Equation 19
\[
\text{Slope} = \frac{\sum_{j=1}^{J} (R_j - \bar{R})(\bar{C}_j - \bar{C})}{\sum_{j=1}^{J}(R_j - \bar{R})^2}
\]

Equation 20
\[
\text{Intercept} = \bar{C} - \text{slope} \times \bar{R}
\]

(4) To pass this test, at each test site:
(i) The slope (calculated to at least 2 decimal places) must be in the interval specified for regression slope in table C-4 of this subpart; and
(ii) The intercept (calculated to at least 2 decimal places) must be in the interval specified for regression intercept in table C-4 of this subpart.
(iii) The slope and intercept limits are illustrated in figures C-2 and C-3 of this subpart.

(h) Tests for comparison correlation. (1) For each test site, calculate the (Pearson) correlation coefficient, \(r\) (not the coefficient of determination, \(r^2\)), using equation 21 of this section:

\[
Equation 21
\]

\[
r = \frac{\sum_{j=1}^{J} (R_j - \bar{R})(\bar{C}_j - \bar{C})}{\sqrt{\sum_{j=1}^{J}(R_j - \bar{R})^2 \sum_{j=1}^{J}(\bar{C}_j - \bar{C})^2}}
\]

(2) For each test site, calculate the concentration coefficient of variation, CCV, using equation 22 of this section:

\[
Equation 22
\]

\[
CCV = \frac{1}{R} \sqrt{\frac{\sum_{j=1}^{J} (R_j - \bar{R})^2}{J-1}}
\]

(3) To pass the test, the correlation coefficient, \(r\), for each test site must not be less than the values, for various values of CCV, specified for correlation in table C-4 of this subpart. These limits are illustrated in figure C-4 of this subpart.

[71 FR 61278, Oct. 17, 2006, as amended at 72 FR 32202, June 12, 2007]

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Concentration range, parts per million (ppm)</th>
<th>Simultaneous measurements required</th>
<th>Maximum discrepancy specification, parts per million</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1-hour</td>
<td>24-hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td>First set</td>
<td>Second set</td>
</tr>
<tr>
<td>Ozone</td>
<td>Low 0.06 to 0.10</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Med. 0.15 to 0.25</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>High 0.35 to 0.46</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>Low 7 to 11</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Med. 20 to 30</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>High 25 to 45</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Sulfur dioxide</td>
<td>Low 0.02 to 0.05</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Med. 0.10 to 0.15</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>High 0.30 to 0.50</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Nitrogen dioxide</td>
<td>Low 0.02 to 0.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Med. 0.10 to 0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High 0.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pollutant</td>
<td>Concentration range, parts per million (ppm)</td>
<td>Simultaneous measurements required</td>
<td>Maximum discrepancy specification, parts per million</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------</td>
<td>-----------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>1-hour</td>
<td>24-hour</td>
<td></td>
</tr>
<tr>
<td></td>
<td>First set</td>
<td>Second set</td>
<td>First set</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>

(75 FR 35601, June 22, 2010)

**Table C–2 to Subpart C of Part 53—Sequence of Test Measurements**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Concentration range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low</td>
</tr>
<tr>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Medium</td>
</tr>
<tr>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>5</td>
<td>Low</td>
</tr>
<tr>
<td>6</td>
<td>Medium</td>
</tr>
<tr>
<td>7</td>
<td>Low</td>
</tr>
<tr>
<td>8</td>
<td>Medium</td>
</tr>
<tr>
<td>9</td>
<td>High</td>
</tr>
<tr>
<td>10</td>
<td>Medium</td>
</tr>
<tr>
<td>11</td>
<td>High</td>
</tr>
<tr>
<td>12</td>
<td>Low</td>
</tr>
<tr>
<td>13</td>
<td>Medium</td>
</tr>
<tr>
<td>14</td>
<td>Low</td>
</tr>
<tr>
<td>15</td>
<td>Low</td>
</tr>
<tr>
<td>16</td>
<td>Medium</td>
</tr>
<tr>
<td>17</td>
<td>Low</td>
</tr>
<tr>
<td>18</td>
<td>High</td>
</tr>
</tbody>
</table>

**Table C–3 to Subpart C of Part 53—Test Specifications for Pb in TSP and Pb in PM₁₀ Methods**

<table>
<thead>
<tr>
<th>Concentration range equivalent to percentage of NAAQS in μg/m³.</th>
<th>Minimum number of 24-hr measurements.</th>
<th>Maximum reference method analytical bias, Dₘ.</th>
<th>Maximum precision, Pᵣ or Pₛ.</th>
<th>Maximum difference (D).</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% to 250%</td>
<td>5</td>
<td>±5%</td>
<td>≤15%</td>
<td>≤20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Estimated Method Detection Limit (MDL), μg/m³.</td>
<td>5% of NAAQS level.</td>
<td></td>
</tr>
</tbody>
</table>

(73 FR 67059, Nov. 12, 2008)

**Table C–4 to Subpart C of Part 53—Test Specifications for PM₁₀, PM₁₀₂·₅ and PM₁₀₂·₅ Candidate Equivalent Methods**

<table>
<thead>
<tr>
<th>Specification</th>
<th>PM₁₀</th>
<th>PM₁₀₂·₅</th>
<th>PM₁₀₂·₅</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class I</td>
<td>Class II</td>
<td>Class III</td>
</tr>
<tr>
<td>Acceptable concentration range (Rⱼ), μg/m³.</td>
<td>15–300</td>
<td>3–200</td>
<td>3–200</td>
</tr>
<tr>
<td>Minimum number of test sites.</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Minimum number of candidate method samplers or analyzers per site.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Number of reference method samplers per site.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Minimum number of acceptable sample sets per site for PM₁₀ methods:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rⱼ &lt;60 μg/m³</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Rⱼ &gt;60 μg/m³</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Minimum number of acceptable sample sets per site for PM₁₀₂·₅ and PM₁₀₂·₅ candidate equivalent methods:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rⱼ &lt;30 μg/m³ for 48-hr samples.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Rⱼ &gt;30 μg/m³ for 48-hr samples.</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Each season</td>
<td>10</td>
<td>23</td>
<td>23</td>
</tr>
</tbody>
</table>