

Process vent means furnace vents, dryer vents, agglomeration furnace vents, vents from battery breakers, vents from buildings containing lead bearing material, and any ventilation system controlling lead emissions.

Refining kettle means an open-top vessel that is constructed of cast iron or steel and is indirectly heated from below and contains molten lead for the purpose of refining and alloying the lead. Included are pot furnaces, receiving kettles, and holding kettles.

Reverberatory furnace means a refractory-lined furnace that uses one or more flames to heat the walls and roof of the furnace and lead-bearing scrap to such a temperature (greater than 980 Celsius) that lead compounds are chemically reduced to elemental lead metal.

Rotary furnace (also known as a rotary reverberatory furnace) means a furnace consisting of a refractory-lined chamber that rotates about a horizontal axis and that uses one or more flames to heat the walls of the furnace and lead-bearing scrap to such a temperature (greater than 980 Celsius) that lead compounds are chemically reduced to elemental lead metal.

Secondary lead smelter means any facility at which lead-bearing scrap material, primarily, but not limited to, lead-acid batteries, is recycled into elemental lead or lead alloys by smelting.

Shutdown means the period when no lead bearing materials are being fed to the furnace and smelting operations have ceased during which the furnace is cooled from steady-state operating temperature to ambient temperature.

Smelting means the chemical reduction of lead compounds to elemental lead or lead alloys through processing in high-temperature (greater than 980 Celsius) furnaces including, but not limited to, blast furnaces, reverberatory furnaces, rotary furnaces, and electric furnaces.

Startup means the period when no lead bearing materials have been fed to the furnace and smelting operations have not yet commenced during which the furnace is heated from ambient temperature to steady-state operating temperature.

Total enclosure means a containment building that is completely enclosed

with a floor, walls, and a roof to prevent exposure to the elements and to assure containment of lead bearing material with limited openings to allow access and egress for people and vehicles. The total enclosure must provide an effective barrier against fugitive dust emissions such that the direction of air flow through any openings is inward and the enclosure is maintained under constant negative pressure.

Vehicle wash means a device for removing dust and other accumulated material from the wheels, body, and underside of a vehicle to prevent the inadvertent transfer of lead contaminated material to another area of a secondary lead smelter or to public roadways.

Wet suppression means the use of water, water combined with a chemical surfactant, or a chemical binding agent to prevent the entrainment of dust into the air from fugitive dust sources.

Windward wall means the exterior wall of a total enclosure that is most impacted by the wind in its most prevailing direction determined by a wind rose using available data from the closest representative meteorological station.

§ 63.543 What are my standards for process vents?

(a) For existing sources, you must maintain the concentration of lead compounds in any process vent gas at or below 1.0 milligrams of lead per dry standard cubic meter (0.00043 grains of lead per dry standard cubic foot). You must maintain the flow-weighted average concentration of lead compounds in vent gases from a secondary lead smelting facility at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot).

(1) You must demonstrate compliance with the flow weighted average emissions limit on a 12-month rolling average basis, calculated monthly using the most recent test data available.

(2) Until 12 monthly weighted average emissions rates have been accumulated, calculate only the monthly average weighted emissions rate.

(3) You must use Equation 1 of this section to calculate the flow-weighted

average concentration of lead compounds from process vents:

$$C_{FWA} = \frac{\sum_{i=1}^n F_i \times C_i}{\sum_i F_i} \quad (\text{Eq. 1})$$

Where:

C_{FWA} = Flow-weighted average concentration of all process vents.

n = Number of process vents.

F_i = Flow rate from process vent i in dry standard cubic feet per minute, as measured during the most recent compliance test.

C_i = Concentration of lead in process vent i , as measured during the most recent compliance test.

(4) Each month, you must use the concentration of lead and flow rate obtained during the most recent compliance test performed prior to or during that month to perform the calculation using Equation 1 of this section.

(5) If a continuous emissions monitoring system (CEMS) is used to measure the concentration of lead in a vent, the monthly average lead concentration and monthly average flow rate must be used rather than the most recent compliance test data.

(b) For new sources that begin construction or reconstruction after May 19, 2011 you must maintain the concentration of lead compounds in any process vent gas at or below 0.20 milligrams of lead per dry standard cubic meter (0.000087 grains of lead per dry standard cubic foot).

(c) You must meet the applicable emissions limits for total hydrocarbons and dioxins and furans from furnace sources specified in Table 2 of this subpart. There are no standards for dioxins and furans during periods of startup and shutdown.

(d) If you combine furnace emissions from multiple types of furnaces and these furnaces do not meet the definition of collocated blast and reverberatory furnaces, you must calculate your emissions limit for the combined furnace stream using Equation 2 of this section.

$$C_{EL} = \frac{\sum_{i=1}^n F_i \times C_{ELi}}{\sum_i F_i} \quad (\text{Eq. 2})$$

Where:

C_{EL} = Flow-weighted average emissions limit (concentration) of combined furnace vents.

n = Number of furnace vents.

F_i = Flow rate from furnace vent i in dry standard cubic feet per minute.

C_{ELi} = Emissions limit (concentration) of pollutant in furnace vent i as specified in Table 2 of this subpart.

(e) If you combine furnace emissions with the furnace charging process fugitive emissions and discharge them to

the atmosphere through a common emissions point, you must demonstrate compliance with the applicable total hydrocarbons concentration limit specified in paragraph (c) of this section at a location downstream from the point at which the two emissions streams are combined.

(f) If you do not combine the furnace charging process fugitive emissions with the furnace process emissions, and discharge such emissions to the atmosphere through separate emissions points, you must maintain the total hydrocarbons concentration in the exhaust gas at or below 20 parts per million by volume, expressed as propane and corrected to 4 percent carbon dioxide.

(g) Following the initial performance or compliance test to demonstrate compliance with the lead emissions limits specified in paragraph (a) or (b) of this section, you must conduct performance tests according to the schedule in paragraph (g)(1) or (2) of this section.

(1) Conduct an annual performance test for lead compounds from each process vent (no later than 12 calendar months following the previous compliance test), unless you install and operate a CEMS meeting the requirements of § 63.8.

(2) If an annual compliance test demonstrates that a process vent emitted lead compounds at 0.10 milligram of lead per dry standard cubic meter or less during the time of the annual compliance test, you may submit a written request to the Administrator applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for lead compounds.

(h) Following the initial performance or compliance test to demonstrate compliance with the total hydrocarbons emissions limits in paragraphs (c) and (f) of this section, you must conduct an annual performance test for total hydrocarbons emissions from each process vent that has established limits for total hydrocarbons (no later than 12 calendar months following the previous compliance test), unless you install and operate a CEMS meeting the requirements of § 63.8. If an annual compliance test demonstrates that a

process vent emitted total hydrocarbons at less than 50 percent of the allowable limit during the time of the annual compliance test, you may submit a written request to the Administrator applying for an extension of up to 24 calendar months from the previous compliance test to conduct the next compliance test for total hydrocarbons.

(i) Following the initial performance or compliance test to demonstrate compliance with the dioxins and furans emissions limits specified in paragraph (c) of this section, you must conduct a performance test for dioxins and furans emissions from each process vent that has established limits for dioxins and furans at least once every 6 years following the previous compliance test.

(j) You must conduct the performance tests specified in paragraphs (g) through (i) of this section under maximum representative operating conditions for the process. During the performance test, you may operate the control device at maximum or minimum representative operating conditions for monitored control device parameters, whichever results in lower emission reduction. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(k) At all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(l) If you own or operate a unit subject to emission limits in Table 2 of this subpart, you must minimize the unit's startup and shutdown periods following the manufacturer's recommended procedures, if available. You must develop and follow standard

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operating procedures designed to minimize emissions of total hydrocarbon for each startup or shutdown scenario anticipated. You must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted startups and shutdowns according to the manufacturer's recommended procedures, if available, and the standard operating procedures designed to minimize emissions of total hydrocarbons.

(m) In addition to complying with the applicable emissions limits for dioxins and furans listed in Table 2 to this subpart, you must operate a process to separate plastic battery casing materials from all automotive batteries prior to introducing feed into a furnace.

§ 63.544 What are my total enclosure standards?

(a) You must operate the process fugitive emissions sources and fugitive dust sources listed in paragraphs (a)(1) through (9) of this section in a total enclosure that is maintained at negative pressure at all times and vented to a control device designed to capture lead particulate. The total enclosure must meet the requirements specified in paragraph (c) of this section.

- (1) Smelting furnaces.
- (2) Smelting furnace charging areas.
- (3) Lead taps, slag taps, and molds during tapping.
- (4) Battery breakers.
- (5) Refining kettles, casting areas.
- (6) Dryers.
- (7) Agglomerating furnaces and agglomerating furnace product taps.
- (8) Material handling areas for any lead bearing materials except those listed in paragraph (b) of this section.
- (9) Areas where dust from fabric filters, sweepings or used fabric filters are processed.

(b) Total enclosures are not required in the following areas: lead ingot product handling areas, stormwater and wastewater treatment areas, intact battery storage areas, areas where lead bearing material is stored in closed containers or enclosed mechanical conveyors, and areas where clean battery casing material is handled.

(c) You must construct and operate total enclosures for the sources listed

in paragraph (a) of this section as specified in paragraphs (c)(1) and (2) of this section. The total enclosure must be free of significant cracks, gaps, corrosion or other deterioration that could cause lead bearing material to be released from the primary barrier. Measures must be in place to prevent the tracking of lead bearing material out of the unit by personnel or by equipment used in handling the material. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed.

(1) You must ventilate the total enclosure continuously to ensure negative pressure values of at least 0.013 mm of mercury (0.007 inches of water).

(2) You must maintain an inward flow of air through all natural draft openings.

(d) You must inspect enclosures and facility structures that contain any lead-bearing materials at least once per month. You must repair any gaps, breaks, separations, leak points or other possible routes for emissions of lead to the atmosphere within one week of identification unless you obtain approval for an extension from the Administrator before the repair period is exceeded.

§ 63.545 What are my standards for fugitive dust sources?

(a) You must prepare, and at all times operate according to, a standard operating procedures manual that describes in detail the measures that will be put in place and implemented to control the fugitive dust emissions from the sources listed in paragraphs (a)(1) through (7) of this section.

- (1) Plant roadways.
- (2) Plant buildings.
- (3) Accidental releases.
- (4) Battery storage area.
- (5) Equipment maintenance.
- (6) Material storage areas.
- (7) Material handling areas.

(b) You must submit the standard operating procedures manual to the Administrator or delegated authority for review and approval when initially developed and any time changes are made.

(c) The controls specified in the standard operating procedures manual