§ 60.85 Test methods and procedures.

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b). Acceptable alternative methods and procedures are given in paragraph (c) of this section.

(b) The owner or operator shall determine compliance with the SO₂ acid mist, and visible emission standards in §§ 60.82 and 60.83 as follows:

1. The emission rate (E) of acid mist or SO₂ shall be computed for each run using the following equation:

   \[ E = \frac{(CQ_{sd})}{(PK)} \]

   where:

   \[ E = \text{emission rate of acid mist or SO}_2 \text{ kg/metric ton (lb/ton) of } 100 \text{ percent } H_2SO_4 \text{ produced.} \]

   \[ C = \text{concentration of acid mist or } SO_2, \text{ g/dscm (lb/dscf).} \]

   \[ Q_{sd} = \text{volumetric flow rate of the effluent gas, dscm/hr (dscf/hr).} \]

   \[ P = \text{production rate of } 100 \text{ percent } H_2SO_4, \text{metric ton/hr (ton/hr).} \]

   \[ K = \text{conversion factor, } 1000 \text{ g/kg (1.0 lb/lb).} \]

2. Method 8 shall be used to determine the acid mist and SO₂ concentrations (C’s) and the volumetric flow rate (Qsd) of the effluent gas. The moisture content may be considered to be zero. The sampling time and sample volume for each run shall be at least 60 minutes and 1.15 dscm (40.6 dscf).

3. Suitable methods shall be used to determine the production rate (P) of 100 percent H₂SO₄ for each run. Material balance over the production system shall be used to confirm the production rate.

(c) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(i) If a source processes elemental sulfur or an ore that contains elemental sulfur and uses air to supply oxygen, the following procedure may be used instead of determining the volumetric flow rate and production rate:

   (i) The integrated technique of Method 3 is used to determine the O₂ concentration and, if required, CO₂ concentration.

   (ii) The SO₂ or acid mist emission rate is calculated as described in § 60.84(d), substituting the acid mist concentration for C, as appropriate.

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P = production rate of 100 percent H₂SO₄, metric ton/hr (ton/hr).

K = conversion factor, 1000 g/kg (1.0 lb/lb).

Note: It is necessary in some cases to convert measured concentration units to other units for these calculations: Use the following table for such conversions:

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Multiply by</th>
</tr>
</thead>
<tbody>
<tr>
<td>g/dscm</td>
<td>kg/dscm</td>
<td>10⁻³</td>
</tr>
<tr>
<td>mg/dscm</td>
<td>kg/dscm</td>
<td>10⁻⁶</td>
</tr>
<tr>
<td>ppm (SO₂)</td>
<td>kg/dscm</td>
<td>2.660 × 10⁻⁷</td>
</tr>
<tr>
<td>ppm (SO₂)</td>
<td>lb/dscf</td>
<td>1.660 × 10⁻⁷</td>
</tr>
</tbody>
</table>

(e) For the purpose of reports under § 60.7(c), periods of excess emissions shall be all three-hour periods (or the arithmetic average of three consecutive one-hour periods) during which the integrated average sulfur dioxide emissions exceed the applicable standards under § 60.82.

Environmental Protection Agency

§ 60.100 Applicability, designation of affected facility, and reconstruction.

(a) The provisions of this subpart are applicable to the following affected facilities in petroleum refineries: fluid catalytic cracking unit catalyst regenerators, fuel gas combustion devices, and all Claus sulfur recovery plants except Claus plants with a design capacity for sulfur feed of 20 long tons per day (LTD) or less. The Claus sulfur recovery plant need not be physically located within the boundaries of a petroleum refinery to be an affected facility, provided it processes gases produced within a petroleum refinery.

(b) Any fluid catalytic cracking unit catalyst regenerator or fuel gas combustion device under paragraph (a) of this section other than a flare which commences construction, reconstruction, or modification after June 11, 1973, and on or before May 14, 2007, or any fuel gas combustion device under paragraph (a) of this section that is also a flare which commences construction, reconstruction, or modification after June 11, 1973, and on or before June 24, 2008, or any Claus sulfur recovery plant under paragraph (a) of this section which commences construction, reconstruction, or modification after October 4, 1976, and on or before May 14, 2007, is subject to the requirements of this subpart except as provided under paragraphs (c) through (e) of this section.

(c) Any fluid catalytic cracking unit catalyst regenerator under paragraph (b) of this section which commences construction, reconstruction, or modification on or before January 17, 1984, is exempted from §60.104(b).

(d) Any fluid catalytic cracking unit in which a contact material reacts with petroleum derivatives to improve feedstock quality and in which the contact material is regenerated by burning off coke and/or other deposits and that...