

(1) For a thermal oxidizer, install a gas temperature monitor in the firebox of the thermal oxidizer or in the duct immediately downstream of the firebox before any substantial heat exchange occurs.

(2) For a catalytic oxidizer, install a gas temperature monitor according to paragraph (c)(2)(i) or (ii) of this section.

(i) If you establish operating limits according to § 63.3546(b)(1) and (2), then you must install the gas temperature monitors both upstream and downstream of the catalyst bed. The temperature monitors must be in the gas stream at the inlet to and the outlet of the catalyst bed to measure the temperature difference across the bed.

(ii) If you establish operating limits according to § 63.3546(b)(3) and (4), then you must install a gas temperature monitor upstream of the catalyst bed. The temperature monitor must be in the gas stream at the inlet to the catalyst bed to measure the temperature.

(3) For all thermal oxidizers and catalytic oxidizers, you must meet the requirements in paragraphs (a) and (c)(3)(i) through (ii) of this section for each gas temperature monitoring device.

(i) Locate the temperature sensor in a position that provides a representative temperature.

(ii) Use a temperature sensor with a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger.

(d) *Carbon adsorbers.* If you are using a carbon adsorber as an add-on control device, you must monitor the total regeneration desorbing gas (e.g., steam or nitrogen) mass flow for each regeneration cycle, the carbon bed temperature after each regeneration and cooling cycle, and comply with paragraphs (a)(3) through (5) and (d)(1) and (2) of this section.

(1) The regeneration desorbing gas mass flow monitor must be an integrating device having an accuracy of ± 10 percent capable of recording the total regeneration desorbing gas mass flow for each regeneration cycle.

(2) The carbon bed temperature monitor must have a minimum accuracy of ± 1.2 degrees Celsius or ± 1 percent of the temperature value in degrees Celsius, whichever is larger, and must be capable of recording the temperature within 15 minutes of completing any carbon bed cooling cycle.

(e) *Condensers.* If you are using a condenser, you must monitor the condenser outlet (product side) gas temperature and comply with paragraphs (a) and (e)(1) and (2) of this section.

(1) The gas temperature monitor must have a minimum accuracy of ± 1 percent of the temperature recorded in degrees Celsius or ± 1.2 degrees Celsius, whichever is greater.

(2) The temperature monitor must provide a continuous gas temperature record.

(f) *Concentrators.* If you are using a concentrator such as a zeolite wheel or rotary carbon bed concentrator, you must comply with the requirements in paragraphs (f)(1) through (4) of this section.

(1) You must install a temperature monitor at the inlet to the desorption/ reactivation zone of the concentrator. The temperature monitor must meet the requirements in paragraphs (a) and (c)(3) of this section.

(2) You must select an indicator(s) of performance of the desorption/ reactivation fan operation, such as speed, power, static pressure, or flow rate.

(3) You must monitor the rotational speed of the concentrator in revolutions per hour.

(4) You must verify the performance of the adsorbent material by examining representative samples and testing adsorbent activity per the manufacturer's recommendations.

Compliance Requirements for the Control Efficiency/Outlet Concentration Option

§ 63.3550 By what date must I conduct performance tests and other initial compliance demonstrations?

(a) *New and reconstructed affected sources.* For a new or reconstructed source, you must meet the requirements of paragraphs (a)(1) through (4) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3483. You must conduct a performance test of each capture system and add-on control device according to §§ 63.3553, 63.3554, and 63.3555 and establish the operating limits required by § 63.3492 no later than 180 days after the applicable compliance date specified in § 63.3483.

(2) You must develop and begin implementing the work practice plan required by § 63.3493 no later than the compliance date specified in § 63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3551. The initial compliance period begins on the applicable compliance date specified in § 63.3483 and ends on the last day of the 12th month following the compliance

date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to § 63.3553, 63.3554, and 63.3555; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3557; and

documentation of whether you developed and implemented the work practice plan required by § 63.3493.

(4) You do not need to comply with the operating limits for the emission capture system and add-on control device required by § 63.3492 until after you have completed the performance tests specified in paragraph (a)(1) of this section. Instead, you must maintain a log detailing the operation and maintenance of the emission capture system, add-on control device, and continuous parameter monitors during the period between the compliance date and the performance test. You must begin complying with the operating limits on the date you complete the performance tests specified in paragraph (a)(1) of this section.

(b) *Existing affected sources.* For an existing affected source, you must meet the requirements of paragraphs (b)(1) through (3) of this section.

(1) All emission capture systems, add-on control devices, and CPMS must be installed and operating no later than the applicable compliance date specified in § 63.3483.

(2) You must develop and begin implementing the work practice plan required by § 63.3493 no later than the compliance date specified in § 63.3483.

(3) You must complete the initial compliance demonstration for the initial compliance period according to the requirements of § 63.3551. The initial compliance period begins on the applicable compliance date specified in § 63.3483 and ends on the last day of the 12th month following the compliance date. If the compliance date occurs on any day other than the first day of a month, then the initial compliance period extends through the end of that month plus the next 12 months. The initial compliance demonstration includes the results of emission capture system and add-on control device performance tests conducted according to §§ 63.3553, 63.3554, and 63.3555; the operating limits established during the performance tests and the results of the continuous parameter monitoring required by § 63.3557; and