As stated in §63.1564(b)(2), you shall meet each requirement in the following table that applies to you.

<table>
<thead>
<tr>
<th>For each new or existing catalytic cracking unit catalyst regenerator vent</th>
<th>You must . . .</th>
<th>Using . . .</th>
<th>According to these requirements . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If you elect Option 1 in item 2 of Table 1, Option 2 in item 3 of Table 1, Option 3 in item 4 of Table 1, or Option 4 in item 5 of Table 1 of this subpart.</td>
<td>a. Select sampling port’s location and the number of traverse ports.</td>
<td>Method 1 or 1A in appendix A to part 60 of this chapter.</td>
<td>Sampling sites must be located at the outlet of the control device or the outlet of the regenerator, as applicable, and prior to any releases to the atmosphere.</td>
</tr>
<tr>
<td></td>
<td>b. Determine velocity and volumetric flow rate.</td>
<td>Method 2, 2A, 2C, 2D, 2F, or 2G in appendix A to part 60 of this chapter, as applicable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Conduct gas molecular weight analysis.</td>
<td>Method 3, 3A, or 3B in appendix A to part 60 of this chapter, as applicable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Measure moisture content of the stack gas.</td>
<td>Method 4 in appendix A to part 60 of this chapter.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>e. If you use an electro-static precipitator, record the total number of fields in the control system and how many operated during the applicable performance test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>f. If you use a wet scrubber, record the total amount (rate) of water (or scrubbing liquid) and the amount (rate) of make-up liquid to the scrubber during each test run.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Option 1: Elect NSPS</td>
<td>a. Measure PM emissions.</td>
<td>Method 5B or 5F (40 CFR part 60, appendix A) to determine PM emissions and associated moisture content for units without wet scrubbers. Method 5B (40 CFR part 60, appendix A) to determine PM emissions and associated moisture content for unit with wet scrubber.</td>
<td>You must maintain a sampling rate of at least 0.15 dry standard cubic meters per minute (dscm/min) (0.53 dry standard cubic feet per minute (dscf/min)).</td>
</tr>
<tr>
<td></td>
<td>b. Compute PM emission rate (lbs/1,000 lbs) of coke burnoff.</td>
<td>Equations 1, 2, and 3 of §63.1564 (if applicable).</td>
<td>You must collect opacity monitoring data every 10 seconds during the entire period of the Method 5B or 5F performance test and reduce the data to 6-minute averages.</td>
</tr>
<tr>
<td></td>
<td>c. Measure opacity of emissions.</td>
<td>Continuous opacity monitoring system.</td>
<td></td>
</tr>
<tr>
<td>3. Option 2: PM limit . . .</td>
<td>a. Measure PM emissions.</td>
<td>See item 2. of this table. Equations 1 and 2 of §63.1564.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Compute coke burn-off rate and PM emission rate.</td>
<td></td>
<td>See item 2. of this table.</td>
</tr>
<tr>
<td>For each new or existing catalytic cracking unit catalyst regenerator vent</td>
<td>You must . . .</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>c. Establish your site-specific opacity operating limit if you use a continuous opacity monitoring system.</td>
<td>Data from the continuous opacity monitoring system.</td>
<td>You must collect opacity monitoring data every 10 seconds during the entire period of the Method 5B or 5F performance test and reduce the data to 6-minute averages; determine and record the hourly average opacity from all the 6-minute averages; and compute the site-specific limit using Equation 4 of §63.1564.</td>
<td></td>
</tr>
<tr>
<td>4. Option 3: Ni lb/hr</td>
<td>a. Measure concentration of Ni and total metal HAP.</td>
<td>Method 29 (40 CFR part 60, appendix A). Equation 5 of §63.1564.</td>
<td>You must obtain 1 sample for each of the 3 runs; determine and record the equilibrium catalyst Ni concentration for each of the 3 samples; and you may adjust the laboratory results to the maximum value using Equation 2 of §63.1571.</td>
</tr>
<tr>
<td></td>
<td>b. Compute Ni emission rate (lb/hr).</td>
<td></td>
<td>(1) You must collect opacity monitoring data every 10 seconds during the entire period of the initial Ni performance test; reduce the data to 6-minute averages; and determine and record the hourly average opacity from all the 6-minute averages.</td>
</tr>
<tr>
<td></td>
<td>c. Determine the equilibrium catalyst Ni concentration.</td>
<td>XRF procedure in appendix A to this subpart; or EPA Method 6010B or 6020 or EPA Method 7520 or 7521 in SW–846; or an alternative to the SW–846 method satisfactory to the Administrator.</td>
<td>(2) You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial Ni performance test; measure the gas flow as near as practical to the continuous opacity monitoring system; and determine and record the hourly actual gas flow rate from all the readings.</td>
</tr>
<tr>
<td>d. If you use a continuous opacity monitoring system, establish your site-specific Ni operating limit.</td>
<td>i. Equations 6 and 7 of §63.1564 using data from continuous opacity monitoring system, gas flow rate, results of equilibrium catalyst Ni concentration analysis, and Ni emission rate from Method 29 test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Option 4: Ni lbs/1,000 lbs of coke burn-off.</td>
<td>a. Measure concentration of Ni and total HAP.</td>
<td>Method 29 (40 CFR part 60, appendix A). Equations 1 and 8 of §63.1564.</td>
<td>You must obtain 1 sample for each of the 3 runs; determine and record the equilibrium catalyst Ni concentration for each of the 3 samples; and you may adjust the laboratory results to the maximum value using Equation 2 of §63.1571.</td>
</tr>
<tr>
<td>b. Compute Ni emission rate (80/lb of coke burn-off).</td>
<td></td>
<td></td>
<td>(1) You must collect opacity monitoring data every 10 seconds during the entire period of the initial Ni performance test; reduce the data to 6-minute averages; and determine and record the hourly average opacity from all the 6-minute averages.</td>
</tr>
<tr>
<td>c. Determine the equilibrium catalyst Ni concentration.</td>
<td>See item 4.c. of this table.</td>
<td></td>
<td>(2) You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial Ni performance test; measure the gas flow as near as practical to the continuous opacity monitoring system; and determine and record the hourly actual gas flow rate from all the readings.</td>
</tr>
<tr>
<td>d. If you use a continuous opacity monitoring system, establish your site-specific Ni operating limit.</td>
<td>i. Equations 9 and 10 of §63.1564 with data from continuous opacity monitoring system, coke burn-off rate, results of equilibrium catalyst Ni concentration analysis, and Ni emission rate from Method 29 test.</td>
<td></td>
<td></td>
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</table>
For each new or existing catalytic cracking unit catalyst regenerator vent

<table>
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<tbody>
<tr>
<td>(2) You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial Ni performance test; measure the gas flow rate as near as practical to the continuous opacity monitoring system; and determine and record the hourly average actual gas flow rate from all the readings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6. If you elect Option 2 in Entry 3 in Table 1, Option 3 in Entry 4 in Table 1, or Option 4 in Entry 5 in Table 1 of this subpart and you use continuous parameter monitoring systems.

e. Record the catalyst addition rate for each test and schedule for the 10- day period prior to the test.

f. Electrostatic precipitator or wet scrubber: liquid-to-gas ratio.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the hourly average actual gas flow rate from all the readings.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the maximum hourly average gas flow rate from all the readings.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect pressure drop monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the minimum hourly average pressure drop from all the readings.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect pressure drop monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the minimum hourly average pressure drop from all the readings.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio.

Results of analysis for equilibrium catalyst Ni concentration.

You must determine and record the average equilibrium catalyst Ni concentration for the 3 runs based on the laboratory results. You may adjust the value using Equation 1 or 2 of §63.1571 as applicable.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect pressure drop monitoring data every 15 minutes during the entire period of the initial performance test; and determine and record the minimum hourly average pressure drop from all the readings.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio.

Data from the continuous parameter monitoring systems and applicable performance test methods.

You must collect gas flow rate and total water (or scrubbing liquid) flow rate monitoring data every 15 minutes during the entire period of the initial performance test; determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate from all the readings; and determine and record the minimum liquid-to-gas ratio.
Environmental Protection Agency  
Pt. 63, Subpt. UUU, Table 5

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<tbody>
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<td>g. Alternative procedure for gas flow rate.</td>
<td>Data from the continuous parameter monitoring systems and applicable performance test methods.</td>
<td>You must collect air flow rate monitoring data or determine the air flow rate using control room instrumentation every 15 minutes during the entire period of the initial performance test; determine and record the hourly average rate of all the readings; and determine and record the maximum gas flow rate using Equation 1 of § 63.1573.</td>
<td></td>
</tr>
</tbody>
</table>

1 Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure).


(67 FR 17773, Apr. 11, 2002, as amended at 70 FR 6942 and 6944, Feb. 9, 2005)

**Table 5 to Subpart UUU of Part 63—Initial Compliance With Metal HAP Emission Limits for Catalytic Cracking Units**

As stated in §63.1564(b)(5), you shall meet each requirement in the following table that applies to you.