



Ohio Administrative Code

Rule 3745-205-35 Recordkeeping - process vents.

Effective: June 12, 2023

(A)

(1) Each owner or operator subject to rules 3745-205-30 to 3745-205-36 of the Administrative Code shall comply with the recordkeeping requirements of this rule.

(2) An owner or operator of more than one hazardous waste management unit subject to rules 3745-205-30 to 3745-205-36 of the Administrative Code may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(B) Owners and operators shall record the following information in the facility operating record:

(1) For facilities that comply with paragraph (A)(2) of rule 3745-205-33 of the Administrative Code, an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule also shall include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule shall be in the facility operating record by the effective date that the facility becomes subject to rules 3745-205-30 to 3745-205-36 of the Administrative Code.

(2) Up to date documentation of compliance with the process vent standards in rule 3745-205-32 of the Administrative Code, including:

(a) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).



(b) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions shall be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan shall include:

(a) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(b) A detailed engineering description of the closed-vent system and control device including:

(i) Manufacturer's name and model number of control device.

(ii) Type of control device.

(iii) Dimensions of the control device.

(iv) Capacity.

(v) Construction materials.



(c) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with rule 3745-205-33 of the Administrative Code shall include the following information:

(a) A list of all information references and sources used in preparing the documentation.

(b) Records, including the dates, of each compliance test required by paragraph (K) of rule 3745-205-33 of the Administrative Code.

(c) If engineering calculations are used, a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the director that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraphs (B)(4)(c)(i) to (B)(4)(c)(vii) of this rule may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in this paragraph.

(i) For a thermal vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also shall establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(ii) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also shall establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(iii) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also shall establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.



- (iv) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis also shall consider the requirements specified in paragraph (D) of rule 3745-205-33 of the Administrative Code.
- (v) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also shall establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.
- (vi) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also shall establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling or drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.
- (vii) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis also shall establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.
- (d) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.
- (e) A statement signed and dated by the owner or operator certifying that the control device is



designed to operate at an efficiency of ninety-five per cent or greater unless the total organic concentration limit of paragraph (A) of rule 3745-205-32 of the Administrative Code is achieved at an efficiency less than ninety-five weight per cent or the total organic emission limits of paragraph (A) of rule 3745-205-32 of the Administrative Code for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than ninety-five weight per cent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(f) If performance tests are used to demonstrate compliance, all test results.

(C) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with Chapters 3745-54 to 3745-57 and 3745-205 of the Administrative Code shall be recorded and kept up to date in the facility operating record. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with paragraphs (F)(1) and (F)(2) of rule 3745-205-33 of the Administrative Code.

(3) Monitoring, operating, and inspection information required by paragraphs (F) to (K) of rule 3745-205-33 of the Administrative Code.

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified in paragraph (C)(4) of this rule:

(a) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of seven hundred sixty degrees Celsius, period when the combustion temperature is below seven hundred sixty degrees Celsius.



(b) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of ninety-five weight per cent or greater, period when the combustion zone temperature is more than twenty-eight degrees Celsius below the design average combustion zone temperature established as a requirement of paragraph (B)(4)(c)(i) of this rule.

(c) For a catalytic vapor incinerator, period when:

(i) Temperature of the vent stream at the catalyst bed inlet is more than twenty-eight degrees Celsius below the average temperature of the inlet vent stream established as a requirement of paragraph (B)(4)(c)(ii) of this rule; or

(ii) Temperature difference across the catalyst bed is less than eighty per cent of the design average temperature difference established as a requirement of paragraph (B)(4)(c)(ii) of this rule.

(d) For a boiler or process heater, period when:

(i) Flame zone temperature is more than twenty-eight degrees Celsius below the design average flame zone temperature established as a requirement of paragraph (B)(4)(c)(iii) of this rule; or

(ii) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of paragraph (B)(4)(c)(iii) of this rule.

(e) For a flare, period when the pilot flame is not ignited.

(f) For a condenser that complies with paragraph (F)(2)(f)(i) of rule 3745-205-33 of the Administrative Code, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than twenty per cent greater than the design outlet organic compound concentration level established as a requirement of paragraph (B)(4)(c)(v) of this rule.

(g) For a condenser that complies with paragraph (F)(2)(f)(ii) of rule 3745-205-33 of the Administrative Code, period when:



- (i) Temperature of the exhaust vent stream from the condenser is more than six degrees Celsius above the design average exhaust vent stream temperature established as a requirement of paragraph (B)(4)(c)(v) of this rule; or
- (ii) Temperature of the coolant fluid exiting the condenser is more than six degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of paragraph (B)(4)(c)(v) of this rule.
- (h) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with paragraph (F)(2)(g)(i) of rule 3745-205-33 of the Administrative Code, period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than twenty per cent greater than the design exhaust vent stream organic compound concentration level established as a requirement of paragraph (B)(4)(c)(iii) of this rule.
- (i) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly on-site in the control device and complies with paragraph (F)(2)(g)(ii) of rule 3745-205-33 of the Administrative Code, period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of paragraph (B)(4)(c)(vi) of this rule.
- (5) Explanation for each period recorded under paragraph (C)(4) of this rule, of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.
- (6) For a carbon adsorption system operated subject to requirements specified in either paragraph (G) of rule 3745-205-33 or paragraph (H)(2) of rule 3745-205-33 of the Administrative Code, date when existing carbon in the control device is replaced with fresh carbon.
- (7) For a carbon adsorption system operated subject to requirements specified in paragraph (H)(1) of rule 3745-205-33 of the Administrative Code, a log that records:
- (a) Date and time when control device is monitored for carbon breakthrough and the monitoring



device reading.

(b) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

(9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to paragraph (O) of rule 3745-205-33 of the Administrative Code shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of paragraph (O) of rule 3745-205-33 of the Administrative Code, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in paragraph (L) of rule 3745-205-33 of the Administrative Code, the following information shall be recorded:

(a) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or U.S. EPA identification number.

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

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

(d) Maximum instrument reading measured by method 21 of 40 CFR Part 60 appendix A after the leak is successfully repaired or determined to be nonrepairable.

(e) "Repair delayed" and the reason for the delay if a leak is not repaired within fifteen calendar days after discovery of the leak.

(i) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.



(ii) If delay of repair was caused by depletion of stocked parts, documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion is required.

(D) Records of the monitoring, operating, and inspection information required by paragraphs (C)(3) to (C)(10) of this rule shall be maintained by the owner or operator for at least three years after the date of each occurrence, measurement, maintenance, corrective action, or record.

(E) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the director will specify the appropriate recordkeeping requirements.

(F) Up to date information and data used to determine whether or not a process vent is subject to the requirements in rule 3745-205-32 of the Administrative Code including supporting documentation as required by paragraph (D)(2) of rule 3745-205-34 of the Administrative Code when application of the knowledge of the nature of the hazardous waste stream or the process by which the hazardous waste stream was produced is used, shall be recorded in a log that is kept in the facility operating record.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-50-11 of the Administrative Code titled "Incorporated by reference."]