clean coal technology demonstration project* means a project using funds appropriated under the heading ‘Department of Energy-Clean Coal Technology’, up to a total amount of \$2,500,000,000 for commercial demonstrations of clean coal technology, or similar projects funded through appropriations for the Environmental Protection Agency.

*Commenced* means, with respect to the definition of *new source* in section 111(a)(2) of the Act, that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

*Construction* means fabrication, erection, or installation of an affected facility.

*Continuous monitoring system* means the total equipment, required under the emission monitoring sections in applicable subparts, used to sample and condition (if applicable), to analyze, and to provide a permanent record of emissions or process parameters.

*Electric utility steam generating unit* means any steam electric generating unit that is constructed for the purpose of supplying more than one-third of its potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale. Any steam supplied to a steam distribution system for the purpose of providing steam to a steam-electric generator that would produce electrical energy for sale is also considered in determining the electrical energy output capacity of the affected facility.

*Equivalent method* means any method of sampling and analyzing for an air pollutant which has been demonstrated to the Administrator's satisfaction to have a consistent and quantitatively known relationship to the reference method, under specified conditions.

*Excess Emissions and Monitoring Systems Performance Report* is a report that must be submitted periodically by a source in order to provide data on its compliance with stated emission limits and operating parameters, and on the performance of its monitoring systems.

*Existing facility* means, with reference to a stationary source, any apparatus of the type for which a standard is promulgated in this part, and the construction or modification of which was commenced before the date of proposal of that standard; or any apparatus which could be altered in such a way as to be of that type.

*Force majeure* means, for purposes of §60.8, an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents the owner or operator from complying with the regulatory requirement to conduct performance tests within the specified timeframe despite the affected facility's best efforts to fulfill the obligation. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility.

*Isokinetic sampling* means sampling in which the linear velocity of the gas entering the sampling nozzle is equal to that of the undisturbed gas stream at the sample point.

*Issuance* of a part 70 permit will occur, if the State is the permitting authority, in accordance with the requirements of part 70 of this chapter and the applicable, approved State permit program. When the EPA is the permitting authority, issuance of a Title V permit occurs immediately after the EPA takes final action on the final permit.

*Malfunction* means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

*Modification* means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.

*Monitoring device* means the total equipment, required under the monitoring of operations sections in applicable subparts, used to measure and record (if applicable) process parameters.

*Nitrogen oxides* means all oxides of nitrogen except nitrous oxide, as measured by test methods set forth in this part.

*One-hour period* means any 60-minute period commencing on the hour.

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*Opacity* means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

*Owner or operator* means any person who owns, leases, operates, controls, or supervises an affected facility or a stationary source of which an affected facility is a part.

*Part 70 permit* means any permit issued, renewed, or revised pursuant to part 70 of this chapter.

*Particulate matter* means any finely divided solid or liquid material, other than uncombined water, as measured by the reference methods specified under each applicable subpart, or an equivalent or alternative method.

*Permit program* means a comprehensive State operating permit system established pursuant to title V of the Act (42 U.S.C. 7661) and regulations codified in part 70 of this chapter and applicable State regulations, or a comprehensive Federal operating permit system established pursuant to title V of the Act and regulations codified in this chapter.

*Permitting authority* means:

- (1) The State air pollution control agency, local agency, other State agency, or other agency authorized by the Administrator to carry out a permit program under part 70 of this chapter; or
- (2) The Administrator, in the case of EPA-implemented permit programs under title V of the Act (42 U.S.C. 7661).

*Proportional sampling* means sampling at a rate that produces a constant ratio of sampling rate to stack gas flow rate.

*Reactivation of a very clean coal-fired electric utility steam generating unit* means any physical change or change in the method of operation associated with the commencement of commercial operations by a coal-fired utility unit after a period of discontinued operation where the unit:

- (1) Has not been in operation for the two-year period prior to the enactment of the Clean Air Act Amendments of 1990, and the emissions from such unit continue to be carried in the permitting authority's emissions inventory at the time of enactment;
- (2) Was equipped prior to shut-down with a continuous system of emissions control that achieves a removal efficiency for sulfur dioxide of no less than 85 percent and a removal efficiency for particulates of no less than 98 percent;
- (3) Is equipped with low-NO<sub>x</sub> burners prior to the time of commencement of operations following reactivation; and
- (4) Is otherwise in compliance with the requirements of the Clean Air Act.

*Reference method* means any method of sampling and analyzing for an air pollutant as specified in the applicable subpart.

*Repowering* means replacement of an existing coal-fired boiler with one of the following clean coal technologies: atmospheric or pressurized fluidized bed combustion, integrated gasification combined cycle, magnetohydrodynamics, direct and indirect coal-fired turbines, integrated gasification fuel cells, or as determined by the Administrator, in consultation with the Secretary of Energy, a derivative of one or more of these technologies, and any other technology capable of controlling multiple combustion emissions simultaneously with improved boiler or generation efficiency and with significantly greater waste reduction relative to the performance of technology in widespread commercial use as of November 15, 1990. Repowering shall also include any oil and/or gas-fired unit which has been awarded clean coal technology demonstration funding as of January 1, 1991, by the Department of Energy.

*Run* means the net period of time during which an emission sample is collected. Unless otherwise specified, a run may be either intermittent or continuous within the limits of good engineering practice.

*Shutdown* means the cessation of operation of an affected facility for any purpose.

*Six-minute period* means any one of the 10 equal parts of a one-hour period.

*Standard* means a standard of performance proposed or promulgated under this part.

*Standard conditions* means a temperature of 293 K (68F) and a pressure of 101.3 kilopascals (29.92 in Hg).

*Startup* means the setting in operation of an affected facility for any purpose.

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*State* means all non-Federal authorities, including local agencies, interstate associations, and State-wide programs, that have delegated authority to implement: (1) The provisions of this part; and/or (2) the permit program established under part 70 of this chapter. The term State shall have its conventional meaning where clear from the context.

*Stationary source* means any building, structure, facility, or installation which emits or may emit any air pollutant.

*Title V permit* means any permit issued, renewed, or revised pursuant to Federal or State regulations established to implement title V of the Act (42 U.S.C. 7661). A title V permit issued by a State permitting authority is called a part 70 permit in this part.

*Volatile Organic Compound* means any organic compound which participates in atmospheric photochemical reactions; or which is measured by a reference method, an equivalent method, an alternative method, or which is determined by procedures specified under any subpart.

[44 FR 55173, Sept. 25, 1979, as amended at 45 FR 5617, Jan. 23, 1980; 45 FR 85415, Dec. 24, 1980; 54 FR 6662, Feb. 14, 1989; 55 FR 51382, Dec. 13, 1990; 57 FR 32338, July 21, 1992; 59 FR 12427, Mar. 16, 1994; 72 FR 27442, May 16, 2007]

**§ 60.3 Units and abbreviations.**

Used in this part are abbreviations and symbols of units of measure. These are defined as follows:

(a) System International (SI) units of measure:

A—ampere  
g—gram  
Hz—hertz  
J—joule  
K—degree Kelvin  
kg—kilogram  
m—meter  
m<sup>3</sup>—cubic meter  
mg—milligram—10<sup>-3</sup> gram  
mm—millimeter—10<sup>-3</sup> meter  
Mg—megagram—10<sup>6</sup> gram  
mol—mole  
N—newton  
ng—nanogram—10<sup>-9</sup> gram  
nm—nanometer—10<sup>-9</sup> meter  
Pa—pascal  
s—second  
V—volt  
W—watt  
Ω—ohm  
μg—microgram—10<sup>-6</sup> gram

(b) Other units of measure:

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Btu—British thermal unit  
°C—degree Celsius (centigrade)  
cal—calorie  
cfm—cubic feet per minute  
cu ft—cubic feet  
dcf—dry cubic feet  
dcm—dry cubic meter  
dscf—dry cubic feet at standard conditions  
dscm—dry cubic meter at standard conditions  
eq—equivalent  
°F—degree Fahrenheit  
ft—feet  
gal—gallon  
gr—grain  
g-eq—gram equivalent  
hr—hour  
in—inch  
k—1,000  
l—liter  
lpm—liter per minute  
lb—pound  
meq—milliequivalent  
min—minute  
ml—milliliter  
mol. wt.—molecular weight  
ppb—parts per billion  
ppm—parts per million  
psia—pounds per square inch absolute  
psig—pounds per square inch gage  
°R—degree Rankine  
scf—cubic feet at standard conditions  
scfh—cubic feet per hour at standard conditions  
scm—cubic meter at standard conditions  
sec—second  
sq ft—square feet

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std—at standard conditions

(c) Chemical nomenclature:

CdS—cadmium sulfide

CO—carbon monoxide

CO<sub>2</sub>—carbon dioxide

HCl—hydrochloric acid

Hg—mercury

H<sub>2</sub>O—water

H<sub>2</sub>S—hydrogen sulfide

H<sub>2</sub>SO<sub>4</sub>—sulfuric acid

N<sub>2</sub>—nitrogen

NO—nitric oxide

NO<sub>2</sub>—nitrogen dioxide

NO<sub>x</sub>—nitrogen oxides

O<sub>2</sub>—oxygen

SO<sub>2</sub>—sulfur dioxide

SO<sub>3</sub>—sulfur trioxide

SO<sub>x</sub>—sulfur oxides

(d) Miscellaneous:

A.S.T.M.—American Society for Testing and Materials

[42 FR 37000, July 19, 1977; 42 FR 38178, July 27, 1977]

**§ 60.4 Address.**

**ALL ADDRESSES THAT PERTAIN TO FLORIDA HAVE BEEN INCORPORATED. TO SEE THE COMPLETE LIST OF ADDRESSES PLEASE GO TO [HTTP://ECFR.GPOACCESS.GOV/CGI/T/TEXT/TEXT-  
IDX?C=ECFR&RGN=DIV6&VIEW=TEXT&NODE=40:6.0.1.1.1.1&IDNO=40](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div6&view=text&node=40:6.0.1.1.1.1&idno=40).**

[Link to an amendment published at 73 FR 18164, Apr. 3, 2008.](#)

- (a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to this part shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices.

Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee),  
Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 345 Courtland  
Street, NE., Atlanta, GA 30365.

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(b) Section 111(c) directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement). The appropriate mailing address for those States whose delegation request has been approved is as follows:

(K) Bureau of Air Quality Management, Department of Environmental Regulation, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, FL 32301.

[40 FR 18169, Apr. 25, 1975]

**Editorial Note:** For Federal Register citations affecting §60.4 see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

**§ 60.5 Determination of construction or modification.**

- (a) When requested to do so by an owner or operator, the Administrator will make a determination of whether action taken or intended to be taken by such owner or operator constitutes construction (including reconstruction) or modification or the commencement thereof within the meaning of this part.
- (b) The Administrator will respond to any request for a determination under paragraph (a) of this section within 30 days of receipt of such request.

[40 FR 58418, Dec. 16, 1975]

**§ 60.6 Review of plans.**

- (a) When requested to do so by an owner or operator, the Administrator will review plans for construction or modification for the purpose of providing technical advice to the owner or operator.
- (b)
  - (1) A separate request shall be submitted for each construction or modification project.
  - (2) Each request shall identify the location of such project, and be accompanied by technical information describing the proposed nature, size, design, and method of operation of each affected facility involved in such project, including information on any equipment to be used for measurement or control of emissions.
- (c) Neither a request for plans review nor advice furnished by the Administrator in response to such request shall (1) relieve an owner or operator of legal responsibility for compliance with any provision of this part or of any applicable State or local requirement, or (2) prevent the Administrator from implementing or enforcing any provision of this part or taking any other action authorized by the Act.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 9314, Mar. 8, 1974]

**§ 60.7 Notification and record keeping.**

- (a) Any owner or operator subject to the provisions of this part shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:
  - (1) A notification of the date construction (or reconstruction as defined under §60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.
  - (2) [Reserved]

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- (3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.
  - (4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.
  - (5) A notification of the date upon which demonstration of the continuous monitoring system performance commences in accordance with §60.13(c). Notification shall be postmarked not less than 30 days prior to such date.
  - (6) A notification of the anticipated date for conducting the opacity observations required by §60.11(e)(1) of this part. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.
  - (7) A notification that continuous opacity monitoring system data results will be used to determine compliance with the applicable opacity standard during a performance test required by §60.8 in lieu of Method 9 observation data as allowed by §60.11(e)(5) of this part. This notification shall be postmarked not less than 30 days prior to the date of the performance test.
- (b) Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
- (c) Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or summary report form (see paragraph (d) of this section) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information:
- (1) The magnitude of excess emissions computed in accordance with §60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.
  - (2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.
  - (3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - (4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- (d) The summary report form shall contain the information and be in the format shown in figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.
- (1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in §60.7(c) need not be submitted unless requested by the Administrator.

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- (2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in §60.7(c) shall both be submitted.

Figure 1—Summary Report—Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One—SO<sub>2</sub>/NO<sub>x</sub>/TRS/H<sub>2</sub>S/CO/Opacity)

Reporting period dates: From \_\_\_\_\_ to \_\_\_\_\_

Company:

Emission Limitation \_\_\_\_\_

Address:

Monitor Manufacturer and Model No. \_\_\_\_\_

Date of Latest CMS Certification or Audit \_\_\_\_\_

Process Unit(s) Description:

Total source operating time in reporting period<sup>1</sup> \_\_\_\_\_

Emission data summary <sup>1</sup>		CMS performance summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:		1. CMS downtime in reporting period due to:	
a. Startup/shutdown		a. Monitor equipment malfunctions	
b. Control equipment problems		b. Non-Monitor equipment malfunctions	
c. Process problems		c. Quality assurance calibration	
d. Other known causes		d. Other known causes	
e. Unknown causes		e. Unknown causes	
2. Total duration of excess emission		2. Total CMS Downtime	
3. Total duration of excess emissions × (100) [Total source operating time]	% <sup>2</sup>	3. [Total CMS Downtime] × (100) [Total source operating time]	% <sup>2</sup>

<sup>1</sup>For opacity, record all times in minutes. For gases, record all times in hours.

<sup>2</sup>For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §60.7(c) shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

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Date

(e)

- (1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
    - (i) For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;
    - (ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and
    - (iii) The Administrator does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.
  - (2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.
  - (3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.
- (f) Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as follows:
- (1) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emission standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of subhourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.
  - (2) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude

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periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS subhourly measurements as required under paragraph (f) of this section, the owner or operator shall retain all subhourly measurements for the most recent reporting period. The subhourly measurements shall be retained for 120 days from the date of the most recent summary or excess emission report submitted to the Administrator.

- (3) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (f) of this section, if the Administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.
- (g) If notification substantially similar to that in paragraph (a) of this section is required by any other State or local agency, sending the Administrator a copy of that notification will satisfy the requirements of paragraph (a) of this section.
- (h) Individual subparts of this part may include specific provisions which clarify or make inapplicable the provisions set forth in this section.

[36 FR 24877, Dec. 28, 1971, as amended at 40 FR 46254, Oct. 6, 1975; 40 FR 58418, Dec. 16, 1975; 45 FR 5617, Jan. 23, 1980; 48 FR 48335, Oct. 18, 1983; 50 FR 53113, Dec. 27, 1985; 52 FR 9781, Mar. 26, 1987; 55 FR 51382, Dec. 13, 1990; 59 FR 12428, Mar. 16, 1994; 59 FR 47265, Sep. 15, 1994; 64 FR 7463, Feb. 12, 1999]

**§ 60.8 Performance tests.**

- (a) Except as specified in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
  - (1) If a force majeure is about to occur, occurs, or has occurred for which the affected owner or operator intends to assert a claim of force majeure, the owner or operator shall notify the Administrator, in writing as soon as practicable following the date the owner or operator first knew, or through due diligence should have known that the event may cause or caused a delay in testing beyond the regulatory deadline, but the notification must occur before the performance test deadline unless the initial force majeure or a subsequent force majeure event delays the notice, and in such cases, the notification shall occur as soon as practicable.
  - (2) The owner or operator shall provide to the Administrator a written description of the force majeure event and a rationale for attributing the delay in testing beyond the regulatory deadline to the force majeure; describe the measures taken or to be taken to minimize the delay; and identify a date by which the owner or operator proposes to conduct the performance test. The performance test shall be conducted as soon as practicable after the force majeure occurs.
  - (3) The decision as to whether or not to grant an extension to the performance test deadline is solely within the discretion of the Administrator. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an extension as soon as practicable.
  - (4) Until an extension of the performance test deadline has been approved by the Administrator under paragraphs (a)(1), (2), and (3) of this section, the owner or operator of the affected facility remains strictly subject to the requirements of this part.
- (b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, (3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance, (4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or (5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

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- (c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.
- (d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.
- (e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:
  - (1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.
  - (2) Safe sampling platform(s).
  - (3) Safe access to sampling platform(s).
  - (4) Utilities for sampling and testing equipment.
- (f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[36 FR 24877, Dec. 23, 1971, as amended at 39 FR 9314, Mar. 8, 1974; 42 FR 57126, Nov. 1, 1977; 44 FR 33612, June 11, 1979; 54 FR 6662, Feb. 14, 1989; 54 FR 21344, May 17, 1989; 64 FR 7463, Feb. 12, 1999; 72 FR 27442, May 16, 2007]

**§ 60.9 Availability of information.**

The availability to the public of information provided to, or otherwise obtained by, the Administrator under this part shall be governed by part 2 of this chapter. (Information submitted voluntarily to the Administrator for the purposes of §§60.5 and 60.6 is governed by §§2.201 through 2.213 of this chapter and not by §2.301 of this chapter.)

**§ 60.10 State authority.**

The provisions of this part shall not be construed in any manner to preclude any State or political subdivision thereof from:

- (a) Adopting and enforcing any emission standard or limitation applicable to an affected facility, provided that such emission standard or limitation is not less stringent than the standard applicable to such facility.
- (b) Requiring the owner or operator of an affected facility to obtain permits, licenses, or approvals prior to initiating construction, modification, or operation of such facility.

**§ 60.11 Compliance with standards and maintenance requirements.**

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- (a) Compliance with standards in this part, other than opacity standards, shall be determined in accordance with performance tests established by §60.8, unless otherwise specified in the applicable standard.
- (b) Compliance with opacity standards in this part shall be determined by conducting observations in accordance with Method 9 in appendix A of this part, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
- (c) The opacity standards set forth in this part shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.
- (d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
- (e)
  - (1) For the purpose of demonstrating initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in §60.8 unless one of the following conditions apply. If no performance test under §60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under §60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in §60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under §60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of appendix B of this part. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emission, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in appendix B of this part, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.
  - (2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in this part applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under §60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.
  - (3) The owner or operator of an affected facility to which an opacity standard in this part applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in §60.7(a)(6). If, for some reason, the Administrator

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cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

- (4) An owner or operator of an affected facility using a continuous opacity monitor (transmissometer) shall record the monitoring data produced during the initial performance test required by §60.8 and shall furnish the Administrator a written report of the monitoring results along with Method 9 and §60.8 performance test results.
- (5) An owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under §60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under §60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under §60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under §60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under §60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in §60.13(c) of this part, that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine compliance with the opacity standard.
- (6) Upon receipt from an owner or operator of the written reports of the results of the performance tests required by §60.8, the opacity observation results and observer certification required by §60.11(e)(1), and the COMS results, if applicable, the Administrator will make a finding concerning compliance with opacity and other applicable standards. If COMS data results are used to comply with an opacity standard, only those results are required to be submitted along with the performance test results required by §60.8. If the Administrator finds that an affected facility is in compliance with all applicable standards for which performance tests are conducted in accordance with §60.8 of this part but during the time such performance tests are being conducted fails to meet any applicable opacity standard, he shall notify the owner or operator and advise him that he may petition the Administrator within 10 days of receipt of notification to make appropriate adjustment to the opacity standard for the affected facility.
- (7) The Administrator will grant such a petition upon a demonstration by the owner or operator that the affected facility and associated air pollution control equipment was operated and maintained in a manner to minimize the opacity of emissions during the performance tests; that the performance tests were performed under the conditions established by the Administrator; and that the affected facility and associated air pollution control equipment were incapable of being adjusted or operated to meet the applicable opacity standard.
- (8) The Administrator will establish an opacity standard for the affected facility meeting the above requirements at a level at which the source will be able, as indicated by the performance and opacity tests, to meet the opacity standard at all times during which the source is meeting the mass or concentration emission standard. The Administrator will promulgate the new opacity standard in the Federal Register.
- (f) Special provisions set forth under an applicable subpart shall supersede any conflicting provisions in paragraphs (a) through (e) of this section.
- (g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this part, nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[38 FR 28565, Oct. 15, 1973, as amended at 39 FR 39873, Nov. 12, 1974; 43 FR 8800, Mar. 3, 1978; 45 FR 23379, Apr. 4, 1980; 48 FR 48335, Oct. 18, 1983; 50 FR 53113, Dec. 27, 1985; 51 FR 1790, Jan. 15, 1986; 52 FR 9781, Mar. 26, 1987; 62 FR 8328, Feb. 24, 1997; 65 FR 61749, Oct. 17, 2000]

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**§ 60.12 Circumvention.**

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

[39 FR 9314, Mar. 8, 1974]

**§ 60.13 Monitoring requirements.**

- (a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B to this part and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to this part, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.
- (b) All continuous monitoring systems and monitoring devices shall be installed and operational prior to conducting performance tests under §60.8. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device.
- (c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under §60.11(e)(5), he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of this part before the performance test required under §60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under §60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of this part. The owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.
  - (1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under §60.8 and as described in §60.11(e)(5) shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in paragraph (c) of this section at least 10 days before the performance test required under §60.8 is conducted.
  - (2) Except as provided in paragraph (c)(1) of this section, the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.
- (d)
  - (1) Owners and operators of a CEMS installed in accordance with the provisions of this part, must check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span must, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in appendix B of this part. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. Owners and operators of a COMS installed in accordance with the provisions of this part, must automatically, intrinsic to the opacity monitor, check the zero and upscale (span) calibration drifts at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is as defined in the applicable version of PS-1 in appendix B of this part. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.
  - (2) Unless otherwise approved by the Administrator, the following procedures must be followed for a COMS. Minimum procedures must include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures must provide a system check of all active analyzer internal optics

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with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation.

- (e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under paragraph (d) of this section, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:
  - (1) All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
  - (2) All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
- (f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used.
- (g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.
- (h)
  - (1) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in §60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period.
  - (2) For continuous monitoring systems other than opacity, 1-hour averages shall be computed as follows, except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations:
    - (i) Except as provided under paragraph (h)(2)(iii) of this section, for a full operating hour (any clock hour with 60 minutes of unit operation), at least four valid data points are required to calculate the hourly average, *i.e.* , one data point in each of the 15-minute quadrants of the hour.
    - (ii) Except as provided under paragraph (h)(2)(iii) of this section, for a partial operating hour (any clock hour with less than 60 minutes of unit operation), at least one valid data point in each 15-minute quadrant of the hour in which the unit operates is required to calculate the hourly average.
    - (iii) For any operating hour in which required maintenance or quality-assurance activities are performed:
      - (A) If the unit operates in two or more quadrants of the hour, a minimum of two valid data points, separated by at least 15 minutes, is required to calculate the hourly average; or
      - (B) If the unit operates in only one quadrant of the hour, at least one valid data point is required to calculate the hourly average.

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- (iv) If a daily calibration error check is failed during any operating hour, all data for that hour shall be invalidated, unless a subsequent calibration error test is passed in the same hour and the requirements of paragraph (h)(2)(iii) of this section are met, based solely on valid data recorded after the successful calibration.
  - (v) For each full or partial operating hour, all valid data points shall be used to calculate the hourly average.
  - (vi) Except as provided under paragraph (h)(2)(vii) of this section, data recorded during periods of continuous monitoring system breakdown, repair, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph.
  - (vii) Owners and operators complying with the requirements of §60.7(f)(1) or (2) must include any data recorded during periods of monitor breakdown or malfunction in the data averages.
  - (viii) When specified in an applicable subpart, hourly averages for certain partial operating hours shall not be computed or included in the emission averages ( e.g. hours with < 30 minutes of unit operation under §60.47b(d)).
  - (ix) Either arithmetic or integrated averaging of all data may be used to calculate the hourly averages. The data may be recorded in reduced or nonreduced form ( e.g. , ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant).
- (3) All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subpart. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in the applicable subpart to specify the emission limit.
- (i) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part including, but not limited to the following:
    - (1) Alternative monitoring requirements when installation of a continuous monitoring system or monitoring device specified by this part would not provide accurate measurements due to liquid water or other interferences caused by substances in the effluent gases.
    - (2) Alternative monitoring requirements when the affected facility is infrequently operated.
    - (3) Alternative monitoring requirements to accommodate continuous monitoring systems that require additional measurements to correct for stack moisture conditions.
    - (4) Alternative locations for installing continuous monitoring systems or monitoring devices when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements.
    - (5) Alternative methods of converting pollutant concentration measurements to units of the standards.
    - (6) Alternative procedures for performing daily checks of zero and span drift that do not involve use of span gases or test cells.
    - (7) Alternatives to the A.S.T.M. test methods or sampling procedures specified by any subpart.
    - (8) Alternative continuous monitoring systems that do not meet the design or performance requirements in Performance Specification 1, appendix B, but adequately demonstrate a definite and consistent relationship between its measurements and the measurements of opacity by a system complying with the requirements in Performance Specification 1. The Administrator may require that such demonstration be performed for each affected facility.
    - (9) Alternative monitoring requirements when the effluent from a single affected facility or the combined effluent from two or more affected facilities is released to the atmosphere through more than one point.
  - (j) An alternative to the relative accuracy (RA) test specified in Performance Specification 2 of appendix B may be requested as follows:
    - (1) An alternative to the reference method tests for determining RA is available for sources with emission rates demonstrated to be less than 50 percent of the applicable standard. A source owner or operator may petition the Administrator to waive the RA test in Section 8.4 of Performance Specification 2 and substitute the procedures in

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Section 16.0 if the results of a performance test conducted according to the requirements in §60.8 of this subpart or other tests performed following the criteria in §60.8 demonstrate that the emission rate of the pollutant of interest in the units of the applicable standard is less than 50 percent of the applicable standard. For sources subject to standards expressed as control efficiency levels, a source owner or operator may petition the Administrator to waive the RA test and substitute the procedures in Section 16.0 of Performance Specification 2 if the control device exhaust emission rate is less than 50 percent of the level needed to meet the control efficiency requirement. The alternative procedures do not apply if the continuous emission monitoring system is used to determine compliance continuously with the applicable standard. The petition to waive the RA test shall include a detailed description of the procedures to be applied. Included shall be location and procedure for conducting the alternative, the concentration or response levels of the alternative RA materials, and the other equipment checks included in the alternative procedure. The Administrator will review the petition for completeness and applicability. The determination to grant a waiver will depend on the intended use of the CEMS data (e.g., data collection purposes other than NSPS) and may require specifications more stringent than in Performance Specification 2 (e.g., the applicable emission limit is more stringent than NSPS).

- (2) The waiver of a CEMS RA test will be reviewed and may be rescinded at such time, following successful completion of the alternative RA procedure, that the CEMS data indicate that the source emissions are approaching the level. The criterion for reviewing the waiver is the collection of CEMS data showing that emissions have exceeded 70 percent of the applicable standard for seven, consecutive, averaging periods as specified by the applicable regulation(s). For sources subject to standards expressed as control efficiency levels, the criterion for reviewing the waiver is the collection of CEMS data showing that exhaust emissions have exceeded 70 percent of the level needed to meet the control efficiency requirement for seven, consecutive, averaging periods as specified by the applicable regulation(s) [e.g., §60.45(g) (2) and (3), §60.73(e), and §60.84(e)]. It is the responsibility of the source operator to maintain records and determine the level of emissions relative to the criterion on the waiver of RA testing. If this criterion is exceeded, the owner or operator must notify the Administrator within 10 days of such occurrence and include a description of the nature and cause of the increasing emissions. The Administrator will review the notification and may rescind the waiver and require the owner or operator to conduct a RA test of the CEMS as specified in Section 8.4 of Performance Specification 2.

[40 FR 46255, Oct. 6, 1975; 40 FR 59205, Dec. 22, 1975, as amended at 41 FR 35185, Aug. 20, 1976; 48 FR 13326, Mar. 30, 1983; 48 FR 23610, May 25, 1983; 48 FR 32986, July 20, 1983; 52 FR 9782, Mar. 26, 1987; 52 FR 17555, May 11, 1987; 52 FR 21007, June 4, 1987; 64 FR 7463, Feb. 12, 1999; 65 FR 48920, Aug. 10, 2000; 65 FR 61749, Oct. 17, 2000; 66 FR 44980, Aug. 27, 2001; 71 FR 31102, June 1, 2006; 72 FR 32714, June 13, 2007]

**Editorial Note:** At 65 FR 61749, Oct. 17, 2000, §60.13 was amended by revising the words “ng/J of pollutant” to read “ng of pollutant per J of heat input” in the sixth sentence of paragraph (h). However, the amendment could not be incorporated because the words “ng/J of pollutant” do not exist in the sixth sentence of paragraph (h).

**§ 60.14 Modification.**

- (a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere.
- (b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emission rate:
  - (1) Emission factors as specified in the latest issue of “Compilation of Air Pollutant Emission Factors,” EPA Publication No. AP-42, or other emission factors determined by the Administrator to be superior to AP-42 emission factors, in cases where utilization of emission factors demonstrates that the emission level resulting from the physical or operational change will either clearly increase or clearly not increase.
  - (2) Material balances, continuous monitor data, or manual emission tests in cases where utilization of emission factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emission level resulting from the physical or operational change will either clearly increase or clearly not

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increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emission factors as referenced in paragraph (b)(1) of this section. When the emission rate is based on results from manual emission tests or continuous monitoring systems, the procedures specified in appendix C of this part shall be used to determine whether an increase in emission rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

- (c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of this part any other facility within that source.
- (d) [Reserved]
- (e) The following shall not, by themselves, be considered modifications under this part:
  - (1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and §60.15.
  - (2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.
  - (3) An increase in the hours of operation.
  - (4) Use of an alternative fuel or raw material if, prior to the date any standard under this part becomes applicable to that source type, as provided by §60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.
  - (5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emission control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.
  - (6) The relocation or change in ownership of an existing facility.
- (f) Special provisions set forth under an applicable subpart of this part shall supersede any conflicting provisions of this section.
- (g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.
- (h) No physical change, or change in the method of operation, at an existing electric utility steam generating unit shall be treated as a modification for the purposes of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the 5 years prior to the change.
- (i) Repowering projects that are awarded funding from the Department of Energy as permanent clean coal technology demonstration projects (or similar projects funded by EPA) are exempt from the requirements of this section provided that such change does not increase the maximum hourly emissions of any pollutant regulated under this section above the maximum hourly emissions achievable at that unit during the five years prior to the change.
- (j)
  - (1) Repowering projects that qualify for an extension under section 409(b) of the Clean Air Act are exempt from the requirements of this section, provided that such change does not increase the actual hourly emissions of any pollutant regulated under this section above the actual hourly emissions achievable at that unit during the 5 years prior to the change.
  - (2) This exemption shall not apply to any new unit that:

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- (i) Is designated as a replacement for an existing unit;
  - (ii) Qualifies under section 409(b) of the Clean Air Act for an extension of an emission limitation compliance date under section 405 of the Clean Air Act; and
  - (iii) Is located at a different site than the existing unit.
- (k) The installation, operation, cessation, or removal of a temporary clean coal technology demonstration project is exempt from the requirements of this section. *A temporary clean coal control technology demonstration project*, for the purposes of this section is a clean coal technology demonstration project that is operated for a period of 5 years or less, and which complies with the State implementation plan for the State in which the project is located and other requirements necessary to attain and maintain the national ambient air quality standards during the project and after it is terminated.
- (l) The reactivation of a very clean coal-fired electric utility steam generating unit is exempt from the requirements of this section.

[40 FR 58419, Dec. 16, 1975, as amended at 43 FR 34347, Aug. 3, 1978; 45 FR 5617, Jan. 23, 1980; 57 FR 32339, July 21, 1992; 65 FR 61750, Oct. 17, 2000]

**§ 60.15 Reconstruction.**

- (a) An existing facility, upon reconstruction, becomes an affected facility, irrespective of any change in emission rate.
- (b) “Reconstruction” means the replacement of components of an existing facility to such an extent that:
  - (1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and
  - (2) It is technologically and economically feasible to meet the applicable standards set forth in this part.
- (c) “Fixed capital cost” means the capital needed to provide all the depreciable components.
- (d) If an owner or operator of an existing facility proposes to replace components, and the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, he shall notify the Administrator of the proposed replacements. The notice must be postmarked 60 days (or as soon as practicable) before construction of the replacements is commenced and must include the following information:
  - (1) Name and address of the owner or operator.
  - (2) The location of the existing facility.
  - (3) A brief description of the existing facility and the components which are to be replaced.
  - (4) A description of the existing air pollution control equipment and the proposed air pollution control equipment.
  - (5) An estimate of the fixed capital cost of the replacements and of constructing a comparable entirely new facility.
  - (6) The estimated life of the existing facility after the replacements.
  - (7) A discussion of any economic or technical limitations the facility may have in complying with the applicable standards of performance after the proposed replacements.
- (e) The Administrator will determine, within 30 days of the receipt of the notice required by paragraph (d) of this section and any additional information he may reasonably require, whether the proposed replacement constitutes reconstruction.
- (f) The Administrator's determination under paragraph (e) shall be based on:
  - (1) The fixed capital cost of the replacements in comparison to the fixed capital cost that would be required to construct a comparable entirely new facility;
  - (2) The estimated life of the facility after the replacements compared to the life of a comparable entirely new facility;

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- (3) The extent to which the components being replaced cause or contribute to the emissions from the facility; and
- (4) Any economic or technical limitations on compliance with applicable standards of performance which are inherent in the proposed replacements.
- (g) Individual subparts of this part may include specific provisions which refine and delimit the concept of reconstruction set forth in this section.

[40 FR 58420, Dec. 16, 1975]

**§ 60.16 Priority list.**

A LIST OF PRIORITIZED MAJOR SOURCE CATEGORIES MAY BE FOUND AT THE FOLLOWING  
EPA WEB SITE: [HTTP://ECFR.GPOACCESS.GOV/CGI/T/TEXT/TEXT-  
IDX?C=ECFR&RGN=DIV6&VIEW=TEXT&NODE=40:6.0.1.1.1&IDNO=40](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&rgn=div6&view=text&node=40:6.0.1.1.1&idno=40)

[47 FR 951, Jan. 8, 1982, as amended at 47 FR 31876, July 23, 1982; 51 FR 42796, Nov. 25, 1986; 52 FR 11428, Apr. 8, 1987; 61 FR 9919, Mar. 12, 1996]

**§ 60.17 Incorporations by reference.**

The materials listed below are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register on the date listed. These materials are incorporated as they exist on the date of the approval, and a notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding address noted below, and all are available for inspection at the Library (C267– 01), U.S. EPA, Research Triangle Park, NC or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202– 741– 6030, or go to:

*[http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).*

- (a) The following materials are available for purchase from at least one of the following addresses: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, Post Office Box C700, West Conshohocken, PA 19428– 2959; or ProQuest, 300 North Zeeb Road, Ann Arbor, MI 48106.
  - (1) ASTM A99– 76, 82 (Reapproved 1987), Standard Specification for Ferromanganese, incorporation by reference (IBR) approved for §60.261.
  - (2) ASTM A100– 69, 74, 93, Standard Specification for Ferrosilicon, IBR approved for §60.261.
  - (3) ASTM A101– 73, 93, Standard Specification for Ferrochromium, IBR approved for §60.261.
  - (4) ASTM A482– 76, 93, Standard Specification for Ferrochromesilicon, IBR approved for §60.261.
  - (5) ASTM A483– 64, 74 (Reapproved 1988), Standard Specification for Silicomanganese, IBR approved for §60.261.
  - (6) ASTM A495– 76, 94, Standard Specification for Calcium-Silicon and Calcium Manganese-Silicon, IBR approved for §60.261.

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- (7) ASTM D86– 78, 82, 90, 93, 95, 96, Distillation of Petroleum Products, IBR approved for §§60.562–2(d), 60.593(d), 60.593a(d), and 60.633(h).
- (8) ASTM D129– 64, 78, 95, 00, Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §§60.106(j)(2), 60.335(b)(10)(i), and Appendix A: Method 19, 12.5.2.2.3.
- (9) ASTM D129– 00 (Reapproved 2005), Standard Test Method for Sulfur in Petroleum Products (General Bomb Method), IBR approved for §60.4415(a)(1)(i).
- (10)ASTM D240– 76, 92, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter, IBR approved for §§60.46(c), 60.296(b), and Appendix A: Method 19, Section 12.5.2.2.3.
- (11)ASTM D270– 65, 75, Standard Method of Sampling Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.1.
- (12)ASTM D323– 82, 94, Test Method for Vapor Pressure of Petroleum Products (Reid Method), IBR approved for §§60.111(l), 60.111a(g), 60.111b(g), and 60.116b(f)(2)(ii).
- (13)ASTM D388– 77, 90, 91, 95, 98a, 99 (Reapproved 2004)ε<sup>1</sup>, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.24(h)(8), 60.41 of subpart D of this part, 60.45(f)(4)(i), 60.45(f)(4)(ii), 60.45(f)(4)(vi), 60.41Da of subpart Da of this part, 60.41b of subpart Db of this part, 60.41c of subpart Dc of this part, and 60.4102.
- (14)ASTM D388– 77, 90, 91, 95, 98a, Standard Specification for Classification of Coals by Rank, IBR approved for §§60.251(b) and (c) of subpart Y of this part.
- (15)ASTM D396– 78, 89, 90, 92, 96, 98, Standard Specification for Fuel Oils, IBR approved for §§60.41b of subpart Db of this part, 60.41c of subpart Dc of this part, 60.111(b) of subpart K of this part, and 60.111a(b) of subpart Ka of this part.
- (16)ASTM D975– 78, 96, 98a, Standard Specification for Diesel Fuel Oils, IBR approved for §§60.111(b) of subpart K of this part and 60.111a(b) of subpart Ka of this part.
- (17)ASTM D1072– 80, 90 (Reapproved 1994), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.335(b)(10)(ii).
- (18)ASTM D1072– 90 (Reapproved 1999), Standard Test Method for Total Sulfur in Fuel Gases, IBR approved for §60.4415(a)(1)(ii).
- (19)ASTM D1137– 53, 75, Standard Method for Analysis of Natural Gases and Related Types of Gaseous Mixtures by the Mass Spectrometer, IBR approved for §60.45(f)(5)(i).

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- (20)ASTM D1193– 77, 91, Standard Specification for Reagent Water, IBR approved for Appendix A: Method 5, Section 7.1.3; Method 5E, Section 7.2.1; Method 5F, Section 7.2.1; Method 6, Section 7.1.1; Method 7, Section 7.1.1; Method 7C, Section 7.1.1; Method 7D, Section 7.1.1; Method 10A, Section 7.1.1; Method 11, Section 7.1.3; Method 12, Section 7.1.3; Method 13A, Section 7.1.2; Method 26, Section 7.1.2; Method 26A, Section 7.1.2; and Method 29, Section 7.2.2.
- (21)ASTM D1266– 87, 91, 98, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §§60.106(j)(2) and 60.335(b)(10)(i).
- (22)ASTM D1266– 98 (Reapproved 2003)e1, Standard Test Method for Sulfur in Petroleum Products (Lamp Method), IBR approved for §60.4415(a)(1)(i).
- (23)ASTM D1475– 60 (Reapproved 1980), 90, Standard Test Method for Density of Paint, Varnish Lacquer, and Related Products, IBR approved for §60.435(d)(1), Appendix A: Method 24, Section 6.1; and Method 24A, Sections 6.5 and 7.1.
- (24)ASTM D1552– 83, 95, 01, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §§60.106(j)(2), 60.335(b)(10)(i), and Appendix A: Method 19, Section 12.5.2.2.3.
- (25)ASTM D1552– 03, Standard Test Method for Sulfur in Petroleum Products (High-Temperature Method), IBR approved for §60.4415(a)(1)(i).
- (26)ASTM D1826– 77, 94, Standard Test Method for Calorific Value of Gases in Natural Gas Range by Continuous Recording Calorimeter, IBR approved for §§60.45(f)(5)(ii), 60.46(c)(2), 60.296(b)(3), and Appendix A: Method 19, Section 12.3.2.4.
- (27)ASTM D1835– 87, 91, 97, 03a, Standard Specification for Liquefied Petroleum (LP) Gases, IBR approved for §§60.41Da of subpart Da of this part, 60.41b of subpart Db of this part, and 60.41c of subpart Dc of this part.
- (28)ASTM D1945– 64, 76, 91, 96, Standard Method for Analysis of Natural Gas by Gas Chromatography, IBR approved for §60.45(f)(5)(i).
- (29)ASTM D1946– 77, 90 (Reapproved 1994), Standard Method for Analysis of Reformed Gas by Gas Chromatography, IBR approved for §§60.18(f)(3), 60.45(f)(5)(i), 60.564(f)(1), 60.614(e)(2)(ii), 60.614(e)(4), 60.664(e)(2)(ii), 60.664(e)(4), 60.704(d)(2)(ii), and 60.704(d)(4).
- (30)ASTM D2013– 72, 86, Standard Method of Preparing Coal Samples for Analysis, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.

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- (31)ASTM D2015– 77 (Reapproved 1978), 96, Standard Test Method for Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, IBR approved for §60.45(f)(5)(ii), 60.46(c)(2), and Appendix A: Method 19, Section 12.5.2.1.3.
- (32)ASTM D2016– 74, 83, Standard Test Methods for Moisture Content of Wood, IBR approved for Appendix A: Method 28, Section 16.1.1.
- (33)ASTM D2234– 76, 96, 97b, 98, Standard Methods for Collection of a Gross Sample of Coal, IBR approved for Appendix A: Method 19, Section 12.5.2.1.1.
- (34)ASTM D2369– 81, 87, 90, 92, 93, 95, Standard Test Method for Volatile Content of Coatings, IBR approved for Appendix A: Method 24, Section 6.2.
- (35)ASTM D2382– 76, 88, Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method), IBR approved for §§60.18(f)(3), 60.485(g)(6), 60.485a(g)(6), 60.564(f)(3), 60.614(e)(4), 60.664(e)(4), and 60.704(d)(4).
- (36)ASTM D2504– 67, 77, 88 (Reapproved 1993), Noncondensable Gases in C3 and Lighter Hydrocarbon Products by Gas Chromatography, IBR approved for §§60.485(g)(5) and 60.485a(g)(5).
- (37)ASTM D2584– 68 (Reapproved 1985), 94, Standard Test Method for Ignition Loss of Cured Reinforced Resins, IBR approved for §60.685(c)(3)(i).
- (38)ASTM D2597– 94 (Reapproved 1999), Standard Test Method for Analysis of Demethanized Hydrocarbon Liquid Mixtures Containing Nitrogen and Carbon Dioxide by Gas Chromatography, IBR approved for §60.335(b)(9)(i).
- (39)ASTM D2622– 87, 94, 98, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §§60.106(j)(2) and 60.335(b)(10)(i).
- (40)ASTM D2622– 05, Standard Test Method for Sulfur in Petroleum Products by Wavelength Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.4415(a)(1)(i).
- (41)ASTM D2879– 83, 96, 97, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope, IBR approved for §§60.111b(f)(3), 60.116b(e)(3)(ii), 60.116b(f)(2)(i), 60.485(e)(1), and 60.485a(e)(1).
- (42)ASTM D2880– 78, 96, Standard Specification for Gas Turbine Fuel Oils, IBR approved for §§60.111(b), 60.111a(b), and 60.335(d).
- (43)ASTM D2908– 74, 91, Standard Practice for Measuring Volatile Organic Matter in Water by Aqueous-Injection Gas Chromatography, IBR approved for §60.564(j).

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- (44)ASTM D2986– 71, 78, 95a, Standard Method for Evaluation of Air, Assay Media by the Monodisperse DOP (Dioctyl Phthalate) Smoke Test, IBR approved for Appendix A: Method 5, Section 7.1.1; Method 12, Section 7.1.1; and Method 13A, Section 7.1.1.2.
- (45)ASTM D3173– 73, 87, Standard Test Method for Moisture in the Analysis Sample of Coal and Coke, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
- (46)ASTM D3176– 74, 89, Standard Method for Ultimate Analysis of Coal and Coke, IBR approved for §60.45(f)(5)(i) and Appendix A: Method 19, Section 12.3.2.3.
- (47)ASTM D3177– 75, 89, Standard Test Method for Total Sulfur in the Analysis Sample of Coal and Coke, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
- (48)ASTM D3178– 73 (Reapproved 1979), 89, Standard Test Methods for Carbon and Hydrogen in the Analysis Sample of Coal and Coke, IBR approved for §60.45(f)(5)(i).
- (49)ASTM D3246– 81, 92, 96, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.335(b)(10)(ii).
- (50)ASTM D3246– 05, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, IBR approved for §60.4415(a)(1)(ii).
- (51)ASTM D3270– 73T, 80, 91, 95, Standard Test Methods for Analysis for Fluoride Content of the Atmosphere and Plant Tissues (Semiautomated Method), IBR approved for Appendix A: Method 13A, Section 16.1.
- (52)ASTM D3286– 85, 96, Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
- (53)ASTM D3370– 76, 95a, Standard Practices for Sampling Water, IBR approved for §60.564(j).
- (54)ASTM D3792– 79, 91, Standard Test Method for Water Content of Water-Reducible Paints by Direct Injection into a Gas Chromatograph, IBR approved for Appendix A: Method 24, Section 6.3.
- (55)ASTM D4017– 81, 90, 96a, Standard Test Method for Water in Paints and Paint Materials by the Karl Fischer Titration Method, IBR approved for Appendix A: Method 24, Section 6.4.
- (56)ASTM D4057– 81, 95, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.3.
- (57)ASTM D4057– 95 (Reapproved 2000), Standard Practice for Manual Sampling of Petroleum and Petroleum Products, IBR approved for §60.4415(a)(1).
- (58)ASTM D4084– 82, 94, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §60.334(h)(1).

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- (59)ASTM D4084– 05, Standard Test Method for Analysis of Hydrogen Sulfide in Gaseous Fuels (Lead Acetate Reaction Rate Method), IBR approved for §§60.4360 and 60.4415(a)(1)(ii).
- (60)ASTM D4177– 95, Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for Appendix A: Method 19, Section 12.5.2.2.1.
- (61)ASTM D4177– 95 (Reapproved 2000), Standard Practice for Automatic Sampling of Petroleum and Petroleum Products, IBR approved for §60.4415(a)(1).
- (62)ASTM D4239– 85, 94, 97, Standard Test Methods for Sulfur in the Analysis Sample of Coal and Coke Using High Temperature Tube Furnace Combustion Methods, IBR approved for Appendix A: Method 19, Section 12.5.2.1.3.
- (63)ASTM D4294– 02, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.335(b)(10)(i).
- (64)ASTM D4294– 03, Standard Test Method for Sulfur in Petroleum and Petroleum Products by Energy-Dispersive X-Ray Fluorescence Spectrometry, IBR approved for §60.4415(a)(1)(i).
- (65)ASTM D4442– 84, 92, Standard Test Methods for Direct Moisture Content Measurement in Wood and Wood-base Materials, IBR approved for Appendix A: Method 28, Section 16.1.1.
- (66)ASTM D4444– 92, Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters, IBR approved for Appendix A: Method 28, Section 16.1.1.
- (67)ASTM D4457– 85 (Reapproved 1991), Test Method for Determination of Dichloromethane and 1, 1, 1-Trichloroethane in Paints and Coatings by Direct Injection into a Gas Chromatograph, IBR approved for Appendix A: Method 24, Section 6.5.
- (68)ASTM D4468– 85 (Reapproved 2000), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, IBR approved for §§60.335(b)(10)(ii) and 60.4415(a)(1)(ii).
- (69)ASTM D4629– 02, Standard Test Method for Trace Nitrogen in Liquid Petroleum Hydrocarbons by Syringe/Inlet Oxidative Combustion and Chemiluminescence Detection, IBR approved for §§60.49b(e) and 60.335(b)(9)(i).
- (70)ASTM D4809– 95, Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method), IBR approved for §§60.18(f)(3), 60.485(g)(6), 60.485a(g)(6), 60.564(f)(3), 60.614(d)(4), 60.664(e)(4), and 60.704(d)(4).
- (71)ASTM D4810– 88 (Reapproved 1999), Standard Test Method for Hydrogen Sulfide in Natural Gas Using Length of Stain Detector Tubes, IBR approved for §§60.4360 and 60.4415(a)(1)(ii).

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- (72)ASTM D5287– 97 (Reapproved 2002), Standard Practice for Automatic Sampling of Gaseous Fuels, IBR approved for §60.4415(a)(1).
- (73)ASTM D5403– 93, Standard Test Methods for Volatile Content of Radiation Curable Materials, IBR approved for Appendix A: Method 24, Section 6.6.
- (74)ASTM D5453– 00, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for §60.335(b)(10)(i).
- (75)ASTM D5453– 05, Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence, IBR approved for §60.4415(a)(1)(i).
- (76)ASTM D5504– 01, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, IBR approved for §§60.334(h)(1) and 60.4360.
- (77)ASTM D5762– 02, Standard Test Method for Nitrogen in Petroleum and Petroleum Products by Boat-Inlet Chemiluminescence, IBR approved for §60.335(b)(9)(i).
- (78)ASTM D5865– 98, Standard Test Method for Gross Calorific Value of Coal and Coke, IBR approved for §60.45(f)(5)(ii), 60.46(c)(2), and Appendix A: Method 19, Section 12.5.2.1.3.
- (79)ASTM D6216– 98, Standard Practice for Opacity Monitor Manufacturers to Certify Conformance with Design and Performance Specifications, IBR approved for Appendix B, Performance Specification 1.
- (80)ASTM D6228– 98, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for §60.334(h)(1).
- (81)ASTM D6228– 98 (Reapproved 2003), Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection, IBR approved for §§60.4360 and 60.4415.
- (82)ASTM D6348– 03, Standard Test Method for Determination of Gaseous Compounds by Extractive Direct Interface Fourier Transform Infrared (FTIR) Spectroscopy, IBR approved for table 7 of Subpart IIII of this part and table 2 of subpart JJJJ of this part.
- (83)ASTM D6366– 99, Standard Test Method for Total Trace Nitrogen and Its Derivatives in Liquid Aromatic Hydrocarbons by Oxidative Combustion and Electrochemical Detection, IBR approved for §60.335(b)(9)(i).
- (84)ASTM D6420– 99 (Reapproved 2004) Standard Test Method for Determination of Gaseous Organic Compounds by Direct Interface Gas Chromatography-Mass Spectrometry, IBR approved for table 2 of subpart JJJJ of this part.

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- (85)ASTM D6522– 00, Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for §60.335(a).
- (86)ASTM D6522– 00 (Reapproved 2005), Standard Test Method for Determination of Nitrogen Oxides, Carbon Monoxide, and Oxygen Concentrations in Emissions from Natural Gas-Fired Reciprocating Engines, Combustion Turbines, Boilers, and Process Heaters Using Portable Analyzers, IBR approved for table 2 of subpart JJJJ of this part.
- (87)ASTM D6667– 01, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for §60.335(b)(10)(ii).
- (88)ASTM D6667– 04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, IBR approved for §60.4415(a)(1)(ii).
- (89)ASTM D6784– 02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), IBR approved for Appendix B to part 60, Performance Specification 12A, Section 8.6.2.
- (90)ASTM E168– 67, 77, 92, General Techniques of Infrared Quantitative Analysis, IBR approved for §§60.485a(d)(1), 60.593(b)(2), 60.593a(b)(2), and 60.632(f).
- (91)ASTM E169– 63, 77, 93, General Techniques of Ultraviolet Quantitative Analysis, IBR approved for §§60.485a(d)(1), 60.593(b)(2), 60.593a(b)(2), and 60.632(f).
- (92)ASTM E260– 73, 91, 96, General Gas Chromatography Procedures, IBR approved for §§60.485a(d)(1), 60.593(b)(2), 60.593a(b)(2), and 60.632(f).
- (b) The following material is available for purchase from the Association of Official Analytical Chemists, 1111 North 19th Street, Suite 210, Arlington, VA 22209.
- (1) AOAC Method 9, Official Methods of Analysis of the Association of Official Analytical Chemists, 11th edition, 1970, pp. 11– 12, IBR approved January 27, 1983 for §§60.204(b)(3), 60.214(b)(3), 60.224(b)(3), 60.234(b)(3).
- (c) The following material is available for purchase from the American Petroleum Institute, 1220 L Street NW., Washington, DC 20005.
- (1) API Publication 2517, Evaporation Loss from External Floating Roof Tanks, Second Edition, February 1980, IBR approved January 27, 1983, for §§60.111(i), 60.111a(f), 60.111a(f)(1) and 60.116b(e)(2)(i).

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- (d) The following material is available for purchase from the Technical Association of the Pulp and Paper Industry (TAPPI), Dunwoody Park, Atlanta, GA 30341.
- (1) TAPPI Method T624 os– 68, IBR approved January 27, 1983 for §60.285(d)(3).
- (e) The following material is available for purchase from the Water Pollution Control Federation (WPCF), 2626 Pennsylvania Avenue NW., Washington, DC 20037.
- (1) Method 209A, Total Residue Dried at 103– 105 °C, in Standard Methods for the Examination of Water and Wastewater, 15th Edition, 1980, IBR approved February 25, 1985 for §60.683(b).
- (f) The following material is available for purchase from the following address: Underwriter's Laboratories, Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062.
- (1) UL 103, Sixth Edition revised as of September 3, 1986, Standard for Chimneys, Factory-built, Residential Type and Building Heating Appliance.
- (g) The following material is available for purchase from the following address: West Coast Lumber Inspection Bureau, 6980 SW. Barnes Road, Portland, OR 97223.
- (1) West Coast Lumber Standard Grading Rules No. 16, pages 5– 21 and 90 and 91, September 3, 1970, revised 1984.
- (h) The following material is available for purchase from the American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016– 5990.
- (1) ASME QRO– 1– 1994, Standard for the Qualification and Certification of Resource Recovery Facility Operators, IBR approved for §§60.56a, 60.54b(a), 60.54b(b), 60.1185(a), 60.1185(c)(2), 60.1675(a), and 60.1675(c)(2).
- (2) ASME PTC 4.1– 1964 (Reaffirmed 1991), Power Test Codes: Test Code for Steam Generating Units (with 1968 and 1969 Addenda), IBR approved for §§60.46b of subpart Db of this part, 60.58a(h)(6)(ii), 60.58b(i)(6)(ii), 60.1320(a)(3) and 60.1810(a)(3).
- (3) ASME Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th Edition (1971), IBR approved for §§60.58a(h)(6)(ii), 60.58b(i)(6)(ii), 60.1320(a)(4), and 60.1810(a)(4).
- (4) ANSI/ASME PTC 19.10– 1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], IBR approved for Tables 1 and 3 of subpart EEEE, Tables 2 and 4 of subpart FFFF, Table 2 of subpart JJJJ, and §§60.4415(a)(2) and 60.4415(a)(3) of subpart KKKK of this part.
- (i) Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW– 846 Third Edition (November 1986), as amended by Updates I (July 1992), II (September 1994), IIA (August, 1993), IIB (January 1995), and III (December 1996). This document may be obtained from the U.S. EPA, Office of

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Solid Waste and Emergency Response, Waste Characterization Branch, Washington, DC 20460, and is incorporated by reference for appendix A to part 60, Method 29, Sections 7.5.34; 9.2.1; 9.2.3; 10.2; 10.3; 11.1.1; 11.1.3; 13.2.1; 13.2.2; 13.3.1; and Table 29– 3.

- (j) “ Standard Methods for the Examination of Water and Wastewater,” 16th edition, 1985. Method 303F: “ Determination of Mercury by the Cold Vapor Technique.” This document may be obtained from the American Public Health Association, 1015 18th Street, NW., Washington, DC 20036, and is incorporated by reference for appendix A to part 60, Method 29, Sections 9.2.3; 10.3; and 11.1.3.
- (k) This material is available for purchase from the American Hospital Association (AHA) Service, Inc., Post Office Box 92683, Chicago, Illinois 60675– 2683. You may inspect a copy at EPA's Air and Radiation Docket and Information Center (Docket A– 91– 61, Item IV– J– 124), Room M– 1500, 1200 Pennsylvania Ave., NW., Washington, DC.
  - (1) An Ounce of Prevention: Waste Reduction Strategies for Health Care Facilities. American Society for Health Care Environmental Services of the American Hospital Association. Chicago, Illinois. 1993. AHA Catalog No. 057007. ISBN 0– 87258– 673– 5. IBR approved for §60.35e and §60.55c.
- (l) This material is available for purchase from the National Technical Information Services, 5285 Port Royal Road, Springfield, Virginia 22161. You may inspect a copy at EPA's Air and Radiation Docket and Information Center (Docket A– 91– 61, Item IV– J– 125), Room M– 1500, 1200 Pennsylvania Ave., NW., Washington, DC.
  - (1) OMB Bulletin No. 93– 17: Revised Statistical Definitions for Metropolitan Areas. Office of Management and Budget, June 30, 1993. NTIS No. PB 93– 192– 664. IBR approved for §60.31e.
- (m) This material is available for purchase from at least one of the following addresses: The Gas Processors Association, 6526 East 60th Street, Tulsa, OK, 74145; or Information Handling Services, 15 Inverness Way East, PO Box 1154, Englewood, CO 80150– 1154. You may inspect a copy at EPA's Air and Radiation Docket and Information Center, Room B108, 1301 Constitution Ave., NW., Washington, DC 20460.
  - (1) Gas Processors Association Method 2377– 86, Test for Hydrogen Sulfide and Carbon Dioxide in Natural Gas Using Length of Stain Tubes, IBR approved for §§60.334(h)(1), 60.4360, and 60.4415(a)(1)(ii).
  - (2) [Reserved]
- (n) This material is available for purchase from IHS Inc., 15 Inverness Way East, Englewood, CO 80112.
  - (1) International Organization for Standards 8178– 4: 1996(E), Reciprocating Internal Combustion Engines—Exhaust Emission Measurement—Part 4: Test Cycles for Different Engine Applications, IBR approved for §60.4241(b).

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(2) [Reserved]

[48 FR 3735, Jan. 27, 1983]

**Editorial Note:** For Federal Register citations affecting §60.17, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

**§ 60.18 General control device and work practice requirements.**

(a) *Introduction.*

- (1) This section contains requirements for control devices used to comply with applicable subparts of 40 CFR parts 60 and 61. The requirements are placed here for administrative convenience and apply only to facilities covered by subparts referring to this section.
- (2) This section also contains requirements for an alternative work practice used to identify leaking equipment. This alternative work practice is placed here for administrative convenience and is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.

(b) *Flares.* Paragraphs (c) through (f) apply to flares.

(c)

- (1) Flares shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
- (2) Flares shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f).
- (3) An owner/operator has the choice of adhering to either the heat content specifications in paragraph (c)(3)(ii) of this section and the maximum tip velocity specifications in paragraph (c)(4) of this section, or adhering to the requirements in paragraph (c)(3)(i) of this section.

(i)

- (A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume), or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity,  $V_{\max}$ , as determined by the following equation:

$$V_{\max} = (X_{H_2} - K_1) * K_2$$

Where:

$V_{\max}$  = Maximum permitted velocity, m/sec.

$K_1$  = Constant, 6.0 volume-percent hydrogen.

$K_2$  = Constant, 3.9(m/sec)/volume-percent hydrogen.

$X_{H_2}$  = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946–77. (Incorporated by reference as specified in §60.17).

- (B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (f)(4) of this section.

- (ii) Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.

(4)

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- (i) Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) of this section.
- (ii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
- (iii) Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4), less than the velocity,  $V_{\max}$ , as determined by the method specified in paragraph (f)(5), and less than 122 m/sec (400 ft/sec) are allowed.
- (5) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{\max}$ , as determined by the method specified in paragraph (f)(6).
- (6) Flares used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.
- (d) Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices.
- (e) Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
- (f)
  - (1) Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.
  - (2) The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
  - (3) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

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where:

$H_T$  = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \text{Constant}, \frac{1}{1.740 \times 10^{-7}} \left( \frac{1}{\text{ppm}} \right) \left( \frac{\text{g mole}}{\text{scm}} \right) \left( \frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for  $\left( \frac{\text{g mole}}{\text{scm}} \right)$  is 20°C;

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$C_i$  = Concentration of sample component  $i$  in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946–77 or 90 (Reapproved 1994) (Incorporated by reference as specified in §60.17); and

$H_i$  = Net heat of combustion of sample component  $i$ , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 (incorporated by reference as specified in §60.17) if published values are not available or cannot be calculated.

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- (4) The actual exit velocity of a flare shall be determined by dividing the volumetric flowrate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D as appropriate; by the unobstructed (free) cross sectional area of the flare tip.
- (5) The maximum permitted velocity,  $V_{\max}$ , for flares complying with paragraph (c)(4)(iii) shall be determined by the following equation.

$$\text{Log}_{10}(V_{\max}) = (H_T + 28.8) / 31.7$$

$V_{\max}$  = Maximum permitted velocity, M/sec

28.8 = Constant

31.7 = Constant

$H_T$  = The net heating value as determined in paragraph (f)(3).

- (6) The maximum permitted velocity,  $V_{\max}$ , for air-assisted flares shall be determined by the following equation.

$$V_{\max} = 8.706 + 0.7084 (H_T)$$

$V_{\max}$  = Maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

$H_T$  = The net heating value as determined in paragraph (f)(3).

- (g) *Alternative work practice for monitoring equipment for leaks.* Paragraphs (g), (h), and (i) of this section apply to all equipment for which the applicable subpart requires monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor, except for closed vent systems, equipment designated as leakless, and equipment identified in the applicable subpart as having no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background. An owner or operator may use an optical gas imaging instrument instead of a 40 CFR part 60, Appendix A–7, Method 21 monitor. Requirements in the existing subparts that are specific to the Method 21 instrument do not apply under this section. All other requirements in the applicable subpart that are not addressed in paragraphs (g), (h), and (i) of this section apply to this standard. For example, equipment specification requirements, and non-Method 21 instrument recordkeeping and reporting requirements in the applicable subpart continue to apply. The terms defined in paragraphs (g)(1) through (5) of this section have meanings that are specific to the alternative work practice standard in paragraphs (g), (h), and (i) of this section.

- (1) *Applicable subpart* means the subpart in 40 CFR parts 60, 61, 63, or 65 that requires monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.
- (2) *Equipment* means pumps, valves, pressure relief valves, compressors, open-ended lines, flanges, connectors, and other equipment covered by the applicable subpart that require monitoring with a 40 CFR part 60, Appendix A–7, Method 21 monitor.
- (3) *Imaging* means making visible emissions that may otherwise be invisible to the naked eye.
- (4) *Optical gas imaging instrument* means an instrument that makes visible emissions that may otherwise be invisible to the naked eye.
- (5) *Repair* means that equipment is adjusted, or otherwise altered, in order to eliminate a leak.
- (6) *Leak* means:
- (i) Any emissions imaged by the optical gas instrument;
  - (ii) Indications of liquids dripping;
  - (iii) Indications by a sensor that a seal or barrier fluid system has failed; or

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- (iv) Screening results using a 40 CFR part 60, Appendix A–7, Method 21 monitor that exceed the leak definition in the applicable subpart to which the equipment is subject.
- (h) The alternative work practice standard for monitoring equipment for leaks is available to all subparts in 40 CFR parts 60, 61, 63, and 65 that require monitoring of equipment with a 40 CFR part 60, Appendix A–7, Method 21 monitor.
  - (1) An owner or operator of an affected source subject to CFR parts 60, 61, 63, or 65 can choose to comply with the alternative work practice requirements in paragraph (i) of this section instead of using the 40 CFR part 60, Appendix A–7, Method 21 monitor to identify leaking equipment. The owner or operator must document the equipment, process units, and facilities for which the alternative work practice will be used to identify leaks.
  - (2) Any leak detected when following the leak survey procedure in paragraph (i)(3) of this section must be identified for repair as required in the applicable subpart.
  - (3) If the alternative work practice is used to identify leaks, re-screening after an attempted repair of leaking equipment must be conducted using either the alternative work practice or the 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart to which the equipment is subject.
  - (4) The schedule for repair is as required in the applicable subpart.
  - (5) When this alternative work practice is used for detecting leaking equipment, choose one of the monitoring frequencies listed in Table 1 to subpart A of this part in lieu of the monitoring frequency specified for regulated equipment in the applicable subpart. Reduced monitoring frequencies for good performance are not applicable when using the alternative work practice.
  - (6) When this alternative work practice is used for detecting leaking equipment the following are not applicable for the equipment being monitored:
    - (i) Skip period leak detection and repair;
    - (ii) Quality improvement plans; or
    - (iii) Complying with standards for allowable percentage of valves and pumps to leak.
  - (7) When the alternative work practice is used to detect leaking equipment, the regulated equipment in paragraph (h)(1)(i) of this section must also be monitored annually using a 40 CFR part 60, Appendix A–7, Method 21 monitor at the leak definition required in the applicable subpart. The owner or operator may choose the specific monitoring period (for example, first quarter) to conduct the annual monitoring. Subsequent monitoring must be conducted every 12 months from the initial period. Owners or operators must keep records of the annual Method 21 screening results, as specified in paragraph (i)(4)(vii) of this section.
- (i) An owner or operator of an affected source who chooses to use the alternative work practice must comply with the requirements of paragraphs (i)(1) through (i)(5) of this section.
  - (1) Instrument Specifications. The optical gas imaging instrument must comply with the requirements in (i)(1)(i) and (i)(1)(ii) of this section.
    - (i) Provide the operator with an image of the potential leak points for each piece of equipment at both the detection sensitivity level and within the distance used in the daily instrument check described in paragraph (i)(2) of this section. The detection sensitivity level depends upon the frequency at which leak monitoring is to be performed.
    - (ii) Provide a date and time stamp for video records of every monitoring event.
  - (2) Daily Instrument Check. On a daily basis, and prior to beginning any leak monitoring work, test the optical gas imaging instrument at the mass flow rate determined in paragraph (i)(2)(i) of this section in accordance with the procedure specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each camera configuration used during monitoring (for example, different lenses used), unless an alternative method to demonstrate daily instrument checks has been approved in accordance with paragraph (i)(2)(v) of this section.

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- (i) Calculate the mass flow rate to be used in the daily instrument check by following the procedures in paragraphs (i)(2)(i)(A) and (i)(2)(i)(B) of this section.
  - (A) For a specified population of equipment to be imaged by the instrument, determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level.
  - (B) Multiply the standard detection sensitivity level, corresponding to the selected monitoring frequency in Table 1 of subpart A of this part, by the mass fraction of detectable chemicals from the stream identified in paragraph (i)(2)(i)(A) of this section to determine the mass flow rate to be used in the daily instrument check, using the following equation.

$$E_{dic} = (E_{sds}) \sum_{i=1}^k x_i$$

Where:

$E_{dic}$  = Mass flow rate for the daily instrument check, grams per hour

$x_i$  = Mass fraction of detectable chemical(s)  $i$  seen by the optical gas imaging instrument, within the distance to be used in paragraph (i)(2)(iv)(B) of this section, at or below the standard detection sensitivity level,  $E_{sds}$ .

$E_{sds}$  = Standard detection sensitivity level from Table 1 to subpart A, grams per hour

$k$  = Total number of detectable chemicals emitted from the leaking equipment and seen by the optical gas imaging instrument.

- (ii) Start the optical gas imaging instrument according to the manufacturer's instructions, ensuring that all appropriate settings conform to the manufacturer's instructions.
  - (iii) Use any gas chosen by the user that can be viewed by the optical gas imaging instrument and that has a purity of no less than 98 percent.
  - (iv) Establish a mass flow rate by using the following procedures:
    - (A) Provide a source of gas where it will be in the field of view of the optical gas imaging instrument.
    - (B) Set up the optical gas imaging instrument at a recorded distance from the outlet or leak orifice of the flow meter that will not be exceeded in the actual performance of the leak survey. Do not exceed the operating parameters of the flow meter.
    - (C) Open the valve on the flow meter to set a flow rate that will create a mass emission rate equal to the mass rate specified in paragraph (i)(2)(i) of this section while observing the gas flow through the optical gas imaging instrument viewfinder. When an image of the gas emission is seen through the viewfinder at the required emission rate, make a record of the reading on the flow meter.
  - (v) Repeat the procedures specified in paragraphs (i)(2)(ii) through (i)(2)(iv) of this section for each configuration of the optical gas imaging instrument used during the leak survey.
  - (vi) To use an alternative method to demonstrate daily instrument checks, apply to the Administrator for approval of the alternative under §60.13(i).
- (3) Leak Survey Procedure. Operate the optical gas imaging instrument to image every regulated piece of equipment selected for this work practice in accordance with the instrument manufacturer's operating parameters. All emissions imaged by the optical gas imaging instrument are considered to be leaks and are subject to repair. All emissions visible to the naked eye are also considered to be leaks and are subject to repair.
- (4) Recordkeeping. You must keep the records described in paragraphs (i)(4)(i) through (i)(4)(vii) of this section:

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- (i) The equipment, processes, and facilities for which the owner or operator chooses to use the alternative work practice.
  - (ii) The detection sensitivity level selected from Table 1 to subpart A of this part for the optical gas imaging instrument.
  - (iii) The analysis to determine the piece of equipment in contact with the lowest mass fraction of chemicals that are detectable, as specified in paragraph (i)(2)(i)(A) of this section.
  - (iv) The technical basis for the mass fraction of detectable chemicals used in the equation in paragraph (i)(2)(i)(B) of this section.
  - (v) The daily instrument check. Record the distance, per paragraph (i)(2)(iv)(B) of this section, and the flow meter reading, per paragraph (i)(2)(iv)(C) of this section, at which the leak was imaged. Keep a video record of the daily instrument check for each configuration of the optical gas imaging instrument used during the leak survey (for example, the daily instrument check must be conducted for each lens used). The video record must include a time and date stamp for each daily instrument check. The video record must be kept for 5 years.
  - (vi) Recordkeeping requirements in the applicable subpart. A video record must be used to document the leak survey results. The video record must include a time and date stamp for each monitoring event. A video record can be used to meet the recordkeeping requirements of the applicable subparts if each piece of regulated equipment selected for this work practice can be identified in the video record. The video record must be kept for 5 years.
  - (vii) The results of the annual Method 21 screening required in paragraph (h)(7) of this section. Records must be kept for all regulated equipment specified in paragraph (h)(1) of this section. Records must identify the equipment screened, the screening value measured by Method 21, the time and date of the screening, and calibration information required in the existing applicable subpart.
- (5) Reporting. Submit the reports required in the applicable subpart. Submit the records of the annual Method 21 screening required in paragraph (h)(7) of this section to the Administrator via e-mail to [CCG-AWP@EPA.GOV](mailto:CCG-AWP@EPA.GOV).

[51 FR 2701, Jan. 21, 1986, as amended at 63 FR 24444, May 4, 1998; 65 FR 61752, Oct. 17, 2000; 73 FR 78209, Dec. 22, 2008]

#### § 60.19 General notification and reporting requirements.

- (a) For the purposes of this part, time periods specified in days shall be measured in calendar days, even if the word “calendar” is absent, unless otherwise specified in an applicable requirement.
- (b) For the purposes of this part, if an explicit postmark deadline is not specified in an applicable requirement for the submittal of a notification, application, report, or other written communication to the Administrator, the owner or operator shall postmark the submittal on or before the number of days specified in the applicable requirement. For example, if a notification must be submitted 15 days before a particular event is scheduled to take place, the notification shall be postmarked on or before 15 days preceding the event; likewise, if a notification must be submitted 15 days after a particular event takes place, the notification shall be delivered or postmarked on or before 15 days following the end of the event. The use of reliable non-Government mail carriers that provide indications of verifiable delivery of information required to be submitted to the Administrator, similar to the postmark provided by the U.S. Postal Service, or alternative means of delivery, including the use of electronic media, agreed to by the permitting authority, is acceptable.
- (c) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
- (d) If an owner or operator of an affected facility in a State with delegated authority is required to submit periodic reports under this part to the State, and if the State has an established timeline for the submission of periodic reports that is

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consistent with the reporting frequency(ies) specified for such facility under this part, the owner or operator may change the dates by which periodic reports under this part shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. The allowance in the previous sentence applies in each State beginning 1 year after the affected facility is required to be in compliance with the applicable subpart in this part. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.

- (e) If an owner or operator supervises one or more stationary sources affected by standards set under this part and standards set under part 61, part 63, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State with an approved permit program) a common schedule on which periodic reports required by each applicable standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning 1 year after the stationary source is required to be in compliance with the applicable subpart in this part, or 1 year after the stationary source is required to be in compliance with the applicable 40 CFR part 61 or part 63 of this chapter standard, whichever is latest. Procedures governing the implementation of this provision are specified in paragraph (f) of this section.
- (f)
- (1)
- (i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (f)(2) and (f)(3) of this section, the owner or operator of an affected facility remains strictly subject to the requirements of this part.
- (ii) An owner or operator shall request the adjustment provided for in paragraphs (f)(2) and (f)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in this part.
- (2) Notwithstanding time periods or postmark deadlines specified in this part for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.
- (3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.
- (4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

[59 FR 12428, Mar. 16, 1994, as amended at 64 FR 7463, Feb. 12, 1998]

**Table 1 to Subpart A to Part 60–Detection Sensitivity Levels (grams per hour)**

Monitoring frequency per subpart <sup>a</sup>	Detection sensitivity level
Bi-Monthly	60
Semi-Quarterly	85
Monthly	100

<sup>a</sup>When this alternative work practice is used to identify leaking equipment, the owner or operator must choose one of the monitoring frequencies listed in this table in lieu of the monitoring frequency specified in the applicable subpart. Bi-monthly means every other month. Semi-quarterly means twice per quarter. Monthly means once per month.

[73 FR 78211, Dec. 22, 2008]

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## SECTION 4. APPENDIX F

### 40 CFR Part 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals

#### SUBPART XX—STANDARDS OF PERFORMANCE FOR BULK GASOLINE TERMINALS

**Source:** 48 FR 37590, Aug. 18, 1983, unless otherwise noted.

##### § 60.500 APPLICABILITY AND DESIGNATION OF AFFECTED FACILITY.

(a) The affected facility to which the provisions of this subpart apply is the total of all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks.

(b) Each facility under paragraph (a) of this section, the construction or modification of which is commenced after December 17, 1980, is subject to the provisions of this subpart.

(c) For purposes of this subpart, any replacement of components of an existing facility, described in paragraph (a) of this section, commenced before August 18, 1983 in order to comply with any emission standard adopted by a State or political subdivision thereof will not be considered a reconstruction under the provisions of 40 CFR 60.15.

**Note:** The intent of these standards is to minimize the emissions of VOC through the application of best demonstrated technologies (BDT). The numerical emission limits in this standard are expressed in terms of total organic compounds. This emission limit reflects the performance of BDT.

##### § 60.501 DEFINITIONS.

The terms used in this subpart are defined in the Clean Air Act, in §60.2 of this part, or in this section as follows:

*Bulk gasoline terminal* means any gasoline facility which receives gasoline by pipeline, ship or barge, and has a gasoline throughput greater than 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal, State or local law and discoverable by the Administrator and any other person.

*Continuous vapor processing system* means a vapor processing system that treats total organic compounds vapors collected from gasoline tank trucks on a demand basis without intermediate accumulation in a vapor holder.

*Existing vapor processing system* means a vapor processing system [capable of achieving emissions to the atmosphere no greater than 80 milligrams of total organic compounds per liter of gasoline loaded], the construction or refurbishment of which was commenced before December 17, 1980, and which was not constructed or refurbished after that date.

*Flare* means a thermal oxidation system using an open (without enclosure) flame.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater which is used as a fuel for internal combustion engines.

*Gasoline tank truck* means a delivery tank truck used at bulk gasoline terminals which is loading gasoline or which has loaded gasoline on the immediately previous load.

*Intermittent vapor processing system* means a vapor processing system that employs an intermediate vapor holder to accumulate total organic compounds vapors collected from gasoline tank trucks, and treats the accumulated vapors only during automatically controlled cycles.

*Loading rack* means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill delivery tank trucks.

*Refurbishment* means, with reference to a vapor processing system, replacement of components of, or addition of components to, the system within any 2-year period such that the fixed capital cost of the new components required for such component replacement or addition exceeds 50 percent of the cost of a comparable entirely new system.

*Thermal oxidation system* means a combustion device used to mix and ignite fuel, air pollutants, and air to provide a flame to heat and oxidize hazardous air pollutants. Auxiliary fuel may be used to heat air pollutants to combustion temperatures.

*Total organic compounds* means those compounds measured according to the procedures in §60.503.

*Vapor collection system* means any equipment used for containing total organic compounds vapors displaced during the loading of gasoline tank trucks.

*Vapor processing system* means all equipment used for recovering or oxidizing total organic compounds vapors displaced from the affected facility.

*Vapor-tight gasoline tank truck* means a gasoline tank truck which has demonstrated within the 12 preceding months that its product delivery tank will sustain a pressure change of not more than 750 pascals (75 mm of water) within 5 minutes after it is pressurized to 4,500 pascals (450 mm of water). This capability is to be demonstrated using the pressure test procedure specified in Method 27.

[48 FR 37590, Aug. 18, 1983, as amended at 65 FR 61763, Oct. 17, 2000; 68 FR 70965, Dec. 19, 2003]

## SECTION 4. APPENDIX F

### 40 CFR Part 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals

#### § 60.502 STANDARD FOR VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM BULK GASOLINE TERMINALS.

On and after the date on which §60.8(a) requires a performance test to be completed, the owner or operator of each bulk gasoline terminal containing an affected facility shall comply with the requirements of this section.

- (a) Each affected facility shall be equipped with a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading.
- (b) The emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 35 milligrams of total organic compounds per liter of gasoline loaded, except as noted in paragraph (c) of this section.
- (c) For each affected facility equipped with an existing vapor processing system, the emissions to the atmosphere from the vapor collection system due to the loading of liquid product into gasoline tank trucks are not to exceed 80 milligrams of total organic compounds per liter of gasoline loaded.
- (d) Each vapor collection system shall be designed to prevent any total organic compounds vapors collected at one loading rack from passing to another loading rack.
- (e) Loadings of liquid product into gasoline tank trucks shall be limited to vapor-tight gasoline tank trucks using the following procedures:
  - (1) The owner or operator shall obtain the vapor tightness documentation described in §60.505(b) for each gasoline tank truck which is to be loaded at the affected facility.
  - (2) The owner or operator shall require the tank identification number to be recorded as each gasoline tank truck is loaded at the affected facility.
  - (3)(i) The owner or operator shall cross-check each tank identification number obtained in paragraph (e)(2) of this section with the file of tank vapor tightness documentation within 2 weeks after the corresponding tank is loaded, unless either of the following conditions is maintained:
    - (A) If less than an average of one gasoline tank truck per month over the last 26 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed each quarter; or
    - (B) If less than an average of one gasoline tank truck per month over the last 52 weeks is loaded without vapor tightness documentation then the documentation cross-check shall be performed semiannually.
  - (ii) If either the quarterly or semiannual cross-check provided in paragraphs (e)(3)(i) (A) through (B) of this section reveals that these conditions were not maintained, the source must return to biweekly monitoring until such time as these conditions are again met.
- (4) The terminal owner or operator shall notify the owner or operator of each non-vapor-tight gasoline tank truck loaded at the affected facility within 1 week of the documentation cross-check in paragraph (e)(3) of this section.
- (5) The terminal owner or operator shall take steps assuring that the nonvapor-tight gasoline tank truck will not be reloaded at the affected facility until vapor tightness documentation for that tank is obtained.
- (6) Alternate procedures to those described in paragraphs (e)(1) through (5) of this section for limiting gasoline tank truck loadings may be used upon application to, and approval by, the Administrator.
- (f) The owner or operator shall act to assure that loadings of gasoline tank trucks at the affected facility are made only into tanks equipped with vapor collection equipment that is compatible with the terminal's vapor collection system.
- (g) The owner or operator shall act to assure that the terminal's and the tank truck's vapor collection systems are connected during each loading of a gasoline tank truck at the affected facility. Examples of actions to accomplish this include training drivers in the hookup procedures and posting visible reminder signs at the affected loading racks.
- (h) The vapor collection and liquid loading equipment shall be designed and operated to prevent gauge pressure in the delivery tank from exceeding 4,500 pascals (450 mm of water) during product loading. This level is not to be exceeded when measured by the procedures specified in §60.503(d).
- (i) No pressure-vacuum vent in the bulk gasoline terminal's vapor collection system shall begin to open at a system pressure less than 4,500 pascals (450 mm of water).
- (j) Each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline shall be inspected during the loading of gasoline tank trucks for total organic compounds liquid or vapor leaks. For purposes of this paragraph, detection methods incorporating sight, sound, or smell are acceptable. Each detection of a leak shall be recorded and the source of the leak repaired within 15 calendar days after it is detected.

[48 FR 37590, Aug. 18, 1983; 48 FR 56580, Dec. 22, 1983, as amended at 54 FR 6678, Feb. 14, 1989; 64 FR 7466, Feb. 12, 1999]

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### 40 CFR Part 60, Subpart XX – Standards of Performance for Bulk Gasoline Terminals

#### § 60.503 TEST METHODS AND PROCEDURES.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). The three-run requirement of §60.8(f) does not apply to this subpart.

(b) Immediately before the performance test required to determine compliance with §60.502 (b), (c), and (h), the owner or operator shall use Method 21 to monitor for leakage of vapor all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck is being loaded. The owner or operator shall repair all leaks with readings of 10,000 ppm (as methane) or greater before conducting the performance test.

(c) The owner or operator shall determine compliance with the standards in §60.502 (b) and (c) as follows:

(1) The performance test shall be 6 hours long during which at least 300,000 liters of gasoline is loaded. If this is not possible, the test may be continued the same day until 300,000 liters of gasoline is loaded or the test may be resumed the next day with another complete 6-hour period. In the latter case, the 300,000-liter criterion need not be met. However, as much as possible, testing should be conducted during the 6-hour period in which the highest throughput normally occurs.

(2) If the vapor processing system is intermittent in operation, the performance test shall begin at a reference vapor holder level and shall end at the same reference point. The test shall include at least two startups and shutdowns of the vapor processor. If this does not occur under automatically controlled operations, the system shall be manually controlled.

(3) The emission rate (E) of total organic compounds shall be computed using the following equation:

$$E = K \sum_{i=1}^n (V_{esi} C_{ei}) / (L 10^6)$$

where:

E=emission rate of total organic compounds, mg/liter of gasoline loaded.

$V_{esi}$ =volume of air-vapor mixture exhausted at each interval "i", scm.

$C_{ei}$ =concentration of total organic compounds at each interval "i", ppm.

L=total volume of gasoline loaded, liters.

n=number of testing intervals.

i=emission testing interval of 5 minutes.

K=density of calibration gas,  $1.83 \times 10^6$  for propane and  $2.41 \times 10^6$  for butane, mg/scm.

(4) The performance test shall be conducted in intervals of 5 minutes. For each interval "i", readings from each measurement shall be recorded, and the volume exhausted ( $V_{esi}$ ) and the corresponding average total organic compounds concentration ( $C_{ei}$ ) shall be determined. The sampling system response time shall be considered in determining the average total organic compounds concentration corresponding to the volume exhausted.

(5) The following methods shall be used to determine the volume ( $V_{esi}$ ) air-vapor mixture exhausted at each interval:

(i) Method 2B shall be used for combustion vapor processing systems.

(ii) Method 2A shall be used for all other vapor processing systems.

(6) Method 25A or 25B shall be used for determining the total organic compounds concentration ( $C_{ei}$ ) at each interval. The calibration gas shall be either propane or butane. The owner or operator may exclude the methane and ethane content in the exhaust vent by any method (e.g., Method 18) approved by the Administrator.

(7) To determine the volume (L) of gasoline dispensed during the performance test period at all loading racks whose vapor emissions are controlled by the processing system being tested, terminal records or readings from gasoline dispensing meters at each loading rack shall be used.

(d) The owner or operator shall determine compliance with the standard in §60.502(h) as follows:

(1) A pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument), capable of measuring up to 500 mm of water gauge pressure with  $\pm 2.5$  mm of water precision, shall be calibrated and installed on the terminal's vapor collection system at a pressure tap located as close as possible to the connection with the gasoline tank truck.

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(2) During the performance test, the pressure shall be recorded every 5 minutes while a gasoline truck is being loaded; the highest instantaneous pressure that occurs during each loading shall also be recorded. Every loading position must be tested at least once during the performance test.

(e) The performance test requirements of paragraph (c) of this section do not apply to flares defined in §60.501 and meeting the requirements in §60.18(b) through (f). The owner or operator shall demonstrate that the flare and associated vapor collection system is in compliance with the requirements in §§60.18(b) through (f) and 60.503(a), (b), and (d).

(f) The owner or operator shall use alternative test methods and procedures in accordance with the alternative test method provisions in §60.8(b) for flares that do not meet the requirements in §60.18(b).

[54 FR 6678, Feb. 14, 1989; 54 FR 21344, Feb. 14, 1989, as amended at 68 FR 70965, Dec. 19, 2003]

#### § 60.504 [RESERVED]

#### § 60.505 REPORTING AND RECORDKEEPING.

(a) The tank truck vapor tightness documentation required under §60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection.

(b) The documentation file for each gasoline tank truck shall be updated at least once per year to reflect current test results as determined by Method 27. This documentation shall include, as a minimum, the following information:

(1) Test title: Gasoline Delivery Tank Pressure Test—EPA Reference Method 27.

(2) Tank owner and address.

(3) Tank identification number.

(4) Testing location.

(5) Date of test.

(6) Tester name and signature.

(7) Witnessing inspector, if any: Name, signature, and affiliation.

(8) Test results: Actual pressure change in 5 minutes, mm of water (average for 2 runs).

(c) A record of each monthly leak inspection required under §60.502(j) shall be kept on file at the terminal for at least 2 years. Inspection records shall include, as a minimum, the following information:

(1) Date of inspection.

(2) Findings (may indicate no leaks discovered; or location, nature, and severity of each leak).

(3) Leak determination method.

(4) Corrective action (date each leak repaired; reasons for any repair interval in excess of 15 days).

(5) Inspector name and signature.

(d) The terminal owner or operator shall keep documentation of all notifications required under §60.502(e)(4) on file at the terminal for at least 2 years.

(e) As an alternative to keeping records at the terminal of each gasoline cargo tank test result as required in paragraphs (a), (c), and (d) of this section, an owner or operator may comply with the requirements in either paragraph (e)(1) or (2) of this section.

(1) An electronic copy of each record is instantly available at the terminal.

(i) The copy of each record in paragraph (e)(1) of this section is an exact duplicate image of the original paper record with certifying signatures.

(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(1) of this section.

(2) For facilities that utilize a terminal automation system to prevent gasoline cargo tanks that do not have valid cargo tank vapor tightness documentation from loading ( e.g., via a card lock-out system), a copy of the documentation is made available ( e.g., via facsimile) for inspection by permitting authority representatives during the course of a site visit, or within a mutually agreeable time frame.

(i) The copy of each record in paragraph (e)(2) of this section is an exact duplicate image of the original paper record with certifying signatures.

(ii) The permitting authority is notified in writing that each terminal using this alternative is in compliance with paragraph (e)(2) of this section.

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(f) The owner or operator of an affected facility shall keep records of all replacements or additions of components performed on an existing vapor processing system for at least 3 years.

[48 FR 37590, Aug. 18, 1983; 48 FR 56580, Dec. 22, 1983, as amended at 68 FR 70965, Dec. 19, 2003]

#### **§ 60.506 RECONSTRUCTION.**

For purposes of this subpart:

(a) The cost of the following frequently replaced components of the affected facility shall not be considered in calculating either the “fixed capital cost of the new components” or the “fixed capital costs that would be required to construct a comparable entirely new facility” under §60.15: pump seals, loading arm gaskets and swivels, coupler gaskets, overfill sensor couplers and cables, flexible vapor hoses, and grounding cables and connectors.

(b) Under §60.15, the “fixed capital cost of the new components” includes the fixed capital cost of all depreciable components (except components specified in §60.506(a)) which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following December 17, 1980. For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

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### 40 CFR Part 60, Subpart Y — National Emission Standards for Marine Tank Vessel Loading Operations

**Source:** 61 FR 48399, Sept. 19, 1995, unless otherwise noted.

#### § 63.560 APPLICABILITY AND DESIGNATION OF AFFECTED SOURCE.

(a) *Maximum achievable control technology (MACT) standards.* (1) The provisions of this subpart pertaining to the MACT standards in §63.562(b) and (d) of this subpart are applicable to existing and new sources with emissions of 10 or 25 tons, as that term is defined in §63.561, except as specified in paragraph (d) of this section, and are applicable to new sources with emissions less than 10 and 25 tons, as that term is defined in §63.561, except as specified in paragraph (d) of this section.

(2) Existing sources with emissions less than 10 and 25 tons are not subject to the emissions standards in §63.562(b) and (d).

(3) The recordkeeping requirements of §63.567(j)(4) and the emission estimation requirements of §63.565(l) apply to existing sources with emissions less than 10 and 25 tons.

(b) *Reasonably available control technology (RACT) standards.* (1) The provisions of this subpart pertaining to RACT standards in §63.562(c) and (d) of this subpart are applicable to sources with throughput of 10 M barrels or 200 M barrels, as that term is defined in §63.561, except as specified in paragraph (d) of this section.

(2) Sources with throughput less than 10 M barrels and 200 M barrels, as that term is defined in §63.561, are not subject to the emissions standards in §63.562(c) and (d).

(c) *General Provisions applicability.* Owners or operators of affected sources, as that term is defined in §63.561, of this subpart must comply with the requirements of subpart A of this part in accordance with the provisions for applicability of subpart A to this subpart in Table 1 of this section.

(d) *Exemptions from MACT and RACT standards.* (1) This subpart does not apply to emissions resulting from marine tank vessel loading operations, as that term is defined in §63.561, of commodities with vapor pressures less than 10.3 kilopascals (kPa) (1.5 pounds per square inch, absolute) (psia) at standard conditions, 20 °C and 760 millimeters Hg (mm Hg).

(2) The provisions of this subpart pertaining to the MACT standards in §63.562(b)(2), (3) and (4) and to the RACT standards in §63.562(c)(3) and (4) do not apply to marine tank vessel loading operations where emissions are reduced by using a vapor balancing system, as that term is defined in §63.561. The provisions pertaining to the vapor collection system, ship-to-shore compatibility, and vapor tightness of marine tank vessels in §63.562(b)(1) and (c)(2) do apply.

(3) The provisions of this subpart pertaining to the MACT standards in §63.562(b)(2), (3), and (4) do not apply to marine tank vessel loading operations that are contiguous with refinery operations at sources subject to and complying with subpart CC of this part, National Emissions Standards for Organic Hazardous Air Pollutants from Petroleum Refineries, except to the extent that any such provisions of this subpart are made applicable by subpart CC of this part.

(4) The provisions of this subpart pertaining to the MACT standards in §63.562(b) and (d) do not apply to benzene emissions from marine tank vessel loading operations that are subject to and complying with 40 CFR part 61, subpart BB, National Emissions Standards for Benzene Emissions from Benzene Transfer Operations, except that benzene emissions or other HAP emissions (i.e., nonbenzene HAP emissions) from marine tank vessel loading operations that are not subject to subpart BB are subject to the provisions of this subpart.

(5) The provisions of this subpart pertaining to the MACT standards in §63.562(b) and (d) do not apply to marine tank vessel loading operations at loading berths that only transfer liquids containing organic HAP as impurities, as that term is defined in §63.561.

(6) The provisions of this subpart do not apply to marine tank vessel loading operations at existing offshore loading terminals, as that term is defined in §63.561.

(7) The provisions of this subpart do not apply to ballasting operations, as that term is defined in §63.561.

(e) *Compliance dates—(1) MACT standards compliance dates, except the Valdez Marine Terminal (VMT) source.* (i) A new or existing source with emissions of 10 or 25 tons, except the VMT source, and a new source with emissions less than 10 and 25 tons, except the VMT source, that has an initial startup date on or before September 20, 1999 shall comply with the provisions of this subpart pertaining to the MACT standards in §63.562(b) no later than 4 years after the effective date.

(ii) A new source with emissions of 10 or 25 tons, except the VMT source, and a new source with emissions less than 10 and 25 tons, except the VMT source, that has an initial startup date after September 20, 1999 shall comply with provisions of this subpart pertaining to the MACT standards in §63.562(b) immediately upon startup.

(iii) A source with emissions less than 10 and 25 tons that increases its emissions subsequent to September 20, 1999 such that it becomes a source with emissions of 10 or 25 tons shall comply with the provisions of this subpart pertaining to the MACT standards in §63.562(b) within 3 years following the exceedance of the threshold level.

(2) *RACT standards compliance dates, except the VMT source.* (i) A source with throughput of 10 M barrels or 200 M barrels, except the VMT source, with an initial startup date on or before September 21, 1998 shall comply with §63.562(c)(1) no later than 2 years after the effective date.

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(ii) A source with throughput of 10 M barrels or 200 M barrels, except the VMT source, with an initial startup date on or before September 21, 1998 shall comply with the provisions of this subpart pertaining to the RACT standards in §63.562(c) other than §63.562(c)(1), no later than 3 years after the effective date.

(iii) A source with throughput of 10 M barrels or 200 M barrels, except the VMT source, with an initial startup date after September 21, 1998 shall comply with the provisions of this subpart pertaining to the RACT standards in §63.562(c) immediately upon startup.

(iv) A source with throughput less than 10 M barrels and 200 M barrels that increases its throughput subsequent to September 21, 1998 such that it becomes a source with throughput of 10 M barrels or 200 M barrels shall comply with the provisions of this subpart pertaining to the RACT standards in §63.562(c) within 3 years following the exceedance of the threshold levels.

(v) A source with throughput of 10 M barrels or 200 M barrels may apply for approval from the Administrator for an extension of the compliance date of up to 1 year if it can demonstrate that the additional time is necessary for installation of the control device.

(3) *MACT and RACT compliance dates for the VMT source.* The VMT source, as that term is defined in §63.561, shall comply with the provisions of this subpart pertaining to the MACT and RACT standards in §63.562(d) no later than 30 months after the effective date.

**Table 1 of §63.560—General Provisions Applicability to Subpart Y**

<b>Reference</b>	<b>Applies to affected sources in subpart Y</b>	<b>Comment</b>
63.1(a)(1)	Yes	Additional terms are defined in §63.561; when overlap between subparts A and Y occurs, subpart Y takes precedence.
63.1(a)(2)	Yes	
63.1(a)(3)	Yes	
63.1(a)(4)	Yes	Subpart Y clarifies the applicability of each paragraph in subpart A to sources subject to subpart Y in this table.
63.1(a)(5)	No	Reserved.
63.1(a)(6)	Yes	
63.1(a)(7)	Yes	
63.1(a)(8)	Yes	
63.1(a)(9)	No	Reserved.
63.1(a)(10)	Yes	
63.1(a)(11)	Yes	§63.567(a) also allows report submissions via facsimile and on electronic media.
63.1(a)(12)	Yes	
63.1(a)(13)	Yes	
63.1(a)(14)	Yes	
63.1(b)(1)	Yes	
63.1(b)(2)	Yes	
63.1(b)(3)	No	§63.560 specifies applicability.
63.1(c)(1)	Yes	Subpart Y clarifies the applicability of each paragraph in subpart A to sources subject to subpart Y in this table.

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63.1(c)(2)	Yes	Subpart Y is not applicable to area sources.
63.1(c)(3)	No	Reserved.
63.1(c)(4)	Yes	
63.1(c)(5)	No	§63.560 specifies applicability.
63.1(d)	No	Reserved.
63.1(e)	Yes	
63.2	Yes	Additional terms are defined in §63.561; when overlap between subparts A and Y occurs, subpart Y takes precedence.
63.3	Yes	Other units used in subpart Y are defined in the text of subpart Y.
63.4(a)(1)	Yes	
63.4(a)(2)	Yes	
63.4(a)(3)	Yes	
63.4(a)(4)	No	Reserved.
63.4(a)(5)	Yes	
63.4(b)	Yes	
63.4(c)	Yes	
63.5(a)	Yes	
63.5(b)(1)(i)	Yes	
63.5(b)(1)(ii)	No	
63.5(b)(2)	No	Reserved.
63.5(b)(3)	Yes	
63.5(b)(4)–(5)	No	
63.5(b)(6)	Yes	
63.5(c)	No	Reserved.
63.5(d)(1)(i)	No	See §63.566(b)(2).
63.5(d)(1)(ii)(A)(H)	Yes	
63.5(d)(1)(ii)(I)	No	Reserved.
63.5(d)(1)(ii)(J)	Yes	
63.5(d)(1)(iii)	Yes	
63.5(d)(2)–(4)	Yes	
63.5(e)	Yes	

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63.5(f)(1)(i) and (ii)	Yes	
63.5(f)(1)(iii) and (iv)	No	
63.5(f)(2)	No	See §63.566(c).
63.6(a)(1)	Yes	
63.6(a)(2)	No	§63.560 specifies applicability.
63.6(b)(1)–(5)	No	§63.560(e) specifies compliance dates for sources.
63.6(b)(6)	No	Reserved.
63.6(b)(7)	No	§63.560(e) specifies compliance dates for sources.
63.6(c)(1)	No	§63.560(e) specifies compliance dates for sources.
63.6(c)(2)	No	
63.6(c)(3)–(4)	No	Reserved.
63.6(c)(5)	No	§63.560(e) specifies compliance dates for sources.
63.6(d)	No	Reserved.
63.6(e)	No	See §63.562(e).
63.6(f)(1)	Yes	
63.6(f)(2)(i)	Yes	
63.6(f)(2)(ii)	No	
63.6(f)(2)(iii)	Yes	
63.6(f)(2)(iv)	Yes	
63.6(f)(2)(v)	No	See §63.562(e)(1).
63.6(f)(3)	Yes	
63.6(g)	Yes	
63.6(h)	No	No opacity monitoring is required under subpart Y.
63.6(i)(1)–(3)	Yes	
63.6(i)(4)(i)(A)	No	
63.6(i)(4)(i)(B)	Yes	
63.6(i)(4)(ii)	No	
63.6(i)(5)–(12)	Yes	
63.6(i)(13)	No	
63.6(i)(14)	Yes	

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63.6(i)(15)	No	Reserved.
63.6(i)(16)	Yes	
63.6(j)	Yes	
63.7(a)(1)	Yes	
63.7(a)(2)(i)–(iv)	No	See §63.563(b)(1).
63.7(a)(2)(v)	Yes	
63.7(a)(2)(vi)	No	
63.7(a)(2)(vii)–(viii)	No	Reserved.
63.7(a)(2)(ix)	No	
63.7(a)(3)	Yes	
63.7(b)	Yes	
63.7(c)(1)–(2)	Yes	The site-specific test plan must be submitted only if requested by the Administrator.
63.7(c)(3)(i)–(ii)(A)	Yes	
63.7(c)(3)(ii)(B)	No	See §63.565(m)(2).
63.7(c)(3)(iii)	Yes	
63.7(c)(4)	Yes	
63.7(d)	Yes	
63.7(e)	Yes	
63.7(f)	Yes	
63.7(g)(1)	Yes	
63.7(g)(2)	No	Reserved.
63.7(g)(3)	Yes	
63.7(h)	Yes	
63.8(a)(1)–(2)	Yes	
63.8(a)(3)	No	Reserved.
63.8(a)(4)	Yes	
63.8(b)(1)	Yes	
63.8(b)(2)	No	
63.8(b)(3)	Yes	
63.8(c)(1)(i)	Yes	

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63.8(c)(1)(ii)	No	
63.8(c)(1)(iii)	Yes	
63.8(c)(2)	Yes	
63.8(c)(3)	Yes	
63.8(c)(4)	No	See §63.564(a)(3).
63.8(c)(5)	No	
63.8(c)(6)	Yes	See also performance specifications for continuous monitoring systems §63.564(a)(4).
63.8(c)(7)(i)(A)–(B)	Yes	See also §63.564(a)(5).
63.8(c)(7)(i)(C)	No	
63.8(c)(7)(ii)	Yes	
63.8(c)(8)	No	See §63.564(a)(5).
63.8(d)	No	See §63.562(e)(2)(iv).
63.8(e)(1)–(4)	Yes	
63.8(e)(5)(i)	Yes	
63.8(e)(5)(ii)	No	
63.8(f)(1)	Yes	
63.8(f)(2)(i)–(vii)	Yes	
63.8(f)(2)(viii)	No	
63.8(f)(2)(ix)	Yes	
63.8(f)(3)–(6)	Yes	
63.8(g)	Yes	
63.9(a)(1)	Yes	
63.9(a)(2)	Yes	
63.9(a)(3)	Yes	
63.9(a)(4)	Yes	
63.9(b)(1)(i)	Yes	
63.9(b)(1)(ii)	No	See §63.567(b)(1)
63.9(b)(1)(iii)	Yes	
63.9(b)(2)	No	See §63.567(b)(2).
63.9(b)(3)	No	See §63.567(b)(3).

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63.9(b)(4)	No	See §63.567(b)(4).
63.9(b)(5)	No	See §63.567(b)(4).
63.9(c)	No	See §63.567(c).
63.9(d)	No	
63.9(e)	Yes	
63.9(f)	No	
63.9(g)(1)	Yes	
63.9(g)(2)	No	
63.9(g)(3)	Yes	
63.9(h)(1)–(3)	Yes	
63.9(h)(4)	No	Reserved.
63.9(h)(5)–(6)	Yes	
63.9(i)	Yes	
63.9(j)	Yes	
63.10(a)	Yes	
63.10(b)(1)	Yes	
63.10(b)(2)(i)	No	
63.10(b)(2) (ii)–(iii)	Yes	
63.10(b)(2)(iv)	No	
63.10(b)(2)(v)	No	
63.10(b)(2)(vi)–(xiv)	Yes	
63.10(b)(3)	No	See §63.567(j)(4).
63.10(c)(1)	Yes	
63.10(c)(2)–(4)	No	Reserved.
63.10(c)(5)	Yes	
63.10(c)(6)	No	See §63.564(a)(5).
63.10(c)(7)	No	
63.10(c)(8)	Yes	
63.10(c)(9)	No	Reserved.
63.10(c)(10)–(13)	Yes	

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63.10(c)(14)	No	See §63.562(d)(2)(iv).
63.10(c)(15)	No	
63.10(d)(1)–(2)	Yes	
63.10(d)(3)	No	See §63.567(d).
63.10(d)(4)	Yes	
63.10(d)(5)	No	
63.10(e)(1)	Yes	
63.10(e)(2)(i)	Yes	
63.10(e)(2)(ii)	No	
63.10(e)(3)(i)–(v)	No	See §63.567(e)
63.10(e)(3)(vi).	Yes	
63.10(e)(3)(vii)–(viii)	No	See §63.567(e)
63.10(e)(4)	No	
63.10(f)	Yes	
63.11	Yes	
63.12–63.15	Yes	

### § 63.561 DEFINITIONS.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act or in subpart A of this part.

*Affected source* means a source with emissions of 10 or 25 tons, a new source with emissions less than 10 and 25 tons, a new major source offshore loading terminal, a source with throughput of 10 M barrels or 200 M barrels, or the VMT source, that is subject to the emissions standards in §63.562.

*Air pollution control device* or *control device* means a combustion device or vapor recovery device.

*Ballasting operations* means the introduction of ballast water into a cargo tank of a tankship or oceangoing barge.

*Baseline operating parameter* means a minimum or maximum value of a process parameter, established for a control device during a performance test where the control device is meeting the required emissions reduction or established as the manufacturer recommended operating parameter, that, if achieved by itself or in combination with one or more other operating parameters, determines if a control device is operating properly.

*Boiler* means a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system.

*Car-seal* means a seal that is placed on a device used to change the position of a valve (e.g., from open to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

*Combustion device* means all equipment, including, but not limited to, thermal incinerators, catalytic incinerators, flares, boilers, and process heaters used for combustion or destruction of organic vapors.

*Commenced* means, with respect to construction of an air pollution control device, that an owner or operator has undertaken a continuous program of construction or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction.

*Commodity* means a distinct product that a source loads onto marine tank vessels.

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*Continuous* means, with respect to monitoring, reading and recording (either in hard copy or computer readable form) of data values measured at least once every 15 minutes.

*Crude oil* means a naturally occurring mixture consisting predominantly of hydrocarbons and/or sulfur, nitrogen, and oxygen derivatives of hydrocarbons that is removed from the earth in a liquid state or is capable of being so removed.

*Exceedance* or *Variance* means, with respect to parametric monitoring, the operating parameter of the air pollution control device that is monitored as an indication of proper operation of the control device is outside the acceptable range or limits for the baseline parameter given in §63.563(b)(4) through (9).

*Excess emissions* means, with respect to emissions monitoring, the concentration of the outlet stream of the air pollution control device is outside the acceptable range or limits for the baseline concentration given in §63.563(b)(4) through (9).

*Flow indicator* means a device that indicates whether gas flow is present in a line or vent system.

*Gasoline* means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kPa (4.0 psia) or greater, that is used as a fuel for internal combustion engines.

*Impurity* means HAP substances that are present in a commodity or that are produced in a process coincidentally with the primary product or commodity and that are 0.5 percent total HAP by weight or less. An impurity does not serve a useful purpose in the production or use of the primary product or commodity and is not isolated.

*Leak* means a reading of 10,000 parts per million volume (ppmv) or greater as methane that is determined using the test methods in Method 21, appendix A of part 60 of this chapter.

*Lightering* or *Lightering operation* means the offshore transfer of a bulk liquid cargo from one marine tank vessel to another vessel.

*Loading berth* means the loading arms, pumps, meters, shutoff valves, relief valves, and other piping and valves necessary to fill marine tank vessels. The loading berth includes those items necessary for an offshore loading terminal.

*Loading cycle* means the time period from the beginning of filling a single marine tank vessel until commodity flow to the marine tank vessel ceases.

*Maintenance allowance* means a period of time that an affected source is allowed to perform maintenance on the loading berth without controlling emissions from marine tank vessel loading operations.

*Marine tank vessel loading operation* means any operation under which a commodity is bulk loaded onto a marine tank vessel from a terminal, which may include the loading of multiple marine tank vessels during one loading operation. Marine tank vessel loading operations do not include refueling of marine tank vessels.

*Marine vessel* or *Marine tank vessel* means any tank ship or tank barge that transports liquid product such as gasoline or crude oil in bulk.

*Nonvapor-tight* means any marine tank vessel that does not pass the required vapor-tightness test.

*Offshore loading terminal* means a location that has at least one loading berth that is 0.81 km (0.5 miles) or more from the shore that is used for mooring a marine tank vessel and loading liquids from shore.

*Primary fuel* means the fuel that provides the principal heat input to the device. To be considered primary, the fuel must be able to sustain operation of the device without the addition of other fuels.

*Process heater* means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

*Recovery device* means an individual unit of equipment, including, but not limited to, a carbon adsorber, condenser/refrigeration unit, or absorber that is capable of and used for the purpose of removing vapors and recovering liquids or chemicals.

*Routine loading* means, with respect to the VMT source, marine tank vessel loading operations that occur as part of normal facility operation over a loading berth when no loading berths are inoperable due to maintenance.

*Secondary fuel* means any fuel other than the primary fuel. The secondary fuel provides supplementary heat in addition to the heat provided by the primary fuel and is generally fired through a burner other than the primary burner.

*Source(s)* means any location where at least one dock or loading berth is bulk loading onto marine tank vessels, except offshore drilling platforms and lightering operations.

*Source(s) with emissions less than 10 and 25 tons* means major source(s) having aggregate actual HAP emissions from marine tank vessel loading operations at all loading berths as follows:

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(1) Prior to the compliance date, of less than 9.1 Mg (10 tons) of each individual HAP calculated on a 24-month annual average basis after September 19, 1997 and less than 22.7 Mg (25 tons) of all HAP combined calculated on a 24-month annual average basis after September 19, 1997, as determined by emission estimation in §63.565(l) of this subpart; and

(2) After the compliance date, of less than 9.1 Mg (10 tons) of each individual HAP calculated annually after September 20, 1999 and less than 22.7 Mg (25 tons) of all HAP combined calculated annually after September 20, 1999, as determined by emission estimation in §63.565(l) of this subpart.

*Source(s) with emissions of 10 or 25 tons* means major source(s) having aggregate actual HAP emissions from marine tank vessels loading operations at all loading berths as follows:

(1) Prior to the compliance date, emissions of 9.1 Mg (10 tons) or more of each individual HAP calculated on a 24-month annual average basis after September 19, 1997 or of 22.7 Mg (25 tons) or more of all HAP combined calculated on a 24-month annual average basis after September 19, 1997, as determined by emission estimation in §63.565(l); or

(2) After the compliance date, emissions of 9.1 Mg (10 tons) or more of each individual HAP calculated annually after September 20, 1999 or of 22.7 Mg (25 tons) or more of all HAP combined calculated annually after September 20, 1999, as determined by emission estimation in §63.565(l).

*Source(s) with throughput less than 10 M barrels and 200 M barrels* means source(s) having aggregate loading from marine tank vessel loading operations at all loading berths as follows:

(1) Prior to the compliance date, of less than 1.6 billion liters (10 million (M) barrels) of gasoline on a 24-month annual average basis and of less than 32 billion liters (200 M barrels) of crude oil on a 24-month annual average basis after September 19, 1996; and

(2) After the compliance date, of less than 1.6 billion liters (10 M barrels) of gasoline annually and of less than 32 billion liters (200 M barrels) of crude oil annually after September 21, 1998.

*Source(s) with throughput of 10 M barrels or 200 M barrels* means source(s) having aggregate loading from marine tank vessel loading operations at all loading berths as follows:

(1) Prior to the compliance date, of 1.6 billion liters (10 M barrels) or more of gasoline on a 24-month annual average basis or of 32 billion liters (200 M barrels) or more of crude oil on a 24-month annual average basis after September 19, 1996; or

(2) After the compliance date, of 1.6 billion liters (10 M barrels) or more of gasoline annually or of 32 billion liters (200 M barrels) or more of crude oil annually after September 21, 1998.

*Terminal* means all loading berths at any land or sea based structure(s) that loads liquids in bulk onto marine tank vessels.

*Twenty-four-month (24-month) annual average basis* means annual HAP emissions, with respect to MACT standards, or annual loading throughput, with respect to RACT standards, from marine tank vessel loading operations averaged over a 24-month period.

*Valdez Marine Terminal (VMT) source* means the major source that is permitted under the Trans-Alaska Pipeline Authorization Act (TAPAA) (43 U.S.C. §1651 et seq.). The source is located in Valdez, Alaska in Prince William Sound.

*Vapor balancing system* means a vapor collection system or piping system that is designed to collect organic HAP vapors displaced from marine tank vessels during marine tank vessel loading operations and that is designed to route the collected organic HAP vapors to the storage vessel from which the liquid being loaded originated or to compress collected organic HAP vapors and commingle with the raw feed of a process unit.

*Vapor collection system* means any equipment located at the source, i.e., at the terminal, that is not open to the atmosphere, that is composed of piping, connections, and flow inducing devices, and that is used for containing and transporting vapors displaced during the loading of marine tank vessels to a control device or for vapor balancing. This does not include the vapor collection system that is part of any marine vessel vapor collection manifold system.

*Vapor-tight marine vessel* means a marine tank vessel that has demonstrated within the preceding 12 months to have no leaks. A marine tank vessel loaded at less than atmospheric pressure is assumed to be vapor tight for the purpose of this standard.

*Volatile organic compounds* or VOC is as defined in 40 CFR 51.100(s) of this chapter.

## § 63.562 STANDARDS.

(a) The emissions limitations in paragraphs (b), (c), and (d) of this section apply during marine tank vessel loading operations.

(b) *MACT standards, except for the VMT source*—(1)(i) *Vapor collection system of the terminal.* The owner or operator of a new source with emissions less than 10 and 25 tons and an existing or new source with emissions of 10 or 25 tons shall equip each terminal with a vapor collection system that is designed to collect HAP vapors displaced from marine tank vessels during marine tank vessel loading operations and to prevent HAP vapors collected at one loading berth from passing through another loading berth to the atmosphere, except for those commodities exempted under §63.560(d).

(ii) *Ship-to-shore compatibility.* The owner or operator of a new source with emissions less than 10 and 25 tons and an existing or new source with emissions of 10 or 25 tons shall limit marine tank vessel loading operations to those vessels that are equipped with vapor collection equipment that is compatible with the terminal's vapor collection system, except for those commodities exempted under §63.560(d).

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(iii) *Vapor tightness of marine vessels.* The owner or operator of a new source with emissions less than 10 and 25 tons and an existing or new source with emissions of 10 or 25 tons shall limit marine tank vessel loading operations to those vessels that are vapor tight and to those vessels that are connected to the vapor collection system, except for those commodities exempted under §63.560(d).

(2) *MACT standards for existing sources with emissions of 10 or 25 tons.* The owner or operator of an existing source with emissions of 10 or 25 tons, except offshore loading terminals and the VMT source, shall reduce captured HAP emissions from marine tank vessel loading operations by 97 weight-percent, as determined using methods in §63.565 (d) and (l).

(3) *MACT standards for new sources.* The owner or operator of a new source with emissions less than 10 and 25 tons or a new source with emissions of 10 or 25 tons, except offshore loading terminals and the VMT source, shall reduce HAP emissions from marine tank vessel loading operations by 98 weight-percent, as determined using methods in §63.565 (d) and (l).

(4) *MACT standards for new major source offshore loading terminals.* The owner or operator of a new major source offshore loading terminal shall reduce HAP emissions from marine tank vessel loading operations by 95 weight-percent, as determined using methods in §63.565 (d) and (l).

(5) *Prevention of carbon adsorber emissions during regeneration.* The owner or operator of a source subject to paragraph (b)(2), (3), or (4) shall prevent HAP emissions from escaping to the atmosphere from the regeneration of the carbon bed when using a carbon adsorber to control HAP emissions from marine tank vessel loading operations.

(6) *Maintenance allowance for loading berths.* The owner or operator of a source subject to paragraph (b)(2), (3) or (4), may apply for approval to the Administrator for a maintenance allowance for loading berths based on a percent of annual throughput or annual marine tank vessel loading operation time for commodities not exempted in §63.560(d). The owner or operator shall maintain records for all maintenance performed on the air pollution control equipment. The Administrator will consider the following in approving the maintenance allowance:

(i) The owner or operator expects to be in violation of the emissions standards due to maintenance;

(ii) Due to conditions beyond the reasonable control of the owner or operator, compliance with the emissions standards during maintenance would result in unreasonable economic hardship;

(iii) The economic hardship cannot be justified by the resulting air quality benefit;

(iv) The owner or operator has given due consideration to curtailing marine vessel loading operations during maintenance;

(v) During the maintenance allowance, the owner or operator will endeavor to reduce emissions from other loading berths that are controlled as well as from the loading berth the owner or operator is seeking the maintenance allowance; and

(vi) During the maintenance allowance, the owner or operator will monitor and report emissions from the loading berth to which the maintenance allowance applies.

(c) *RACT standards, except the VMT source*—(1) *Commencement of construction.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels, except the VMT source, with an initial startup date on or before September 21, 1998 shall provide the Agency no later than 2 years after the effective date with proof that it has commenced construction of its vapor collection system and air pollution control device.

(2)(i) *Vapor collection system of the terminal.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels shall equip each terminal with a vapor collection system that is designed to collect VOC vapors displaced from marine tank vessels during loading and to prevent VOC vapors collected at one loading berth from passing through another loading berth to the atmosphere, except for those commodities exempted under §63.560(d).

(ii) *Ship-to-shore compatibility.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels shall limit marine tank vessel loading operations to those vessels that are equipped with vapor collection equipment that is compatible with the terminal's vapor collection system, except for those commodities exempted under §63.560(d).

(iii) *Vapor tightness of marine vessels.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels shall limit marine tank vessel loading operations to those vessels that are vapor-tight and to those vessels that are connected to the vapor collection system, except for those commodities exempted under §63.560(d).

(3) *RACT standard for sources with throughput of 10 M or 200 M barrels, except the VMT source.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels, except the VMT source, shall reduce captured VOC emissions from marine tank vessel loading operations by 98 weight-percent when using a combustion device or reduce captured VOC emissions by 95 weight-percent when using a recovery device, as determined using methods in §63.565(d) and (l).

(4) The owner or operator of a source with throughput of 10 M barrels or 200 M barrels, except the VMT source, may meet the requirements of paragraph (c)(3) by reducing gasoline loading emissions to, at most, 1,000 ppmv outlet VOC concentration.

(5) *Prevention of carbon adsorber emissions during regeneration.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels shall prevent HAP emissions from escaping to the atmosphere from the regeneration of the carbon bed when using a carbon adsorber to control HAP emissions from marine tank vessel loading operations.

(6) *Maintenance allowance for loading berths.* The owner or operator of a source with throughput of 10 M barrels or 200 M barrels may apply for approval to the Administrator for a maintenance allowance for loading berths based on a percent of annual throughput or annual marine tank vessel

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loading operation time for commodities not exempted in §63.560(d). The owner or operator shall maintain records for all maintenance performed on the air pollution control equipment. The Administrator will consider the following in approving the maintenance allowance:

- (i) The owner or operator expects to be in violation of the emissions standards due to maintenance;
  - (ii) Due to conditions beyond the reasonable control of the owner or operator, compliance with the emissions standards during maintenance would result in unreasonable economic hardship;
  - (iii) The economic hardship cannot be justified by the resulting air quality benefit;
  - (iv) The owner or operator has given due consideration to curtailing marine vessel loading operations during maintenance;
  - (v) During the maintenance allowance, the owner or operator will endeavor to reduce emissions from other loading berths that are controlled as well as from the loading berth the owner or operator is seeking the maintenance allowance; and
  - (vi) During the maintenance allowance, the owner or operator will monitor and report emissions from the loading berth to which the maintenance allowance applies.
- (d) *MACT and RACT standards for the VMT source* —(1)(i) *Vapor collection system of the terminal.* The owner or operator of the VMT source shall equip each terminal subject under paragraph (d)(2) with a vapor collection system that is designed to collect HAP vapors displaced from marine tank vessels during marine tank vessel loading operations and to prevent HAP vapors collected at one loading berth from passing through another loading berth to the atmosphere, except for those commodities exempted under §63.560(d).
- (ii) *Ship-to-shore compatibility.* The owner or operator of the VMT source shall limit marine tank vessel loading operations at berths subject under paragraph (d)(2) of this section to those vessels that are equipped with vapor collection equipment that is compatible with the terminal's vapor collection system, except for those commodities exempted under §63.560(d).
- (iii) *Vapor tightness of marine vessels.* The owner or operator of the VMT source shall limit marine tank vessel loading operations at berths subject under paragraph (d)(2) of this section to those vessels that are vapor-tight and to those vessels that are connected to the vapor collection system, except for those commodities exempted under §63.560(d).

(2) The owner or operator of the VMT source shall reduce captured HAP and VOC emissions by 98 weight-percent, as determined using methods in §63.565(d) and (l) for loading berths subject under this paragraph according to paragraphs (d)(2)(i), (ii), (iii), and (iv):

(i) The owner or operator of the VMT source shall equip at least two loading berths and any additional berths indicated pursuant to paragraph (d)(2)(iii) with a vapor collection system and air pollution control device and shall load marine tank vessels over loading berths equipped with a vapor collection system and control device to the maximum extent practicable. The owner or operator shall equip all loading berths that will be used for routine loading after March 19, 1998 with a vapor collection system and control device if the annual average daily loading rate for all loading berths exceeds the limits in paragraphs (d)(2)(i)(A), (B), and (C) of this section.

(A) For 1995, 1,630,000 barrels per day; and

(B) For 1996, 1,546,000 barrels per day; and

(C) For 1997, 1,445,000 barrels per day.

(ii) Maximum extent practicable means that the total annual average daily loading over all loading berths not equipped with a vapor collection system and control device shall not exceed the totals in paragraphs (d)(2)(ii)(A) and (B):

(A) *Loading allowances for marine tank vessel loading operations at loading berths not equipped with control devices.* The following maximum annual average daily loading rate for routine loading at loading berths not equipped with control devices in any of the following years shall not exceed:

( 1 ) For 1998, 275,000 barrels per day;

( 2 ) For 1999, 205,000 barrels per day;

( 3 ) For 2000, 118,000 barrels per day;

( 4 ) For 2001, 39,000 barrels per day; and

( 5 ) For 2002 and subsequent years, no marine tank vessel loading operations shall be performed at berths not equipped with a vapor collection system and control device, except as allowed for maintenance under paragraph (B).

(B) *Maintenance allowances for loading berths subject under paragraph (d)(2)(i).* Beginning in the year 2000, the owner or operator of the VMT source may have a maximum of 40 calendar days per calendar year use of loading berths not equipped with a vapor collection system and control device, in accordance with the limits in paragraph (d)(2)(ii)(B)( a ), ( b ), or ( c ), to allow for maintenance of loading berths subject to paragraph (d)(2)(i). Beginning in the year 2002, the total annual average daily loading of crude oil over all loading berths not equipped with a vapor collection system and control device shall not exceed the amount stated in paragraph (d)(2)(ii)(B)( b ). The 40 days allowed for maintenance shall be converted

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into a compliance measure of annual average daily loading over the loading berths not equipped with a vapor collection system and control device as follows:

( 1 ) If the total annual average daily volume of crude oil loaded at the facility was greater than or equal to 1,100,000 barrels per day in the prior calendar year, the maintenance allowance shall not exceed an annual average daily loading of 60,000 barrels per day.

( 2 ) If the total annual average daily volume of crude oil loaded at the facility was less than 1,100,000 barrels per day and greater than or equal to 550,000 barrels per day in the prior calendar year, the maintenance allowance for the calendar year shall not exceed  $Q_m$ :

$$Q_m = \frac{(P - 550,000) \times 40}{365}$$

Where:

$Q_m$  = maintenance allowance, barrels per day

P = prior calendar year's average daily volume of crude oil loaded at the facility, barrels per day.

( 3 ) If the total annual average daily volume of crude oil loaded at the facility was less than 550,000 barrels per day in the prior calendar year, there shall be no maintenance allowance.

(iii) If the average daily loading rate for the loading berths not equipped with a vapor collection system and control device is greater than the combined amounts in any year listed in paragraphs (d)(2)(i)(A), (B), and (C) and (d)(2)(ii)(A) and (B), then the owner or operator of the VMT source shall equip all loading berths used for routine loading with a vapor collection system and control device within 2 years of the exceedance except that in an emergency situation the Administrator may, instead of requiring controls, approve an alternative plan to reduce loading over the unequipped berth(s) to a level which will ensure compliance with the applicable limit. Beginning in the year 2002, the owner or operator of the VMT source shall equip all uncontrolled loading berths used for marine tank vessel loading operations beyond the maintenance allowance in paragraph (d)(2)(ii)(B) with a vapor collection system and control device.

(iv) The owner or operator of the VMT source shall develop a program to communicate to relevant facility operations and marine transportation personnel and engage their active and consistent participation in honoring the intent and goal of minimizing loaded volumes over the unequipped berths and maximizing the loaded volumes at the berths equipped with a vapor collection system and control device to prevent exceedance of the load volume limits in paragraphs (d)(2)(ii)(A) and (B). This program is to be presented semi-annually during the first year of compliance and annually thereafter until the use of unequipped berths for routine loading is no longer required.

(e) *Operation and maintenance requirements for air pollution control equipment and monitoring equipment for affected sources.* At all times, including periods of startup, shutdown, and malfunction, owners or operators of affected sources shall operate and maintain a source, including associated air pollution control equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(1) The Administrator will determine compliance with design, equipment, work practice, or operational emission standards by evaluating an owner or operator's conformance with operation and maintenance requirements.

(2) The owner or operator of an affected source shall develop a written operation and maintenance plan that describes in detail a program of corrective action for varying (i.e., exceeding baseline parameters) air pollution control equipment and monitoring equipment, based on monitoring requirements in §63.564, used to comply with these emissions standards. The plan shall also identify all routine or otherwise predictable continuous monitoring system (thermocouples, pressure transducers, continuous emissions monitors (CEMS), etc.) variances.

(i) The plan shall specify procedures (preventive maintenance) to be followed to ensure that pollution control equipment and monitoring equipment functions properly and variances of the control equipment and monitoring equipment are minimal.

(ii) The plan shall identify all operating parameters to be monitored and recorded for the air pollution control device as indicators of proper operation and shall establish the frequency at which the parameters will be monitored (see §63.564).

(iii) Owners or operators of affected sources shall incorporate a standardized inspection schedule for each component of the control device used to comply with the emissions standards in §63.562(b), (c), and (d). To satisfy the requirements of this paragraph, the owner or operator may use the inspection schedule recommended by the vendor of the control system or any other technical publication regarding the operation of the control system.

(iv) Owners or operators shall develop and implement a continuous monitoring system (CMS) quality control program. The owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in §63.8(e) of subpart A of this part. Each quality control program shall include, at a minimum, a written protocol that describes procedures for initial and any subsequent calibration of the CMS; determination and adjustment of the calibration drift of the CMS; preventive maintenance of the CMS, including spare parts inventory; data recording, calculations, and reporting; and accuracy audit procedures, including sampling and analysis methods. The owner or operation shall maintain records of the procedures that are part of the quality control program developed and implemented for CMS.

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(3) Based on the results of the determination made under paragraph (e)(2), the Administrator may require that an owner or operator of an affected source make changes to the operation and maintenance plan for that source. Revisions may be required if the plan:

- (i) Does not address a variance of the air pollution control equipment or monitoring equipment that has occurred that increases emissions;
- (ii) Fails to provide for operation during a variance of the air pollution control equipment or the monitoring equipment in a manner consistent with safety and good air pollution control practices; or
- (iii) Does not provide adequate procedures for correcting a variance of the air pollution control equipment or monitoring equipment as soon as reasonable.

(4) If the operation and maintenance plan fails to address or inadequately addresses a variance event at the time the plan was initially developed, the owner or operator shall revise the operation and maintenance plan within 45 working days after such an event occurs. The revised plan shall include procedures for operating and maintaining the air pollution control equipment or monitoring equipment during similar variance events and a program for corrective action for such events.

(5) The operation and maintenance plan shall be developed by the source's compliance date. The owner or operator shall keep the written operation and maintenance plan on record to be made available for inspection, upon request, by the Administrator for the life of the source. In addition, if the operation and maintenance plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the plan on record to be made available for inspection upon request by the Administrator for a period of 5 years after each revision to the plan.

(6) To satisfy the requirements of the operation and maintenance plan, the owner or operator may use the source's standard operating procedures (SOP) manual, an Occupational Safety and Health Administration (OSHA) plan, or other existing plans provided the alternative plans meet the requirements of this section and are made available for inspection when requested by the Administrator.

[61 FR 48399, Sept. 19, 1995, as amended at 68 FR 37350, June 23, 2003; 71 FR 20457, Apr. 20, 2006]

#### § 63.563 COMPLIANCE AND PERFORMANCE TESTING.

(a) The following procedures shall be used to determine compliance with the emissions limits under §63.562(b)(1), (c)(2), and (d)(1):

(1) *Vent stream by-pass requirements for the terminal's vapor collection system.* (i) In accordance with §63.562(b)(1)(i), (c)(2)(i), and (d)(1)(i), each valve in the terminal's vapor collection system that would route displaced vapors to the atmosphere, either directly or indirectly, shall be secured closed during marine tank vessel loading operations either by using a car-seal or a lock-and-key type configuration, or the by-pass line from the valve shall be equipped with a flow indicator, except for those valves used for pressure/vacuum relief, analyzers, instrumentation devices, sampling, and venting for maintenance. Marine tank vessel loading operations shall not be performed with open by-pass lines.

(ii) Repairs shall be made to valves, car-seals, or closure mechanisms no later than 15 days after a change in the position of the valve or a break in the car-seal or closure mechanism is detected or no later than prior to the next marine tank vessel loading operation, whichever is later.

(2) *Ship-to-shore compatibility of vapor collection systems.* Following the date on which the initial performance test is completed, marine tank vessel loading operations must be performed only if the marine tank vessel's vapor collection equipment is compatible to the terminal's vapor collection system; marine tank vessel loading operations must be performed only when the marine tank vessel's vapor collection equipment is connected to the terminal's vapor collection system, as required in §63.562(b)(1)(ii), (c)(2)(ii), and (d)(1)(ii).

(3) *Pressure/vacuum settings for the marine tank vessel's vapor collection equipment.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator of an affected source shall demonstrate compliance with operating pressure requirements of 33 CFR 154.814 using the procedures in §63.565(b).

(4) *Vapor-tightness requirements of the marine vessel.* The owner or operator of an affected source shall use the procedures in paragraph (a)(4)(i), (ii), (iii), or (iv) of this section to ensure that marine tank vessels are vapor tight, as required in §63.562(b)(1)(iii), (c)(2)(iii), and (d)(1)(iii).

(i) *Pressure test documentation for determining vapor tightness of the marine vessel.* The owner or operator of a marine tank vessel, who loads commodities containing HAP not determined to be exempt under §63.560(d) at an affected source, shall provide a copy of the vapor-tightness pressure test documentation described in §63.567(i) for each marine tank vessel prior to loading. The date of the test listed in the documentation must be within the preceding 12 months, and the test must be conducted in accordance with the procedures in §63.565(c)(1). Following the date on which the initial performance test is completed, the affected source must check vapor-tightness pressure test documentation for marine tank vessels loaded at positive pressure.

(ii) *Leak test documentation for determining vapor tightness of the marine vessel.* If no documentation of the vapor tightness pressure test as described in paragraph (a)(4)(i) of this section is available, the owner or operator of a marine tank vessel, who loads commodities containing HAP not determined to be exempt under §63.560(d) at an affected source, shall provide the leak test documentation described in §63.567(i) for each marine tank vessel prior to loading. The date of the test listed in the documentation must be within the preceding 12 months, and the test must be conducted in accordance with the procedures in §63.565(c)(2). If the marine tank vessel has failed its most recent vapor-tightness leak test at that terminal, the owner or operator of the non-vapor-tight marine tank vessel shall provide documentation that the leaks detected during the previous vapor-tightness test have been repaired and documented with a successful vapor-tightness leak test described in §63.565(c)(2) conducted during loading. If the owner or operator of the marine tank vessel can document that repair is technically infeasible without cleaning and gas freeing or dry-docking the vessel, the owner or operator of the affected source may load the marine tank vessel. Following the date on which the initial performance test is completed, an affected source must check the vapor-tightness leak test documentation for marine tank vessels loaded at positive pressure.

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(iii) *Leak test performed during loading using Method 21 for determining vapor tightness of the marine vessel.* If no documentation of vapor tightness as described in paragraphs (a)(4)(i) or (ii) of this section is available, the owner or operator of a marine tank vessel, who loads commodities containing HAP not determined to be exempt under §63.560(d) at an affected source, shall perform a leak test of the marine tank vessel during marine tank vessel loading operation using the procedures described in §63.565(c)(2).

(A) If no leak is detected, the owner or operator of a marine tank vessel shall complete the documentation described in §63.567(i) prior to departure of the vessel.

(B) If a leak is detected, the owner or operator of the marine tank vessel shall document the vapor-tightness failure for the marine tank vessel prior to departure of the vessel. The leaking component shall be repaired prior to the next marine tank vessel loading operation at a controlled terminal unless the repair is technically infeasible without cleaning and gas freeing or dry-docking the vessel. If the owner or operator of the vessel provides documentation that repair of such equipment is technically infeasible without cleaning and gas freeing or dry-docking the vessel, the equipment responsible for the leak will be excluded from future Method 21 tests until repairs are effected. A copy of this documentation shall be maintained by the owner or operator of the affected source. Repair of the equipment responsible for the leak shall occur the next time the vessel is cleaned and gas freed or dry-docked. For repairs that are technically feasible without dry-docking the vessel, the owner or operator of the affected source shall not load the vessel again unless the marine tank vessel owner or operator can document that the equipment responsible for the leak has been repaired.

(iv) *Negative pressure loading.* The owner or operator of an affected source shall ensure that a marine tank vessel is loaded with the product tank below atmospheric pressure (i.e., at negative gauge pressure). The pressure shall be measured between the facility's vapor connection and its manual isolation valve, and the measured pressure must be below atmospheric pressure. Following the date on which the initial performance test is completed, marine tank vessel loading operations for nonvapor-tight vessels must be performed below atmospheric pressure (i.e., at negative gauge pressure) in the product tank.

(b) *Compliance determination for affected sources.* The following procedures shall be used to determine compliance with the emissions limits under §63.562(b), (c), and (d).

(1) *Initial performance test.* An initial performance test shall be conducted using the procedures listed in §63.7 of subpart A of this part according to the applicability in Table 1 of §63.560, the procedures listed in this section, and the test methods listed in §63.565. The initial performance test shall be conducted within 180 days after the compliance date for the specific affected source. During this performance test, sources subject to MACT standards under §63.562(b)(2), (3), (4), and (5) and (d)(2) shall determine the reduction of HAP emissions, as VOC, for all combustion or recovery devices other than flares. Sources subject to RACT standards under §63.562(c)(3), (4), and (5) and (d)(2) shall determine the reduction of VOC emissions for all combustion or recovery devices other than flares.

(2) *Performance test exemptions.* An initial performance test required in this section and in §63.565(d) and the continuous monitoring in §63.564(e) is not required in the following cases:

(i) When a boiler or process heater with a design heat input capacity of 44 Megawatts or less is used to comply with §63.562(b)(2), (3), or (4), (c)(3) or (4), or (d)(2) and the vent stream is used as the primary fuel or with the primary fuel;

(ii) When a boiler or process heater with a design heat input capacity of 44 Megawatts or greater is used to comply with §63.562(b)(2), (3) or (4), (c)(3) or (4), or (d)(2); or

(iii) When a boiler subject to 40 CFR part 266, subpart H, "Hazardous Waste Burned in Industrial Furnaces," that has demonstrated 99.99 percent destruction or recovery efficiency is used to comply with §63.562(b)(2), (3), or (4), (c)(3) or (4), or (d)(2).

(3) *Operation and maintenance inspections.* If the 3-hour or 3-cycle block average operating parameters in paragraphs (b)(4) through (9) of this section, outside the acceptable operating ranges, are measured and recorded, i.e., variances of the pollution control device or monitoring equipment, the owner or operator of the affected source shall perform an unscheduled inspection of the control device and monitoring equipment and review of the parameter monitoring data. The owner or operator of the affected source shall perform an inspection and review when total parameter variance time for the control device is greater than 10 percent of the operating time for marine tank vessel loading operations on a 30-day, rolling-average basis. The inspection and review shall be conducted within 24 hours after passing the allowable variance time of 10 percent. The inspection checklist from the requirements of §63.562(e)(2)(iii) and the monitoring data from requirements in §63.562(e)(2)(ii) and 63.564 should be used to identify any maintenance problems that may be associated with the variance. The unscheduled inspection should encompass all components of the control device and monitoring equipment that can be inspected while in operation. If any maintenance problem is identified during the inspection, the owner or operator of the affected source must take corrective action (e.g., adjustments to operating controls, etc.) as soon as practicable. If no immediate maintenance problems are identified from the inspection performed while the equipment is operating, a complete inspection in accordance with §63.562(e)(2) must be conducted prior to the next marine tank vessel loading operation and corrective action (e.g., replacement of defective parts) must be taken as soon as practicable for any maintenance problem identified during the complete inspection.

(4) *Combustion device, except flare.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall determine the efficiency of and/or the outlet VOC concentration from the combustion device used to comply with §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2) using the test methods in §63.565(d). The owner or operator shall comply with paragraph (b)(4)(i) or (ii) of this section.

(i) *Outlet VOC concentration limit for required percent combustion efficiency.* The owner or operator shall establish as an operating parameter the baseline VOC concentration using the procedures described in §63.565(g). Following the date on which the initial performance test is completed, the facility shall be operated with a block average outlet VOC concentration as determined in §63.564(e)(1) no more than 20 percent above the baseline VOC concentration.

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(ii) *Baseline temperature for required percent combustion efficiency.* The owner or operator shall establish as an operating parameter the baseline temperature using the procedures described in §63.565(f). Following the date on which the initial performance test is completed, the facility shall be operated with the block average temperature as determined in §63.564(e)(2) or (3) no more than 28 °C (50 °F) below the baseline temperature.

(5) *Flare.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall establish that the flare used to comply with the emissions standards in §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2) is in compliance with the design requirements for flares cited in §63.565(e). Following the date on which the initial determination of compliance is established, the facility shall operate with the presence of a pilot flame in the flare, as determined in §63.564(f).

(6) *Carbon adsorber.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall determine the efficiency of and/or the outlet VOC concentration from the recovery device used to comply with §63.562(b)(2), (3), (4), and (5), (c)(3), (4), and (5), and (d)(2) using the test methods in §63.565(d). The owner or operator shall comply with paragraph (b)(6)(i) as well as either paragraph (b)(6)(ii) or (iii) of this section. The owner or operator of affected sources complying with paragraph (b)(6)(ii)(B) or (C) of this section shall conduct a performance test once each year.

(i) *Compliance determination for carbon bed regeneration.* Desorbed hydrocarbons from regeneration of the off-line carbon bed shall be vented to the on-line carbon bed.

(ii) *Baseline parameters for required percent recovery efficiency.* The owner or operator shall comply with paragraph (b)(6)(ii)(A), (B), or (C) of this section.

(A) *Outlet VOC concentration limit for required percent recovery efficiency.* The owner or operator shall establish as an operating parameter the baseline VOC concentration using the procedures described in §63.565(g). Following the date on which the initial performance test is completed, the facility shall be operated with a block average outlet VOC concentration as determined in §63.564(g)(1) no more than 20 percent above the baseline VOC concentration.

(B) *Carbon adsorbers with vacuum regeneration.* The owner or operator shall establish as operating parameters the baseline regeneration time for the vacuum stage of carbon bed regeneration using the procedures described in §63.565(h) and shall establish the baseline vacuum pressure (negative gauge pressure) using the procedures described in §63.565(i). Following the date on which the initial performance test is completed, the facility shall be operated with block average regeneration time of the vacuum stage of carbon bed regeneration as determined in §63.564(g)(2) no more than 20 percent below the baseline regeneration time, and the facility shall be operated with the block average vacuum pressure (negative gauge pressure) as determined in §63.564(g)(2) no more than 20 percent above the baseline vacuum pressure.

(C) *Carbon adsorbers with steam regeneration.* The owner or operator shall establish as operating parameters the baseline total stream flow using the procedures described in §63.565(j) and a baseline carbon bed temperature after cooling of the bed using the procedures in §63.565(f)(2). Following the date on which the initial performance test is completed, the facility shall be operated with the total stream flow, as determined in §63.564(g)(3), no more than 20 percent below the baseline stream flow and with the carbon bed temperature (measured within 15 minutes after completion of the cooling cycle), as determined in §63.564(g)(3), no more than 10 percent or 5.6 °C (10 °F) above the baseline carbon bed temperature, whichever is less stringent.

(iii) *Outlet VOC concentration of 1,000 ppmv for gasoline loading.* Following the date on which the initial performance test is completed, the facility shall operate with a block average outlet VOC concentration as determined in §63.564(g)(1) of no more than 1,200 ppmv VOC.

(7) *Condenser/refrigeration unit.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall determine the efficiency of and/or the outlet VOC concentration from the recovery device used to comply with §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2) using the test methods in §63.565(d). The owner or operator shall comply with either paragraph (b)(7)(i), (ii), or (iii) of this section.

(i) *VOC outlet concentration limit for required percent recovery efficiency.* The owner or operator shall establish as an operating parameter the baseline VOC concentration using the procedures described in §63.565(g). Following the date on which the initial performance test is completed, the facility shall be operated with a block average outlet VOC concentration as determined in §63.564(h)(2) no more than 20 percent above the baseline VOC concentration.

(ii) *Baseline temperature for required percent recovery efficiency.* The owner or operator shall establish as an operating parameter the baseline temperature using the procedures described in §63.565(f). Following the date on which the initial performance test is completed, the facility shall operate with a block average temperature, as determined in §63.564(h)(1), no more than 28 °C (50 °F) above the baseline temperature.

(iii) *Baseline parameters for 1,000 ppmv VOC concentration limit for gasoline loading.* The owner or operator shall monitor either the outlet VOC concentration or the outlet temperature of the unit. For sources monitoring temperature, the owner or operator shall establish as an operating parameter the baseline temperature using the procedures described in §63.565(f). Following the date on which the initial performance test is completed, the facility shall operate with a block average outlet VOC concentration, as determined in §63.564(h)(2), of no more than 1,200 ppmv VOC or with a block average temperature, as determined in §63.564(h)(1), no more than 28 °C (50 °F) above the baseline temperature.

(8) *Absorber.* During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall determine the efficiency of the absorber and/or the outlet VOC concentration from the recovery device used to comply with §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2) using the test methods in §63.565(d). The owner or operator shall comply with either paragraph (b)(8)(i) or (ii) of this section.

(i) *VOC outlet concentration limit for required percent recovery efficiency.* The owner or operator shall establish as an operating parameter the baseline VOC concentration using the procedures described in §63.565(g). Following the date on which the initial performance test is completed, the facility shall be operated with a block average outlet VOC concentration as determined in §63.564(i)(1) no more than 20 percent above the baseline VOC concentration.

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(ii) *Baseline liquid-to-vapor ratio for required percent recovery efficiency.* The owner or operator shall establish as an operating parameter the baseline liquid flow to vapor flow (L/V) ratio using the procedures described in §63.565(k). Following the date on which the initial performance test is completed, the facility shall operate with a block average L/V ratio, as determined in §63.564(i)(2), no more than 20 percent below the baseline L/V ratio.

(9) *Alternative control devices.* For sources complying with §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2) with the use of a control technology other than the devices discussed in paragraphs (b)(4) through (8) of this section, the owner or operator of an affected source shall provide to the Administrator information describing the design and operation of the air pollution control system, including recommendations for the operating parameter(s) to be monitored to indicate proper operation and maintenance of the air pollution control system. Based on this information, the Administrator shall determine the operating parameter(s) to be established during the performance test. During the initial performance test required in paragraph (b)(1) of this section, the owner or operator shall determine the efficiency of the air pollution control system using the test methods in §63.565(d). The device shall achieve at least the percent destruction efficiency or recovery efficiency required under §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2). The owner or operator shall establish the operating parameter(s) approved by the Administrator. Following the date on which the initial performance test is complete, the facility shall operate either above or below a maximum or minimum operating parameter, as appropriate.

(10) *Emission estimation.* The owner or operator of a source subject to §63.562(b)(2), (3), and (4) shall use the emission estimation procedures in §63.565(l) to calculate HAP emissions.

(c) *Leak detection and repair for vapor collection systems and control devices.* The following procedures are required for all sources subject to §63.562(b), (c), or (d).

(1) *Annual leak detection and repair for vapor collection systems and control devices.* The owner or operator of an affected source shall inspect and monitor all ductwork and piping and connections to vapor collection systems and control devices once each calendar year using Method 21.

(2) *Ongoing leak detection and repair for vapor collection systems and control devices.* If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method, all ductwork and piping and connections to vapor collection systems and control devices shall be inspected to the extent necessary to positively identify the potential leak and any potential leaks shall be monitored within 5 days by Method 21. Each detection of a leak shall be recorded, and the leak shall be tagged until repaired.

(3) When a leak is detected, a first effort to repair the vapor collection system and control device shall be made within 15 days or prior to the next marine tank vessel loading operation, whichever is later.

### § 63.564 MONITORING REQUIREMENTS.

(a)(1) The owner or operator of an affected source shall comply with the monitoring requirements in §63.8 of subpart A of this part in accordance with the provisions for applicability of subpart A to this subpart in Table 1 of §63.560 and the monitoring requirements in this section.

(2) Each owner or operator of an affected source shall monitor the parameters specified in this section. All monitoring equipment shall be installed such that representative measurements of emissions or process parameters from the source are obtained. For monitoring equipment purchased from a vendor, verification of the operational status of the monitoring equipment shall include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system.

(3) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all continuous parametric monitoring systems (CPMS) and CEMS shall be in continuous operation while marine tank vessel loading operations are occurring and shall meet minimum frequency of operation requirements. Sources monitoring by use of CEMS and CPMS shall complete a minimum of one cycle of operation (sampling, analyzing, and/or data recording) for each successive 15-minute period.

(4) The owner or operator of a CMS installed in accordance with these emissions standards shall comply with the performance specifications either in performance specification (PS) 8 in 40 CFR part 60, appendix B for CEMS or in §63.7(c)(6) of subpart A of this part for CPMS.

(5) A CEMS is out of control when the measured values (i.e., daily calibrations, multipoint calibrations, and performance audits) exceed the limits specified in either PS 8 or in §63.8(c)(7) of subpart A of this part. The owner or operator of a CEMS that is out of control shall submit all information concerning out of control periods, including start and end dates and hours and descriptions of corrective actions taken, in the excess emissions and continuous monitoring system performance report required in §63.567(e).

(b) *Vapor collection system of terminal.* Owners or operators of a source complying with §63.563(a)(1) that uses a vapor collection system that contains valves that could divert a vent stream from a control device used to comply with the provisions of this subpart shall comply with paragraph (b)(1), (2), or (3) of this section.

(1) Measure and record the vent stream flowrate of each by-pass line once every 15 minutes. The owner or operator shall install, calibrate, maintain, and operate a flow indicator and data recorder. The flow indicator shall be installed immediately downstream of any valve (i.e., entrance to by-pass line) that could divert the vent stream from the control device to the atmosphere.

(2) Measure the vent stream flowrate of each by-pass line once every 15 minutes. The owner or operator shall install, calibrate, maintain, and operate a flow indicator with either an audio or visual alarm. The flow indicator and alarm shall be installed immediately downstream of any valve (i.e., entrance to by-pass line) that could divert the vent stream from the control device to the atmosphere. The alarm shall be checked every 6 months to demonstrate that it is functioning properly.

(3) Visually inspect the seal or closure mechanism once during each marine tank vessel loading operation and at least once every month to ensure that the valve is maintained in the closed position and that the vent stream is not diverted through the by-pass line; record all times when the car

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seals have been broken and the valve position has been changed. Each by-pass line valve shall be secured in the closed position with a car-seal or a lock-and-key type configuration.

(c) *Pressure/vacuum settings for the marine tank vessel's vapor collection equipment.* Owners or operators of a source complying with §63.563(a)(3) shall measure continuously the operating pressure of the marine tank vessel during loading.

(d) *Loading at negative pressure.* Owners or operators of a source complying with §63.563(a)(4)(iv) that load vessels at less than atmospheric pressure (i.e., negative gauge pressure) shall measure and record the loading pressure. The owner or operator shall install, calibrate, maintain, and operate a recording pressure measurement device (magnehelic gauge or equivalent device) and an audible and visible alarm system that is activated when the pressure vacuum specified in §63.563(a)(4)(iv) is not attained. The owner or operator shall place the alarm system so that it can be seen and heard where cargo transfer is controlled. The owner or operator shall verify the accuracy of the pressure device once each calendar year with a reference pressure monitor (traceable to National Institute of Standards and Technology (NIST) standards or an independent pressure measurement device dedicated for this purpose).

(e) *Combustion device, except flare.* For sources complying with §63.563(b)(4), use of a combustion device except a flare, the owner or operator shall comply with paragraph (e)(1), (2), or (3) of this section. Owners or operators complying with paragraphs (e)(2) or (3) shall also comply with paragraph (e)(4) of this section.

(1) *Outlet VOC concentration.* Monitor the VOC concentrations at the exhaust point of the combustion device and record the output from the system. For sources monitoring the outlet VOC concentration established during the performance test, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each cycle (same time period or cycle as the performance test) and a 3-cycle block average concentration every third cycle. For sources monitoring the 1,000 ppmv VOC concentration for gasoline loading, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each hour and a 3-hour block average concentration every third hour. The owner or operator will install, calibrate, operate, and maintain a CEMS consistent with the requirements of PS 8 to measure the VOC concentration. The daily calibration requirements are required only on days when marine tank vessel loading operations occur.

(2) *Operating temperature determined during performance testing.* If the baseline temperature was established during the performance test, the data acquisition system shall record the temperature every 15 minutes and shall compute and record an average temperature each cycle (same time period or cycle of the performance test) and a 3-cycle block average every third cycle.

(3) *Manufacturer's recommended operating temperature.* If the baseline temperature is based on the manufacturer recommended operating temperature, the data acquisition system shall record the temperature every 15 minutes and shall compute and record an average temperature each hour and a 3-hour block average every third hour.

(4) *Temperature monitor.* The owner or operator shall install, calibrate, operate, and maintain a temperature monitor accurate to within  $\pm 5.6$  °C ( $\pm 10$  °F) or within 1 percent of the baseline temperature, whichever is less stringent, to measure the temperature. The monitor shall be installed at the exhaust point of the combustion device but not within the combustion zone. The owner or operator shall verify the accuracy of the temperature monitor once each calendar year with a reference temperature monitor (traceable to National Institute of Standards and Technology (NIST) standards or an independent temperature measurement device dedicated for this purpose). During accuracy checking, the probe of the reference device shall be at the same location as that of the temperature monitor being tested.

(f) *Flare.* For sources complying with §63.563(b)(5), use of a flare, the owner or operator shall monitor and record continuously the presence of the flare pilot flame. The owner or operator shall install, calibrate, maintain, and operate a heat sensing device (an ultraviolet beam sensor or thermocouple) at the pilot light to indicate the presence of a flame during the entire loading cycle.

(g) *Carbon adsorber.* For sources complying with §63.563(b)(6), use of a carbon adsorber, the owner or operator shall comply with paragraph (g)(1), (2), or (3) of this section.

(1) *Outlet VOC concentration.* Monitor the VOC concentrations at the exhaust point of each carbon adsorber unit and record the output from the system. For sources monitoring the outlet VOC concentration established during the performance test, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each cycle (same time period or cycle as the performance test) and a 3-cycle block average concentration every third cycle. For sources monitoring the 1,000 ppmv VOC concentration for gasoline loading, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each hour and a 3-hour block average concentration every third hour. The owner or operator will install, calibrate, operate, and maintain a CEMS consistent with the requirements of PS 8 to measure the VOC concentration. The daily calibration requirements are required only on days when marine tank vessel loading operations occur.

(2) *Carbon adsorbers with vacuum regeneration.* Monitor and record the regeneration time for carbon bed regeneration and monitor and record continuously the vacuum pressure of the carbon bed regeneration cycle. The owner or operator will record the time when the carbon bed regeneration cycle begins and when the cycle ends for a single carbon bed and will calculate a 3-cycle block average every third cycle. The owner or operator shall install, calibrate, maintain, and operate a recording pressure measurement device (magnehelic gauge or equivalent device). A data acquisition system shall record and compute a 3-cycle (carbon bed regeneration cycle) block average vacuum pressure every third cycle. The owner or operator shall verify the accuracy of the pressure device once each calendar year with a reference pressure monitor (traceable to National Institute of Standards and Technology (NIST) standards or an independent pressure measurement device dedicated for this purpose). During accuracy checking, the probe of the reference device shall be at the same location as that of the pressure monitor being tested.

(3) *Carbon adsorbers with steam regeneration.* Monitor and record the total stream mass flow and monitor and record the carbon bed temperature after regeneration (but within 15 minutes of completion of the cooling cycle). The owner or operator will install, calibrate, maintain, and operate an integrating stream flow monitoring device that is accurate within  $\pm 10$  percent and that is capable of recording the total stream mass flow for each regeneration cycle. The owner or operator will install, calibrate, maintain, and operate a temperature monitor accurate to within  $\pm 5.6$  °C (10 °F) or

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within 1 percent of the baseline carbon bed temperature, whichever is less stringent, to measure the carbon bed temperature. The monitor shall be installed at the exhaust point of the carbon bed. The data acquisition system shall record the carbon bed temperature after each cooling cycle (measured within 15 minutes of completion of the cooling cycle). The owner or operator shall verify the accuracy of the temperature monitor once each calendar year with a reference temperature monitor (traceable to National Institute of Standards and Technology (NIST) standards or an independent temperature measurement device dedicated for this purpose). During accuracy checking, the probe of the reference device shall be at the same location as that of the temperature monitor being tested.

(h) *Condenser/refrigeration unit.* For sources complying with §63.563(b)(7), use of a condenser/refrigeration unit, the owner or operator shall comply with either paragraph (h)(1) or (2) of this section.

(1) *Baseline temperature.* Monitor and record the temperature at the outlet of the unit. The owner or operator shall install, calibrate, operate, and maintain a temperature monitor accurate to within  $\pm 5.6^{\circ}\text{C}$  ( $\pm 10^{\circ}\text{F}$ ) or within 1 percent of the baseline temperature, whichever is less stringent, to measure the temperature. The monitor shall be installed at the exhaust point of the condenser/refrigeration unit. For sources monitoring the temperature established during the performance test, the data acquisition system shall record the temperature every 15 minutes and shall compute and record an average temperature each cycle (same time period or cycle of the performance test) and a 3-hour block average every third cycle. For sources monitoring the manufacturer recommended temperature, the data acquisition system shall record the temperature every 15 minutes and shall compute and record an average temperature each hour and a 3-hour block average every third hour. The owner or operator shall verify the accuracy of the temperature monitor once each calendar year with a reference temperature monitor (traceable to National Institute of Standards and Technology (NIST) standards or an independent temperature measurement device dedicated for this purpose). During accuracy checking, the probe of the reference device shall be at the same location as that of the temperature monitor being tested.

(2) *Outlet VOC concentration.* Monitor the VOC concentrations at the outlet of the unit and record the output from the system. For sources monitoring the outlet VOC concentration established during the performance test, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each cycle (same time period or cycle as the performance test) and a 3-cycle block average concentration every third cycle. For sources monitoring the 1,000 ppmv VOC concentration for gasoline loading, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each hour and a 3-hour block average concentration every third hour. The owner or operator will install, calibrate, operate, and maintain a VOC CEMS consistent with the requirements of PS 8 to measure the VOC concentration. The daily calibration requirements are required only on days when marine tank vessel loading operations occur.

(i) *Absorber.* For sources complying with §63.563(b)(8), use of an absorber, the owner or operator shall comply with either paragraph (i)(1) or (2) of this section.

(1) *Outlet VOC concentration.* Monitor the VOC concentrations at the outlet of the absorber and record the output from the system. For sources monitoring the outlet VOC concentration established during the performance test, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each cycle (same time period or cycle as the performance test) and a 3-cycle block average concentration every third cycle. For sources monitoring the 1,000 ppmv VOC concentration for gasoline loading, a data acquisition system shall record a concentration every 15 minutes and shall compute and record an average concentration each hour and a 3-hour block average concentration every third hour. The owner or operator will install, calibrate, operate, and maintain a VOC CEMS consistent with the requirements of PS 8. The daily calibration requirements are required only on days when marine tank vessel loading operations occur.

(2) *L/V ratio.* Monitor and record the inlet liquid flowrate and the inlet gas flowrate to the absorber and record the calculated L/V ratio. The owner or operator shall install, calibrate, maintain, and operate liquid and gas flow indicators. For sources monitoring the L/V ratio established during the performance test, a data acquisition system shall record the flowrates and calculated ratio every 15 minutes and shall compute and record an average ratio each cycle (same time period or cycle as the performance test) and a 3-cycle block average ratio every third cycle. For sources monitoring the manufacturer recommended L/V ratio, a data acquisition system shall record the flowrates and calculated ratio every 15 minutes and shall compute and record an average ratio each hour and a 3-hour average ratio every third hour. The liquid and gas flow indicators shall be installed immediately upstream of the respective inlet lines to the absorber.

(j) *Alternate monitoring procedures.* Alternate procedures to those described in this section may be used upon application to, and approval by, the Administrator. The owner or operator shall comply with the procedures for use of an alternative monitoring method in §63.8(f).

### § 63.565 TEST METHODS AND PROCEDURES.

(a) *Performance testing.* The owner or operator of an affected source in §63.562 shall comply with the performance testing requirements in §63.7 of subpart A of this part in accordance with the provisions for applicability of subpart A to this subpart in Table 1 of §63.560 and the performance testing requirements in this section.

(b) *Pressure/vacuum settings of marine tank vessel's vapor collection equipment.* For the purpose of determining compliance with §63.563(a)(3), the following procedures shall be used:

(1) Calibrate and install a pressure measurement device (liquid manometer, magnehelic gauge, or equivalent instrument) capable of measuring up to the maximum relief set pressure of the pressure-vacuum vents;

(2) Connect the pressure measurement device to a pressure tap in the terminal's vapor collection system, located as close as possible to the connection with the marine tank vessel; and

(3) During the performance test required in §63.563(b)(1), record the pressure every 5 minutes while a marine tank vessel is being loaded and record the highest instantaneous pressure and vacuum that occurs during each loading cycle.

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(c) *Vapor-tightness test procedures for the marine tank vessel.* When testing a vessel for vapor tightness to comply with the marine vessel vapor-tightness requirements of §63.563(a)(4)(i), the owner or operator of a source shall use the methods in either paragraph (c)(1) or (2) in this section.

(1) *Pressure test for the marine tank vessel.* (i) Each product tank shall be pressurized with dry air or inert gas to no more than the pressure of the lowest pressure relief valve setting.

(ii) Once the pressure is obtained, the dry air or inert gas source shall be shut off.

(iii) At the end of one-half hour, the pressure in the product tank and piping shall be measured. The change in pressure shall be calculated using the following formula:

$$P = P_i - P_f$$

Where:

P=change in pressure, inches of water.

P<sub>i</sub>=pressure in tank when air/gas source is shut off, inches of water.

P<sub>f</sub>=pressure in tank at the end of one-half hour after air/gas source is shut off, inches of water.

(iv) The change in pressure, P, shall be compared to the pressure drop calculated using the following formula:

$$PM = 0.861 P_{ia} L/V$$

Where:

PM=maximum allowable pressure change, inches of water.

P<sub>ia</sub>=pressure in tank when air/gas source is shut off, psia.

L=maximum permitted loading rate of vessel, barrels per hour.

V=total volume of product tank, barrels.

(v) If  $P \leq PM$ , the vessel is vapor tight.

(vi) If  $P > PM$ , the vessel is not vapor tight and the source of the leak must be identified and repaired prior to retesting.

(2) *Leak test for the marine tank vessel.* Each owner or operator of a source complying with §§63.563(a)(4)(ii) or (iii) shall use Method 21 as the vapor-tightness leak test for marine tank vessels. The test shall be conducted during the final 20 percent of loading of each product tank of the marine vessel, and it shall be applied to any potential sources of vapor leaks on the vessel.

(d) *Combustion (except flare) and recovery control device performance test procedures.* (1) All testing equipment shall be prepared and installed as specified in the appropriate test methods.

(2) All testing shall be performed during the last 20 percent of loading of a tank or compartment.

(3) All emission testing intervals shall consist of each 5 minute period during the performance test. For each interval, the following shall be performed:

(i) *Readings.* The reading from each measurement instrument shall be recorded.

(ii) *Sampling Sites.* Method 1 or 1A of appendix A of part 60 of this chapter, as appropriate, shall be used for selection of sampling sites. Sampling sites shall be located at the inlet and outlet of the combustion device or recovery device except for owners or operators complying with the 1,000 ppmv VOC emissions limit for gasoline vapors under §63.563(b)(6) or (7), where the sampling site shall be located at the outlet of the recovery device.

(iii) *Volume exhausted.* The volume exhausted shall be determined using Method 2, 2A, 2C, or 2D of appendix A of part 60 of this chapter, as appropriate.

(4) *Combustion devices, except flares.* The average VOC concentration in the vent upstream and downstream of the control device shall be determined using Method 25 of appendix A of part 60 of this chapter for combustion devices, except flares. The average VOC concentration shall correspond to the volume measurement by taking into account the sampling system response time.

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(5) *Recovery devices.* The average VOC concentration in the vent upstream and downstream of the control device shall be determined using Method 25A of appendix A of part 60 of this chapter for recovery devices. The average VOC concentration shall correspond to the volume measurement by taking into account the sampling system response time.

(6) The VOC mass at the inlet and outlet of the combustion or recovery device during each testing interval shall be calculated as follows:

$$M_j = FK V_s C_{VOC}$$

Where:

$M_j$  = mass of VOC at the inlet and outlet of the combustion or recovery device during testing interval  $j$ , kilograms (kg).

$F = 10^{-6}$  = conversion factor, (cubic meters VOC/cubic meters air)(1/ppmv) ( $m^3$  VOC/ $m^3$  air)(1/ppmv).

$K$  = density, kilograms per cubic meter ( $kg/m^3$  VOC), standard conditions, 20 °C and 760 mm Hg.

$V_s$  = volume of air-vapor mixture at the inlet and outlet of the combustion or recovery device, cubic meters ( $m^3$ ) at standard conditions, 20 °C and 760 mm Hg.

$C_{VOC}$  = VOC concentration (as measured) at the inlet and outlet of the combustion or recovery device, ppmv, dry basis.

$s$  = standard conditions, 20 °C and 760 mm Hg.

(7) The VOC mass emission rates at the inlet and outlet of the recovery or combustion device shall be calculated as follows:

$$E_i = \frac{\sum_{j=1}^n M_{ij}}{T}$$

$$E_o = \frac{\sum_{j=1}^n M_{oj}}{T}$$

Where:

$E_i$ ,  $E_o$  = mass flow rate of VOC at the inlet (i) and outlet (o) of the recovery or combustion device, kilogram per hour (kg/hr).

$M_{ij}$ ,  $M_{oj}$  = mass of VOC at the inlet (i) or outlet (o) during testing interval  $j$ , kg.

$T$  = Total time of all testing intervals, hour.

$n$  = number of testing intervals.

(8) Where Method 25 or 25A is used to measure the percent reduction in VOC, the percent reduction across the combustion or recovery device shall be calculated as follows:

$$R = \frac{E_i - E_o}{E_i} (100\%)$$

Where:

$R$  = control efficiency of control device, percent.

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$E_i$ =mass flow rate of VOC at the inlet to the combustion or recovery device as calculated under paragraph (c)(7) of this section, kg/hr.

$E_o$ =mass flow rate of VOC at the outlet of the combustion or recovery device, as calculated under paragraph (c)(7) of this section, kg/hr.

(9) Repeat the procedures in paragraph (d)(1) through (d)(8) of this section 3 times. The arithmetic average percent efficiency of the three runs shall determine the overall efficiency of the control device.

(10) Use of methods other than Method 25 or Method 25A shall be validated pursuant to Method 301 of appendix A of part 63 of this chapter.

(e) *Performance test for flares.* When a flare is used to comply with §63.562(b)(2), (3), and (4), (c)(3) and (4), and (d)(2), the source must demonstrate that the flare meets the requirements of §63.11 of subpart A of this part. In addition, a performance test according to Method 22 of appendix A of part 63 shall be performed to determine visible emissions. The observation period shall be at least 2 hours and shall be conducted according to Method 22. Performance testing shall be conducted during three complete loading cycles with a separate test run for each loading cycle. The observation period for detecting visible emissions shall encompass each loading cycle. Integrated sampling to measure process vent stream flow rate shall be performed continuously during each loading cycle. The owner or operator shall record all visible emission readings, heat content determinations, flow rate measurements, maximum permitted velocity calculations, and exit velocity determinations made during the performance test.

(f) *Baseline temperature.* The procedures in this paragraph shall be used to determine the baseline temperature required in §63.563(b)(4), (6), and (7) for combustion devices, carbon adsorber beds, and condenser/refrigeration units, respectively, and to monitor the temperature as required in §63.564(e), (g), and (h). The owner or operator shall comply with either paragraph (f)(1) or (2) of this section.

(1) *Baseline temperature from performance testing.* The owner or operator shall establish the baseline temperature as the temperature at the outlet point of the unit averaged over three test runs from paragraph (d) of this section. Temperature shall be measured every 15 minutes.

(2) *Baseline temperature from manufacturer.* The owner or operator shall establish the baseline temperature as the manufacturer recommended minimum operating temperature for combustion devices, maximum operating temperature for condenser units, and maximum operating temperature for carbon beds of carbon adsorbers.

(g) *Baseline outlet VOC concentration.* The procedures in this paragraph shall be used to determine the outlet VOC concentration required in §63.563(b)(4), (6), (7), and (8) for combustion devices except flare, carbon adsorbers, condenser/refrigeration units, and absorbers, respectively, and to monitor the VOC concentration as required in §63.564(e), (g), (h), and (i). The owner or operator shall use the procedures outlined in Method 25A. For the baseline VOC concentration, the arithmetic average of the outlet VOC concentration from three test runs from paragraph (d) of this section shall be calculated for the control device. The VOC concentration shall be measured at least every 15 minutes. Compliance testing of VOC CEMS shall be performed using PS 8.

(h) *Baseline regeneration time for carbon bed regeneration.* The procedures in this paragraph shall be used to demonstrate the baseline regeneration time for the vacuum stage of carbon bed regeneration required in §63.563(b)(6) for a carbon adsorber and to monitor the regeneration time for the vacuum regeneration as required in §63.564(g). The owner or operator shall comply with paragraph (h)(1) or (2).

(1) *Baseline regeneration time from performance testing.* The owner or operator shall establish the baseline regeneration time as the length of time for the vacuum stage of carbon bed regeneration averaged over three test runs from paragraph (d) of this section.

(2) *Baseline regeneration time from manufacturer recommendation.* The owner or operator shall establish the baseline regeneration time as the manufacturer recommended minimum regeneration time for the vacuum stage of carbon bed regeneration.

(i) *Baseline vacuum pressure for carbon bed regeneration.* The procedures in this paragraph shall be used to demonstrate the baseline vacuum pressure for the vacuum stage of carbon bed regeneration required in §63.563(b)(6) for a carbon adsorber and to monitor the vacuum pressure as required in §63.564(g). The owner or operator shall establish the baseline vacuum pressure as the manufacturer recommended minimum vacuum for carbon bed regeneration.

(j) *Baseline total stream flow.* The procedures in this paragraph shall be used to demonstrate the baseline total stream flow for steam regeneration required in §63.563(b)(6) for a carbon adsorber and to monitor the total stream flow as required in §63.564(g). The owner or operator shall establish the baseline stream flow as the manufacturer recommended minimum total stream flow for carbon bed regeneration.

(k) *Baseline L/V ratio.* The procedures in this paragraph shall be used to determine the baseline L/V ratio required in §63.563(b)(8) for an absorber and to monitor the L/V ratio as required in §63.564(i). The owner or operator shall comply with either paragraph (k)(1) or (2) of this section.

(1) *Baseline L/V ratio from performance test.* The owner or operator shall establish the baseline L/V ratio as the calculated value of the inlet liquid flow divided by the inlet gas flow to the absorber averaged over three test runs using the procedures in paragraph (d) of this section.

(2) *Baseline L/V ratio from manufacturer.* The owner or operator shall establish the baseline L/V ratio as the manufacturer recommended minimum L/V ratio for absorber operation.

(l) *Emission estimation procedures.* For sources with emissions less than 10 or 25 tons and sources with emissions of 10 or 25 tons, the owner or operator shall calculate an annual estimate of HAP emissions, excluding commodities exempted by §63.560(d), from marine tank vessel loading

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operations. Emission estimates and emission factors shall be based on test data, or if test data is not available, shall be based on measurement or estimating techniques generally accepted in industry practice for operating conditions at the source.

(m) *Alternate test procedures.* (1) Alternate test procedures to those described in this section may be used upon application to, and approval by, the Administrator.

(2) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified, the owner or operator shall refrain from conducting the performance test until the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or until after the alternative method is approved (see §63.7(f) of subpart A of this part). If the Administrator does not approve the site-specific test plan (if review is requested) or the use of the alternative method within 30 days before the test is scheduled to begin, the performance test dates specified in §63.563(b)(1) shall be extended such that the owner or operator shall conduct the performance test within 60 calendar days after the Administrator approves the site-specific test plan or after use of the alternative method is approved. Notwithstanding the requirements in the preceding two sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

#### § 63.566 CONSTRUCTION AND RECONSTRUCTION.

(a) The owner or operator of an affected source shall fulfill all requirements for construction or reconstruction of a source in §63.5 of subpart A of this part in accordance with the provisions for applicability of subpart A to this subpart in Table 1 of §63.560 and construction or reconstruction requirements in this section.

(b)(1) *Application for approval of construction or reconstruction.* The provisions of this paragraph and §63.5(d)(1)(ii) and (iii), (2), (3), and (4) of subpart A implement section 112(i)(1) of the Act.

(2) *General application requirements.* An owner or operator who is subject to the requirements of §63.5(b)(3) of subpart A shall submit to the Administrator an application for approval of the construction of a new source, the reconstruction of a source, or the reconstruction of a source not subject to the emissions standards in §63.562 such that the source becomes an affected source. The application shall be submitted as soon as practicable before the construction or reconstruction is planned to commence. The application for approval of construction or reconstruction may be used to fulfill the initial notification requirements of §63.567(b)(3). The owner or operator may submit the application for approval well in advance of the date construction or reconstruction is planned to commence in order to ensure a timely review by the Administrator and that the planned commencement date will not be delayed.

(c) *Approval of construction or reconstruction based on prior State preconstruction review.* The owner or operator shall submit to the Administrator the request for approval of construction or reconstruction under this paragraph and §63.5(f)(1) of subpart A of this part no later than the application deadline specified in paragraph (b)(2) of this section. The owner or operator shall include in the request information sufficient for the Administrator's determination. The Administrator will evaluate the owner or operator's request in accordance with the procedures specified in §63.5(e) of subpart A of this part. The Administrator may request additional relevant information after the submittal of a request for approval of construction or reconstruction.

#### § 63.567 RECORDKEEPING AND REPORTING REQUIREMENTS.

(a) The owner or operator of an affected source shall fulfill all reporting and recordkeeping requirements in §§63.9 and 63.10 of subpart A of this part in accordance with the provisions for applicability of subpart A to this subpart in Table 1 of §63.560 and fulfill all reporting and recordkeeping requirements in this section. These reports will be made to the Administrator at the appropriate address identified in §63.13 of subpart A of this part.

(1) Reports required by subpart A and this section may be sent by U.S. mail, facsimile (fax), or by another courier.

(i) Submittals sent by U.S. mail shall be postmarked on or before the specified date.

(ii) Submittals sent by other methods shall be received by the Administrator on or before the specified date.

(2) If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(b) *Notification requirements.* The owner or operator of an affected source shall fulfill all notification requirements in §63.9 of subpart A of this part in accordance with the provisions for applicability of that section to this subpart in Table 1 of §63.560 and the notification requirements in this paragraph.

(1) *Applicability.* If a source that otherwise would not be subject to the emissions standards subsequently increases its HAP emissions calculated on a 24-month annual average basis after September 19, 1997 or increases its annual HAP emissions after September 20, 1999 or subsequently increases its gasoline or crude loading throughput calculated on a 24-month annual average basis after September 19, 1996 or increases its gasoline or crude loading annual throughput after September 21, 1998 such that the source becomes subject to the emissions standards, such source shall be subject to the notification requirements of §63.9 of subpart A of this part and the notification requirements of this paragraph.

(2) *Initial notification for sources with startup before the effective date.* The owner or operator of a source with initial startup before the effective date shall notify the Administrator in writing that the source is subject to the relevant standard. The notification shall be submitted not later than 365 days after the effective date of the emissions standards and shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the source;

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(iii) An identification of this emissions standard that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source;

(v) A statement that the source is a major source.

(3) *Initial notification for sources with startup after the effective date.* The owner or operator of a new or reconstructed source or a source that has been reconstructed such that it is subject to the emissions standards that has an initial startup after the effective date but before the compliance date, and for which an application for approval of construction or reconstruction is not required under §63.5(d) of subpart A of this part and §63.566 of this subpart, shall notify the Administrator in writing that the source is subject to the standard no later than 365 days or 120 days after initial startup, whichever occurs before notification of the initial performance test in §63.9(e) of subpart A of this part. The notification shall provide all the information required in paragraph (b)(2) of this section, delivered or postmarked with the notification required in paragraph (b)(4) of this section.

(4) *Initial notification requirements for constructed/reconstructed sources.* After the effective date of these standards, whether or not an approved permit program is effective in the State in which a source subject to these standards is (or would be) located, an owner or operator subject to the notification requirements of §63.5 of subpart A of this part and §63.566 of this subpart who intends to construct a new source subject to these standards, reconstruct a source subject to these standards, or reconstruct a source such that it becomes subject to these standards, shall comply with paragraphs (b)(4)(i), (ii), (iii), and (iv) of this section.

(i) *Notify the Administrator in writing of the intended construction or reconstruction.* The notification shall be submitted as soon as practicable before the construction or reconstruction is planned to commence. The notification shall include all the information required for an application for approval of construction or reconstruction as specified in §63.5 of subpart A of this part. The application for approval of construction or reconstruction may be used to fulfill the requirements of this paragraph.

(ii) Submit a notification of the date when construction or reconstruction was commenced, delivered or postmarked not later than 30 days after such date, if construction was commenced after the effective date.

(iii) Submit a notification of the anticipated date of startup of the source, delivered or postmarked not more than 60 days nor less than 30 days before such date;

(iv) Submit a notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) *Additional initial notification requirements.* (i) The owner or operator of sources subject to §63.562(b)(2), (3), and (4), MACT standards, shall also include in the initial notification report required by paragraph (b)(2) and (3) the 24-month annual average or the annual actual HAP emissions from marine tank vessel loading operations, as appropriate, at all loading berths, as calculated according to the procedures in §63.565(l). Emissions will be reported by commodity and type of marine tank vessel (barge or tanker) loaded.

(ii) As an alternative to reporting the information in paragraph (b)(5)(i) of this section, the source may submit documentation showing that all HAP-containing marine tank vessel loading operations, not exempt by §63.560(d), occurred using vapor tight vessels that comply with the procedures of §63.563(a) and that the emissions were routed to control devices meeting the requirements specified in §63.563(b).

(c) *Request for extension of compliance.* If the owner or operator has installed BACT or technology to meet LAER consistent with §63.6(i)(5) of subpart A of this part, he/she may submit to the Administrator (or State with an approved permit program) a request for an extension of compliance as specified in §63.6(i)(4)(i)(B), (i)(5), and (i)(6) of subpart A of this part.

(d) *Reporting for performance testing of flares.* The owner or operator of a source required to conduct an opacity performance test shall report the opacity results and other information required by §63.565(e) and §63.11 of subpart A of this part with the notification of compliance status.

(e) *Summary reports and excess emissions and monitoring system performance reports —(1) Schedule for summary report and excess emissions and monitoring system performance reports.* Excess emissions and parameter monitoring exceedances are defined in §63.563(b). The owner or operator of a source subject to these emissions standards that is required to install a CMS shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator once each year, except, when the source experiences excess emissions, the source shall comply with a semi-annual reporting format until a request to reduce reporting frequency under paragraph (e)(2) of this section is approved.

(2) *Request to reduce frequency of excess emissions and continuous monitoring system performance reports.* An owner or operator who is required to submit excess emissions and continuous monitoring system performance and summary reports on a semi-annual basis may reduce the frequency of reporting to annual if the following conditions are met:

(i) For 1 full year the source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance; and

(ii) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and subpart A of this part.

(3) The frequency of reporting of excess emissions and continuous monitoring system performance and summary reports required may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the 5-year recordkeeping prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation maintenance requirements. Such information may be used by the Administrator to make a judgement about the source's potential for noncompliance in the future. If the Administrator will notify

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the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(4) *Content and submittal dates for excess emissions and monitoring system performance reports.* All excess emissions and monitoring system performance reports and all summary reports, if required per paragraph (e)(5) and (6) of this section, shall be delivered or postmarked within 30 days following the end of each calendar year, or within 30 days following the end of each six month period, if appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all information required in §63.10(c)(5) through (13) of subpart A of this part as applicable in Table 1 of §63.560 and information from any calibration tests in which the monitoring equipment is not in compliance with PS 8 or other methods used for accuracy testing of temperature, pressure, or flow monitoring devices. The written report shall also include the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances have occurred or monitoring equipment has not been inoperative, repaired, or adjusted, such information shall be stated in the report. This information will be kept for a minimum of 5 years and made readily available to the Administrator or delegated State authority upon request.

(5) If the total duration of excess emissions or control system parameter exceedances for the reporting period is less than 5 percent of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 10 percent of the total operating time for the reporting period, only the summary report of §63.10(e)(3)(vi) of subpart A of this part shall be submitted, and the full excess emissions and continuous monitoring system performance report of paragraph (e)(4) of this section need not be submitted unless required by the Administrator.

(6) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 5 percent or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 10 percent or greater of the total operating time for the reporting period, both the summary report of §63.10(e)(3)(vi) of subpart A of this part and the excess emissions and continuous monitoring system performance report of paragraph (e)(4) of this section shall be submitted.

(f) *Vapor collection system of the terminal.* Each owner or operator of an affected source shall submit with the initial performance test and maintain in an accessible location on site an engineering report describing in detail the vent system, or vapor collection system, used to vent each vent stream to a control device. This report shall include all valves and vent pipes that could vent the stream to the atmosphere, thereby bypassing the control device, and identify which valves are car-sealed opened and which valves are car-sealed closed.

(g) If a vent system, or vapor collection system, containing valves that could divert the emission stream away from the control device is used, each owner or operator of an affected source shall keep for at least 5 years up-to-date, readily accessible continuous records of:

(1) All periods when flow bypassing the control device is indicated if flow indicators are installed under §63.563(a)(1) and §63.564(b), and

(2) All times when maintenance is performed on car-sealed valves, when the car-seal is broken, and when the valve position is changed (i.e., from open to closed for valves in the vent piping to the control device and from closed to open for valves that vent the stream directly or indirectly to the atmosphere bypassing the control device) if valves are monitored under §63.564(b).

(h) The owner or operator of an affected source shall keep the vapor-tightness documentation required under §63.563(a)(4) on file at the source in a permanent form available for inspection.

(i) *Vapor tightness test documentation for marine tank vessels.* The owner or operator of an affected source shall maintain a documentation file for each marine tank vessel loaded at that source to reflect current test results as determined by the appropriate method in §63.565(c)(1) and (2). Updates to this documentation file shall be made at least once per year. The owner or operator shall include, as a minimum, the following information in this documentation:

(1) Test title;

(2) Marine vessel owner and address;

(3) Marine vessel identification number;

(4) Loading time, according to §63.563(a)(4)(ii) or (iii), if appropriate;

(5) Testing location;

(6) Date of test;

(7) Tester name and signature;

(8) Test results from §63.565(c)(1) or (2), as appropriate;

(9) Documentation provided under §63.563(a)(4)(ii) and (iii)(B) showing that the repair of leaking components attributed to a failure of a vapor-tightness test is technically infeasible without dry-docking the vessel; and

(10) Documentation that a marine tank vessel failing a pressure test or leak test has been repaired.

(j) *Emission estimation reporting and recordkeeping procedures.* The owner or operator of each source complying with the emission limits specified in §63.562(b)(2), (3), and (4) shall comply with the following provisions:

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### 40 CFR Part 60, Subpart Y — National Emission Standards for Marine Tank Vessel Loading Operations

- (1) Maintain records of all measurements, calculations, and other documentation used to identify commodities exempted under §63.560(d);
- (2) Keep readily accessible records of the emission estimation calculations performed in §63.565(l) for 5 years; and
- (3) Submit an annual report of the source's HAP control efficiency calculated using the procedures specified in §63.565(l), based on the source's actual throughput.
- (4) Owners or operators of marine tank vessel loading operations specified in §63.560(a)(3) shall retain records of the emissions estimates determined in §63.565(l) and records of their actual throughputs by commodity, for 5 years.

(k) *Leak detection and repair of vapor collection systems and control devices.* When each leak of the vapor collection system, or vapor collection system, and control device is detected and repaired as specified in §63.563(c) the following information required shall be maintained for 5 years:

- (1) Date of inspection;
- (2) Findings (location, nature, and severity of each leak);
- (3) Leak determination method;
- (4) Corrective action (date each leak repaired, reasons for repair interval); and
- (5) Inspector name and signature.

(l) The owner or operator of the VMT source required by §63.562(d)(2)(iv) to develop a program, shall submit annual reports on or before January 31 of each year to the Administrator certifying the annual average daily loading rate for the previous calendar year. Beginning on January 31, 1996, for the reported year 1995, the annual report shall specify the annual average daily loading rate over all loading berths. Beginning on January 31, 1999, for the reported year 1998, the annual report shall specify the annual average daily loading rate over all loading berths, over each loading berth equipped with a vapor collection system and control device, and over each loading berth not equipped with a vapor collection system and control device. The annual average daily loading rate under this section is calculated as the total amount of crude oil loaded during the calendar year divided by 365 days or 366 days, as appropriate.

[61 FR 48399, Sept. 19, 1995, as amended at 68 FR 37350, June 23, 2003]

### § 63.568 IMPLEMENTATION AND ENFORCEMENT.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or Tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or Tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

- (1) Approval of alternatives to the requirements in §§63.560 and 63.562(a) through (d).
- (2) Approval of major alternatives to test methods for under §63.7(e)(2)(ii) and (f), as defined in §63.90, and as required in this subpart.
- (3) Approval of major alternatives to monitoring under §63.8(f), as defined in §63.90, and as required in this subpart.
- (4) Approval of major alternatives to recordkeeping and reporting under §63.10(f), as defined in §63.90, and as required in this subpart.

[68 FR 37350, June 23, 2003]

## SECTION 4. APPENDIX H

### 40 CFR Part 60, Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels

[Last Updated 10/15/03]

{Source: Federal Register dated 7/1/98, revised 2/7/02 to reflect FR 10/17/00 and FR 12/14/00, revised 10/15/03 to reflect FR 10/15/03 changes}

#### **Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984**

##### **§ 60.110b Applicability and designation of affected facility.**

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters ( $\text{m}^3$ ) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) This subpart does not apply to storage vessels with a capacity greater than or equal to 151  $\text{m}^3$  storing a liquid with a maximum true vapor pressure less than 3.5 kilopascals (kPa) or with a capacity greater than or equal to 75  $\text{m}^3$  but less than 151  $\text{m}^3$  storing a liquid with a maximum true vapor pressure less than 15.0 kPa.

(c) [Reserved]

(d) This subpart does not apply to the following:

- (1) Vessels at coke oven by-product plants.
- (2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.
- (3) Vessels permanently attached to mobile vehicles such as trucks, rail-cars, barges, or ships.
- (4) Vessels with a design capacity less than or equal to 1,589.874  $\text{m}^3$  used for petroleum or condensate stored, processed, or treated prior to custody transfer.
- (5) Vessels located at bulk gasoline plants.
- (6) Storage vessels located at gasoline service stations.
- (7) Vessels used to store beverage alcohol.
- (8) Vessels subject to subpart GGGG of 40 CFR part 63.

(e) *Alternative means of compliance* -- (1) *Option to comply with part 65.* Owners or operators may choose to comply with 40 CFR part 65, subpart C, to satisfy the requirements of §§ 60.112b through 60.117b for storage vessels that are subject to this subpart that meet the specifications in paragraphs (e)(1)(i) and (ii) of this section. When choosing to comply with 40 CFR part 65, subpart C, the monitoring requirements of § 60.116b(c), (e), (f)(1), and (g) still apply. Other provisions applying to owners or operators who choose to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(i) A storage vessel with a design capacity greater than or equal to 151  $\text{m}^3$  containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa; or

(ii) A storage vessel with a design capacity greater than 75  $\text{m}^3$  but less than 151  $\text{m}^3$  containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart C, must also comply with §§ 60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those storage vessels. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (e)(2) do not apply to owners or operators of storage vessels complying with 40 CFR part 65, subpart C, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart C, must comply with 40 CFR part 65, subpart A.

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### 40 CFR Part 60, Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels

(3) *Internal floating roof report.* If an owner or operator installs an internal floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.43. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

(4) *External floating roof report.* If an owner or operator installs an external floating roof and, at initial startup, chooses to comply with 40 CFR part 65, subpart C, a report shall be furnished to the Administrator stating that the control equipment meets the specifications of 40 CFR 65.44. This report shall be an attachment to the notification required by 40 CFR 65.5(b).

#### § 60.111b Definitions.

Terms used in this subpart are defined in the Act, in subpart A of this part, or in this subpart as follows:

*Bulk gasoline plant* means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

*Condensate* means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

*Custody transfer* means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

*Fill* means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

*Gasoline service station* means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

*Maximum true vapor pressure* means the equilibrium partial pressure exerted by the volatile organic compounds (as defined in 40 CFR 51.100) in the stored VOL at the temperature equal to the highest calendar-month average of the VOL storage temperature for VOL's stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for VOL's stored at the ambient temperature, as determined:

(1) In accordance with methods de-scribed in American Petroleum institute Bulletin 2517, Evaporation Loss From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM Method D2879–83, 96, or 97 (incorporated by reference— see § 60.17);

(4) Any other method approved by the Administrator.

*Reid vapor pressure* means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323–82 or 94 (incorporated by reference—see § 60.17).

*Petroleum* means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

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### 40 CFR Part 60, Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels

*Petroleum liquids* means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

*Process tank* means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

*Storage vessel* means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors;
- (2) Subsurface caverns or porous rock reservoirs; or
- (3) Process tanks.

*Volatile organic liquid (VOL)* means any organic liquid which can emit volatile organic compounds (as defined in 40 CFR 51.100) into the atmosphere.

*Waste* means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

#### § 60.112b Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(i) The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam- or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating

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### 40 CFR Part 60, Subpart Kb — Standards of Performance for Volatile Organic Liquid Storage Vessels

roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(iv) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(v) Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.

(vi) Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer's recommended setting.

(vii) Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90 percent of the opening.

(viii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) An external floating roof. An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) A closed vent system and control device meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, § 60.485(b).

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(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m<sup>3</sup> which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

- (1) A closed vent system and control device as specified in § 60.112b(a)(3).
- (2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

(c) *Site-specific standard for Merck & Co., Inc.'s Stonewall Plant in Elkton, Virginia.* This paragraph applies only to the pharmaceutical manufacturing facility, commonly referred to as the Stonewall Plant, located at Route 340 South, in Elkton, Virginia ("site").

(1) For any storage vessel that otherwise would be subject to the control technology requirements of paragraphs (a) or (b) of this section, the site shall have the option of either complying directly with the requirements of this subpart, or reducing the site-wide total criteria pollutant emissions cap (total emissions cap) in accordance with the procedures set forth in a permit issued pursuant to 40 CFR 52.2454. If the site chooses the option of reducing the total emissions cap in accordance with the procedures set forth in such permit, the requirements of such permit shall apply in lieu of the otherwise applicable requirements of this subpart for such storage vessel.

(2) For any storage vessel at the site not subject to the requirements of 40 CFR 60.112b (a) or (b), the requirements of 40 CFR 60.116b (b) and (c) and the General Provisions (subpart A of this part) shall not apply. [52 FR 11429, Apr. 8, 1987, as amended at 62 FR 52641, Oct. 8, 1997]

#### § 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

(a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For Vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(a)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

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(3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision occur at intervals greater than 10 years in the case of vessels conducting the annual visual inspection as specified in paragraphs (a)(2) and (a)(3)(ii) of this section and at intervals no greater than 5 years in the case of vessels specified in paragraph (a)(3)(i) of this section.

(5) Notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by paragraphs (a)(1) and (a)(4) of this section to afford the Administrator the opportunity to have an observer present. If the inspection required by paragraph (a)(4) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance or refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(b) After installing the control equipment required to meet § 60.112b(a)(2) (external floating roof), the owner or operator shall:

(1) Determine the gap areas and maximum gap widths, between the primary seal and the wall of the storage vessel and between the secondary seal and the wall of the storage vessel according to the following frequency.

(i) Measurements of gaps between the tank wall and the primary seal (seal gaps) shall be performed during the hydrostatic testing of the vessel or within 60 days of the initial fill with VOL and at least once every 5 years thereafter.

(ii) Measurements of gaps between the tank wall and the secondary seal shall be performed within 60 days of the initial fill with VOL and at least once per year thereafter.

(iii) If any source ceases to store VOL for a period of 1 year or more, subsequent introduction of VOL into the vessel shall be considered an initial fill for the purposes of paragraphs (b)(1)(i) and (b)(1)(ii) of this section.

(2) Determine gap widths and areas in the primary and secondary seals individually by the following procedures:

(i) Measure seal gaps, if any, at one or more floating roof levels when the roof is floating off the roof leg supports.

(ii) Measure seal gaps around the entire circumference of the tank in each place where a 0.32-cm diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the storage vessel and measure the circumferential distance of each such location.

(iii) The total surface area of each gap described in paragraph (b)(2)(ii) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

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(3) Add the gap surface area of each gap location for the primary seal and the secondary seal individually and divide the sum for each seal by the nominal diameter of the tank and compare each ratio to the respective standards in paragraph (b)(4) of this section.

(4) Make necessary repairs or empty the storage vessel within 45 days of identification in any inspection for seals not meeting the requirements listed in (b)(4) (i) and (ii) of this section:

(i) The accumulated area of gaps between the tank wall and the mechanical shoe or liquid-mounted primary seal shall not exceed  $212 \text{ Cm}^2$  per meter of tank diameter, and the width of any portion of any gap shall not exceed 3.81 cm.

(A) One end of the mechanical shoe is to extend into the stored liquid, and the other end is to extend a minimum vertical distance of 61 cm above the stored liquid surface.

(B) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (b)(2)(iii) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal shall not exceed  $21.2 \text{ cm}^2$  per meter of tank diameter, and the width of any portion of any gap shall not exceed 1.27 cm.

(C) There are to be no holes, tears, or other openings in the seal or seal fabric.

(iii) If a failure that is detected during inspections required in paragraph (b)(1) of § 60.113b(b) cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115b(b)(4). Such extension request must include a demonstration of unavailability of alternate storage capacity and a specification of a schedule that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(5) Notify the Administrator 30 days in advance of any gap measurements required by paragraph (b)(1) of this section to afford the Administrator the opportunity to have an observer present.

(6) Visually inspect the external floating roof, the primary seal, secondary seal, and fittings each time the vessel is emptied and degassed.

(i) If the external floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before filling or refilling the storage vessel with VOL.

(ii) For all the inspections required by paragraph (b)(6) of this section, the owner or operator shall notify the Administrator in writing at least 30 days prior to the filling or refilling of each storage vessel to afford the Administrator the opportunity to inspect the storage vessel prior to refilling. If the inspection required by paragraph (b)(6) of this section is not planned and the owner or operator could not have known about the inspection 30 days in advance of refilling the tank, the owner or operator shall notify the Administrator at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, this notification including the written documentation may be made in writing and sent by express mail so that it is received by the Administrator at least 7 days prior to the refilling.

(c) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.112b (a)(3) or (b)(2) (other than a flare) is exempt from § 60.8 of the General Provisions and shall meet the following requirements.

(1) Submit for approval by the Administrator as an attachment to the notification required by § 60.7(a)(1) or, if the facility is exempt from § 60.7(a)(1), as an attachment to the notification required by § 60.7(a)(2), an operating plan containing the information listed below.

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- (i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions. This documentation is to include a description of the gas stream which enters the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent capture system receives vapors, gases, or liquids other than fuels from sources that are not designated sources under this subpart, the efficiency demonstration is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 °C is used to meet the 95 percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) Operate the closed vent system and control device and monitor the parameters of the closed vent system and control device in accordance with the operating plan submitted to the Administrator in accordance with paragraph (c)(1) of this section, unless the plan was modified by the Administrator during the review process. In this case, the modified plan applies.

(d) The owner or operator of each source that is equipped with a closed vent system and a flare to meet the requirements in § 60.112b (a)(3) or (b)(2) shall meet the requirements as specified in the general control device requirements, § 60.18 (e) and (f).

[52 FR 11429, Apr. 8, 1987, as amended at 54 FR 32973, Aug. 11, 1989]

#### **§ 60.114b Alternative means of emission limitation.**

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in emissions at least equivalent to the reduction in emissions achieved by any requirement in § 60.112b, the Administrator will publish in the FEDERAL REGISTER a notice permitting the use of the alternative means for purposes of compliance with that requirement.

(b) Any notice under paragraph (a) of this section will be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall submit to the Administrator a written application including:

(1) An actual emissions test that uses a full-sized or scale-model storage vessel that accurately collects and measures all VOC emissions from a given control device and that accurately simulates wind and accounts for other emission variables such as temperature and barometric pressure.

(2) An engineering evaluation that the Administrator determines is an accurate method of determining equivalence.

(d) The Administrator may condition the permission on requirements that may be necessary to ensure operation and maintenance to achieve the same emissions reduction as specified in § 60.112b.

#### **§ 60.115b Reporting and recordkeeping requirements.**

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The owner or operator of each storage vessel as specified in § 60.112b(a) shall keep records and furnish reports as required by paragraphs (a), (b), or (c) of this section depending upon the control equipment installed to meet the requirements of § 60.112b. The owner or operator shall keep copies of all reports and records required by this section, except for the record required by (c)(1), for at least 2 years. The record required by (c)(1) will be kept for the life of the control equipment.

(a) After installing control equipment in accordance with § 60.112b(a)(1) (fixed roof and internal floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(1) and § 60.113b(a)(1). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Keep a record of each inspection performed as required by § 60.113b (a)(1), (a)(2), (a)(3), and (a)(4). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).

(3) If any of the conditions described in § 60.113b(a)(2) are detected during the annual visual inspection required by § 60.113b(a)(2), a report shall be furnished to the Administrator within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.

(4) After each inspection required by § 60.113b(a)(3) that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects listed in § 60.113b(a)(3)(ii), a report shall be furnished to the Administrator within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of § 60.112b(a)(1) or § 60.113b(a)(3) and list each repair made.

(b) After installing control equipment in accordance with § 60.112b(a)(2) (external floating roof), the owner or operator shall meet the following requirements.

(1) Furnish the Administrator with a report that describes the control equipment and certifies that the control equipment meets the specifications of § 60.112b(a)(2) and § 60.113b(b)(2), (b)(3), and (b)(4). This report shall be an attachment to the notification required by § 60.7(a)(3).

(2) Within 60 days of performing the seal gap measurements required by § 60.113b(b)(1), furnish the Administrator with a report that contains:

- (i) The date of measurement.
- (ii) The raw data obtained in the measurement.
- (iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(3) Keep a record of each gap measurement performed as required by § 60.113b(b). Each record shall identify the storage vessel in which the measurement was performed and shall contain:

- (i) The date of measurement.
- (ii) The raw data obtained in the measurement.
- (iii) The calculations described in § 60.113b (b)(2) and (b)(3).

(4) After each seal gap measurement that detects gaps exceeding the limitations specified by § 60.113b(b)(4), submit a report to the Administrator within 30 days of the inspection. The report will identify the vessel and contain the information specified in paragraph (b)(2) of this section and the date the vessel was emptied or the repairs made and date of repair.

(c) After installing control equipment in accordance with § 60.112b (a)(3) or (b)(1) (closed vent system and control device other than a flare), the owner or operator shall keep the following records.

- (1) A copy of the operating plan.
- (2) A record of the measured values of the parameters monitored in accordance with § 60.113b(c)(2).

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(d) After installing a closed vent system and flare to comply with § 60.112b, the owner or operator shall meet the following requirements.

(1) A report containing the measurements required by § 60.18(f) (1), (2), (3), (4), (5), and (6) shall be furnished to the Administrator as required by § 60.8 of the General Provisions. This report shall be submitted within 6 months of the initial start-up date.

(2) Records shall be kept of all periods of operation during which the flare pilot flame is absent.

(3) Semiannual reports of all periods recorded under § 60.115b(d)(2) in which the pilot flame was absent shall be furnished to the Administrator.

#### **§ 60.116b Monitoring of operations.**

(a) The owner or operator shall keep copies of all records required by this section, except for the record required by paragraph (b) of this section, for at least 2 years. The record required by paragraph (b) of this section will be kept for the life of the source.

(b) The owner or operator of each storage vessel as specified in § 60.110b(a) shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

(c) Except as provided in paragraphs (f) and (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 3.5 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure greater than or equal to 15.0 kPa shall maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

(d) Except as provided in paragraph (g) of this section, the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 5.2 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure that is normally less than 27.6 kPa shall notify the Administrator within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

(e) Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.

(1) For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.

(2) For crude oil or refined petroleum products the vapor pressure may be obtained by the following:

(i) Available data on the Reid vapor pressure and the maximum expected storage temperature based on the highest expected calendar-month average temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517 (incorporated by reference—see § 60.17), unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(ii) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa or with physical properties that preclude determination by the recommended method is to be determined from available data and recorded if the estimated maximum true vapor pressure is greater than 3.5 kPa.

(3) For other liquids, the vapor pressure:

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- (i) May be obtained from standard reference texts, or
- (ii) Determined by ASTM Method D2879–83, 96, or 97 (incorporated by reference— see § 60.17); or
- (iii) Measured by an appropriate method approved by the Administrator; or
- (iv) Calculated by an appropriate method approved by the Administrator.

(f) The owner or operator of each vessel storing a waste mixture of indeterminate or variable composition shall be subject to the following requirements.

(1) Prior to the initial filling of the vessel, the highest maximum true vapor pressure for the range of anticipated liquid compositions to be stored will be determined using the methods described in paragraph (e) of this section.

(2) For vessels in which the vapor pressure of the anticipated liquid composition is above the cutoff for monitoring but below the cutoff for controls as defined in §60.112b(a), an initial physical test of the vapor pressure is required; and a physical test at least once every 6 months thereafter is required as determined by the following methods:

- (i) ASTM Method D2879–83, 96, or 97 (incorporated by reference—see § 60.17); or
- (ii) ASTM Method D323–82 or 94 (incorporated by reference—see §60.17); or
- (iii) As measured by an appropriate method as approved by the Administrator.

(g) The owner or operator of each vessel equipped with a closed vent system and control device meeting the specifications of § 60.112b or with emissions reduction equipment as specified in 40 CFR 65.5(b)(4), (b)(5), (b)(6), or (c) is exempt from the requirements of paragraphs (c) and (d) of this section.

#### **§ 60.117b Delegation of authority.**

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §§ 60.111b(f)(4), 60.114b, 60.116b(e)(3)(iii), 60.116b(e)(3)(iv), and 60.116b(f)(2)(iii).

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#### SUBPART DC—STANDARDS OF PERFORMANCE FOR SMALL INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS

**Source:** 72 FR 32759, June 13, 2007, unless otherwise noted.

##### **§ 60.40C APPLICABILITY AND DELEGATION OF AUTHORITY.**

- (a) Except as provided in paragraphs (d), (e), (f), and (g) of this section, the affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)) or less, but greater than or equal to 2.9 MW (10 MMBtu/hr).
- (b) In delegating implementation and enforcement authority to a State under section 111(c) of the Clean Air Act, §60.48c(a)(4) shall be retained by the Administrator and not transferred to a State.
- (c) Steam generating units that meet the applicability requirements in paragraph (a) of this section are not subject to the sulfur dioxide (SO<sub>2</sub>) or particulate matter (PM) emission limits, performance testing requirements, or monitoring requirements under this subpart (§§60.42c, 60.43c, 60.44c, 60.45c, 60.46c, or 60.47c) during periods of combustion research, as defined in §60.41c.
- (d) Any temporary change to an existing steam generating unit for the purpose of conducting combustion research is not considered a modification under §60.14.
- (e) Heat recovery steam generators that are associated with combined cycle gas turbines and meet the applicability requirements of subpart KKKK of this part are not subject to this subpart. This subpart will continue to apply to all other heat recovery steam generators that are capable of combusting more than or equal to 2.9 MW (10 MMBtu/hr) heat input of fossil fuel but less than or equal to 29 MW (100 MMBtu/hr) heat input of fossil fuel. If the heat recovery steam generator is subject to this subpart, only emissions resulting from combustion of fuels in the steam generating unit are subject to this subpart. (The gas turbine emissions are subject to subpart GG or KKKK, as applicable, of this part).
- (f) Any facility covered by subpart AAAA of this part is not subject by this subpart.
- (g) Any facility covered by an EPA approved State or Federal section 111(d)/129 plan implementing subpart BBBB of this part is not subject by this subpart.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

##### **§ 60.41C DEFINITIONS.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Annual capacity factor* means the ratio between the actual heat input to a steam generating unit from an individual fuel or combination of fuels during a period of 12 consecutive calendar months and the potential heat input to the steam generating unit from all fuels had the steam generating unit been operated for 8,760 hours during that 12-month period at the maximum design heat input capacity. In the case of steam generating units that are rented or leased, the actual heat input shall be determined based on the combined heat input from all operations of the affected facility during a period of 12 consecutive calendar months.

*Coal* means all solid fuels classified as anthracite, bituminous, subbituminous, or lignite by the American Society of Testing and Materials in ASTM D388 (incorporated by reference, see §60.17), coal refuse, and petroleum coke. Coal-derived synthetic fuels derived from coal for the purposes of creating useful heat, including but not limited to solvent refined coal, gasified coal not meeting the definition of natural gas, coal-oil mixtures, and coal-water mixtures, are also included in this definition for the purposes of this subpart.

*Coal refuse* means any by-product of coal mining or coal cleaning operations with an ash content greater than 50 percent (by weight) and a heating value less than 13,900 kilojoules per kilogram (kJ/kg) (6,000 Btu per pound (Btu/lb) on a dry basis.

*Cogeneration steam generating unit* means a steam generating unit that simultaneously produces both electrical (or mechanical) and thermal energy from the same primary energy source.

*Combined cycle system* means a system in which a separate source (such as a stationary gas turbine, internal combustion engine, or kiln) provides exhaust gas to a steam generating unit.

*Combustion research* means the experimental firing of any fuel or combination of fuels in a steam generating unit for the purpose of conducting research and development of more efficient combustion or more effective prevention or control of air pollutant emissions from combustion, provided that, during these periods of research and development, the heat generated is not used for any purpose other than preheating combustion air for use by that steam generating unit ( i.e. , the heat generated is released to the atmosphere without being used for space heating, process heating, driving pumps, preheating combustion air for other units, generating electricity, or any other purpose).

*Conventional technology* means wet flue gas desulfurization technology, dry flue gas desulfurization technology, atmospheric fluidized bed combustion technology, and oil hydrosulfurization technology.

*Distillate oil* means fuel oil that complies with the specifications for fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17) or diesel fuel oil numbers 1 or 2, as defined by the American Society for Testing and Materials in

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ASTM D975 (incorporated by reference, see §60.17).

*Dry flue gas desulfurization technology* means a SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline reagent and water, whether introduced separately or as a premixed slurry or solution and forming a dry powder material. This definition includes devices where the dry powder material is subsequently converted to another form. Alkaline reagents used in dry flue gas desulfurization systems include, but are not limited to, lime and sodium compounds.

*Duct burner* means a device that combusts fuel and that is placed in the exhaust duct from another source (such as a stationary gas turbine, internal combustion engine, kiln, etc.) to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a steam generating unit.

*Emerging technology* means any SO<sub>2</sub> control system that is not defined as a conventional technology under this section, and for which the owner or operator of the affected facility has received approval from the Administrator to operate as an emerging technology under §60.48c(a)(4).

*Federally enforceable* means all limitations and conditions that are enforceable by the Administrator, including the requirements of 40 CFR parts 60 and 61, requirements within any applicable State implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 51.24.

*Fluidized bed combustion technology* means a device wherein fuel is distributed onto a bed (or series of beds) of limestone aggregate (or other sorbent materials) for combustion; and these materials are forced upward in the device by the flow of combustion air and the gaseous products of combustion. Fluidized bed combustion technology includes, but is not limited to, bubbling bed units and circulating bed units.

*Fuel pretreatment* means a process that removes a portion of the sulfur in a fuel before combustion of the fuel in a steam generating unit.

*Heat input* means heat derived from combustion of fuel in a steam generating unit and does not include the heat derived from preheated combustion air, recirculated flue gases, or exhaust gases from other sources (such as stationary gas turbines, internal combustion engines, and kilns).

*Heat transfer medium* means any material that is used to transfer heat from one point to another point.

*Maximum design heat input capacity* means the ability of a steam generating unit to combust a stated maximum amount of fuel (or combination of fuels) on a steady state basis as determined by the physical design and characteristics of the steam generating unit.

*Natural gas* means:

- (1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or
- (2) Liquefied petroleum (LP) gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §60.17); or
- (3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 34 and 43 megajoules (MJ) per dry standard cubic meter (910 and 1,150 Btu per dry standard cubic foot).

*Noncontinental area* means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, or the Northern Mariana Islands.

*Oil* means crude oil or petroleum, or a liquid fuel derived from crude oil or petroleum, including distillate oil and residual oil.

*Potential sulfur dioxide emission rate* means the theoretical SO<sub>2</sub> emissions (nanograms per joule (ng/J) or lb/MMBtu heat input) that would result from combusting fuel in an uncleaned state and without using emission control systems.

*Process heater* means a device that is primarily used to heat a material to initiate or promote a chemical reaction in which the material participates as a reactant or catalyst.

*Residual oil* means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society for Testing and Materials in ASTM D396 (incorporated by reference, see §60.17).

*Steam generating unit* means a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.

*Steam generating unit operating day* means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the steam generating unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

*Wet flue gas desulfurization technology* means an SO<sub>2</sub> control system that is located between the steam generating unit and the exhaust vent or stack, and that removes sulfur oxides from the combustion gases of the steam generating unit by contacting the combustion gases with an alkaline slurry or solution and forming a liquid material. This definition includes devices where the liquid material is subsequently converted to another form. Alkaline reagents used in wet flue gas desulfurization systems include, but are not limited to, lime, limestone, and sodium compounds.

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*Wet scrubber system* means any emission control device that mixes an aqueous stream or slurry with the exhaust gases from a steam generating unit to control emissions of PM or SO<sub>2</sub>.

*Wood* means wood, wood residue, bark, or any derivative fuel or residue thereof, in any form, including but not limited to sawdust, sanderdust, wood chips, scraps, slabs, millings, shavings, and processed pellets made from wood or other forest residues.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

#### § 60.42C STANDARD FOR SULFUR DIOXIDE (SO<sub>2</sub>).

(a) Except as provided in paragraphs (b), (c), and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that combusts only coal shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility shall neither: cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 10 percent (0.10) of the potential SO<sub>2</sub> emission rate (90 percent reduction), nor cause to be discharged into the atmosphere from the affected facility any gases that contain SO<sub>2</sub> in excess of the emission limit is determined pursuant to paragraph (e)(2) of this section.

(b) Except as provided in paragraphs (c) and (e) of this section, on and after the date on which the performance test is completed or required to be completed under §60.8, whichever date comes first, the owner or operator of an affected facility that:

(1) Combusts only coal refuse alone in a fluidized bed combustion steam generating unit shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 87 ng/J (0.20 lb/MMBtu) heat input or 20 percent (0.20) of the potential SO<sub>2</sub> emission rate (80 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 520 ng/J (1.2 lb/MMBtu) heat input. If coal is fired with coal refuse, the affected facility subject to paragraph (a) of this section. If oil or any other fuel (except coal) is fired with coal refuse, the affected facility is subject to the 87 ng/J (0.20 lb/MMBtu) heat input SO<sub>2</sub> emissions limit or the 90 percent SO<sub>2</sub> reduction requirement specified in paragraph (a) of this section and the emission limit is determined pursuant to paragraph (e)(2) of this section.

(2) Combusts only coal and that uses an emerging technology for the control of SO<sub>2</sub> emissions shall neither:

(i) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 50 percent (0.50) of the potential SO<sub>2</sub> emission rate (50 percent reduction); nor

(ii) Cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 260 ng/J (0.60 lb/MMBtu) heat input. If coal is combusted with other fuels, the affected facility is subject to the 50 percent SO<sub>2</sub> reduction requirement specified in this paragraph and the emission limit determined pursuant to paragraph (e)(2) of this section.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, alone or in combination with any other fuel, and is listed in paragraphs (c)(1), (2), (3), or (4) of this section shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of the emission limit determined pursuant to paragraph (e)(2) of this section. Percent reduction requirements are not applicable to affected facilities under paragraphs (c)(1), (2), (3), or (4).

(1) Affected facilities that have a heat input capacity of 22 MW (75 MMBtu/hr) or less.

(2) Affected facilities that have an annual capacity for coal of 55 percent (0.55) or less and are subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for coal of 55 percent (0.55) or less.

(3) Affected facilities located in a noncontinental area.

(4) Affected facilities that combust coal in a duct burner as part of a combined cycle system where 30 percent (0.30) or less of the heat entering the steam generating unit is from combustion of coal in the duct burner and 70 percent (0.70) or more of the heat entering the steam generating unit is from exhaust gases entering the duct burner.

(d) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of 215 ng/J (0.50 lb/MMBtu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The percent reduction requirements are not applicable to affected facilities under this paragraph.

(e) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, oil, or coal and oil with any other fuel shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO<sub>2</sub> in excess of the following:

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(1) The percent of potential SO<sub>2</sub> emission rate or numerical SO<sub>2</sub> emission rate required under paragraph (a) or (b)(2) of this section, as applicable, for any affected facility that

- (i) Combusts coal in combination with any other fuel;
- (ii) Has a heat input capacity greater than 22 MW (75 MMBtu/hr); and
- (iii) Has an annual capacity factor for coal greater than 55 percent (0.55); and

(2) The emission limit determined according to the following formula for any affected facility that combusts coal, oil, or coal and oil with any other fuel:

$$E_s = \frac{(K_a H_a + K_b H_b + K_c H_c)}{(H_a + H_b + H_c)}$$

Where:

E<sub>s</sub> = SO<sub>2</sub> emission limit, expressed in ng/J or lb/MMBtu heat input;

K<sub>a</sub> = 520 ng/J (1.2 lb/MMBtu);

K<sub>b</sub> = 260 ng/J (0.60 lb/MMBtu);

K<sub>c</sub> = 215 ng/J (0.50 lb/MMBtu);

H<sub>a</sub> = Heat input from the combustion of coal, except coal combusted in an affected facility subject to paragraph (b)(2) of this section, in Joules (J) [MMBtu];

H<sub>b</sub> = Heat input from the combustion of coal in an affected facility subject to paragraph (b)(2) of this section, in J (MMBtu); and

H<sub>c</sub> = Heat input from the combustion of oil, in J (MMBtu).

(f) Reduction in the potential SO<sub>2</sub> emission rate through fuel pretreatment is not credited toward the percent reduction requirement under paragraph (b)(2) of this section unless:

- (1) Fuel pretreatment results in a 50 percent (0.50) or greater reduction in the potential SO<sub>2</sub> emission rate; and
  - (2) Emissions from the pretreated fuel (without either combustion or post-combustion SO<sub>2</sub> control) are equal to or less than the emission limits specified under paragraph (b)(2) of this section.
- (g) Except as provided in paragraph (h) of this section, compliance with the percent reduction requirements, fuel oil sulfur limits, and emission limits of this section shall be determined on a 30-day rolling average basis.
- (h) For affected facilities listed under paragraphs (h)(1), (2), or (3) of this section, compliance with the emission limits or fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier, as described under §60.48c(f), as applicable.
- (1) Distillate oil-fired affected facilities with heat input capacities between 2.9 and 29 MW (10 and 100 MMBtu/hr).
  - (2) Residual oil-fired affected facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
  - (3) Coal-fired facilities with heat input capacities between 2.9 and 8.7 MW (10 and 30 MMBtu/hr).
- (i) The SO<sub>2</sub> emission limits, fuel oil sulfur limits, and percent reduction requirements under this section apply at all times, including periods of startup, shutdown, and malfunction.
- (j) For affected facilities located in noncontinental areas and affected facilities complying with the percent reduction standard, only the heat input supplied to the affected facility from the combustion of coal and oil is counted under this section. No credit is provided for the heat input to the affected facility from wood or other fuels or for heat derived from exhaust gases from other sources, such as stationary gas turbines, internal combustion engines, and kilns.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5090, Jan. 28, 2009]

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#### § 60.43C STANDARD FOR PARTICULATE MATTER (PM).

(a) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts coal or combusts mixtures of coal with other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emission limits:

(1) 22 ng/J (0.051 lb/MMBtu) heat input if the affected facility combusts only coal, or combusts coal with other fuels and has an annual capacity factor for the other fuels of 10 percent (0.10) or less.

(2) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility combusts coal with other fuels, has an annual capacity factor for the other fuels greater than 10 percent (0.10), and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor greater than 10 percent (0.10) for fuels other than coal.

(b) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commenced construction, reconstruction, or modification on or before February 28, 2005, that combusts wood or combusts mixtures of wood with other fuels (except coal) and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater, shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of the following emissions limits:

(1) 43 ng/J (0.10 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood greater than 30 percent (0.30); or

(2) 130 ng/J (0.30 lb/MMBtu) heat input if the affected facility has an annual capacity factor for wood of 30 percent (0.30) or less and is subject to a federally enforceable requirement limiting operation of the affected facility to an annual capacity factor for wood of 30 percent (0.30) or less.

(c) On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that can combust coal, wood, or oil and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. Owners and operators of an affected facility that elect to install, calibrate, maintain, and operate a continuous emissions monitoring system (CEMS) for measuring PM emissions according to the requirements of this subpart and are subject to a federally enforceable PM limit of 0.030 lb/MMBtu or less are exempt from the opacity standard specified in this paragraph.

(d) The PM and opacity standards under this section apply at all times, except during periods of startup, shutdown, or malfunction.

(e)(1) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 13 ng/J (0.030 lb/MMBtu) heat input, except as provided in paragraphs (e)(2), (e)(3), and (e)(4) of this section.

(2) As an alternative to meeting the requirements of paragraph (e)(1) of this section, the owner or operator of an affected facility for which modification commenced after February 28, 2005, may elect to meet the requirements of this paragraph. On and after the date on which the initial performance test is completed or required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005 shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of both:

(i) 22 ng/J (0.051 lb/MMBtu) heat input derived from the combustion of coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels; and

(ii) 0.2 percent of the combustion concentration (99.8 percent reduction) when combusting coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels.

(3) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, no owner or operator of an affected facility that commences modification after February 28, 2005, and that combusts over 30 percent wood (by heat input) on an annual basis and has a heat input capacity of 8.7 MW (30 MMBtu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that contain PM in excess of 43 ng/J (0.10 lb/MMBtu) heat input.

(4) On and after the date on which the initial performance test is completed or is required to be completed under §60.8, whichever date comes first, an owner or operator of an affected facility that commences construction, reconstruction, or modification after February 28, 2005, and that combusts only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a PM standard under §60.43c and not using a post-combustion technology (except a wet scrubber) to reduce PM or SO<sub>2</sub> emissions is not subject to the PM limit in this section.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

#### § 60.44C COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES FOR SULFUR DIOXIDE.

(a) Except as provided in paragraphs (g) and (h) of this section and §60.8(b), performance tests required under §60.8 shall be conducted following the procedures specified in paragraphs (b), (c), (d), (e), and (f) of this section, as applicable. Section 60.8(f) does not apply to this section. The 30-day notice

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required in §60.8(d) applies only to the initial performance test unless otherwise specified by the Administrator.

(b) The initial performance test required under §60.8 shall be conducted over 30 consecutive operating days of the steam generating unit. Compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under §60.42c shall be determined using a 30-day average. The first operating day included in the initial performance test shall be scheduled within 30 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after the initial startup of the facility. The steam generating unit load during the 30-day period does not have to be the maximum design heat input capacity, but must be representative of future operating conditions.

(c) After the initial performance test required under paragraph (b) of this section and §60.8, compliance with the percent reduction requirements and SO<sub>2</sub> emission limits under §60.42c is based on the average percent reduction and the average SO<sub>2</sub> emission rates for 30 consecutive steam generating unit operating days. A separate performance test is completed at the end of each steam generating unit operating day, and a new 30-day average percent reduction and SO<sub>2</sub> emission rate are calculated to show compliance with the standard.

(d) If only coal, only oil, or a mixture of coal and oil is combusted in an affected facility, the procedures in Method 19 of appendix A of this part are used to determine the hourly SO<sub>2</sub> emission rate (E<sub>ho</sub>) and the 30-day average SO<sub>2</sub> emission rate (E<sub>ao</sub>). The hourly averages used to compute the 30-day averages are obtained from the CEMS. Method 19 of appendix A of this part shall be used to calculate E<sub>ao</sub> when using daily fuel sampling or Method 6B of appendix A of this part.

(e) If coal, oil, or coal and oil are combusted with other fuels:

(1) An adjusted E<sub>ho</sub> (E<sub>hoO</sub>) is used in Equation 19–19 of Method 19 of appendix A of this part to compute the adjusted E<sub>ao</sub> (E<sub>aoO</sub>). The E<sub>hoO</sub> is computed using the following formula:

$$E_{hoO} = \frac{E_{ho} - E_w(1 - X_k)}{X_k}$$

Where:

E<sub>hoO</sub> = Adjusted E<sub>ho</sub>, ng/J (lb/MMBtu);

E<sub>ho</sub> = Hourly SO<sub>2</sub> emission rate, ng/J (lb/MMBtu);

E<sub>w</sub> = SO<sub>2</sub> concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 9 of appendix A of this part, ng/J (lb/MMBtu). The value E<sub>w</sub> for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E<sub>w</sub> if the owner or operator elects to assume E<sub>w</sub> = 0.

X<sub>k</sub> = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(2) The owner or operator of an affected facility that qualifies under the provisions of §60.42c(c) or (d) (where percent reduction is not required) does not have to measure the parameters E<sub>w</sub> or X<sub>k</sub> if the owner or operator of the affected facility elects to measure emission rates of the coal or oil using the fuel sampling and analysis procedures under Method 19 of appendix A of this part.

(f) Affected facilities subject to the percent reduction requirements under §60.42c(a) or (b) shall determine compliance with the SO<sub>2</sub> emission limits under §60.42c pursuant to paragraphs (d) or (e) of this section, and shall determine compliance with the percent reduction requirements using the following procedures:

(1) If only coal is combusted, the percent of potential SO<sub>2</sub> emission rate is computed using the following formula:

$$\%P_s = 100 \left( 1 - \frac{\%R_g}{100} \right) \left( 1 - \frac{\%R_f}{100} \right)$$

Where:

%P<sub>s</sub> = Potential SO<sub>2</sub> emission rate, in percent;

%R<sub>g</sub> = SO<sub>2</sub> removal efficiency of the control device as determined by Method 19 of appendix A of this part, in percent; and

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%R<sub>f</sub>= SO<sub>2</sub>removal efficiency of fuel pretreatment as determined by Method 19 of appendix A of this part, in percent.

(2) If coal, oil, or coal and oil are combusted with other fuels, the same procedures required in paragraph (f)(1) of this section are used, except as provided for in the following:

(i) To compute the %P<sub>s</sub>, an adjusted %R<sub>g</sub>(%R<sub>gO</sub>) is computed from E<sub>aoO</sub> from paragraph (e)(1) of this section and an adjusted average SO<sub>2</sub>inlet rate (E<sub>aiO</sub>) using the following formula:

$$\%R_{gO} = 100 \left( 1 - \frac{E_{ao}^*}{E_{ai}^*} \right)$$

Where:

%R<sub>gO</sub> = Adjusted %R<sub>g</sub>, in percent;

E<sub>aoO</sub> = Adjusted E<sub>ao</sub>, ng/J (lb/MMBtu); and

E<sub>aiO</sub> = Adjusted average SO<sub>2</sub>inlet rate, ng/J (lb/MMBtu).

(ii) To compute E<sub>aiO</sub>, an adjusted hourly SO<sub>2</sub>inlet rate (E<sub>hiO</sub>) is used. The E<sub>hiO</sub> is computed using the following formula:

$$E_{hiO} = \frac{E_{hi} - E_w(1 - X_1)}{X_1}$$

Where:

E<sub>hiO</sub> = Adjusted E<sub>hi</sub>, ng/J (lb/MMBtu);

E<sub>hi</sub> = Hourly SO<sub>2</sub>inlet rate, ng/J (lb/MMBtu);

E<sub>w</sub> = SO<sub>2</sub>concentration in fuels other than coal and oil combusted in the affected facility, as determined by fuel sampling and analysis procedures in Method 19 of appendix A of this part, ng/J (lb/MMBtu). The value E<sub>w</sub> for each fuel lot is used for each hourly average during the time that the lot is being combusted. The owner or operator does not have to measure E<sub>w</sub> if the owner or operator elects to assume E<sub>w</sub> = 0; and

X<sub>k</sub> = Fraction of the total heat input from fuel combustion derived from coal and oil, as determined by applicable procedures in Method 19 of appendix A of this part.

(g) For oil-fired affected facilities where the owner or operator seeks to demonstrate compliance with the fuel oil sulfur limits under §60.42c based on shipment fuel sampling, the initial performance test shall consist of sampling and analyzing the oil in the initial tank of oil to be fired in the steam generating unit to demonstrate that the oil contains 0.5 weight percent sulfur or less. Thereafter, the owner or operator of the affected facility shall sample the oil in the fuel tank after each new shipment of oil is received, as described under §60.46c(d)(2).

(h) For affected facilities subject to §60.42c(h)(1), (2), or (3) where the owner or operator seeks to demonstrate compliance with the SO<sub>2</sub>standards based on fuel supplier certification, the performance test shall consist of the certification from the fuel supplier, as described in §60.48c(f), as applicable.

(i) The owner or operator of an affected facility seeking to demonstrate compliance with the SO<sub>2</sub>standards under §60.42c(c)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(j) The owner or operator of an affected facility shall use all valid SO<sub>2</sub>emissions data in calculating %P<sub>s</sub> and E<sub>no</sub> under paragraphs (d), (e), or (f) of this section, as applicable, whether or not the minimum emissions data requirements under §60.46c(f) are achieved. All valid emissions data, including valid data collected during periods of startup, shutdown, and malfunction, shall be used in calculating %P<sub>s</sub> or E<sub>no</sub> pursuant to paragraphs (d), (e), or (f) of this section, as applicable.

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[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

#### **§ 60.45C COMPLIANCE AND PERFORMANCE TEST METHODS AND PROCEDURES FOR PARTICULATE MATTER.**

(a) The owner or operator of an affected facility subject to the PM and/or opacity standards under §60.43c shall conduct an initial performance test as required under §60.8, and shall conduct subsequent performance tests as requested by the Administrator, to determine compliance with the standards using the following procedures and reference methods, except as specified in paragraph (c) of this section.

(1) Method 1 of appendix A of this part shall be used to select the sampling site and the number of traverse sampling points.

(2) Method 3A or 3B of appendix A–2 of this part shall be used for gas analysis when applying Method 5 or 5B of appendix A–3 of this part or 17 of appendix A–6 of this part.

(3) Method 5, 5B, or 17 of appendix A of this part shall be used to measure the concentration of PM as follows:

(i) Method 5 of appendix A of this part may be used only at affected facilities without wet scrubber systems.

(ii) Method 17 of appendix A of this part may be used at affected facilities with or without wet scrubber systems provided the stack gas temperature does not exceed a temperature of 160 °C (320 °F). The procedures of Sections 8.1 and 11.1 of Method 5B of appendix A of this part may be used in Method 17 of appendix A of this part only if Method 17 of appendix A of this part is used in conjunction with a wet scrubber system. Method 17 of appendix A of this part shall not be used in conjunction with a wet scrubber system if the effluent is saturated or laden with water droplets.

(iii) Method 5B of appendix A of this part may be used in conjunction with a wet scrubber system.

(4) The sampling time for each run shall be at least 120 minutes and the minimum sampling volume shall be 1.7 dry standard cubic meters (dscm) [60 dry standard cubic feet (dscf)] except that smaller sampling times or volumes may be approved by the Administrator when necessitated by process variables or other factors.

(5) For Method 5 or 5B of appendix A of this part, the temperature of the sample gas in the probe and filter holder shall be monitored and maintained at 160 ±14 °C (320±25 °F).

(6) For determination of PM emissions, an oxygen (O<sub>2</sub>) or carbon dioxide (CO<sub>2</sub>) measurement shall be obtained simultaneously with each run of Method 5, 5B, or 17 of appendix A of this part by traversing the duct at the same sampling location.

(7) For each run using Method 5, 5B, or 17 of appendix A of this part, the emission rates expressed in ng/J (lb/MMBtu) heat input shall be determined using:

(i) The O<sub>2</sub> or CO<sub>2</sub> measurements and PM measurements obtained under this section, (ii) The dry basis F factor, and

(iii) The dry basis emission rate calculation procedure contained in Method 19 of appendix A of this part.

(8) Method 9 of appendix A–4 of this part shall be used for determining the opacity of stack emissions.

(b) The owner or operator of an affected facility seeking to demonstrate compliance with the PM standards under §60.43c(b)(2) shall demonstrate the maximum design heat input capacity of the steam generating unit by operating the steam generating unit at this capacity for 24 hours. This demonstration shall be made during the initial performance test, and a subsequent demonstration may be requested at any other time. If the demonstrated 24-hour average firing rate for the affected facility is less than the maximum design heat input capacity stated by the manufacturer of the affected facility, the demonstrated 24-hour average firing rate shall be used to determine the annual capacity factor for the affected facility; otherwise, the maximum design heat input capacity provided by the manufacturer shall be used.

(c) In place of PM testing with Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part, an owner or operator may elect to install, calibrate, maintain, and operate a CEMS for monitoring PM emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility who elects to continuously monitor PM emissions instead of conducting performance testing using Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall install, calibrate, maintain, and operate a CEMS and shall comply with the requirements specified in paragraphs (c)(1) through (c)(14) of this section.

(1) Notify the Administrator 1 month before starting use of the system.

(2) Notify the Administrator 1 month before stopping use of the system.

(3) The monitor shall be installed, evaluated, and operated in accordance with §60.13 of subpart A of this part.

(4) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under §60.8 of subpart A of this part or within 180 days of notification to the Administrator of use of CEMS if the owner or operator was previously determining compliance by Method 5, 5B, or 17 of appendix A of this part performance tests, whichever is later.

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(5) The owner or operator of an affected facility shall conduct an initial performance test for PM emissions as required under §60.8 of subpart A of this part. Compliance with the PM emission limit shall be determined by using the CEMS specified in paragraph (d) of this section to measure PM and calculating a 24-hour block arithmetic average emission concentration using EPA Reference Method 19 of appendix A of this part, section 4.1.

(6) Compliance with the PM emission limit shall be determined based on the 24-hour daily (block) average of the hourly arithmetic average emission concentrations using CEMS outlet data.

(7) At a minimum, valid CEMS hourly averages shall be obtained as specified in paragraph (c)(7)(i) of this section for 75 percent of the total operating hours per 30-day rolling average.

(i) At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

(ii) [Reserved]

(8) The 1-hour arithmetic averages required under paragraph (c)(7) of this section shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of subpart A of this part.

(9) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (c)(7) of this section are not met.

(10) The CEMS shall be operated according to Performance Specification 11 in appendix B of this part.

(11) During the correlation testing runs of the CEMS required by Performance Specification 11 in appendix B of this part, PM and O<sub>2</sub>(or CO<sub>2</sub>) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and performance tests conducted using the following test methods.

(i) For PM, Method 5 or 5B of appendix A–3 of this part or Method 17 of appendix A–6 of this part shall be used; and

(ii) After July 1, 2010 or after Method 202 of appendix M of part 51 has been revised to minimize artifact measurement and notice of that change has been published in the Federal Register, whichever is later, for condensable PM emissions, Method 202 of appendix M of part 51 shall be used; and

(iii) For O<sub>2</sub> (or CO<sub>2</sub>), Method 3A or 3B of appendix A–2 of this part, as applicable shall be used.

(12) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 2 in appendix F of this part. Relative Response Audit's must be performed annually and Response Correlation Audits must be performed every 3 years.

(13) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Administrator or EPA Reference Method 19 of appendix A of this part to provide, as necessary, valid emissions data for a minimum of 75 percent of total operating hours on a 30-day rolling average.

(14) After July 1, 2011, within 90 days after the date of completing each performance evaluation required by paragraph (c)(11) of this section, the owner or operator of the affected facility must either submit the test data to EPA by successfully entering the data electronically into EPA's WebFIRE data base available at <http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main> or mail a copy to: United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; Mail Code: D243–01; RTP, NC 27711.

(d) The owner or operator of an affected facility seeking to demonstrate compliance under §60.43c(e)(4) shall follow the applicable procedures under §60.48c(f). For residual oil-fired affected facilities, fuel supplier certifications are only allowed for facilities with heat input capacities between 2.9 and 8.7 MW (10 to 30 MMBtu/hr).

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

#### § 60.46C EMISSION MONITORING FOR SULFUR DIOXIDE.

(a) Except as provided in paragraphs (d) and (e) of this section, the owner or operator of an affected facility subject to the SO<sub>2</sub> emission limits under §60.42c shall install, calibrate, maintain, and operate a CEMS for measuring SO<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at the outlet of the SO<sub>2</sub> control device (or the outlet of the steam generating unit if no SO<sub>2</sub> control device is used), and shall record the output of the system. The owner or operator of an affected facility subject to the percent reduction requirements under §60.42c shall measure SO<sub>2</sub> concentrations and either O<sub>2</sub> or CO<sub>2</sub> concentrations at both the inlet and outlet of the SO<sub>2</sub> control device.

(b) The 1-hour average SO<sub>2</sub> emission rates measured by a CEMS shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.42c. Each 1-hour average SO<sub>2</sub> emission rate must be based on at least 30 minutes of operation, and shall be calculated using the data points required under §60.13(h)(2). Hourly SO<sub>2</sub> emission rates are not calculated if the affected facility is operated less than 30 minutes in a 1-hour period and are not counted toward determination of a steam generating unit operating day.

(c) The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS.

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(1) All CEMS shall be operated in accordance with the applicable procedures under Performance Specifications 1, 2, and 3 of appendix B of this part.

(2) Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 of appendix F of this part.

(3) For affected facilities subject to the percent reduction requirements under §60.42c, the span value of the SO<sub>2</sub>CEMS at the inlet to the SO<sub>2</sub>control device shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub>emission rate of the fuel combusted, and the span value of the SO<sub>2</sub>CEMS at the outlet from the SO<sub>2</sub>control device shall be 50 percent of the maximum estimated hourly potential SO<sub>2</sub>emission rate of the fuel combusted.

(4) For affected facilities that are not subject to the percent reduction requirements of §60.42c, the span value of the SO<sub>2</sub>CEMS at the outlet from the SO<sub>2</sub>control device (or outlet of the steam generating unit if no SO<sub>2</sub>control device is used) shall be 125 percent of the maximum estimated hourly potential SO<sub>2</sub>emission rate of the fuel combusted.

(d) As an alternative to operating a CEMS at the inlet to the SO<sub>2</sub>control device (or outlet of the steam generating unit if no SO<sub>2</sub>control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub>emission rate by sampling the fuel prior to combustion. As an alternative to operating a CEMS at the outlet from the SO<sub>2</sub>control device (or outlet of the steam generating unit if no SO<sub>2</sub>control device is used) as required under paragraph (a) of this section, an owner or operator may elect to determine the average SO<sub>2</sub>emission rate by using Method 6B of appendix A of this part. Fuel sampling shall be conducted pursuant to either paragraph (d)(1) or (d)(2) of this section. Method 6B of appendix A of this part shall be conducted pursuant to paragraph (d)(3) of this section.

(1) For affected facilities combusting coal or oil, coal or oil samples shall be collected daily in an as-fired condition at the inlet to the steam generating unit and analyzed for sulfur content and heat content according to the Method 19 of appendix A of this part. Method 19 of appendix A of this part provides procedures for converting these measurements into the format to be used in calculating the average SO<sub>2</sub>input rate.

(2) As an alternative fuel sampling procedure for affected facilities combusting oil, oil samples may be collected from the fuel tank for each steam generating unit immediately after the fuel tank is filled and before any oil is combusted. The owner or operator of the affected facility shall analyze the oil sample to determine the sulfur content of the oil. If a partially empty fuel tank is refilled, a new sample and analysis of the fuel in the tank would be required upon filling. Results of the fuel analysis taken after each new shipment of oil is received shall be used as the daily value when calculating the 30-day rolling average until the next shipment is received. If the fuel analysis shows that the sulfur content in the fuel tank is greater than 0.5 weight percent sulfur, the owner or operator shall ensure that the sulfur content of subsequent oil shipments is low enough to cause the 30-day rolling average sulfur content to be 0.5 weight percent sulfur or less.

(3) Method 6B of appendix A of this part may be used in lieu of CEMS to measure SO<sub>2</sub>at the inlet or outlet of the SO<sub>2</sub>control system. An initial stratification test is required to verify the adequacy of the Method 6B of appendix A of this part sampling location. The stratification test shall consist of three paired runs of a suitable SO<sub>2</sub>and CO<sub>2</sub>measurement train operated at the candidate location and a second similar train operated according to the procedures in §3.2 and the applicable procedures in section 7 of Performance Specification 2 of appendix B of this part. Method 6B of appendix A of this part, Method 6A of appendix A of this part, or a combination of Methods 6 and 3 of appendix A of this part or Methods 6C and 3A of appendix A of this part are suitable measurement techniques. If Method 6B of appendix A of this part is used for the second train, sampling time and timer operation may be adjusted for the stratification test as long as an adequate sample volume is collected; however, both sampling trains are to be operated similarly. For the location to be adequate for Method 6B of appendix A of this part 24-hour tests, the mean of the absolute difference between the three paired runs must be less than 10 percent (0.10).

(e) The monitoring requirements of paragraphs (a) and (d) of this section shall not apply to affected facilities subject to §60.42c(h) (1), (2), or (3) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO<sub>2</sub>standards based on fuel supplier certification, as described under §60.48c(f), as applicable.

(f) The owner or operator of an affected facility operating a CEMS pursuant to paragraph (a) of this section, or conducting as-fired fuel sampling pursuant to paragraph (d)(1) of this section, shall obtain emission data for at least 75 percent of the operating hours in at least 22 out of 30 successive steam generating unit operating days. If this minimum data requirement is not met with a single monitoring system, the owner or operator of the affected facility shall supplement the emission data with data collected with other monitoring systems as approved by the Administrator.

#### **§ 60.47C EMISSION MONITORING FOR PARTICULATE MATTER.**

(a) Except as provided in paragraphs (c), (d), (e), (f), and (g) of this section, the owner or operator of an affected facility combusting coal, oil, or wood that is subject to the opacity standards under §60.43c shall install, calibrate, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of the emissions discharged to the atmosphere and record the output of the system. The owner or operator of an affected facility subject to an opacity standard in §60.43c(c) and that is not required to install a COMS due to paragraphs (c), (d), (e), or (f) of this section that elects not to install a COMS shall conduct a performance test using Method 9 of appendix A–4 of this part and the procedures in §60.11 to demonstrate compliance with the applicable limit in §60.43c and shall comply with either paragraphs (a)(1), (a)(2), or (a)(3) of this section. If during the initial 60 minutes of observation all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent, the observation period may be reduced from 3 hours to 60 minutes.

(1) Except as provided in paragraph (a)(2) and (a)(3) of this section, the owner or operator shall conduct subsequent Method 9 of appendix A–4 of this part performance tests using the procedures in paragraph (a) of this section according to the applicable schedule in paragraphs (a)(1)(i) through (a)(1)(iv) of this section, as determined by the most recent Method 9 of appendix A–4 of this part performance test results.

(i) If no visible emissions are observed, a subsequent Method 9 of appendix A–4 of this part performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted;

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(ii) If visible emissions are observed but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted;

(iii) If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted; or

(iv) If the maximum 6-minute average opacity is greater than 10 percent, a subsequent Method 9 of appendix A-4 of this part performance test must be completed within 30 calendar days from the date that the most recent performance test was conducted.

(2) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 of this part performance tests, elect to perform subsequent monitoring using Method 22 of appendix A-7 of this part according to the procedures specified in paragraphs (a)(2)(i) and (ii) of this section.

(i) The owner or operator shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using Method 22 of appendix A-7 of this part and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period ( *i.e.* , 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period ( *i.e.* , 90 seconds per 30 minute period) the owner or operator shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observation ( *i.e.* , 90 seconds) or conduct a new Method 9 of appendix A-4 of this part performance test using the procedures in paragraph (a) of this section within 30 calendar days according to the requirements in §60.45c(a)(8).

(ii) If no visible emissions are observed for 30 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed.

(3) If the maximum 6-minute opacity is less than 10 percent during the most recent Method 9 of appendix A-4 of this part performance test, the owner or operator may, as an alternative to performing subsequent Method 9 of appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in paragraph (a)(2) of this section. For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods.

(b) All COMS shall be operated in accordance with the applicable procedures under Performance Specification 1 of appendix B of this part. The span value of the opacity COMS shall be between 60 and 80 percent.

(c) Owners and operators of an affected facilities that burn only distillate oil that contains no more than 0.5 weight percent sulfur and/or liquid or gaseous fuels with potential sulfur dioxide emission rates of 26 ng/J (0.060 lb/MMBtu) heat input or less and that do not use a post-combustion technology to reduce SO<sub>2</sub> or PM emissions and that are subject to an opacity standard in §60.43c(c) are not required to operate a COMS if they follow the applicable procedures in §60.48c(f).

(d) Owners or operators complying with the PM emission limit by using a PM CEMS must calibrate, maintain, operate, and record the output of the system for PM emissions discharged to the atmosphere as specified in §60.45c(c). The CEMS specified in paragraph §60.45c(c) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.

(e) Owners and operators of an affected facility that is subject to an opacity standard in §60.43c(c) and that does not use post-combustion technology (except a wet scrubber) for reducing PM, SO<sub>2</sub>, or carbon monoxide (CO) emissions, burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur, and is operated such that emissions of CO discharged to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a boiler operating day average basis is not required to operate a COMS. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (e)(1) through (4) of this section; or

(1) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(ii) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(iii) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(iv) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

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(2) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(3) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(4) You must record the CO measurements and calculations performed according to paragraph (e) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(f) Owners and operators of an affected facility that is subject to an opacity standard in §60.43(c) and that uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part is not required to operate a COMS.

(g) Owners and operators of an affected facility that is subject to an opacity standard in §60.43(c) and that burns only gaseous fuels or fuel oils that contain less than or equal to 0.5 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority is not required to operate a COMS. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]

#### **§ 60.48C REPORTING AND RECORDKEEPING REQUIREMENTS.**

(a) The owner or operator of each affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this part. This notification shall include:

(1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c, or §60.43c.

(3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

(4) Notification if an emerging technology will be used for controlling SO<sub>2</sub> emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

(b) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits of §60.42c, or the PM or opacity limits of §60.43c, shall submit to the Administrator the performance test data from the initial and any subsequent performance tests and, if applicable, the performance evaluation of the CEMS and/or COMS using the applicable performance specifications in appendix B of this part.

(c) In addition to the applicable requirements in §60.7, the owner or operator of an affected facility subject to the opacity limits in §60.43(c) shall submit excess emission reports for any excess emissions from the affected facility that occur during the reporting period and maintain records according to the requirements specified in paragraphs (c)(1) through (3) of this section, as applicable to the visible emissions monitoring method used.

(1) For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(1)(i) through (iii) of this section.

(i) Dates and time intervals of all opacity observation periods;

(ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and

(iii) Copies of all visible emission observer opacity field data sheets;

(2) For each performance test conducted using Method 22 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in paragraphs (c)(2)(i) through (iv) of this section.

(i) Dates and time intervals of all visible emissions observation periods;

(ii) Name and affiliation for each visible emission observer participating in the performance test;

(iii) Copies of all visible emission observer opacity field data sheets; and

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(iv) Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the owner or operator to demonstrate compliance with the applicable monitoring requirements.

(3) For each digital opacity compliance system, the owner or operator shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator

(d) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall submit reports to the Administrator.

(e) The owner or operator of each affected facility subject to the SO<sub>2</sub> emission limits, fuel oil sulfur limits, or percent reduction requirements under §60.42c shall keep records and submit reports as required under paragraph (d) of this section, including the following information, as applicable.

(1) Calendar dates covered in the reporting period.

(2) Each 30-day average SO<sub>2</sub> emission rate (ng/J or lb/MMBtu), or 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of corrective actions taken.

(3) Each 30-day average percent of potential SO<sub>2</sub> emission rate calculated during the reporting period, ending with the last 30-day period; reasons for any noncompliance with the emission standards; and a description of the corrective actions taken.

(4) Identification of any steam generating unit operating days for which SO<sub>2</sub> or diluent (O<sub>2</sub> or CO<sub>2</sub>) data have not been obtained by an approved method for at least 75 percent of the operating hours; justification for not obtaining sufficient data; and a description of corrective actions taken.

(5) Identification of any times when emissions data have been excluded from the calculation of average emission rates; justification for excluding data; and a description of corrective actions taken if data have been excluded for periods other than those during which coal or oil were not combusted in the steam generating unit.

(6) Identification of the F factor used in calculations, method of determination, and type of fuel combusted.

(7) Identification of whether averages have been obtained based on CEMS rather than manual sampling methods.

(8) If a CEMS is used, identification of any times when the pollutant concentration exceeded the full span of the CEMS.

(9) If a CEMS is used, description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specifications 2 or 3 of appendix B of this part.

(10) If a CEMS is used, results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

(11) If fuel supplier certification is used to demonstrate compliance, records of fuel supplier certification as described under paragraph (f)(1), (2), (3), or (4) of this section, as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.

(f) Fuel supplier certification shall include the following information:

(1) For distillate oil:

(i) The name of the oil supplier;

(ii) A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in §60.41c; and

(iii) The sulfur content or maximum sulfur content of the oil.

(2) For residual oil:

(i) The name of the oil supplier;

(ii) The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the affected facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;

(iii) The sulfur content of the oil from which the shipment came (or of the shipment itself); and

(iv) The method used to determine the sulfur content of the oil.

(3) For coal:

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(i) The name of the coal supplier;

(ii) The location of the coal when the sample was collected for analysis to determine the properties of the coal, specifically including whether the coal was sampled as delivered to the affected facility or whether the sample was collected from coal in storage at the mine, at a coal preparation plant, at a coal supplier's facility, or at another location. The certification shall include the name of the coal mine (and coal seam), coal storage facility, or coal preparation plant (where the sample was collected);

(iii) The results of the analysis of the coal from which the shipment came (or of the shipment itself) including the sulfur content, moisture content, ash content, and heat content; and

(iv) The methods used to determine the properties of the coal.

(4) For other fuels:

(i) The name of the supplier of the fuel;

(ii) The potential sulfur emissions rate or maximum potential sulfur emissions rate of the fuel in ng/J heat input; and

(iii) The method used to determine the potential sulfur emissions rate of the fuel.

(g)(1) Except as provided under paragraphs (g)(2) and (g)(3) of this section, the owner or operator of each affected facility shall record and maintain records of the amount of each fuel combusted during each operating day.

(2) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility that combusts only natural gas, wood, fuels using fuel certification in §60.48c(f) to demonstrate compliance with the SO<sub>2</sub> standard, fuels not subject to an emissions standard (excluding opacity), or a mixture of these fuels may elect to record and maintain records of the amount of each fuel combusted during each calendar month.

(3) As an alternative to meeting the requirements of paragraph (g)(1) of this section, the owner or operator of an affected facility or multiple affected facilities located on a contiguous property unit where the only fuels combusted in any steam generating unit (including steam generating units not subject to this subpart) at that property are natural gas, wood, distillate oil meeting the most current requirements in §60.42C to use fuel certification to demonstrate compliance with the SO<sub>2</sub> standard, and/or fuels, excluding coal and residual oil, not subject to an emissions standard (excluding opacity) may elect to record and maintain records of the total amount of each steam generating unit fuel delivered to that property during each calendar month.

(h) The owner or operator of each affected facility subject to a federally enforceable requirement limiting the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c shall calculate the annual capacity factor individually for each fuel combusted. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of the calendar month.

(i) All records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

(j) The reporting period for the reports required under this subpart is each six-month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

[72 FR 32759, June 13, 2007, as amended at 74 FR 5091, Jan. 28, 2009]