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If you use this type of control device for your vent . . .	You shall install and operate this type of continuous monitoring system . . .
4. Fixed-bed gas-solid adsorption system .....	Continuous parameter monitoring system to measure and record the temperature of the gas entering or exiting the adsorption system during coke burn-off and catalyst rejuvenation; and colometric tube sampling system to measure the gaseous HC1 concentration in the adsorption system exhaust and at a point within the absorbent bed not to exceed 90 percent of the total length of the absorbent bed during coke burn-off and catalyst rejuvenation. The colometric tube sampling system must meet the requirements in Table 41 of this subpart.
5. Moving-bed gas-solid adsorption system (e.g., Chlorsorb™ System)..	Continuous parameter monitoring system to measure and record the temperature of the gas entering or exiting the adsorption system during coke burn-off and catalyst rejuvenation.

<sup>1</sup> If applicable, you can use the alternative in § 63.1573 (a)(1) instead of a continuous parameter monitoring system for gas flow rate or instead of a continuous parameter monitoring system for the cumulative volume of gas.  
<sup>2</sup> If applicable, you can use the alternative in § 63.1573(b)(1) instead of a continuous parameter monitoring system for pH of the water (or scrubbing liquid) or the alternative in § 63.1573(b)(2) instead of a continuous parameter monitoring system for alkalinity of the water (or scrubbing liquid).

[70 FR 6956, Feb. 9, 2005]

TABLE 25 TO SUBPART UUU OF PART 63—REQUIREMENTS FOR PERFORMANCE TESTS FOR INORGANIC HAP EMISSIONS FROM CATALYTIC REFORMING UNITS

As stated in § 63.1567(b)(2) and (3), you shall meet each requirement in the following table that applies to you.

For each new and existing catalytic reforming unit using . . .	You shall . . .	Using . . .	According to these requirements . . .
1. Any or no control system.	<p>a. Select sampling port location(s) and the number of traverse points.</p> <p>b. Determine velocity and volumetric flow rate.</p> <p>c. Conduct gas molecular weight analysis.</p> <p>d. Measure moisture content of the stack gas.</p>	<p>Method 1 or 1A (40 CFR part 60, appendix A), as applicable.</p> <p>Method 2, 2A, 2C, 2D, 2F, or 2G (40 CFR part 60, appendix A), as applicable..</p> <p>Method 3, 3A, or 3B (40 CFR part 60, appendix A), as applicable.</p> <p>Method 4 (40 CFR part 60, appendix A).</p>	<p>(1) If you operate a control device and you elect to meet an applicable HCl percent reduction standard, sampling sites must be located at the inlet of the control device or internal scrubbing system and at the outlet of the control device or internal scrubber system prior to any release to the atmosphere. For a series of fixed-bed systems, the outlet sampling site should be located at the outlet of the first fixed-bed, prior to entering the second fixed-bed in the series.</p> <p>(2) If you elect to meet an applicable HCl outlet concentration limit, locate sampling sites at the outlet of the control device or internal scrubber system prior to any release to the atmosphere. For a series of fixed-bed systems, the outlet sampling site should be located at the outlet of the first fixed-bed, prior to entering the second fixed-bed in the series. If there is no control device, locate sampling sites at the outlet of the catalyst regenerator prior to any release to the atmosphere.</p>

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For each new and existing catalytic reforming unit using . . .	You shall . . .	Using . . .	According to these requirements . . .
	<p>e. Measure the HCl concentration at the selected sampling locations.</p>	<p>Method 26 or 26A (40 CFR part 60, appendix A). If your control device is a wet scrubber or internal scrubbing system, you must use Method 26A.</p>	<p>(1) For semi-regenerative and cyclic regeneration units, conduct the test during the coke burn-off and catalyst rejuvenation cycle, but collect no samples during the first hour or the last 6 hours of the cycle (for semi-regenerative units) or during the first hour or the last 2 hours of the cycle (for cyclic regeneration units). For continuous regeneration units, the test should be conducted no sooner than 3 days after process unit or control system start up.</p> <p>(2) Determine and record the HCl concentration corrected to 3 percent oxygen (using Equation 1 of § 63.1567) for each sampling location for each test run.</p> <p>(3) Determine and record the percent emission reduction, if applicable, using Equation 3 of § 63.1567 for each test run.</p> <p>(4) Determine and record the average HCl concentration (corrected to 3 percent oxygen) and the average percent emission reduction, if applicable, for the overall source test from the recorded test run values.</p>
<p>2. Wet scrubber .....</p>	<p>a. Establish operating limit for pH level or alkalinity.</p>	<p>i. Data from continuous parameter monitoring systems.</p> <p>ii. Alternative pH procedure in § 63.1573 (b)(1).</p> <p>iii. Alternative alkalinity method in § 63.1573(b)(2).</p>	<p>Measure and record the pH or alkalinity of the water (or scrubbing liquid) exiting scrubber every 15 minutes during the entire period of the performance test. Determine and record the minimum hourly average pH or alkalinity level from the recorded values.</p> <p>Measure and record the pH of the water (or scrubbing liquid) exiting the scrubber during coke burn-off and catalyst rejuvenation using pH strips at least three times during each test run. Determine and record the average pH level for each test run. Determine and record the minimum test run average pH level.</p> <p>Measure and record the alkalinity of the water (or scrubbing liquid) exiting the scrubber during coke burn-off and catalyst rejuvenation using discrete titration at least three times during each test run. Determine and record the average alkalinity level for each test run. Determine and record the minimum test run average alkalinity level.</p>
<p>3. Internal scrubbing system or no control device (e.g., hot regen system) meeting HCl outlet concentration limit.</p>	<p>b. Establish operating limit for liquid-to-gas ratio.</p> <p>Establish operating limit for HCl concentration.</p>	<p>i. Data from continuous parameter monitoring systems.</p> <p>ii. Alternative procedure for gas flow rate in § 63.1573(a)(1).</p> <p>Data from continuous parameter monitoring system.</p>	<p>Measure and record the gas flow rate entering or exiting the scrubber and the total water (or scrubbing liquid) flow rate entering the scrubber every 15 minutes during the entire period of the performance test. Determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate. Determine and record the minimum liquid-to-gas ratio from the recorded, paired values.</p> <p>Collect air flow rate monitoring data or determine the air flow rate using control room instruments every 15 minutes during the entire period of the initial performance test. Determine and record the hourly average rate of all the readings. Determine and record the maximum gas flow rate using Equation 1 of § 63.1573.</p> <p>Measure and record the HCl concentration in the catalyst regenerator exhaust gas using the colorimetric tube sampling system at least three times during each test run. Determine and record the average HCl concentration for each test run. Determine and record the average HCl concentration for the overall source test from the recorded test run averages. Determine and record the operating limit for HCl concentration using Equation 4 of § 63.1567.</p>

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For each new and existing catalytic reforming unit using . . .	You shall . . .	Using . . .	According to these requirements . . .
<p>4. Internal scrubbing system meeting HCl percent reduction standard.</p>	<p>a. Establish operating limit for pH level or alkalinity.</p> <p>b. Establish operating limit for liquid-to-gas ratio.</p>	<p>i. Data from continuous parameter monitoring system.</p> <p>ii. Alternative pH method in § 63.1573(b)(1).</p> <p>iii. Alternative alkalinity method in § 63.1573(b)(2).</p> <p>Data from continuous parameter monitoring systems.</p>	<p>Measure and record the pH alkalinity of the water (or scrubbing liquid) exiting the internal scrubbing system every 15 minutes during the entire period of the performance test. Determine and record the minimum hourly average pH or alkalinity level from the recorded values.</p> <p>Measure and in record pH of the water (or scrubbing liquid) exiting the internal scrubbing system during coke burn-off and catalyst rejuvenation using pH strips at least three times during each test run. Determine and record the average pH level for each test run. Determine and record the minimum test run average pH level.</p> <p>Measure and record the alkalinity water (or scrubbing liquid) exiting the internal scrubbing system during coke burn-off and catalyst rejuvenation using discrete titration at least three times during each test run. Determine and record the average alkalinity level for each test run. Determine and record the minimum test run average alkalinity level.</p> <p>Measure and record the gas entering or exiting the internal scrubbing system and the total water (or scrubbing liquid) flow rate entering the internal scrubbing system every 15 minutes during the entire period of the performance test. Determine and record the hourly average gas flow rate and total water (or scrubbing liquid) flow rate. Determine and record the minimum liquid-to-gas ratio from the recorded, paired values.</p>
<p>5. Fixed-bed gas-solid adsorption system. Gas-solid.</p>	<p>a. Establish operating limit for temperature.</p> <p>b. Establish operating limit for HCl concentration.</p>	<p>Data from continuous parameter monitoring system.</p> <p>i. Data from continuous parameter monitoring systems.</p>	<p>Measure and record the temperature of gas entering or exiting the adsorption system every 15 minutes. Determine and record the maximum hourly average temperature.</p> <p>(1) Measure and record the HCl concentration in the exhaust gas from the fixed-bed adsorption system using the colorimetric tube sampling system at least three times during each test run. Determine and record the average HCl concentration for each test run. Determine and record the average HCl concentration for the overall source test from the recorded test run averages.</p> <p>(2) If you elect to comply with the HCl outlet concentration limit (Option 2), determine and record the operating limit for HCl concentration using Equation 4 of § 63.1567. If you elect to comply with the HCl percent reduction standard (Option 1), determine and record the operating limit for HCl concentration using Equation 5 of § 63.1567.</p>
<p>6. Moving-bed gas-solid adsorption system (e.g., Chlorsorb™ System).</p>	<p>a. Establish operating limit for temperature.</p>	<p>Data from continuous parameter monitoring systems.</p>	<p>Measure and record the temperature of gas entering or exiting the adsorption system every 15 minutes. Determine and record the maximum hourly average temperature.</p>

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For each new and existing catalytic reforming unit using . . .	You shall . . .	Using . . .	According to these requirements . . .
	b. Measure the chloride level on the sorbent entering and exiting the adsorption system.	Determination of Metal Concentration on Catalyst Particles (Instrumental Analyzer Procedure) in appendix A to subpart UUU; or EPA Method 5050 combined either with EPA Method 9056, or with EPA Method 9253; or EPA Method 9212 with the soil extraction procedures listed within the method. <sup>1</sup>	Measure and record the chloride concentration of the sorbent material entering and exiting the adsorption system at least three times during each test run. Determine and record the average weight percent chloride concentration of the sorbent entering the adsorption system for each test run. Determine and record the average weight percent chloride concentration of the sorbent exiting the adsorption system for each test run.

<sup>1</sup> The EPA Methods 5050, 9056, 9212 and 9253 are included in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, Revision 5 (April 1998). The SW-846 and Updates (document number 955-001-00000-1) are available for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800; and from the National Technical Information Services (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4650. Copies may be inspected at the EPA Docket Center (Air Docket), EPA West, Room B-108, 1301 Constitution Ave., NW., Washington, DC; or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC. These methods are also available at <http://www.epa.gov/epaoswer/hazwaste/test/main.htm>.

[70 FR 6956, Feb. 9, 2005]

**TABLE 26 TO SUBPART UUU OF PART 63—INITIAL COMPLIANCE WITH INORGANIC HAP EMISSION LIMITS FOR CATALYTIC REFORMING UNITS**

As stated in §63.1567(b)(4), you shall meet each requirement in the following table that applies to you.

For . . .	For the following emission limit . . .	You have demonstrated initial compliance if . . .	For . . .	For the following emission limit . . .	You have demonstrated initial compliance if . . .
1. Each existing semi-regenerative catalytic reforming unit.	Reduce uncontrolled emissions of HCl by 92 percent by weight or to a concentration of 30 ppmv, (dry basis), corrected to 3 percent oxygen.	Average emissions HCl measured using Method 26 or 26A, as applicable, over the period of the performance test, are reduced by 92 percent or to a concentration less than or equal to 30 ppmv (dry basis) corrected to 3 percent oxygen.	2. Each existing cyclic or continuous catalytic reforming unit and each new semi-regenerative, cyclic, or continuous catalytic reforming unit.	Reduce uncontrolled emissions of HCl by 97 percent by weight or to a concentration of 10 ppmv (dry basis), corrected to 3 percent oxygen.	Average emissions of HCl measured using Method 26 or 26A, as applicable, over the period of the performance test, are reduced by 97 percent or to a concentration less than or equal to 10 ppmv (dry basis) corrected to 3 percent oxygen.

[70 FR 6959, Feb. 9, 2005]

**TABLE 27 TO SUBPART UUU OF PART 63—CONTINUOUS COMPLIANCE WITH INORGANIC HAP EMISSION LIMITS FOR CATALYTIC REFORMING UNITS**

As stated in §63.1567(c)(1), you shall meet each requirement in the following table that applies to you.