



Ohio Administrative Code

Rule 3745-51-731 Definitions - air emission standards for process vents.

Effective: June 12, 2023

As used in rules 3745-51-730 to 3745-51-735 of the Administrative Code, all terms not defined herein have the meanings given in the Resource Conservation and Recovery Act and Chapters 3745-50 to 3745-57, 3745-65 to 3745-69, 3745-205, 3745-256, and 3745-266 of the Administrative Code.

(A) "Air stripping operation" is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

(B) "Bottoms receiver" means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

(C)

(1) "Closed-vent system" means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

(2) "Condenser" means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

(3) "Connector" means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

(4) "Continuous recorder" means a data-recording device recording an instantaneous data value at least once every fifteen minutes.



(5) "Control device" means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

(6) "Control device shutdown" means the cessation of operation of a control device for any purpose.

(D)

(1) "Distillate receiver" means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

(2) "Distillation operation" means an operation, either batch or continuous, separating one or more feed streams into two or more exit streams, each exit stream having component concentrations different from those in the feed streams. The separation is achieved by the redistribution of the components between the liquid and vapor phase as the components approach equilibrium within the distillation unit.

(3) "Double block and bleed system" means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

(E) "Equipment" means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange or other connector, and any control devices or systems required by rules 3745-51-730 to 3745-51-735 of the Administrative Code.

(F)

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

(2) "Flow indicator" means a device that indicates whether gas flow is present in a vent stream.



(3) "First attempt at repair" means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

(4) "Fractionation operation" means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

(G) [Reserved.]

(H)

(1) "Hazardous secondary material management unit shutdown" means a work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous secondary material management unit or part of a hazardous secondary material management unit for less than twenty-four hours is not a hazardous secondary material management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous secondary material management unit shutdowns.

(2) "Hot well" means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

(I)

(1) "In gas or vapor service" means that the piece of equipment contains or contacts a hazardous secondary material stream that is in the gaseous state at operating conditions.

(2) "In heavy liquid service" means that the piece of equipment is not in gas or vapor service or in light liquid service.

(3) "In light liquid service" means that the piece of equipment contains or contacts a material stream where the vapor pressure of one or more of the organic components in the stream is greater than 0.3



kilopascals (kPa) at twenty degrees Celsius, the total concentration of the pure organic components having a vapor pressure greater than 0.3 kPa at twenty degrees Celsius is equal to or greater than twenty per cent by weight, and the fluid is a liquid at operating conditions.

(4) "In situ sampling systems" means non-extractive samplers or in-line samplers.

(5) "In vacuum service" means that equipment is operating at an internal pressure that is at least five kPa below ambient pressure.

(J) [Reserved.]

(K) [Reserved.]

(L) [Reserved.]

(M) "Malfunction" means any sudden failure of a control device or a hazardous secondary material management unit or failure of a hazardous secondary material management unit to operate in a normal or usual manner, so that organic emissions are increased.

(N) [Reserved.]

(O) "Open-ended valve or line" means any valve, except pressure relief valves, having one side of the valve seat in contact with hazardous secondary material and one side open to the atmosphere, either directly or through open piping.

(P)

(1) "Pressure release" means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

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



(3) "Process vent" means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous secondary material distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

(Q) [Reserved.]

(R) "Repaired" means that equipment is adjusted, or otherwise altered, to eliminate a leak.

(S)

(1) "Sampling connection system" means an assembly of equipment within a process or material management unit used during periods of representative operation to take samples of the process or material fluid. Equipment used to take non-routine grab samples is not considered a sampling connection system.

(2) "Sensor" means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

(3) "Separator tank" means a device used for separation of two immiscible liquids.

(4) "Solvent extraction operation" means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

(5) "Startup" means the setting in operation of a hazardous secondary material management unit or control device for any purpose.

(6) "Steam stripping operation" means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

(7) "Surge control tank" means a large-sized pipe or storage reservoir sufficient to contain the



surging liquid discharge of the process tank to which the pipe or storage reservoir is connected.

(T) "Thin-film evaporation operation" means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

(U) [Reserved.]

(V)

(1) "Vapor 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.

(2) "Vented" means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

[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."]