MEMORANDUM

TO: Andrew Bouchard, U.S. EPA/OAQPS/SPPD – EPA Office of Air Quality Planning and Standards

FROM: Eastern Research Group, Inc. (ERG)

DATE: March 2023

SUBJECT: Proposed Regulation Edits for 40 CFR Part 60 Subparts III and IIIa: Standards of Performance for Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry Air Oxidation Unit Processes

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The attachments to this memorandum, for the convenience of interested parties, present the redline/strikeout (RLSO) version of New Source Performance Standards (NSPS) subpart III and new NSPS subpart IIIa. Subpart III applies to sources that were new, modified, and reconstructed after October 21, 1983, and on or before the *Federal Register* publication date of this proposed action. Subpart IIIa applies to sources that are new, modified, and reconstructed after the *Federal Register* publication date of this proposed action. These amendments are associated with the proposed action titled *New Source Performance Standards for the Synthetic Organic Chemical Manufacturing Industry and National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry and Group I & II Polymers and Resins Industry*.

Attachments:
RLSO of 40 CFR 60, Subpart III
40 CFR 60, Subpart IIIa

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 60 of the Code of Federal Regulations as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart III—Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes After October 21, 1983, and on or Before [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]

Contents

§60.610 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to each affected facility designated in paragraph (b) of this section that produces any of the chemicals listed in §60.617 as a product, co-product, by-product, or intermediate, except as provided in paragraph (c) of this section.

(b) The affected facility is any of the following for which construction, modification, or reconstruction commenced after October 21, 1983, and on or before **[DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]**:

(1) Each air oxidation reactor not discharging its vent stream into a recovery system.

(2) Each combination of an air oxidation reactor and the recovery system into which its vent stream is discharged.

(3) Each combination of two or more air oxidation reactors and the common recovery system into which their vent streams are discharged.

(c) Each affected facility that has a total resource effectiveness (TRE) index value greater than 4.0 is exempt from all provisions of this subpart except for §§60.612, 60.614(f), 60.615(h), and 60.615(l).

(d) *Alternative means of compliance* -(1) *Option to comply with part 65.* Owners or operators of process vents that are subject to this subpart may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.612 through 60.615 and 60.618. The provisions of 40 CFR part 65 also satisfy the criteria of paragraph (c) of this section. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart D, 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 process vents. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (d)(2) do not apply to owners or operators of process vents complying with 40 CFR part 65, subpart D, 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 D, must comply with 40 CFR part 65, subpart A.

(3) *Compliance date.* Owners or operators who choose to comply with 40 CFR part 65, subpart D, at initial startup shall comply with paragraphs (d)(1) and (2) of this section for each

vent stream on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial startup, whichever date comes first.

(4) *Initial startup notification.* Each owner or operator subject to the provisions of this subpart that chooses to comply with 40 CFR part 65, subpart D, at initial startup shall notify the Administrator of the specific provisions of 40 CFR 65.63(a)(1), (2), or (3) with which the owner or operator has elected to comply. Notification shall be submitted with the notifications of initial startup required by 40 CFR 65.5(b).

Note: The intent of these standards is to minimize the emissions of VOC through the application of BDT. The numerical emission limits in these standards are expressed in terms of total organic compounds (TOC), measured as TOC minus methane and ethane. This emission limit reflects the performance of BDT.

§60.611 Definitions.

As used in this subpart, all terms not defined here shall have the meaning given them in the Act and in subpart A of part 60, and the following terms shall have the specific meanings given them.

Air Oxidation Reactor means any device or process vessel in which one or more organic reactants are combined with air, or a combination of air and oxygen, to produce one or more organic compounds. Ammoxidation and oxychlorination reactions are included in this definition.

Air Oxidation Reactor Recovery Train means an individual recovery system receiving the vent stream from at least one air oxidation reactor, along with all air oxidation reactors feeding vent streams into this system.

Air Oxidation Unit Process means a unit process, including ammoxidation and oxychlorination unit process, that uses air, or a combination of air and oxygen, as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds.

Boilers means any enclosed combustion device that extracts useful energy in the form of steam.

By Compound means by individual stream components, not carbon equivalents.

Continuous recorder means a data recording device recording an instantaneous data value at least once every 15 minutes.

Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

Flow indicator means a device which indicates whether gas flow is present in a vent stream.

Halogenated Vent Stream means any vent stream determined to have a total concentration (by volume) of compounds containing halogens of 20 ppmv (by compound) or greater.

Incinerator means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

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

Process Unit means equipment assembled and connected by pipes or ducts to produce, as intermediates or final products, one or more of the chemicals in §60.617. A process unit can

operate independently if supplied with sufficient fuel or raw materials and sufficient product storage facilities.

Product means any compound or chemical listed in §60.617 that is produced for sale as a final product as that chemical or is produced for use in a process that needs that chemical for the production of other chemicals in another facility. By-products, co-products, and intermediates are considered to be products.

Recovery Device means an individual unit of equipment, such as an absorber, condenser, and carbon adsorber, capable of and used to recover chemicals for use, reuse or sale.

Recovery System means an individual recovery device or series of such devices applied to the same process stream.

Total organic compounds (TOC) means those compounds measured according to the procedures in §60.614(b)(4). For the purposes of measuring molar composition as required in §60.614(d)(2)(i), hourly emissions rate as required in §60.614(d)(5) and §60.614(e) and TOC concentration as required in §60.615(b)(4) and §60.615(g)(4), those compounds which the Administrator has determined do not contribute appreciably to the formation of ozone are to be excluded. The compounds to be excluded are identified in Environmental Protection Agency's statements on ozone abatement policy for SIP revisions (42 FR 35314; 44 FR 32042; 45 FR 32424; 45 FR 48942).

Total resource effectiveness (TRE) Index Value means a measure of the supplemental total resource requirement per unit reduction of TOC associated with an individual air oxidation vent stream, based on vent stream flow rate, emission rate of TOC, net heating value, and corrosion properties (whether or not the vent stream is halogenated), as quantified by the equation given under §60.614(e).

Vent Stream means any gas stream, containing nitrogen which was introduced as air to the air oxidation reactor, released to the atmosphere directly from any air oxidation reactor recovery train or indirectly, after diversion through other process equipment. The vent stream excludes equipment leaks and relief valve discharges including, but not limited to, pumps, compressors, and valves.

§60.612 Standards.

Each owner or operator of any affected facility shall comply with paragraph (a), (b), or (c) of this section for each vent stream on and after the date on which the initial performance test required by §§60.8 and 60.614 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. Each owner or operator shall either:

(a) Reduce emissions of TOC (minus methane and ethane) by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater; or

(b) Combust the emissions in a flare that meets the requirements of §60.18; or

(c) Maintain a TRE index value greater than 1.0 without use of VOC emission control devices.

§60.613 Monitoring of emissions and operations.

(a) The owner or operator of an affected facility that uses an incinerator to seek to comply with the TOC emission limit specified under §60.612(a) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) A flow indicator that provides a record of vent stream flow to the incinerator at least once every hour for each affected facility. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the inlet of each incinerator and before being joined with any other vent stream.

(b) The owner or operator of an affected facility that uses a flare to seek to comply with §60.612(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultra-violet sensor or thermocouple, at the pilot light to indicate the continuous presence of a flame.

(2) A flow indicator that provides a record of vent stream flow to the flare at least once every hour for each affected facility. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream.

(c) The owner or operator of an affected facility that uses a boiler or process heater to seek to comply with §60.612(a) shall install, calibrate, maintain and operate according to the manufacturer's specifications the following equipment:

(1) A flow indicator that provides a record of vent stream flow to the boiler or process heater at least once every hour for each affected facility. The flow indicator shall be installed in the vent stream from each air oxidation reactor within an affected facility at a point closest to the inlet of each boiler or process heater and before being joined with any other vent stream.

(2) A temperature monitoring device in the firebox equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being measured expressed in degrees Celsius or ±0.5 °C, whichever is greater, for boilers or process heaters of less than 44 MW (150 million Btu/hr) heat input design capacity.

(d) Monitor and record the periods of operation of the boiler or process heater if the design input capacity of the boiler is 44 MW (150 million Btu/hr) or greater. The records must be readily available for inspection.

(e) The owner or operator of an affected facility that seeks to demonstrate compliance with the TRE index value limit specified under §60.612(c) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator:

(1) Where an absorber is the final recovery device in a recovery system:

(i) A scrubbing liquid temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or 0.5 °C, whichever is greater, and a specific gravity monitoring device having an accuracy of 0.02 specific gravity units, each equipped with a continuous recorder;

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(2) Where a condenser is the final recovery device in a recovery system:

(i) A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an acuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or 0.5 °C, whichever is greater;

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(3) Where a carbon adsorber is the final recovery device in a recovery system:

(i) An integrating steam flow monitoring device having an accuracy of 10 percent, and a carbon bed temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater, both equipped with a continuous recorder;

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(f) An owner or operator of an affected facility seeking to demonstrate compliance with the standards specified under §60.612 with control devices other than an incinerator, boiler, process heater, or flare; or recovery devices other than an absorber, condenser, or carbon adsorber shall provide to the Administrator information describing the operation of the control device or recovery device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

§60.614 Test methods and procedures.

(a) For the purpose of demonstrating compliance with §60.612, all affected facilities shall be run at full operating conditions and flow rates during any performance test.

(b) The following methods in appendix A to this part, except as provided under §60.8(b) shall be used as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under §60.612(a).

(1) Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device and after the recovery system.

(2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of the volumetric flow rates.

(3) The emission rate correction factor, integrated sampling and analysis procedure of Method 3 shall be used to determine the oxygen concentration ($\%O_{2d}$) for the purposes of determining compliance with the 20 ppmv limit. The sampling site shall be the same as that of the TOC samples and the samples shall be taken during the same time that the TOC samples are taken. The TOC concentration corrected to 3 percent O_2 (C_c) shall be computed using the following equation:

$$C_c = C_{TOC}\frac{17.9}{20.9 - \%O_{2d}}$$

where:

C_c	=	Concentration of TOC corrected to 3 percent 0_2, dry basis, ppm by volume.
C_{TOC}	=	Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

$\%O_{2d}$ = Concentration of O_2, dry basis, percent by volume.

(4) Method 18 of appendix A-6 of this part to determine concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined. The ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) may be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 may not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(i) The sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used then the samples shall be taken at 15-minute intervals.

(ii) The emission reduction (R) of TOC (minus methane and ethane) shall be determined using the following equation:

$$R = \frac{E_i - E_o}{E_i} \times 100$$

where:

R = Emission reduction, percent by weight.

E_i = Mass rate of TOC entering the control device, kg/hr (lb/hr).

E_o = Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr).

(iii) The mass rates of TOC (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o$$

Where:

C_{ij}, C_{oj} = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis ppm by volume.

M_{ij}, M_{oj} = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/min).

K_2 = 2.494×10^{-6} (1/ppm)(g-mole/scm)(kg/g)(min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.

= 1.557×10^{-7} (1/ppm)(lb-mole/scf)(min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

(iv) The TOC concentration (C_{TOC}) is the sum of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{j=1}^{n} C_j$$

where:

C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

C_j = Concentration of sample components in the sample.

n = Number of components in the sample.

(c) When a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to seek to comply with §60.612(a), the requirement for an initial performance test is waived, in accordance with §60.8(b). However, the Administrator reserves the option to require testing at such other times as may be required, as provided for in section 114 of the Act.

(d) When a flare is used to seek to comply with §60.612(b), the flare shall comply with the requirements of §60.18.

(e) The following test methods in appendix A to this part, except as provided under §60.8(b), shall be used for determining the net heating value of the gas combusted to determine compliance under §60.612(b) and for determining the process vent stream TRE index value to determine compliance under §60.612(c).

(1)(i) Method 1 or 1A, as appropriate, for selection of the sampling site. The sampling site for the vent stream flow rate and molar composition determination prescribed in §60.614(e)(2) and (3) shall be, except for the situations outlined in paragraph (e)(1)(ii) of this section, prior to the inlet of any control device, prior to any post-reactor dilution of the stream with air, and prior to any post-reactor introduction of halogenated compounds into the vent stream. No transverse site selection method is needed for vents smaller than 10 centimeters (4 inches) in diameter.

(ii) If any gas stream other than the air oxidation vent stream from the affected facility is normally conducted through the final recovery device.

(A) The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which the nonair oxidation stream is introduced.

(B) The efficiency of the final recovery device is determined by measuring the TOC concentration using Method 18 of appendix A-6 of this part, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as specified in paragraph (b)(4) of this section, at the inlet to the final recovery device after the introduction of any nonair oxidation vent stream and at the outlet of the final recovery device.

(C) This efficiency is applied to the TOC concentration measured prior to the final recovery device and prior to the introduction of the nonair oxidation stream to determine the

concentration of TOC in the air oxidation stream from the final recovery device. This concentration of TOC is then used to perform the calculations outlined in §60.614(e)(4) and (5).

(2) The molar composition of the process vent stream shall be determined as follows:

(i) Method 18 of appendix A-6 of this part, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as specified in paragraph (b)(4) of this section, to measure the concentration of TOC including those containing halogens.

(ii) D1946-77, or 90 (Reapproved 1994) (incorporation by reference as specified in §60.17 of this part) to measure the concentration of carbon monoxide and hydrogen.

(iii) Method 4 to measure the content of water vapor.

(3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, as appropriate.

(4) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1 \left(\sum_{j=1}^{n} C_j H_j \right)$$

where:

H_T	=	Net heating value of the sample, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (77 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F).
K_1	=	1.74×10^{-7} (1/ppm)(g-mole/scm)(MJ/kcal) (metric units), where standard temperature for (g-mole/scm) is 20 °C.
	=	1.03×10^{-11} (1/ppm)(lb-mole/scf)(Btu/kcal) (English units) where standard temperature for (lb/mole/scf) is 68 °F.
C_j	=	Concentration on a wet basis of compound j in ppm, as measured for organics by Method 18 of appendix A-6 of this part, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as

specified in paragraph (b)(4) of this section, and measured for hydrogen and carbon monoxide by ASTM D1946-77, 90, or 94 (incorporation by reference as specified in §60.17 of Subpart A of this part) as indicated in ~~§60.614~~paragraph (e)(2) of this section.

H_j = Net heat of combustion of compound j, kcal/(g-mole) [kcal/(lb-mole)], based on combustion at 25 °C and 760 mm Hg (77 °F and 30 in. Hg).

(5) The emission rate of TOC in the process vent stream shall be calculated using the following equation:

$$E_{TOC} = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

where:

E_{TOC} = Measured emission rate of TOC, kg/hr (lb/hr).

K_2 = 2.494×10^{-6} (1/ppm)(g-mole/scm)(kg/g)(min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.

= 1.557×10^{-7} (1/ppm)(lb-mole/scf)(min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

C_j = Concentration on a wet basis of compound j in ppm, as measured by Method 18 of appendix A-6 of this part, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as specified in paragraph (b)(4) of this section, as indicated in ~~§60.614~~paragraph (e)(2) of this section.

M_j = Molecular weight of sample j, g/g-mole (lb/lb-mole).

Q_s = Vent stream flow rate, scm/hr (scf/hr), at a temperature of 20 °C (68 °F).

(6) The total process vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Method 18 of appendix A-6 of this part, or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as specified in paragraph (b)(4) of this section.

(f) For purposes of complying with §60.612(c), the owner or operator of a facility affected by this subpart shall calculate the TRE index value of the vent stream using the equation

for incineration in paragraph (e)(1) of this section for halogenated vent streams. The owner or operator of an affected facility with a nonhalogenated vent stream shall determine the TRE index value by calculating values using both the incinerator equation in paragraph (e)(1) of this section and the flare equation in paragraph (e)(2) of this section and selecting the lower of the two values.

(1) The TRE index value of the vent stream controlled by an incinerator shall be calculated using the following equation:

$$TRE = \frac{1}{E_{TOC}}\left[a + b(Q_s)^{0.88} + c(Q_s) + d(Q_s)(H_T) + e(Q_s)^{0.88}(H_T)^{0.88} + f(Y_s)^{0.5}\right]$$

(i) Where for a vent stream flow rate that is greater than or equal to 14.2 scm/min (501 scf/min) at a standard temperature of 20 °C (68 °F):

TRE	=	TRE index value.
Q_s	=	Vent stream flow rate, scm/min (scf/min), at a temperature of 20 °C (68 °F).
H_T	=	Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Q_s.
Y_s	=	Q_s for all vent stream categories listed in table 1 except for Category E vent streams where $Y_s = Q_s H_T/3.6$.
E_{TOC}	=	Hourly emissions of TOC, kg/hr (lb/hr). a, b, c, d, e, and f are coefficients.

The set of coefficients which apply to a vent stream shall be obtained from table 1.

TABLE 1. AIR OXIDATION NSPS TRE COEFFICIENTS FOR VENT STREAMS CONTROLLED BY AN INCINERATOR

DESIGN CATEGORY A1. FOR HALOGENATED PROCESS VENT STREAMS, IF 0 ≤ NET HEATING VALUE (MJ/scm) ≤ 3.5 OR IF 0 ≤ NET HEATING VALUE (Btu/scf) ≤ 94:

Q_s = Vent Stream Flow rate scm/min (scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 18.8$	19.18370	0.27580	0.75762	-0.13064	0	0.01025
$(501 \le Q_s \le 664)$	(42.29238)	(0.017220)	(0.072549)	(-0.00030361)	(0)	(0.003803)
$18.8 < Q_s \le 699$	20.00563	0.27580	0.30387	-0.13064	0	0.01025
$(664 < Q_s \le 24,700)$	(44.10441)	(0.017220)	(0.029098)	(-0.00030361)	(0)	(0.003803)
$699 < Q_s \le 1400$	39.87022	0.29973	0.30387	-0.13064	0	0.01449
$(24,700 < Q_s \le 49,000)$	(87.89789)	(0.018714)	(0.029098)	(-0.00030361)	(0)	(0.005376)
$1400 < Q_s \le 2100$	59.73481	0.31467	0.30387	-0.13064	0	0.01775
$(49,000 < Q_s \le 74,000)$	(131.6914)	(0.019647)	(0.029098)	(-0.00030361)	(0)	(0.006585)
$2100 < Q_s \le 2800$	79.59941	0.32572	0.30387	-0.13064	0	0.02049
$(74,000 < Q_s \le 99,000)$	(175.4849)	(0.020337)	(0.029098)	(-0.00030361)	(0)	(0.007602)
$2800 < Q_s \le 3500$	99.46400	0.33456	0.30387	-0.13064	0	0.02291
$(99,000 < Q_s \le 120,000)$	(219.2783)	(0.020888)	(0.029098)	(-0.00030361)	(0)	(0.008500)

DESIGN CATEGORY A2. FOR HALOGENATED PROCESS VENT STREAMS, IF NET HEATING VALUE < 3.5 (MJ/scm) OR IF NET HEATING VALUE < 94 (Btu/scf):

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 18.8$	18.84466	0.26742	-0.20044	0	0	0.01025
$(501 \le Q_s \le 664)$	(41.54494)	(0.016696)	(-0.019194)	(0)	(0)	(0.003803)
$18.8 < Q_s \le 699$	19.65658	0.26742	-0.25332	0	0	0.01025
$(664 < Q_s \le 24,700)$	(43.35694)	(0.016696)	(-0.024258)	(0)	(0)	(0.003803)
$699 < Q_s \le 1400$	39.19213	0.29062	-0.25332	0	0	0.01449
$(24,700 < Q_s \le 49,000)$	(86.40297)	(0.018145)	(-0.024258)	(0)	(0)	(0.005376)
$1400 < Q_s \le 2100$	58.71768	0.30511	-0.25332	0	0	0.01775
$(49,000 < Q_s \le 74,000)$	(129.4490)	(0.019050)	(-0.024258)	(0)	(0)	(0.006585)
$2100 < Q_s \le 2800$	78.24323	0.31582	-0.25332	0	0	0.02049
$(74,000 < Q_s \le 99,000)$	(172.4950)	(0.019718)	(-0.024258)	(0)	(0)	(0.007602)
$2800 < Q_s \le 3500$	97.76879	0.32439	-0.25332	0	0	0.02291
$(99,000 < Q_s \le 120,000)$	(215.5411)	(0.020253)	(-0.024258)	(0)	(0)	(0.008500)

DESIGN CATEGORY B. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 0 ≤ NET HEATING VALUE (MJ/scm) ≤ 0.48 OR IF 0 ≤ NET HEATING VALUE (Btu/scf) ≤ 13:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1340$	8.54245	0.10555	0.09030	-0.17109	0	0.01025
$(501 \le Q_s \le 47,300)$	(18.83268)	(0.0065901)	(0.008647)	(-0.00039762)	(0)	(0.003803)
$1340 < Q_s \le 2690$	16.94386	0.11470	0.09030	-0.17109	0	0.01449
$(47,300 < Q_s \le 95,000)$	(37.35443)	(0.0071614)	(0.008647)	(-0.00039762)	(0)	(0.005376)
$2690 < Q_s \le 4040$	25.34528	0.12042	0.09030	-0.17109	0	0.01775
$(95,000 < Q_s \le 143,000)$	(55.87620)	(0.0075185)	(0.008647)	(-0.00039762)	(0)	(0.00658

DESIGN CATEGORY C. FOR NONHALOGENTED PROCESS VENT STREAMS, IF 0.48 < NET HEATING VALUE (MJ/scm) ≤ 1.9 OR IF 13 < NET HEATING VALUE (Btu/scf) ≤ 51:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1340$	9.25233	0.06105	0.31937	-0.16181	0	0.01025
$(501 \le Q_s \le 47{,}300)$	(20.39769)	(0.003812)	(0.030582)	(-0.00037605)	(0)	(0.003803)
$1340 < Q_s \le 2690$	18.36363	0.06635	0.31937	-0.16181	0	0.01449
$(47{,}300 < Q_s \le 95{,}000)$	(40.48446)	(0.004143)	(0.030582)	(-0.00037605)	(0)	(0.005376)
$2690 < Q_s \le 4040$	27.47492	0.06865	0.31937	-0.16181	0	0.01775
$(95{,}000 < Q_s \le 143{,}000)$	(60.57121)	(0.004349)	(0.030582)	(-0.00037605)	(0)	(0.006585)

DESIGN CATEGORY D. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 1.9 < NET HEATING VALUE (MJ/scm) ≤ 3.6 OR IF 51 < NET HEATING VALUE (Btu/scf) ≤ 97:

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Q_s \le 1180$	6.67868	0.06943	0.02582	0	0	0.01025
$(501 \le Q_s \le 41{,}700)$	(14.72382)	(0.004335)	(0.002472)	(0)	(0)	(0.003803)
$1180 < Q_s \le 2370$	13.21633	0.07546	0.02582	0	0	0.01449
$(41{,}700 < Q_s \le 83{,}700)$	(29.13672)	(0.004711)	(0.002472)	(0)	(0)	(0.005376)
$2370 < Q_s \le 3550$	19.75398	0.07922	0.02582	0	0	0.01775
$(83{,}700 < Q_s \le 125{,}000)$	(43.54962)	(0.004946)	(0.002472)	(0)	(0)	(0.00658

Q_s = Vent Stream Flow rate scm/min(scf/min)	a	b	c	d	e	f
$14.2 \le Y_s \le 1180$	6.67868	0	0	-0.00707	0.02220	0.01025
$(501 \le Y_s \le 41{,}700)$	(14.72382)	(0)	(0)	(-0.0000164)	(0.0001174)	(0.003803)
$1180 < Y_s \le 2370$	13.21633	0	0	-0.00707	0.02412	0.01449
$(41{,}700 < Y_s \le 83{,}700)$	(29.13672)	(0)	(0)	(-0.0000164)	(0.0001276)	(0.005376)
$2370 < Y_s \le 3550$	19.75398	0	0	-0.00707	0.02533	0.01775
$(83{,}700 < Y_s \le 125{,}000)$	(43.54962)	(0)	(0)	(-0.0000164)	(0.0001340)	(0.006585)

(ii) Where for a vent stream flow rate that is less than 14.2 scm/min (501 scf/min) at a standard temperature of 20 °C (68 °F):

TRE = TRE index value.

Q_s = 14.2 scm/min (501 scf/min).

H_T = (FLOW)(HVAL)/Q_s.

Where the following inputs are used:

FLOW = Vent stream flow rate, scm/min (scf/min), at a temperature of 20 °C (68 °F).

HVAL = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Q_s.

Y_s = Q_s for all vent stream categories listed in table 1 except for Category E vent streams where $Y_s = Q_s H_T/3.6$.

E_{TOC} = Hourly emissions of TOC, kg/hr (lb/hr).

a, b, c, d, e, and f are coefficients.

The set of coefficients that apply to a vent stream can be obtained from table 1.

(2) The equation for calculating the TRE index value of a vent stream controlled by a flare is as follows:

$$TRE = \frac{1}{E_{TOC}}\left[a(Q_s) + b(Q_s)^{0.8} + c(Q_s)(H_T) + d(E_{TOC}) + e\right]$$

where:

TRE = TRE index value.

E_{TOC} = Hourly emissions of TOC, kg/hr (lb/hr).

Q_s = Vent stream flow rate, scm/min (scf/min), at a standard temperature of 20 °C (68 °F).

H_T = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg (68 °F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20 °C (68 °F) as in the definition of Q_s.

a, b, c, d, and e are coefficients.

The set of coefficients that apply to a vent stream shall be obtained from table 2.

Table 2—Air Oxidation Processes NSPS TRE Coefficients for Vent Streams Controlled by a Flare

	a	**b**	**c**	**d**	**e**
$H_T < 11.2$ MJ/scm	2.25	0.288	−0.193	(−0.0051	2.08
($H_T < 301$ Btu/scf)	(0.140)	(0.0367)	(−0.000448)	(−0.0051)	(4.59)
$H_T \geq 11.2$ MJ/scm	0.309	0.0619	−0.0043	−0.0034	2.08
$H_T \geq 301$ Btu/scf)	(0.0193)	(0.00788)	(−0.000010)	(−0.0034)	(4.59)

(g) Each owner or operator of an affected facility seeking to comply with §60.610(c) or §60.612(c) shall recalculate the TRE index value for that affected facility whenever process

changes are made. Some examples of process changes are changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineering estimates of the effects of the change to the recovery system.

(1) Where the recalculated TRE index value is less than or equal to 1.0, the owner or operator shall notify the Administrator within 1 week of the recalculation and shall conduct a performance test according to the methods and procedures required by §60.614 to determine compliance with §60.612(a). Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

(2) Where the initial TRE index value is greater than 4.0 and the recalculated TRE index value is less than or equal to 4.0, but greater than 1.0, the owner or operator shall conduct a performance test in accordance with §§60.8 and 60.614 and shall comply with §§60.613, 60.614, and 60.615. Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

§60.615 Reporting and recordkeeping requirements.

(a) Each owner or operator subject to §60.612 shall notify the Administrator of the specific provisions of §60.612 (§60.612 (a) (b), or (c)) with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial start-up required by §60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of §60.612 with which he or she will comply, then the Administrator shall be notified by the owner or operator 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by §60.614 within 180 days.

(b) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible records of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under §60.8. Where a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to comply with §60.612(a), a report containing performance test data need not be submitted, but a report containing the information of §60.615(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined. Beginning on **[INSERT date 60 days after date of publication of the final rule in the Federal Register]**, owners and operators must submit the performance test report following the procedures specified in paragraph (m) of this section. Data collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test must be submitted in a file format generated using the EPA's ERT. Alternatively, the owner or operator may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or an alternate electronic file.

(1) Where an owner or operator subject to this subpart seeks to demonstrate compliance with §60.612(a) through use of either a thermal or catalytic incinerator:

(i) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing, and

(ii) The percent reduction of TOC determined as specified in §60.614(b) achieved by the incinerator, or the concentration of TOC (ppmv, by compound) determined as specified in §60.614(b) at the outlet of the control device on a dry basis corrected to 3 percent oxygen.

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.612(a) through use of a boiler or process heater:

(i) A description of the location at which the vent stream is introduced into the boiler or process heater, and

(ii) The average combustion temperature of the boiler or process heater with a design heat input capacity of less than 44 MW (150 million Btu/hr) measured at least every 15 minutes and averaged over the same time period of the performance testing.

(3) Where an owner or operator subject to the provisions of this subpart seeks to comply with §60.612(b) through the use of a smokeless flare, flare design (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring, and records of all periods of operations during which the pilot flame is absent.

(4) Where an owner or operator seeks to demonstrate compliance with §60.612(c):

(i) Where an absorber is the final recovery device in a recovery system, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Administrator), and average exit temperature of the absorbing liquid,

measured at least every 15 minutes and averaged over the same time period of the performance testing (both measured while the vent stream is normally routed and constituted), or

(ii) Where a condenser is the final recovery device in a recovery system, the average exit (product side) temperature, measured at least every 15 minutes and average over the same time period of the performance testing while the vent stream is normally routed and constituted.

(iii) Where a carbon adsorber is the final recovery device in a recovery system, the total steam mass flow measured at least every 15 minutes and averaged over the same time period of the performance test (full carbon bed cycle), temperature of the carbon bed after regeneration (and within 15 minutes of completion of any cooling cycle(s), and duration of the carbon bed steaming cycle (all measured while the vent stream is normally routed and constituted), or

(iv) As an alternative to §60.615(b)(4)(i), (ii) or (iii), the concentration level or reading indicated by the organic monitoring device at the outlet of the absorber, condenser, or carbon adsorber measured at least every 15 minutes and averaged over the same time period of the performance testing while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream.

(c) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §60.613(a) and (c) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Where a combustion device is used by an owner or operator seeking to demonstrate compliance with

§60.612(a) or (c), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:

(1) For thermal incinerators, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance with §60.612(a) was determined.

(2) For catalytic incinerators, all 3-hour periods of operation during which the average temperature of the vent stream immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the vent stream during the most recent performance test at which compliance with §60.612(a) was determined. The owner or operator also shall record all 3-hour periods of operation during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the device during the most recent performance test at which compliance with §60.612(a) was determined.

(3) All 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance with §60.612(a) was determined for boilers or process heaters with a design heat input capacity of less than 44 MW (150 million Btu/hr).

(4) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under §60.612(a).

(d) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the flow indication specified under §60.613(a)(2), §60.613(b)(2), and §60.613(c)(1), as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or has no flow rate.

(e) Each owner or operator subject to the provisions of this subpart who uses a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater to comply with §60.612(a) shall keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State or Federal regulatory requirements).

(f) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the flare pilot flame monitoring specified in §60.613(b), as well as up-to-date, readily accessible records of all periods of operations in which the pilot flame is absent.

(g) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §60.613(e) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Where the owner or operator seeks to demonstrate compliance with §60.612(c), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:

(1) Where an absorber is the final recovery device in a recovery system, and where an organic monitoring device is not used:

(i) All 3-hour periods of operation during which the average absorbing liquid temperature was more than 11 °C (20 °F) above the average absorbing liquid temperature during the most recent performance test, or

(ii) All 3-hour periods of operation during which the average absorbing liquid specific gravity was more than 0.1 unit above, or more than 0.1 unit below, the average absorbing liquid specific gravity during the most recent performance test (unless monitoring of an alternative parameter, which is a measure of the degree of absorbing liquid saturation, is approved by the Administrator, in which case he or she will define appropriate parameter boundaries and periods of operation during which they are exceeded).

(2) When a condenser is the final recovery device in a recovery system, and where an organic monitoring device is not used, all 3-hour periods of operation during which the average exit (product side) condenser operating temperature was more than 6 °C (11 °F) above the average exit (product side) operating temperature during the most recent performance test.

(3) Where a carbon adsorber is the final recovery device in a recovery system and where an organic monitoring device is not used:

(i) All carbon bed regeneration cycles during which the total mass steam flow was more than 10 percent below the total mass steam flow during the most recent performance test, or

(ii) All carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration (and after completion of any cooling cycle(s)) was more than 10 percent greater than the carbon bed temperature (in degrees Celsius) during the most recent performance test.

(4) Where an absorber, condenser, or carbon adsorber is the final recovery device in the recovery system and an organic monitoring device approved by the Administrator is used, all 3-hour periods of operation during which the average concentration level or reading of organic compounds in the exhaust gases is more than 20 percent greater than the exhaust gas organic

compound concentration level or reading measured by the monitoring device during the most recent performance test.

(h) Each owner or operator subject to the provisions of this subpart and seeking to demonstrate compliance with §60.612(c) shall keep up-to-date, readily accessible records of:

(1) Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or air oxidation reactors;

(2) Any recalculation of the TRE index value performed pursuant to §60.614(f);

(3) The results of any performance test performed pursuant to the methods and procedures required by §60.614(d).

(i) Each owner and operator subject to the provisions of this subpart is exempt from the quarterly reporting requirements contained in §60.7(c) of the General Provisions.

(j) Each owner or operator that seeks to comply with the requirements of this subpart by complying with the requirements of §60.612 shall submit to the Administrator semiannual reports of the following information. The initial report shall be submitted within 6 months after the initial start-up-date. On and after **[INSERT date one year after date of publication of final rule in the Federal Register]** or once the report template for this subpart has been available on the Compliance and Emissions Data Reporting Interface (CEDRI) website (*https://www.epa.gov/electronic-reporting-air-emissions/cedri*) for 1 year, whichever date is later, owners and operators must submit all subsequent reports using the appropriate electronic report template on the CEDRI website for this subpart and following the procedure specified in paragraph (m) of this section. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has

approved a different schedule for submission of reports, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted.

(1) Exceedances of monitored parameters recorded under §60.615(c) and (g).

(2) All periods recorded under §60.615(d) when the vent stream is diverted from the control device or has no flow rate.

(3) All periods recorded under §60.615(e) when the boiler or process heater was not operating.

(4) All periods recorded under §60.615(f) in which the pilot flame of the flare was absent.

(5) Any recalculation of the TRE index value, as recorded under §60.615(h).

(k) The requirements of §60.615(j) remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with §60.615(j), provided that they comply with the requirements established by the State. The EPA will not approve a waiver of electronic reporting to the EPA in delegating enforcement authority. Thus, electronic reporting to the EPA cannot be waived, and as such, the provisions of this paragraph cannot be used to relieve owners or operators of affected facilities of the requirement to submit the electronic reports required in this section to the EPA.

(l) The Administrator will specify appropriate reporting and recordkeeping requirements where the owner or operator of an affected facility seeks to demonstrate compliance with the standards specified under §60.612 other than as provided under §60.613(a), (b), (c), and (d).

(m) If an owner or operator is required to submit notifications or reports following the procedure specified in this paragraph (m), the owner or operator must submit notifications or

reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The EPA will make all the information submitted through CEDRI available to the public without further notice to the owner or operator. Do not use CEDRI to submit information the owner or operator claims as CBI. Although the EPA does not expect persons to assert a claim of CBI, if an owner or operator wishes to assert a CBI claim for some of the information in the report or notification, the owner or operator must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (m)(1) and (2) of this section. Clearly mark the part or all of the information claimed to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission. Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. The owner or operator must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (m).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the SOCMI NSPS Sector Lead. Owners and operators

who do not have their own file sharing service and who require assistance with submitting large electronic files that exceed the file size limit for email attachments should email oaqpscbi@epa.gov to request a file transfer link.

(2) If an owner or operator cannot transmit the file electronically, the owner or operator may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the SOCMI NSPS Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(n) Owners and operators required to electronically submit notifications or reports through CEDRI in the EPA's CDX may assert a claim of EPA system outage for failure to timely comply with the electronic submittal requirement. To assert a claim of EPA system outage, owners and operators must meet the requirements outlined in paragraphs (n)(1) through (7) of this section.

(1) The owner or operator must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA’s CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) The owner or operator must submit notification to the Administrator in writing as soon as possible following the date the owner or operator first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) The owner or operator must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which the owner or operator proposes to report, or if the owner or operator has already met the reporting requirement at the time of the notification, the date the report was submitted.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(o) Owners and operators required to electronically submit notifications or reports through CEDRI in the EPA's CDX, owners and operators may assert a claim of *force majeure* for failure to timely comply with the electronic submittal requirement. To assert a claim of *force majeure*, you must meet the requirements outlined in paragraphs (o)(1) through (5) of this section.

(1) An owner or operator may submit a claim if a *force majeure* event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a *force majeure* event is defined as 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 requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(2) The owner or operator must submit notification to the Administrator in writing as soon as possible following the date the owner or operator first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) The owner or operator must provide to the Administrator:

(i) A written description of the *force majeure* event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the *force majeure* event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which the owner or operator proposes to report, or if the owner or operator has already met the reporting requirement at the time of the notification, the date the report was submitted.

(4) The decision to accept the claim of *force majeure* and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the *force majeure* event occurs.

§60.616 Reconstruction.

For purposes of this subpart "fixed capital cost of the new components," as used in §60.15, includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following October 21, 1983. 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.

§60.617 Chemicals affected by subpart III.

Chemical name	CAS No.*
Acetaldehyde	75-07-0
Acetic acid	64-19-7
Acetone	67-64-1
Acetonitrile	75-05-8
Acetophenone	98-86-2
Acrolein	107-02-8
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Anthraquinone	84-65-1
Benzaldehyde	100-52-7
Benzoic acid, tech	65-85-0

1,3-Butadiene	106-99-0
p-t-Butyl benzoic acid	98-73-7
N-Butyric acid	107-92-6
Crotonic acid	3724-65-0
Cumene hydroperoxide	80-15-9
Cyclohexanol	108-93-0
Cyclohexanone	108-94-1
Dimethyl terephthalate	120-61-6
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Formaldehyde	50-00-0
Formic acid	64-18-6
Glyoxal	107-22-2
Hydrogen cyanide	74-90-8
Isobutyric acid	79-31-2
Isophthalic acid	121-91-5
Maleic anhydride	108-31-6
Methyl ethyl ketone	78-93-3
a-Methyl styrene	98-83-9
Phenol	108-95-2
Phthalic anhydride	85-44-9
Propionic acid	79-09-4
Propylene oxide	75-56-9
Styrene	100-42-5
Terephthalic acid	100-21-0

* CAS numbers refer to the Chemical Abstracts Registry numbers assigned to specific chemicals, isomers, or mixtures of chemicals. Some isomers or mixtures that are covered by the standards do not have CAS numbers assigned to them. The standards apply to all of the chemicals listed, whether CAS numbers have been assigned or not.

§60.618 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: §60.613(e) and approval of an alternative to any electronic reporting to the EPA required by this subpart.

For the reasons set out in the preamble, the Environmental Protection Agency proposes to amend title 40, chapter I, part 60 of the Code of Federal Regulations as follows:

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart IIIa—Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes for Which Construction, Reconstruction, or Modification Commenced After [DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER]

Contents

§60.610a Am I subject to this subpart?

(a) You are subject to this subpart if you operate an affected facility designated in paragraph (b) of this section that produces any of the chemicals listed in §60.617a as a product, co-product, by-product, or intermediate.

(b) The affected facility is any of the following for which construction, modification, or reconstruction commenced after [**DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER**]:

(1) Each air oxidation reactor not discharging its vent stream into a recovery system.

(2) Each combination of an air oxidation reactor and the recovery system into which its vent stream is discharged.

(3) Each combination of two or more air oxidation reactors and the common recovery system into which their vent streams are discharged.

§60.611a What definitions must I know?

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

Air Oxidation Reactor means any device or process vessel in which one or more organic reactants are combined with air, or a combination of air and oxygen, to produce one or more organic compounds. Ammoxidation and oxychlorination reactions are included in this definition.

Air Oxidation Reactor Recovery Train means an individual recovery system receiving the vent stream from at least one air oxidation reactor, along with all air oxidation reactors feeding vent streams into this system.

Air Oxidation Unit Process means a unit process, including ammoxidation and oxychlorination unit process, that uses air, or a combination of air and oxygen, as an oxygen source in combination with one or more organic reactants to produce one or more organic compounds.

Boilers means any enclosed combustion device that extracts useful energy in the form of steam.

Breakthrough means the time when the level of TOC, measured at the outlet of the first bed, has been detected is at the highest concentration allowed to be discharged from the adsorber system and indicates that the adsorber bed should be replaced.

By Compound means by individual stream components, not carbon equivalents.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission point to a control device.

Continuous recorder means a data recording device recording an instantaneous data value at least once every 15 minutes.

Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

Flow indicator means a device which indicates whether gas flow is present in a vent stream.

Halogenated Vent Stream means any vent stream determined to have a total concentration (by volume) of compounds containing halogens of 20 ppmv (by compound) or greater.

Incinerator means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

Pressure-assisted multi-point flare means a flare system consisting of multiple flare burners in staged arrays whereby the vent stream pressure is used to promote mixing and smokeless operation at the flare burner tips. Pressure-assisted multi-point flares are designed for smokeless operation at velocities up to Mach = 1 conditions (i.e., sonic conditions), can be

elevated or at ground level, and typically use cross-lighting for flame propagation to combust any flare vent gases sent to a particular stage of flare burners.

Primary Fuel means the fuel fired through a burner or a number of similar burners. The primary fuel provides the principal heat input to the device, and the amount of fuel is sufficient to sustain operation 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 is heated to produce steam.

Process Unit means equipment assembled and connected by pipes or ducts to produce, as intermediates or final products, one or more of the chemicals in §60.617a. A process unit can operate independently if supplied with sufficient fuel or raw materials and sufficient product storage facilities.

Product means any compound or chemical listed in §60.617a that is produced for sale as a final product as that chemical or is produced for use in a process that needs that chemical for the production of other chemicals in another facility. By-products, co-products, and intermediates are considered to be products.

Recovery Device means an individual unit of equipment, such as an absorber, condenser, and carbon adsorber, capable of and used to recover chemicals for use, reuse or sale.

Recovery System means an individual recovery device or series of such devices applied to the same process stream.

Relief valve means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge results from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

Total organic compounds (TOC) means those compounds measured according to the procedures of Method 18 of appendix A-6 of this part or ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) as specified in §60.614a(b)(4) or the concentration of organic compounds measured according to the procedures in Method 21 or Method 25A of appendix A-7 of this part.

Vent Stream means any gas stream, containing nitrogen which was introduced as air to the air oxidation reactor, released to the atmosphere directly from any air oxidation reactor recovery train or indirectly, after diversion through other process equipment. The vent stream excludes equipment leaks including, but not limited to, pumps, compressors, and valves.

§60.612a What standards and associated requirements must I meet?

(a) You must comply with the emission limits and standards specified in Table 1 to this subpart and the requirements specified paragraphs (b) and (c) of this section for each vent stream on and after the date on which the initial performance test required by §60.8 of subpart A of this part and §60.614a is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. The standards in this section apply at all times, including periods of startup, shutdown and malfunction. As provided in §60.11(f) of subpart A of this part, this provision supersedes the exemptions for periods of startup, shutdown and malfunction in the Part 60 General Provisions in Subpart A.

(b) The following release events from an affected facility are a violation of the emission limits and standards specified in Table 1 to this subpart.

(1) Any relief valve discharge to the atmosphere of a vent stream.

(2) The use of a bypass line at any time on a closed vent system to divert emissions to the atmosphere, or to a control device or recovery device not meeting the requirements specified in §60.613a.

(c) You may designate a vent stream as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. You must comply with the applicable requirements in paragraphs (c)(1) through (3) of this section for each maintenance vent. Any vent stream designated as a maintenance vent is only subject to the maintenance vent provisions in this paragraph (c) and the associated recordkeeping and reporting requirements in §60.615a(g), respectively.

(1) Prior to venting to the atmosphere, remove process liquids from the equipment as much as practical and depressurize the equipment to either: A flare meeting the requirements of §60.619a, as applicable, or using any combination of a non-flare control device or recovery device meeting the requirements in Table 1 to this subpart until one of the following conditions, as applicable, is met.

(i) The vapor in the equipment served by the maintenance vent has a lower explosive limit (LEL) of less than 10 percent.

(ii) If there is no ability to measure the LEL of the vapor in the equipment based on the design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 pounds per square inch gauge (psig) or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the LEL of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) is less than 10 percent.

(iii) The equipment served by the maintenance vent contains less than 50 pounds of total VOC.

(iv) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in paragraphs (c)(1)(i) through (iii) of this section can be met prior to installing or removing a blind flange or similar equipment blind, then the pressure in the equipment served by the maintenance vent must be reduced to 2 psig or less before installing or removing the equipment blind. During installation or removal of the equipment blind, active purging of the equipment may be used provided the equipment pressure at the location where purge gas is introduced remains at 2 psig or less.

(2) Except for maintenance vents complying with the alternative in paragraph (c)(1)(iii) of this section, you must determine the LEL or, if applicable, equipment pressure using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(3) For maintenance vents complying with the alternative in paragraph (c)(1)(iii) of this section, you must determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined from equipment design specifications. Equipment contents may be determined using process knowledge.

§60.613a What are my monitoring, installation, operation, and maintenance requirements?

(a) Except as specified in paragraphs (a)(5) and (6) of this section, if you use a non-flare control device or recovery system to comply with the TOC emission limit specified in Table 1 to this subpart, then you must comply with paragraphs (a)(1) through (4), (b), and (c) of this section.

(1) Install a continuous parameter monitoring system(s) (CPMS) and monitor the operating parameter(s) applicable to the control device or recovery system as specified in Table 2 to this subpart.

(2) Establish the applicable minimum, maximum, or range for the operating parameter limit as specified in Table 3 to this subpart by calculating the value(s) as the arithmetic average of operating parameter measurements recorded during the three test runs conducted for the most recent performance test. You may operate outside of the established operating parameter limit(s) during subsequent performance tests in order to establish new operating limits. You must include the updated operating limits with the performance test results submitted to the Administrator pursuant to §60.615a(b). Upon establishment of a new operating limit, you must thereafter operate under the new operating limit. If the Administrator determines that you did not conduct the performance test in accordance with the applicable requirements or that the operating limit established during the performance test does not correspond to the conditions specified in §60.614a(a), then you must conduct a new performance test and establish a new operating limit.

(3) Monitor, record, and demonstrate continuous compliance using the minimum frequencies specified in Table 3 to this subpart.

(4) Comply with the calibration and quality control requirements as specified in Table 4 to this subpart that are applicable to the CPMS used.

(5) Any vent stream introduced with primary fuel into a boiler or process heater is exempt from the requirements specified in paragraphs (a)(1) through (4) of this section.

(6) If you vent emissions through a closed vent system to an adsorber(s) that cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then you must install a system of two or more adsorber units in series and comply with the requirements specified in

paragraphs (a)(6)(i) through (iii) of this section in addition to the requirements specified in paragraphs (a)(1) through (4) of this section.

(i) Conduct an initial performance test or design evaluation of the adsorber and establish the breakthrough limit and adsorber bed life.

(ii) Monitor the TOC concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (a)(6)(iii)(B) of this section. You must measure the concentration of TOC using either a portable analyzer, in accordance with Method 21 of appendix A–7 of this part using methane, propane, or isobutylene as the calibration gas or Method 25A of appendix A–7 of this part using methane or propane as the calibration gas.

(iii) Comply with paragraph (a)(6)(iii)(A) of this section, and comply with the monitoring frequency according to paragraph (a)(6)(iii)(B) of this section.

(A) The first adsorber in series must be replaced immediately when breakthrough, as defined in §60.611a, is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph (a)(6)(iii)(A), ‘‘immediately’’ means within 8 hours of the detection of a breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons. You must monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(B) Based on the adsorber bed life established according to paragraph (a)(6)(i) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the

adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(b) If you vent emissions through a closed vent system to a boiler or process heater, then the vent stream must be introduced into the flame zone of the boiler or process heater.

§60.614a What test methods and procedures must I use to determine compliance with the standards?

(a) For the purpose of demonstrating compliance with the emission limits and standards specified in Table 1 to this subpart, all affected facilities must be run at full operating conditions and flow rates during any performance test.

(1) Conduct initial performance tests no later than the date required by §60.8(a) of subpart A of this part.

(2) Conduct subsequent performance tests no later than 60 calendar months after the previous performance test.

(b) The following methods in appendix A to this part, except as provided in §60.8(b) of subpart A of this part must be used as reference methods to determine compliance with the emission limit or percent reduction efficiency specified in Table 1 to this subpart for non-flare control devices and/or recovery systems.

(1) Method 1 or 1A, as appropriate, for selection of the sampling sites. The inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device or, if equipped with a recovery system, then prior to the inlet of the first recovery device in the recovery system.

(2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of the volumetric flow rates.

(3) Method 3A of appendix A-2 of this part or the manual method in ANSI/ASME PTC 19-10-1981—Part 10 (Incorporated by reference, see § 60.17 of Subpart A of this part) must be used to determine the oxygen concentration ($\%O_{2d}$) for the purposes of determining compliance with the 20 ppmv limit. The sampling site must be the same as that of the TOC samples and the samples must be taken during the same time that the TOC samples are taken. The TOC concentration corrected to 3 percent O_2 (C_c) must be computed using the following equation:

$$C_c = C_{TOC}\frac{17.9}{20.9 - \%O_{2d}}$$

where:

C_c	=	Concentration of TOC corrected to 3 percent O_2, dry basis, ppm by volume.
C_{TOC}	=	Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.
$\%O_{2d}$	=	Concentration of O_2, dry basis, percent by volume.

(4) Method 18 of appendix A-6 of this part to determine concentration of TOC in the control device outlet or in the outlet of the final recovery device in a recovery system, and to determine the concentration of TOC in the inlet when the reduction efficiency of the control device or recovery system is to be determined. The ASTM D6420-18 (Incorporated by reference, see § 60.17 of Subpart A of this part) may be used in lieu of Method 18 of appendix A-6 of this part, if the target compounds are all known and are all listed in Section 1.1 of ASTM D6420-18 as measurable; ASTM D6420-18 must not be used for methane and ethane; and ASTM D6420-18 may not be used as a total VOC method.

(i) The sampling time for each run must be 1 hour in which either an integrated sample or at least four grab samples must be taken. If grab sampling is used then the samples must be taken at 15-minute intervals.

(ii) The emission reduction (R) of TOC (minus methane and ethane) must be determined using the following equation:

$$R = \frac{E_i - E_o}{E_i} \times 100$$

where:

R	=	Emission reduction, percent by weight.
E_i	=	Mass rate of TOC entering the control device or recovery system, kg/hr (lb/hr).
E_o	=	Mass rate of TOC discharged to the atmosphere, kg/hr (lb/hr).

(iii) The mass rates of TOC (E_i, E_o) must be computed using the following equations:

$$E_i = K_2 \left(\sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i$$

$$E_o = K_2 \left(\sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o$$

Where:

C_{ij}, C_{oj}	=	Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device or recovery system, respectively, dry basis ppm by volume.
M_{ij}, M_{oj}	=	Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device or recovery system, respectively, g/g-mole (lb/lb-mole).
Q_i, Q_o	=	Flow rate of gas stream at the inlet and outlet of the control device or recovery system, respectively, dscm/min (dscf/min).
K_2	=	2.494×10^{-6} (1/ppm)(g-mole/scm)(kg/g)(min/hr) (metric units), where standard temperature for (g-mole/scm) is 20 °C.
	=	1.557×10^{-7} (1/ppm)(lb-mole/scf)(min/hr) (English units), where standard temperature for (lb-mole/scf) is 68 °F.

(iv) The TOC concentration (C_{TOC}) is the sum of the individual components and must be computed for each run using the following equation:

$$C_{TOC} = \sum_{j=1}^{n} C_j$$

where:

C_{TOC}	=	Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.
C_j	=	Concentration of sample components in the sample.
n	=	Number of components in the sample.

(c) The requirement for an initial performance test is waived, in accordance with §60.8(b) of subpart A of this part, for the following:

(1) When a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to seek compliance with the emission limit or percent reduction efficiency specified in Table 1 to this subpart.

(2) When a vent stream is introduced into a boiler or process heater with the primary fuel.

(3) The Administrator reserves the option to require testing at such other times as may be required, as provided for in section 114 of the Act.

(d) For purposes of complying with the 98 weight-percent reduction in §60.612a(a), if the vent stream entering a boiler or process heater with a design capacity less than 44 MW (150 million Btu/hour) is introduced with the combustion air or as secondary fuel, the weight-percent reduction of TOC (minus methane and ethane) across the combustion device shall be determined by comparing the TOC (minus methane and ethane) in all combusted vent streams, primary fuels, and secondary fuels with the TOC (minus methane and ethane) exiting the combustion device.

§60.615a What records must I keep and what reports must I submit?

(a) You must notify the Administrator of the specific provisions of Table 1 to this subpart or §60.612a(c) with which you have elected to comply. Notification must be submitted with the notification of initial start-up required by §60.7(a)(3) of subpart A of this part. If you elect at a later date to use an alternative provision of Table 1 to this subpart with which you will comply, then you must notify the Administrator 90 days before implementing a change and, upon implementing the change, you must conduct a performance test as specified by §60.614a within 180 days.

(b) If you use a non-flare control device or recovery system to comply with the TOC emission limit specified in Table 1 to this subpart, then you must keep up-to-date, readily accessible records of the data measured during each performance test to show compliance with the TOC emission limit. You must also include all of the data you use to comply with §60.613a(a)(2). The same data specified in this paragraph must also be submitted in the initial performance test required in §60.8 of subpart A of this part and the reports of all subsequently required performance tests where either the emission reduction efficiency of a control device or recovery system or outlet concentration of TOC is determined.

(1) Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraph (i) of this section. Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, owners and operators may submit an electronic file consistent with the extensible

markup language (XML) schema listed on the EPA's ERT website. Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test must be included as an attachment in the ERT or alternate electronic file.

(2) If you use a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater to comply with the TOC emission limit specified in Table 1 to this subpart, then you are not required to submit a report containing performance test data; however, you must submit a description of the location at which the vent stream is introduced into the boiler or process heater.

(c) If you use a non-flare control device or recovery system to comply with the TOC emission limit specified in Table 1 to this subpart, then you must keep up-to-date, readily accessible records of periods of operation during which the operating parameter limits established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Periods of operation during which the operating parameter limits established during the most recent performance tests are exceeded are defined as follows:

(1) For absorbers:

(i) All 3-hour periods of operation during which the average absorbing liquid temperature was above the maximum absorbing liquid temperature established during the most recent performance test.

(ii) All 3-hour periods of operation during which the average absorbing liquid specific gravity was outside the exit specific gravity range (*i.e.*, more than 0.1 unit above, or more than 0.1 unit below, the average absorbing liquid specific gravity) established during the most recent performance test.

(2) For boilers or process heaters:

(i) Whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under §60.613a(b).

(ii) If the boiler or process heater has a design heat input capacity of less than 44 MW (150 million Btu/hr), then all 3-hour periods of operation during which the average firebox temperature was below the minimum firebox temperature during the most recent performance test.

(3) For catalytic incinerators:

(i) All 3-hour periods of operation during which the average temperature of the vent stream immediately before the catalyst bed is below the minimum temperature of the vent stream established during the most recent performance test.

(ii) All 3-hour periods of operation during which the average temperature difference across the catalyst bed is less than the average temperature difference of the device established during the most recent performance test.

(4) For carbon adsorbers:

(i) All carbon bed regeneration cycles during which the total mass stream flow or the total volumetric stream flow was below the minimum flow established during the most recent performance test.

(ii) All carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration (and after completion of any cooling cycle(s)) was greater than the maximum carbon bed temperature (in degrees Celsius) established during the most recent performance test.

(5) For condensers, all 3-hour periods of operation during which the average exit (product side) condenser operating temperature was above the maximum exit (product side) operating temperature established during the most recent performance test.

(6) For scrubbers used to control halogenated vent streams:

(i) All 3-hour periods of operation during which the average pH of the scrubber effluent is below the minimum pH of the scrubber effluent established during the most recent performance test.

(ii) All 3-hour periods of operation during which the average influent liquid flow to the scrubber is below the minimum influent liquid flow to the scrubber established during the most recent performance test.

(iii) All 3-hour periods of operation during which the average liquid-to-gas ratio flow of the scrubber is below the minimum liquid-to-gas ratio of the scrubber established during the most recent performance test.

(7) For thermal incinerators, all 3-hour periods of operation during which the average firebox temperature was below the minimum firebox temperature established during the most recent performance test.

(d) You must keep up-to-date, readily accessible continuous records of the flow indication specified in Table 2 to this subpart, as well as up-to-date, readily accessible records of all periods when the vent stream is diverted from the control device or recovery device or has no flow rate, including the records as specified in paragraphs (d)(1) and (2) of this section.

(1) For each flow event from a relief valve discharge subject to the requirements in §60.612a(b)(1), you must include an estimate of the volume of gas, the concentration of TOC in the gas and the resulting emissions of TOC that released to the atmosphere using process knowledge and engineering estimates.

(2) For each flow event from a bypass line subject to the requirements in §60.612a(b)(2) and §60.620a(e), you must maintain records sufficient to determine whether or not the detected

flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device or recovery device not meeting the requirements in this subpart, you must include an estimate of the volume of gas, the concentration of TOC in the gas and the resulting emissions of TOC that bypassed the control device or recovery device using process knowledge and engineering estimates.

(e) If you use a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater to comply with the TOC emission limit specified in Table 1 to this subpart, then you must keep an up-to-date, readily accessible record of all periods of operation of the boiler or process heater. (Examples of such records could include records of steam use, fuel use, or monitoring data collected pursuant to other State or Federal regulatory requirements).

(f) If you use a flare to comply with the TOC emission standard specified in Table 1 to this subpart, then you must keep up-to-date, readily accessible records of all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the initial visible emissions demonstration required by § 63.670(h) of part 63, subpart CC of this chapter, as applicable; and all periods during the compliance determination when the pilot flame or flare flame is absent.

(g) For each maintenance vent opening subject to the requirements of §60.612a(c), you must keep the applicable records specified in paragraphs (g)(1) through (5) of this section.

(1) You must maintain standard site procedures used to deinventory equipment for safety purposes (e.g., hot work or vessel entry procedures) to document the procedures used to meet the requirements in §60.612a(c). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of §60.612a(c)(1)(i), and the lower explosive limit at the time of the vessel opening exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the lower explosive limit at the time of the vessel opening.

(3) If complying with the requirements of §60.612a(c)(1)(ii), and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the lower explosive limit at the time of the active purging was initiated exceeds 10 percent, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or equipment at the time of discharge to the atmosphere and, if applicable, the lower explosive limit of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of §60.612a(c)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the deinventory procedures specified in paragraph (g)(1) of this section are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this paragraph (g)(4), records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of §60.612a(c)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records

documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and lower explosive limit of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

(h) You must submit to the Administrator semiannual reports of the information specified in paragraphs (h)(1) through (5) of this section. You are exempt from the reporting requirements specified in §60.7(c) of subpart A of this part. If there are no exceedances, periods, or events specified in paragraphs (h)(1) through (5) of this section that occurred during the reporting period, then you must include a statement in your report that no exceedances, periods, and events specified in paragraphs (h)(1) through (5) of this section occurred during the reporting period. The initial report must be submitted within 6 months after the initial start-up-date. On and after **[INSERT date 60 days after date of publication of final rule in the Federal Register]** or once the report template for this subpart has been available on the Compliance and Emissions Data Reporting Interface (CEDRI) website (*https://www.epa.gov/electronic-reporting-air-emissions/cedri*) for 1 year, whichever date is later, you must submit all subsequent reports using the appropriate electronic report template on the CEDRI website for this subpart and following the procedure specified in paragraph (i) of this section. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports, the report

must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. All semiannual reports must include the following general information: company name, address (including county), and beginning and ending dates of the reporting period.

(1) Exceedances of monitored parameters recorded under paragraph (c) of this section. For each exceedance, the report must include a list of the affected facilities or equipment, the monitored parameter that was exceeded, the start date and time of the exceedance, the duration (in hours) of the exceedance, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, the cause of the exceedance (including unknown cause, if applicable), as applicable, and the corrective action taken.

(2) All periods recorded under paragraph (d) of this section when the vent stream is diverted from the control device or recovery device, or has no flow rate, including the information specified in paragraphs (h)(2)(i) through (iii) of this section.

(i) For periods when the flow indicator is not operating, the identification of the flow indicator and report the start date, start time, and duration in hours.

(ii) For each flow event from a relief valve discharge subject to the requirements in §60.612a(b)(1), the semiannual report must include the identification of the relief valve, the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of TOC in the gas in parts per million by volume and the resulting mass emissions of TOC in pounds that released to the atmosphere.

(iii) For each flow event from a bypass line subject to the requirements in §60.612a(b)(2) and §620a(e)(2), the semiannual report must include the identification of the bypass line, the start

date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of TOC in the gas in parts per million by volume and the resulting mass emissions of TOC in pounds that bypass a control device or recovery device.

(3) All periods when a boiler or process heater was not operating (considering the records recorded under paragraph (e) of this section), including the start date, start time, and duration in hours of each period.

(4) For each flare subject to the requirements in §60.619a, the semiannual report must include an identification of the flare and the items specified in §60.619a(l)(2).

(5) For each closed vent system subject to the requirements in §60.620a, the semiannual report must include an identification of the closed vent system and the items specified in §60.620a(i).

(i) If you are required to submit notifications or reports following the procedure specified in this paragraph (i), you must submit notifications or reports to the EPA via the CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim for some of the information in the report or notification, you must submit a complete file in the format specified in this subpart, including information claimed to be CBI, to the EPA following the procedures in paragraphs (i)(1) and (2) of this section. Clearly mark the part or all of the information that you claim to be CBI. Information not marked as CBI may be authorized for public release without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. All CBI claims must be asserted at the time of submission.

Anything submitted using CEDRI cannot later be claimed CBI. Furthermore, under CAA section 114(c), emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You must submit the same file submitted to the CBI office with the CBI omitted to the EPA via the EPA's CDX as described earlier in this paragraph (i).

(1) The preferred method to receive CBI is for it to be transmitted electronically using email attachments, File Transfer Protocol, or other online file sharing services. Electronic submissions must be transmitted directly to the OAQPS CBI Office at the email address oaqpscbi@epa.gov, and as described above, should include clear CBI markings. ERT files should be flagged to the attention of the Group Leader, Measurement Policy Group; all other files should be flagged to the attention of the SOCMI NSPS Sector Lead. If assistance is needed with submitting large electronic files that exceed the file size limit for email attachments, and if you do not have your own file sharing service, please email oaqpscbi@epa.gov to request a file transfer link.

(2) If you cannot transmit the file electronically, you may send CBI information through the postal service to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711. ERT files should be sent to the attention of the Group Leader, Measurement Policy Group, and all other files should be sent to the attention of the SOCMI NSPS Sector Lead. The mailed CBI material should be double wrapped and clearly marked. Any CBI markings should not show through the outer envelope.

(j) If you are required to electronically submit notifications or reports through CEDRI in the EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with

the electronic submittal requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (j)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(k) If you are required to electronically submit notifications or reports through CEDRI in the EPA's CDX, you may assert a claim of *force majeure* for failure to timely comply with the electronic submittal requirement. To assert a claim of *force majeure*, you must meet the requirements outlined in paragraphs (k)(1) through (5) of this section.

(1) You may submit a claim if a *force majeure* event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a *force majeure* event is defined as 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 you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the *force majeure* event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the *force majeure* event;

(iii) A description of measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of *force majeure* and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the *force majeure* event occurs.

(l) The requirements of paragraph (h) of this section remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with paragraph (h) of this section, provided that they comply with the requirements established by the State. The EPA will not approve a waiver of electronic reporting to the EPA in delegating enforcement authority. Thus, electronic reporting to the EPA cannot be waived, and as such, the provisions of this paragraph cannot be used to relieve owners or operators of affected facilities of the requirement to submit the electronic reports required in this section to the EPA.

(m) The Administrator will specify appropriate reporting and recordkeeping requirements where the owner or operator of an affected facility seeks to demonstrate compliance with the standards specified under §60.612a other than as provided under §60.613a.

(n) Any records required to be maintained by this subpart that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data,

and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

§60.616a What do the terms associated with reconstruction mean for this subpart?

For purposes of this subpart "fixed capital cost of the new components," as used in §60.15 of subpart A of this part, includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following [**DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER**]. For purposes of this paragraph, "commenced" means that you have undertaken a continuous program of component replacement or that you have entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

§60.617a What are the chemicals that I must produce to be affected by subpart IIIa?

Chemical name	CAS No.*
Acetaldehyde	75-07-0
Acetic acid	64-19-7
Acetone	67-64-1
Acetonitrile	75-05-8
Acetophenone	98-86-2
Acrolein	107-02-8
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Anthraquinone	84-65-1
Benzaldehyde	100-52-7
Benzoic acid, tech	65-85-0
1,3-Butadiene	106-99-0
p-t-Butyl benzoic acid	98-73-7

N-Butyric acid	107-92-6
Crotonic acid	3724-65-0
Cumene hydroperoxide	80-15-9
Cyclohexanol	108-93-0
Cyclohexanone	108-94-1
Dimethyl terephthalate	120-61-6
Ethylene dichloride	107-06-2
Ethylene oxide	75-21-8
Formaldehyde	50-00-0
Formic acid	64-18-6
Glyoxal	107-22-2
Hydrogen cyanide	74-90-8
Isobutyric acid	79-31-2
Isophthalic acid	121-91-5
Maleic anhydride	108-31-6
Methyl ethyl ketone	78-93-3
a-Methyl styrene	98-83-9
Phenol	108-95-2
Phthalic anhydride	85-44-9
Propionic acid	79-09-4
Propylene oxide	75-56-9
Styrene	100-42-5
Terephthalic acid	100-21-0

* CAS numbers refer to the Chemical Abstracts Registry numbers assigned to specific chemicals, isomers, or mixtures of chemicals. Some isomers or mixtures that are covered by the standards do not have CAS numbers assigned to them. The standards apply to all of the chemicals listed, whether CAS numbers have been assigned or not.

§60.618a Who implements and enforces this subpart?

[Reserved]

§60.619a What are my requirements if I use a flare to comply with this subpart?

(a) If you use a flare to comply with the TOC emission standard specified in Table 1 to this subpart, then you must meet the applicable requirements for flares as specified in §§63.670 and 63.671 of part 63, subpart CC of this chapter, including the provisions in Tables 12 and 13 to part 63, subpart CC of this chapter, except as specified in paragraphs (b) through (o) of this section. For purposes of compliance with this paragraph (a), the following terms are defined in §63.641 of part 63, subpart CC of this chapter: Assist air, assist steam, center steam, combustion zone, combustion zone gas, flare, flare purge gas, flare supplemental gas, flare sweep gas, flare vent gas, lower steam, net heating value, perimeter assist air, pilot gas, premix assist air, total steam, and upper steam.

(b) When determining compliance with the pilot flame requirements specified in § 63.670(b) and (g) of part 63, subpart CC of this chapter, substitute “pilot flame or flare flame” for each occurrence of “pilot flame.”

(c) When determining compliance with the flare tip velocity and combustion zone operating limits specified in §63.670(d) and (e) of part 63, subpart CC of this chapter, the requirement effectively applies starting with the 15-minute block that includes a full 15 minutes of the flaring event. You are required to demonstrate compliance with the velocity and NHVcz requirements starting with the block that contains the fifteenth minute of a flaring event. You are not required to demonstrate compliance for the previous 15-minute block in which the event started and contained only a fraction of flow.

(d) Instead of complying with paragraph (o)(2)(i) of §63.670 of part 63, subpart CC of this chapter, you must develop and implement the flare management plan no later than startup for

a new flare that commenced construction on or after [**DATE OF PUBLICATION OF THE PROPOSED RULE IN THE FEDERAL REGISTER**].

(e) Instead of complying with paragraph (o)(2)(iii) of §63.670 of part 63, subpart CC of this chapter, if required to develop a flare management plan and submit it to the Administrator, then you must also submit all versions of the plan in portable document format (PDF) following the procedures specified in §60.615a(i).

(f) § 63.670(o)(3)(ii) of part 63, subpart CC of this chapter and all references to § 63.670(o)(3)(ii) of part 63, subpart CC of this chapter do not apply. Instead, you must comply with the maximum flare tip velocity operating limit at all times.

(g) Substitute "affected facility" for each occurrence of "petroleum refinery."

(h) Each occurrence of "refinery" does not apply.

(i) If a pressure-assisted multi-point flare is used as a control device, then you must meet the following conditions:

(1) You are not required to comply with the flare tip velocity requirements in paragraph (d) and (k) of §63.670 of part 63, subpart CC of this chapter;

(2) You must substitute "800" for each occurrence of "270" in paragraph (e) of §63.670 of part 63, subpart CC of this chapter;

(3) You must determine the 15-minute block average NHVvg using only the direct calculation method specified in in paragraph (l)(5)(ii) of §63.670 of part 63, subpart CC of this chapter;

(4) Instead of complying with paragraph (b) and (g) of §63.670 of part 63, subpart CC of this chapter, if a pressure-assisted multi-point flare uses cross-lighting on a stage of burners rather than having an individual pilot flame on each burner, then you must operate each stage of

the pressure-assisted multi-point flare with a flame present at all times when regulated material is routed to that stage of burners. Each stage of burners that cross-lights in the pressure-assisted multi-point flare must have at least two pilots with at least one continuously lit and capable of igniting all regulated material that is routed to that stage of burners. Each 15-minute block during which there is at least one minute where no pilot flame is present on a stage of burners when regulated material is routed to the flare is a deviation of the standard. Deviations in different 15-minute blocks from the same event are considered separate deviations. The pilot flame(s) on each stage of burners that use cross-lighting must be continuously monitored by a thermocouple or any other equivalent device used to detect the presence of a flame;

(5) Unless you choose to conduct a cross-light performance demonstration as specified in this paragraph (i)(5), you must ensure that if a stage of burners on the flare uses cross-lighting, that the distance between any two burners in series on that stage is no more than 6 feet when measured from the center of one burner to the next burner. A distance greater than 6 feet between any two burners in series may be used provided you conduct a performance demonstration that confirms the pressure-assisted multi-point flare will cross-light a minimum of three burners and the spacing between the burners and location of the pilot flame must be representative of the projected installation. The compliance demonstration must be approved by the permitting authority and a copy of this approval must be maintained onsite. The compliance demonstration report must include: a protocol describing the test methodology used, associated test method QA/QC parameters, the waste gas composition and NHVcz of the gas tested, the velocity of the waste gas tested, the pressure-assisted multi-point flare burner tip pressure, the time, length, and duration of the test, records of whether a successful cross-light was observed over all of the burners and the length of time it took for the burners to cross-light, records of maintaining a

stable flame after a successful cross-light and the duration for which this was observed, records of any smoking events during the cross-light, waste gas temperature, meteorological conditions (e.g., ambient temperature, barometric pressure, wind speed and direction, and relative humidity), and whether there were any observed flare flameouts; and

(6) You must install and operate pressure monitor(s) on the main flare header, as well as a valve position indicator monitoring system for each staging valve to ensure that the flare operates within the proper range of conditions as specified by the manufacturer. The pressure monitor must meet the requirements in Table 13 to part 63, subpart CC of this chapter.

(7) If a pressure-assisted multi-point flare is operating under the requirements of an approved alternative means of emission limitations, you must either continue to comply with the terms of the alternative means of emission limitations or comply with the provisions in paragraphs (i)(1) through (i)(6) of this section.

(j) If you choose to determine compositional analysis for net heating value with a continuous process mass spectrometer, then you must comply with the requirements specified in paragraphs (j)(1) through (j)(7) of this section.

(1) You must meet the requirements in §63.671(e)(2) of part 63, subpart CC of this chapter. You may augment the minimum list of calibration gas components found in §63.671(e)(2) of part 63, subpart CC of this chapter with compounds found during a pre-survey or known to be in the gas through process knowledge.

(2) Calibration gas cylinders must be certified to an accuracy of 2 percent and traceable to National Institute of Standards and Technology (NIST) standards.

(3) For unknown gas components that have similar analytical mass fragments to calibration compounds, you may report the unknowns as an increase in the overlapped

calibration gas compound. For unknown compounds that produce mass fragments that do not overlap calibration compounds, you may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHVvg.

(4) You may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.

(5) You must perform an initial calibration to identify mass fragment overlap and response factors for the target compounds.

(6) You must meet applicable requirements in Performance Specification 9 of appendix B of this part, for continuous monitoring system acceptance including, but not limited to, performing an initial multi-point calibration check at three concentrations following the procedure in Section 10.1 and performing the periodic calibration requirements listed for gas chromatographs in Table 13 to part 63, subpart CC of this chapter, for the process mass spectrometer. You may use the alternative sampling line temperature allowed under Net Heating Value by Gas Chromatograph in Table 13 to part 63, subpart CC of this chapter.

(7) The average instrument calibration error (CE) for each calibration compound at any calibration concentration must not differ by more than 10 percent from the certified cylinder gas value. The CE for each component in the calibration blend must be calculated using Equation 1 to this paragraph (j)(7).

$$CE = \frac{C_m - C_a}{C_a} \; x \; 100 \qquad \text{(Eq. 1)}$$

Where :

Cm = Average instrument response (ppm)

Ca = Certified cylinder gas value (ppm)

(k) If you use a gas chromatograph or mass spectrometer for compositional analysis for net heating value, then you may choose to use the CE of $NHV_{measured}$ versus the cylinder tag value NHV as the measure of agreement for daily calibration and quarterly audits in lieu of determining the compound-specific CE. The CE for NHV at any calibration level must not differ by more than 10 percent from the certified cylinder gas value. The CE must be calculated using Equation 2 to this paragraph (k).

$$CE = \frac{NHV_{measured} - NHV_a}{NHV_a} \; x \; 100 \qquad \text{(Eq. 2)}$$

Where:

$NHV_{measured}$ = Average instrument response (Btu/scf)

NHV_a = Certified cylinder gas value (Btu/scf)

(l) Instead of complying with paragraph (q) of §63.670 of part 63, subpart CC of this chapter, you must comply with the reporting requirements specified in paragraphs (l)(1) and (l)(2) of this section.

(1) The notification requirements specified in §60.615a(a).

(2) The semiannual report specified in §60.615a(h)(4) must include the items specified in paragraphs (l)(2)(i) through (vi) of this section.

(i) Records as specified in paragraph (m)(1) of this section for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame or flare flame is present. Include the start and stop time and date of each 15-minute block.

(ii) Visible emission records as specified in paragraph (m)(2)(iv) of this section for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

(iii) The periods specified in paragraph (m)(6) of this section. Indicate the date and start and end times for each period, and the net heating value operating parameter(s) determined following the methods in §63.670(k) through (n) of part 63, subpart CC of this chapter as applicable.

(iv) For flaring events meeting the criteria in §63.670(o)(3) of part 63, subpart CC of this chapter and paragraph (f) of this section:

(A) The start and stop time and date of the flaring event.

(B) The length of time in minutes for which emissions were visible from the flare during the event.

(C) For steam-assisted, air-assisted, and non-assisted flares, the start date, start time, and duration in minutes for periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in §63.670(d)(2) of part 63, subpart CC of this chapter and the maximum 15-minute block average flare tip velocity in ft/sec recorded during the event.

(D) Results of the root cause and corrective actions analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(v) For pressure-assisted multi-point flares, the periods of time when the pressure monitor(s) on the main flare header show the burners operating outside the range of the manufacturer’s specifications. Indicate the date and start and end times for each period.

(vi) For pressure-assisted multi-point flares, the periods of time when the staging valve position indicator monitoring system indicates a stage should not be in operation and is or when

a stage should be in operation and is not. Indicate the date and start and end times for each period.

(m) Instead of complying with paragraph (p) of §63.670 of part 63, subpart CC of this chapter, you must keep the flare monitoring records specified in paragraphs (m)(1) through (14) of this section.

(1) Retain records of the output of the monitoring device used to detect the presence of a pilot flame or flare flame as required in §63.670(b) of part 63, subpart CC of this chapter and the presence of a pilot flame as required in paragraph (i)(4) of this section for a minimum of 2 years. Retain records of each 15-minute block during which there was at least one minute that no pilot flame or flare flame is present when regulated material is routed to a flare for a minimum of 5 years. For a pressure-assisted multi-point flare that uses cross-lighting, retain records of each 15-minute block during which there was at least one minute that no pilot flame is present on each stage when regulated material is routed to a flare for a minimum of 5 years. You may reduce the collected minute-by-minute data to a 15-minute block basis with an indication of whether there was at least one minute where no pilot flame or flare flame was present.

(2) Retain records of daily visible emissions observations as specified in paragraphs (m)(2)(i) through (iv) of this section, as applicable, for a minimum of 3 years.

(i) To determine when visible emissions observations are required, the record must identify all periods when regulated material is vented to the flare.

(ii) If visible emissions observations are performed using Method 22 of appendix A-7 of this part, then the record must identify whether the visible emissions observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a

5-minute or 2-hour observation. Record the date and start time of each visible emissions observation.

(iii) If a video surveillance camera is used pursuant to § 63.670(h)(2) of part 63, subpart CC of this chapter, then the record must include all video surveillance images recorded, with time and date stamps.

(iv) For each 2 hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, then the record must include the date and start and end time of the 2 hour period and an estimate of the cumulative number of minutes in the 2 hour period for which emissions were visible.

(3) The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under §63.670(i) of part 63, subpart CC of this chapter, along with the date and time interval for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, then retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, then retain records of the 15-minute block average temperature, pressure, and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.

(4) The flare vent gas compositions specified to be monitored under §63.670(j) of part 63, subpart CC of this chapter. Retain records of individual component concentrations from each

compositional analysis for a minimum of 2 years. If an NHVvg analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years.

(5) Each 15-minute block average operating parameter calculated following the methods specified in §63.670(k) through (n) of part 63, subpart CC of this chapter, as applicable.

(6) All periods during which operating values are outside of the applicable operating limits specified in §63.670(d) through (f) of part 63, subpart CC of this chapter and paragraph (i) of this section when regulated material is being routed to the flare.

(7) All periods during which you do not perform flare monitoring according to the procedures in §63.670(g) through (j) of part 63, subpart CC of this chapter.

(8) For pressure-assisted multi-point flares, if a stage of burners on the flare uses cross-lighting, then a record of any changes made to the distance between burners.

(9) For pressure-assisted multi-point flares, all periods when the pressure monitor(s) on the main flare header show burners are operating outside the range of the manufacturer's specifications. Indicate the date and time for each period, the pressure measurement, the stage(s) and number of burners affected, and the range of manufacturer's specifications.

(10) For pressure-assisted multi-point flares, all periods when the staging valve position indicator monitoring system indicates a stage of the pressure-assisted multi-point flare should not be in operation and when a stage of the pressure-assisted multi-point flare should be in operation and is not. Indicate the date and time for each period, whether the stage was supposed to be open, but was closed or vice versa, and the stage(s) and number of burners affected.

(11) Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow.

(12) Records when the flow of vent gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event.

(13) Records of the root cause analysis and corrective action analysis conducted as required in §63.670(o)(3) of part 63, subpart CC of this chapter and paragraph (f) of this section, including an identification of the affected flare, the date and duration of the event, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under §63.670(o)(5)(i) of part 63, subpart CC of this chapter.

(14) For any corrective action analysis for which implementation of corrective actions are required in §63.670(o)(5) of part 63, subpart CC of this chapter, a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(n) You may elect to comply with the alternative means of emissions limitation requirements specified in paragraph (r) of §63.670 of part 63, subpart CC of this chapter in lieu of the requirements in paragraphs (d) through (f) of §63.670 of part 63, subpart CC of this chapter, as applicable. However, instead of complying with paragraph (r)(3)(iii) of §63.670 of part 63, subpart CC of this chapter, you must also submit the alternative means of emissions limitation request to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, U.S. EPA Mailroom (C404-02), Attention: SOCMI NSPS Sector Lead, 4930 Old Page Rd., Durham, NC 27703.

(o) The referenced provisions specified in paragraphs (o)(1) through (4) of this section do not apply when demonstrating compliance with this section.

(1) §63.670(o)(4)(iv) of part 63, subpart CC of this chapter.

(2) The last sentence of §63.670(o)(6) of part 63, subpart CC of this chapter.

(3) The phrase "that were not caused by a force majeure event" in §63.670(o)(7)(ii) of part 63, subpart CC of this chapter.

(4) The phrase "that were not caused by a force majeure event" in §63.670(o)(7)(iv) of part 63, subpart CC of this chapter.

§60.620a What are my requirements for closed vent systems?

(a) Except as provided in paragraphs (f) and (g) of this section, you must inspect each closed vent system according to the procedures and schedule specified in paragraphs (a)(1) through (a)(3) of this section.

(1) Conduct an initial inspection according to the procedures in paragraph (b) of this section, and

(2) Conduct annual inspections according to the procedures in paragraph (b) of this section.

(3) Conduct annual visual inspections for visible, audible, or olfactory indications of leaks.

(b) You must inspect each closed vent system according to the procedures specified in paragraphs (b)(1) through (b)(6) of this section.

(1) Inspections must be conducted in accordance with Method 21 of appendix A of this part.

(2)(i) Except as provided in paragraph (b)(2)(ii) of this section, the detection instrument must meet the performance criteria of Method 21 of appendix A of this part, except the instrument response factor criteria in section 3.1.2(a) of Method 21 must be for the average

composition of the process fluid not each individual volatile organic compound in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic hazardous air pollutants or volatile organic compounds, the average stream response factor must be calculated on an inert-free basis.

(ii) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (b)(2)(i) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (b)(2)(i) of this section.

(3) The detection instrument must be calibrated before use on each day of its use by the procedures specified in Method 21 of appendix A of this part.

(4) Calibration gases must be as follows:

(i) Zero air (less than 10 parts per million hydrocarbon in air); and

(ii) Mixtures of methane in air at a concentration less than 2,000 parts per million. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (b)(2)(i) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(5) You may elect to adjust or not adjust instrument readings for background. If you elect to not adjust readings for background, all such instrument readings must be compared directly to the applicable leak definition to determine whether there is a leak.

(6) If you elect to adjust instrument readings for background, you must determine the background concentration using Method 21 of appendix A of this part. After monitoring each potential leak interface, subtract the background reading from the maximum concentration

indicated by the instrument. The arithmetic difference between the maximum concentration indicated by the instrument and the background level must be compared with 500 parts per million for determining compliance.

(c) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, must be repaired as soon as practicable, except as provided in paragraph (d) of this section.

(1) A first attempt at repair must be made no later than 5 calendar days after the leak is detected.

(2) Repair must be completed no later than 15 calendar days after the leak is detected.

(d) Delay of repair of a closed vent system for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in §60.2 of subpart A of this part, or if you determine that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment must be complete by the end of the next shutdown.

(e) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, you must comply with the provisions of either paragraph (e)(1) or (e)(2), except as specified in paragraph (e)(3) of this section.

(1) Install, calibrate, maintain, and operate a flow indicator that determines whether vent stream flow is present at least once every 15 minutes. You must keep hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted to the atmosphere or the flow indicator is not operating. The flow indicator must be installed at the entrance to any bypass line; or

(2) Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism must be performed at least once every month to ensure the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(3) Open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 CFR 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as 40 CFR 60.482-6(a)(2), (b), and (c) are not subject to this paragraph (e) of this section.

(f) Any parts of the closed vent system that are designated, as described in paragraph (h)(1) of this section, as unsafe to inspect are exempt from the inspection requirements of paragraphs (a)(1) and (a)(2) of this section if:

(1) You determine that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraphs (a)(1) and (a)(2) of this section; and

(2) You have a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times.

(g) Any parts of the closed vent system are designated, as described in paragraph (h)(2) of this section, as difficult to inspect are exempt from the inspection requirements of paragraphs (a)(1) and (a)(2) of this section if:

(1) You determine that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(2) You have a written plan that requires inspection of the equipment at least once every 5 years.

(h) You must record the information specified in paragraphs (h)(1) through (h)(5) of this section.

(1) Identification of all parts of the closed vent system that are designated as unsafe to inspect, an explanation of why the equipment is unsafe to inspect, and the plan for inspecting the equipment.

(2) Identification of all parts of the closed vent system that are designated as difficult to inspect, an explanation of why the equipment is difficult to inspect, and the plan for inspecting the equipment.

(3) For each closed vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, you must keep a record of the information specified in either paragraph (h)(3)(i) or (h)(3)(ii) of this section in addition to the information specified in paragraph (h)(3)(iii) of this section.

(i) Hourly records of whether the flow indicator specified under paragraph (e)(1) of this section was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(ii) Where a seal mechanism is used to comply with paragraph (e)(2) of this section, hourly records of flow are not required. In such cases, you must record whether the monthly visual inspection of the seals or closure mechanisms has been done, and you must record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(iii) For each flow event from a bypass line subject to the requirements in paragraph (e) of this section, you must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements in this subpart, you must include an estimate of the volume of gas, the concentration of VOC in the gas and the resulting emissions of VOC that bypassed the control device using process knowledge and engineering estimates.

(4) For each inspection during which a leak is detected, a record of the information specified in paragraphs (h)(4)(i) through (h)(4)(viii) of this section.

(i) The instrument identification numbers; operator name or initials; and identification of the equipment.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) Maximum instrument reading measured by the method specified in paragraph (c) of this section after the leak is successfully repaired or determined to be nonrepairable.

(iv) “Repair delayed” and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(v) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.

(vi) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(vii) Dates of shutdowns that occur while the equipment is unrepaired.

(viii) The date of successful repair of the leak.

(5) For each inspection conducted in accordance with paragraph (b) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(6) For each visual inspection conducted in accordance with paragraph (a)(3) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(i) The semiannual report specified in §60.615a(h)(5) must include the items specified in paragraphs (i)(1) through (i)(3) of this section.

(1) Reports of the times of all periods recorded under paragraph (h)(3)(i) of this section when the vent stream is diverted from the control device through a bypass line. Include the start date, start time, and duration in hours of each period.

(2) Reports of all periods recorded under paragraph (h)(3)(ii) of this section in which the seal mechanism is broken, the bypass line valve position has changed, or the key to unlock the bypass line valve was checked out. Include the start date, start time, and duration in hours of each period.

(3) For bypass lines subject to the requirements in paragraph (e) of this section, the semiannual reports must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of VOC in the gas in parts per million by volume and the resulting mass emissions of VOC in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

Table 1 to Subpart IIIa of Part 60—Emission Limits and Standards for Vent Streams

For each…	You must…
1. Vent stream	a. Reduce emissions of TOC (minus methane and ethane) by 98 weight-percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent by venting emissions through a closed vent system to any combination of non-flare control devices and/or recovery system and meet the requirements specified in §60.613a and §60.620a; *or*
	b. Reduce emissions of TOC (minus methane and ethane) by venting emissions through a closed vent system to a flare and meet the requirements specified in §60.619a and §60.620a.

Table 2 to Subpart IIIa of Part 60—Monitoring Requirements for Complying With 98 Weight-Percent Reduction of Total Organic Compounds Emissions or a Limit of 20 Parts Per Million by Volume

Non-Flare Control Device or Recovery Device	Parameters to be Monitored
1. All control and recovery devices	a. Presence of flow diverted to the atmosphere from the control and recovery device; *or*
	b. Monthly inspections of sealed valves
2. Absorber	a. Exit temperature of the absorbing liquid; *and*
	b. Exit specific gravity
3. Boiler or process heater with a design heat input capacity less than 44 megawatts and vent stream is *not* introduced with or as the primary fuel	Firebox temperature[a]
4. Catalytic incinerator	Temperature upstream and downstream of the catalyst bed
5. Carbon adsorber, regenerative	a. Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s); *and*
	b. Temperature of the carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)]
6. Carbon adsorber, non-regenerative or regenerated offsite	Breakthrough
7. Condenser	Exit (product side) temperature
8. Scrubber for halogenated vent streams	a. pH of scrubber effluent; *and*
	b. Scrubber liquid and gas flow rates
9. Thermal incinerator	Firebox temperature[a]

[a] Monitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

Table 3 to Subpart IIIa of Part 60—Operating Parameters, Operating Parameter Limits and Data Monitoring, Recordkeeping and Compliance Frequencies

For the operating parameter applicable to you, as specified in Table 2...	You must establish the following operating parameter limit...	And you must monitor, record, and demonstrate continuous compliance using these minimum frequencies...		
		Data measurement	Data recording	Data averaging period for compliance
Absorbers				
1. Exit temperature of the absorbing liquid	Maximum temperature	Continuous	Every 15 minutes	3-hour block average
2. Exit specific gravity	Exit specific gravity range	Continuous	Every 15 minutes	3-hour block average
Boilers or process heaters (with a design heat input capacity <44MW and vent stream is not introduced with or as the primary fuel)				
3. Firebox temperature	Minimum firebox temperature	Continuous	Every 15 minutes	3-hour block average
Catalytic incinerators				
4. Temperature in gas stream immediately before the catalyst bed	Minimum temperature	Continuous	Every 15 minutes	3-hour block average
5. Temperature difference between the catalyst bed inlet and the catalyst bed outlet	Minimum temperature difference	Continuous	Every 15 minutes	3-hour block average
Carbon adsorbers				
6. Total regeneration stream mass flow during carbon bed regeneration cycle(s)	Minimum mass flow during carbon bed regeneration cycle(s)	Continuously during regeneration	Every 15 minutes during regeneration cycle	Total flow for each regeneration cycle
7. Total regeneration stream volumetric flow during carbon bed regeneration cycle(s)	Minimum volumetric flow during carbon bed regeneration cycle(s)	Continuously during regeneration	Every 15 minutes during regeneration cycle	Total flow for each regeneration cycle
8. Temperature of the carbon bed after regeneration [and within 15 minutes of completing any cooling cycle(s)]	Maximum temperature of the carbon bed after regeneration	Continuously during regeneration and for 15 minutes after completing any cooling cycle(s)	Every 15 minutes during regeneration cycle (including any cooling cycle)	Average of regeneration cycle

For the operating parameter applicable to you, as specified in Table 2...	You must establish the following operating parameter limit...	And you must monitor, record, and demonstrate continuous compliance using these minimum frequencies...		
		Data measurement	Data recording	Data averaging period for compliance
9. Breakthrough	As defined in §60.611a	As required by §60.613a(a)(6)(iii)(B)	Each monitoring event	N/A
Condensers				
10. Exit (product side) temperature	Maximum temperature	Continuous	Every 15 minutes	3-hour block average
Scrubbers for halogenated vent streams				
11. pH of scrubber effluent	Minimum pH	Continuous	Every 15 minutes	3-hour block average
12. Influent liquid flow	Minimum inlet liquid flow	Continuous	Every 15 minutes	3-hour block average
13. Influent liquid flow rate and gas stream flow rate	Minimum influent liquid-to-gas ratio	Continuous	Every 15 minutes	3-hour block average
Thermal incinerators				
14. Firebox temperature	Minimum firebox temperature	Continuous	Every 15 minutes	3-hour block average

Table 4 to Subpart IIIa of Part 60—Calibration and Quality Control Requirements for Continuous Parameter Monitoring System (CPMS)

If you monitor this parameter...	Your accuracy requirements are...	And your calibration requirements are...
1. Temperature	a. ± 1 percent over the normal range of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit), whichever is greater, for non-cryogenic temperature ranges. b. ± 2.5 percent over the normal range of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit), whichever is greater, for cryogenic temperature ranges.	c. Performance evaluation annually and following any period of more than 24 hours throughout which the temperature exceeded the maximum rated temperature of the sensor, or the data recorder was off scale. d. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant temperature sensor. e. Selection of a representative measurement location.
2. Flow Rate	a. ± 5 percent over the normal range of flow measured or 1.9 liters per minute (0.5 gallons per minute), whichever is greater, for liquid flow rate.	d. Performance evaluation annually and following any period of more than 24 hours throughout which the flow rate exceeded the maximum rated flow rate of the sensor, or the data recorder was off scale.

If you monitor this parameter...	Your accuracy requirements are...	And your calibration requirements are...
	b. ± 5 percent over the normal range of flow measured or 280 liters per minute (10 cubic feet per minute), whichever is greater, for gas flow rate. c. ± 5 percent over the normal range measured for mass flow rate.	e. Checks of all mechanical connections for leakage monthly. f. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant flow sensor. g. Selection of a representative measurement location where swirling flow or abnormal velocity distributions due to upstream and downstream disturbances at the point of measurement are minimized.
pH	a. ± 0.2 pH units.	b. Performance evaluation annually. Conduct a two-point calibration with one of the two buffer solutions having a pH within 1 of the pH of the operating limit. c. Visual inspections and checks of CPMS operation every 3 months, unless the CPMS has a redundant pH sensor. d. Select a measurement location that provides a representative sample of scrubber effluent and that ensures the fluid is properly mixed.