

**Section 42 - Air Oxidation Processes in the  
Synthetic Organic Chemical Manufacturing Industry**

1/11/93

a. Applicability.

1. This Section applies to the following air oxidation facilities in the synthetic organic chemical manufacturing industry:
  - i. Each air oxidation reactor not discharging its vent stream into a recovery system.
  - ii. Each combination of an air oxidation reactor and the recovery system into which its vent stream is discharged.
  - iii. Each combination of two or more air oxidation reactors and the common recovery system into which their vent streams are discharged.
2. Any air oxidation reactor vent stream that has a total resource effectiveness (TRE) index value greater than 1.0 is exempt from all provisions of this Section except the requirements in paragraphs (c), (e)(2), and (f)(10) of this Section.

b. Definitions. As used in this Section, all terms not defined herein shall have the meaning given them in the November 15, 1990 Clean Air Act Amendments (CAAA), or in Section 2 of this regulation.

"Air oxidation facility" means a product recovery system and all associated air oxidation process reactors discharging directly into that system or any such reactors discharging directly into the atmosphere.

"Air oxidation process" means a reactor in which air is used as an oxidizing agent to produce an organic chemical.

"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 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.

"Product recovery system" means any equipment used to collect volatile organic compounds (VOCs) for use, reuse, or sale. Such equipment includes, but is not limited to, absorbers, adsorbers, condensers, and devices that recover non-VOCs such as ammonia and HCl.

"Synthetic organic chemical manufacturing industry" means the industry that produces, as intermediates or final products, one or more of the chemicals listed at 40 CFR 60.489 (July 1, 1992).

"Total resource effectiveness index value," or TRE index value, means a measure of the supplemental total resource requirement per unit of VOC emission reduction associated with an individual air oxidation vent stream, based on vent stream flow rate, emission rate of VOC, net heating value, and corrosive properties, as quantified by the equation given under paragraph (e)(1) of this Section.

"Vent stream" means any gas stream containing nitrogen that was introduced as air to the air oxidation reactor and released to the atmosphere directly from any air oxidation reactor recovery train or indirectly, after diversion through other process equipment.

- c. Standards. For each vent stream from an air oxidation reactor or combination air oxidation reactor and recovery train subject to this Section, the owner or operator shall comply with paragraph (c)(1), (2), or (3) of this Section.
1. Reduce total VOC emissions by 98 weight percent or to 20 parts per million volumetric (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, the vent stream shall be introduced into the flame zone of the boiler or process heater.
  2. Combust the emissions in a flare that meets the requirements of 40 CFR 60.18 (July 1, 1992).
  3. Maintain a TRE index value greater than 1.0 without the use of VOC emission control devices.
- d. Monitoring requirements.
1. The owner or operator of an air oxidation facility that uses an incinerator to seek to comply with the VOC emission limit specified under paragraph (c)(1) of this Section shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
    - i. A temperature monitoring device equipped with a continuous

recorder and having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5^{\circ}\text{C}$ , whichever is greater.

- A. Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox.
  - B. Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.
- ii. A flow indicator that provides a record of vent stream flow to the incinerator at least once every hour for each air oxidation facility. The flow indicator shall be installed in the vent stream from each air oxidation facility at a point closest to the inlet of each incinerator and before being joined with any other vent stream.
2. The owner or operator of an air oxidation facility that uses a flare to seek to comply with paragraph (c)(2) of this Section shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
- i. A heat-sensing device, such as an ultra-violet sensor or thermocouple, at the pilot light to indicate the continuous presence of a flame.
  - ii. A flow indicator that provides a record of vent stream flow to the flare at least once every hour for each air oxidation facility. The flow indicator shall be installed in the vent stream from each air oxidation facility at a point closest to the flare and before being joined with any other vent stream.
3. The owner or operator of an air oxidation facility that uses a boiler or process heater to seek to comply with paragraph (c)(1) of this Section shall install, calibrate, maintain, and operate according to the manufacturer's specifications the following equipment:
- i. A flow indicator that provides a record of vent stream flow to the boiler or process heater at least once every hour for each air oxidation facility. The flow indicator shall be installed in the vent stream from each air oxidation reactor within a facility at a point closest to the inlet of each boiler or process heater and

before being joined with any other vent stream.

- ii. A temperature monitoring device in the firebox equipped with a continuous recorder and having an accuracy of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  °C, whichever is greater, for boilers or process heaters of less than 44 megawatts (MW) (150 million British thermal units per hour [Btu/hr]) heat input design capacity.
  - iii. Monitor and record the periods of operation of the boiler or process heater if the design input capacity of the boiler or process heater is 44 MW (150 million Btu/hr) or greater. The records shall be readily available for inspection.
4. The owner or operator of an air oxidation facility that seeks to demonstrate compliance with the TRE index value limit specified under paragraph (c)(3) of this Section shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:
- i. Where an absorber is the final recovery device in a recovery system:
    - A. A scrubbing liquid temperature monitoring device having an accuracy of  $\pm 1$  percent of the temperature being monitored, expressed in degrees Celsius or  $\pm 0.5$ °C, whichever is greater, and a specific gravity monitoring device having an accuracy of  $\pm 0.02$  specific gravity unit, each equipped with a continuous recorder.
    - B. An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity, each equipped with a continuous recorder.
  - ii. Where a condenser is the final recovery device in a recovery system:
    - A. A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5$ °C, whichever is greater.

- B. An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity, each equipped with a continuous recorder.
    - iii. Where a carbon adsorber is the final recovery device in a recovery system:
      - A. An integrating steam flow monitoring device having an accuracy of  $\pm 10$  percent, and a carbon bed temperature monitoring device having an accuracy of  $\pm 1$  percent of the temperature being monitored expressed in degrees Celsius or  $\pm 0.5^{\circ}\text{C}$ , whichever is greater, both equipped with a continuous recorder.
      - B. An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infrared, photoionization, or thermal conductivity, each equipped with a continuous recorder.
- e. Test methods and procedures. The following methods shall be used as reference methods to demonstrate compliance with paragraph (c) of this Section:
  - 1. The following equation shall be used to calculate the TRE index for a given vent stream:

$$TRE = \frac{1}{E} [ a + b (FL)^{0.00} + c(FL) + d(FL) (H_T) + e(FL)^{0.00} (H_T)^{0.00} + f(FL)^{0.5} ]$$

where:

TRE = The total resource effectiveness index value.  
 E = The measured hourly emissions in units of kilograms per hour (kg/hr).  
 FL = The vent stream flow rate in standard cubic meter per minute (scm/min), at a standard temperature of 20°C. For a Category E stream, the factor f(FL)<sup>0.5</sup> should be replaced with:

$$f \left[ (FL) \frac{(H_T)^{0.5}}{3.6} \right]$$

where:

H<sub>T</sub> = Vent stream net heating value in units of megajoules per standard cubic meter (MJ/scm), where the net enthalpy per mole of offgas is based on combustion at 25°C (68°F) and 760 millimeters of Mercury (mm Hg), but the standard temperature for determining the volume corresponding to one mole is 20°C, as in the definition of FL.

a, b, c, d, e, and f = Specific coefficients for six different general categories of process vent streams. The set of coefficients that apply to a given air oxidation process vent stream may be obtained from the Department.

2. Each owner or operator of an air oxidation facility seeking to comply with paragraph (a)(2) or (c)(3) of this Section shall recalculate the TRE index value for that air oxidation facility whenever process changes are made. Some examples of process changes are changes in production capacity, feedstock type, or catalyst type, or whenever recovery equipment is replaced, removed, or added. 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.

3. Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determining vent stream molar composition or VOC reduction efficiency shall be prior to the inlet of the control device and after the recovery system.
4. Method 2, 2A, 2C, or 2D, as appropriate, for determining the volumetric flow rates.
5. The emission rate correction factor, integrated sampling, and analysis procedure of Method 3 shall be used to determine the oxygen concentration (%O<sub>2d</sub>) for determining compliance with the 20 ppmv limit. The sampling site shall be the same as that of the VOC samples, and the samples shall be taken during the same time that the VOC samples are taken. The VOC concentration corrected to 3 percent O<sub>2</sub> (C<sub>c</sub>) shall be computed using the following equation:

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

where:

C<sub>c</sub> = Concentration of VOC corrected to 3 percent O<sub>2</sub>, dry basis, ppmv.  
 C<sub>VOC</sub> = Concentration of VOC, dry basis, ppmv.  
 %O<sub>2d</sub> = Concentration of O<sub>2</sub>, dry basis, percent by volume.

6. Method 18 to determine the VOC concentration in the control device outlet and the VOC concentration in the inlet when the reduction efficiency of the control device is to be determined.
  - 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 VOC shall be determined using the following equation:

$$R = \frac{E_i - E_0}{E_i} \times 100$$

where:

- R = Emission reduction, percent by weight.  
 E<sub>i</sub> = Mass rate of VOC entering the control device, kg VOC/hr.  
 E<sub>0</sub> = Mass rate of VOC discharged to the atmosphere, kg VOC/hr.

- iii. The mass rates of VOC (E<sub>1</sub>, E<sub>0</sub>) 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<sub>ij</sub>, C<sub>oj</sub> = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively.  
 M<sub>ij</sub>, M<sub>oj</sub> = 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<sub>i</sub>, Q<sub>o</sub> = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/hr).  
 K<sub>2</sub> = Constant, 2.494 x 10<sup>-6</sup> (1/ppm) (g-mole/scm) (kg/g) (min/hr), where standard temperature for (g-mole/scm) is 20°C.

- iv. The VOC concentration (C<sub>VOC</sub>) is the sum of the individual components and shall be computed for each run using the following equation:

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

where:

$C_{\text{VOC}}$  = Concentration of VOC, dry basis, ppmv.  
 $C_j$  = Concentration of sample components in the sample.  
 $n$  = Number of components in the sample.

7. When a flare is used to seek to comply with paragraph (c)(2) of this Section, the flare shall comply with the requirements of 40 CFR 60.18 (July 1, 1992).
8. The test methods in **Appendix A** to 40 CFR Part 60 (July 1, 1992), except as provided under 40 CFR 60.8 (July 1, 1992), shall be used for determining the net heating value of the gas combusted to determine compliance under paragraph (c)(2) of this Section and for determining the process vent stream TRE index value to determine compliance under paragraph (c)(3) of this Section.
9.
  - i. Method 1 or 1A, as appropriate, for selecting the sampling site. The sampling site for the vent stream flow rate and molar composition determination prescribed in paragraph (e)(10) and (11) of this Section shall be, except for the situations outlined in paragraph (e)(9)(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 4 inches in diameter.
  - ii. If any gas stream other than the air oxidation vent stream 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 VOC concentration using Method 18

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 VOC concentration measured prior to the final recovery device and prior to the introduction of the nonair oxidation stream to determine the concentration of VOC in the air oxidation stream from the final recovery device. This concentration of VOC is then used to perform the calculations outlined in paragraphs (e)(12) and (13) of this Section.

10. The molar composition of the process vent stream shall be determined as follows:
- i. Method 18 to measure the concentration of VOC including those containing halogens.
  - ii. ASTM D1946-77 to measure the concentration of carbon monoxide and hydrogen.
  - iii. Method 4 to measure the content of water vapor.
11. The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, as appropriate.
12. 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, where the net enthalpy per mole of offgas is based on combustion at 25°C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20°C, as in the definition of  $Q_S$  (offgas flow rate).

$$K_1 = \text{Constant, } 1.740 \times 10^{-7} \frac{(1)}{\text{ppm}} \frac{(g\text{-mole})}{\text{scm}} \frac{(MJ)}{\text{kcal}}$$

where standard temperature for  $\frac{(g\text{-mole})}{\text{scm}}$

is 20°C.

$C_j$  = Concentration of compound j in ppm, as measured for organics by Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 as indicated in paragraph (e)(10) of this Section.

$H_j$  = Net heat of combustion of compound j, kilocalories per gram-mole (kcal/g-mole), based on combustion at 25°C and 760 mm Hg. The heats of combustion of vent stream components would be required to be determined using ASTM D2382-76 if published values are not available or cannot be calculated.

13. The emission rate of VOCs in the process vent stream shall be calculated using the following equation:

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

where:

$E_{\text{VOC}}$  = Emission rate of VOC in the sample, kg/hr.  
 $K_2$  = Constant,  $2.494 \times 10^{-6}$  (1/ppm) (g-mole/scm) (kg/g) (min/hr), where standard temperature for (g-mole/scm) is 20°C.  
 $C_j$  = Concentration on a dry basis of compound j in ppm as measured by Method 18 as indicated in paragraph (e)(10) of this Section.  
 $M_j$  = Molecular weight of sample j, g/g-mole.  
 $Q_s$  = Vent stream flow rate (scm/min) at a standard temperature of 20°C.

- f. Recordkeeping. The owner or operator of a facility subject to this Section shall keep the records specified in this paragraph in a readily accessible location for at least 5 years. These records shall be made available to the Department immediately upon verbal or written request.

1. Where an owner or operator subject to this Section seeks to demonstrate

compliance with paragraph (c)(1) of this Section through using 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 as the compliance test.
  - ii. The percent reduction of VOC determined as specified in paragraph (c)(1) of this Section that is achieved by the incinerator, or the concentration of VOC determined as specified in paragraph (c)(1) of this Section 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 Section seeks to demonstrate compliance with paragraph (c)(1) of this Section through using a boiler or process heater:
  - i. A description of the location at which the vent stream is introduced into the boiler or process heater.
  - 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 as the compliance testing.
3. Where an owner or operator subject to the provisions of this Section seeks to comply with paragraph (c)(2) of this Section through the use of a smokeless flare:
  - i. The 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 compliance test.
  - ii. Continuous records of the flare pilot flame monitoring.
  - iii. Records of all periods of operation during which the pilot flame is absent.
4. Where an owner or operator seeks to demonstrate compliance with paragraph (c)(3) of this Section:

- i. Where an absorber is the final recovery device in a recovery system, the exit specific gravity and average exit temperature of the absorbing liquid, measured at least every 15 minutes and averaged over the same time period of the compliance testing (both measured while the vent stream is normally routed and constituted).
  - 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 averaged over the same time period of the compliance 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 compliance 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).
  - iv. As an alternative to paragraphs (f)(4)(i), (ii), or (iii) of this Section, 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 compliance testing while the vent stream is normally routed and constituted.
  - v. As an alternative to paragraphs (f)(4)(i), (ii), (iii), or (iv) of this Section, all measurements and calculations performed to determine the TRE index value of the vent stream.
5. Each owner or operator subject to the provisions of this Section shall keep up-to-date, readily accessible, continuous records of the equipment operating parameters specified to be monitored under paragraphs (d)(1) and (d)(3) of this Section, as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent compliance test are exceeded. The Department 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 paragraph (c)(1) or (c)(3) of this Section, periods of operation during which the parameter boundaries

established during the most recent performance tests are exceeded are defined as follows:

- i. 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 test at which compliance with paragraph (c)(1) of this Section was determined.
  - ii. 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 test at which compliance with paragraph (c)(1) of this Section 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 test at which compliance with paragraph (c)(1) of this Section was determined.
  - iii. 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 test at which compliance with paragraph (c)(1) of this Section was determined for boilers or process heaters with a design heat input capacity of less than 44 MW (150 million Btu/hr).
  - iv. 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 paragraph (c)(1) of this Section.
6. Each owner or operator subject to the provisions of this Section shall keep up-to-date, readily accessible continuous records of the flow indication specified under paragraphs (d)(1)(ii), (d)(2)(ii), and (d)(3)(i) of this Section, 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.
7. Each owner or operator subject to the provisions of this Section who uses a boiler or process heater with a design heat input capacity of 44 MW or greater to comply with paragraph (c)(1) of this Section 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.)

8. Each owner or operator subject to the provisions of this Section shall keep up-to-date, readily accessible, continuous records of the flare pilot flame monitoring specified in paragraph (d)(2) of this Section as well as up-to-date, readily accessible records of all periods of operations in which the pilot flame is absent.
9. Each owner or operator subject to the provisions of this Section shall keep up-to-date, readily accessible, continuous records of the equipment operating parameters specified to be monitored under paragraph (d)(3) of this Section as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent compliance test are exceeded. The Department may at any time require a report of these data. Where the owner or operator seeks to demonstrate compliance with paragraph (c)(3) of this Section, periods of operation during which the parameter boundaries established during the most recent compliance tests are exceeded are defined as follows:
  - i. Where an absorber is the final recovery device in a recovery system, and where an organic monitoring device is not used, either paragraph (f)(9)(i)(A) or (B) of this Section:
    - A. 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 compliance test that demonstrated that the facility was in compliance.
    - B. All 3-hour periods of operation during which the average absorbing liquid specific gravity was more than 0.1 unit above or below the average absorbing liquid specific gravity during the most recent compliance test that demonstrated that the facility was in compliance.
  - ii. Where 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 compliance test that demonstrated that the facility was in compliance.

- iii. Where a carbon adsorber is the final recovery device in a recovery system and where an organic monitoring device is not used, either paragraph (f)(9)(iii)(A) or (B) of this Section:
    - A. 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 compliance test that demonstrated that the facility was in compliance.
    - B. 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 compliance test that demonstrated that the facility was in compliance.
  - iv. Where an absorber, condenser, or carbon adsorber is the final recovery device in the recovery system and an organic monitoring device approved by the Department 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 compliance test that demonstrated that the facility was in compliance.
10. Each owner or operator subject to the provisions of this Section and seeking to demonstrate compliance with paragraph (c)(3) of this Section shall keep up-to-date, readily accessible records of:
- i. Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal, or addition of recovery equipment or air oxidation reactors.
  - ii. Any recalculation of the TRE index value performed pursuant to paragraph (e)(2) of this Section.
  - iii. The results of any test performed pursuant to the methods and procedures required by paragraph (d)(4) of this Section.
- g. Reporting requirements. The owner or operator of any facility containing sources subject to this Section shall:

1. Comply with the initial compliance certification requirements of Section 5(a) of this regulation.
2. Comply with the requirements of Section 5(b) of this regulation for excess emissions related to the control devices required to comply with this Section, as well as any other State of Delaware exceedance reporting requirements.