

§§ 63.124–63.125 [Reserved]

§ 63.126 Transfer operations provisions—reference control technology.

(a) For each Group 1 transfer rack the owner or operator shall equip each transfer rack with a vapor collection system and control device.

(1) Each vapor collection system shall be designed and operated to collect the organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading, and to route the collected hazardous air pollutants vapors to a process, or to a fuel gas system, or to a control device as provided in paragraph (b) of this section.

(2) Each vapor collection system shall be designed and operated such that organic HAP vapors collected at one loading arm will not pass through another loading arm in the rack to the atmosphere.

(3) Whenever organic hazardous air pollutants emissions are vented to a process, fuel gas system, or control device used to comply with the provisions of this subpart, the process, fuel gas system, or control device shall be operating.

(b) For each Group 1 transfer rack the owner or operator shall comply with paragraph (b)(1), (b)(2), (b)(3), or (b)(4) of this section.

(1) Use a control device to reduce emissions of total organic hazardous air pollutants by 98 weight-percent or to an exit concentration of 20 parts per million by volume, whichever is less stringent. For combustion devices, the emission reduction or concentration shall be calculated on a dry basis, corrected to 3-percent oxygen. If a boiler or process heater is used to comply with the percent reduction requirement, then the vent stream shall be introduced into the flame zone of such a device. Compliance may be achieved by using any combination of combustion, recovery, and/or recapture devices.

(2) Reduce emissions of organic HAP's using a flare.

(i) The flare shall comply with the requirements of § 63.11(b) of subpart A of this part.

(ii) Halogenated vent streams, as defined in § 63.111 of this subpart, shall not be vented to a flare.

(3) Reduce emissions of organic hazardous air pollutants using a vapor balancing system designed and operated to collect organic hazardous air pollutants vapors displaced from tank trucks or railcars during loading; and to route the collected hazardous air pollutants vapors to the storage vessel from which the liquid being loaded originated, or to another storage vessel connected to a common header, or to compress and route to a process collected hazardous air pollutants vapors.

(4) Route emissions of organic hazardous air pollutants to a fuel gas system or to a process where the organic hazardous air pollutants in the emissions shall predominantly meet one of, or a combination of, the ends specified in paragraphs (b)(4)(i) through (b)(4)(iv) of this section.

(i) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(ii) Transformed by chemical reaction into materials that are not organic hazardous air pollutants;

(iii) Incorporated into a product; and/or

(iv) Recovered.

(c) For each Group 2 transfer rack, the owner or operator shall maintain records as required in § 63.130(f). No other provisions for transfer racks apply to the Group 2 transfer rack.

(d) Halogenated emission streams from Group 1 transfer racks that are combusted shall be controlled according to paragraph (d)(1) or (d)(2) of this section. Determination of whether a vent stream is halogenated shall be made using procedures in (d)(3).

(1) If a combustion device is used to comply with paragraph (b)(1) of this section for a halogenated vent stream, then the vent stream exiting the combustion device shall be ducted to a halogen reduction device, including, but not limited to, a scrubber before it is discharged to the atmosphere.

(i) Except as provided in paragraph (d)(1)(ii) of this section, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 99 percent or shall reduce the outlet mass emission rate of total hydrogen halides and halogens to 0.45

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kilograms per hour or less, whichever is less stringent.

(ii) If a scrubber or other halogen reduction device was installed prior to December 31, 1992, the halogen reduction device shall reduce overall emissions of hydrogen halides and halogens, as defined in § 63.111 of this subpart, by 95 percent or shall reduce the outlet mass of total hydrogen halides and halogens to less than 0.45 kilograms per hour, whichever is less stringent.

(2) A halogen reduction device, such as a scrubber, or other technique may be used to make the vent stream non-halogenated by reducing the vent stream halogen atom mass emission rate to less than 0.45 kilograms per hour prior to any combustion control device used to comply with the requirements of paragraphs (b)(1) or (b)(2) of this section.

(3) In order to determine whether a vent stream is halogenated, the mass emission rate of halogen atoms contained in organic compounds shall be calculated.

(i) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume by compound) shall be determined based on the following procedures:

(A) Process knowledge that no halogen or hydrogen halides are present in the process, or

(B) Applicable engineering assessment as specified in § 63.115(d)(1)(iii) of this subpart, or

(C) Concentration of organic compounds containing halogens measured by Method 18 of 40 CFR part 60, appendix A, or

(D) Any other method or data that has been validated according to the applicable procedures in Method 301 of appendix A of this part.

(ii) The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 V_s \left(\sum_{j=1}^n \sum_{i=1}^m C_j * L_{ji} * M_{ji} \right)$$

where:

E=Mass of halogen atoms, dry basis, kilograms per hour.

K₂=Constant, 2.494 × 10⁻⁶ (parts per million)⁻¹ (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20 °C.

C_j=Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

M_{ji}=Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

L_{ji}=Number of atoms of halogen i in compound j of the gas stream.

V_s=Flow rate of gas stream, dry standard cubic meters per minute, determined according to § 63.128(a)(8) of this subpart.

j=Halogenated compound j in the gas stream.

i=Halogen atom i in compound j of the gas stream.

n=Number of halogenated compounds j in the gas stream.

m=Number of different halogens i in each compound j of the gas stream.

(e) For each Group 1 transfer rack the owner or operator shall load organic HAP's into only tank trucks and railcars which:

(1) Have a current certification in accordance with the U. S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars; or

(2) Have been demonstrated to be vapor-tight within the preceding 12 months, as determined by the procedures in § 63.128(f) of this subpart. Vapor-tight means that the truck or railcar tank will sustain a pressure change of not more than 750 pascals within 5 minutes after it is pressurized to a minimum of 4,500 pascals.

(f) The owner or operator of a transfer rack subject to the provisions of this subpart shall load organic HAP's to only tank trucks or railcars equipped with vapor collection equipment that is compatible with the transfer rack's vapor collection system.

(g) The owner or operator of a transfer rack subject to this subpart shall load organic HAP's to only tank trucks or railcars whose collection systems are connected to the transfer rack's vapor collection systems.

(h) The owner or operator of a transfer rack subject to the provisions of this subpart shall ensure that no pressure-relief device in the transfer rack's vapor collection system or in the organic hazardous air pollutants loading

equipment of each tank truck or railcar shall begin to open during loading. Pressure relief devices needed for safety purposes are not subject to this paragraph.

(i) Each valve in the vent system that would divert the vent stream to the atmosphere, either directly or indirectly, shall be secured in a non-diverting position using a carseal or a lock-and-key type configuration, or shall be equipped with a flow indicator. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief devices needed for safety purposes is not subject to this paragraph.

[59 FR 19468, Apr. 22, 1994, as amended at 62 FR 2749, Jan. 17, 1997]

§ 63.127 Transfer operations provisions—monitoring requirements.

(a) Each owner or operator of a Group 1 transfer rack equipped with a combustion device used to comply with the 98 percent total organic hazardous air pollutants reduction or 20 parts per million by volume outlet concentration requirements in § 63.126(b)(1) of this subpart shall install, calibrate, maintain, and operate according to the manufacturers' specifications (or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately) the monitoring equipment specified in paragraph (a)(1), (a)(2), (a)(3), or (a)(4) of this section, as appropriate.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(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) Where a flare is used, a device (including but not limited to a thermocouple, infrared sensor, or an ultra-violet beam sensor) capable of continu-

ously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater with a design heat input capacity less than 44 megawatts is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all vent streams are introduced with the primary fuel or are used as the primary fuel is exempt from this requirement.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in the case of halogenated vent streams, the following monitoring equipment is required for the scrubber:

(i) A pH monitoring device equipped with a continuous recorder shall be installed to monitor the pH of the scrubber effluent.

(ii) A flow meter equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs (a)(4)(ii)(A) through (a)(4)(ii)(C) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart specified in § 63.100(k) of subpart F of this part, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.

(C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions other than start-ups, shutdowns, or malfunctions. The plan shall include a