new measurements and preparing new documentation as required in §63.7886(d)(2) to show that the total annual HAP quantity (based on the HAP listed in Table 1 of this subpart) in the remediation material placed in all of the designated exempted remediation material management units remains less than 1 Mg/yr.

(d) You have demonstrated continuous compliance with the general standards in §63.7887 that apply to your affected equipment leak sources by meeting the requirements in §63.7923.

[68 FR 58190, Oct. 8, 2003, as amended at 71 FR 69018, Nov. 29, 2006]

PERFORMANCE TESTS

§63.7940 By what date must I conduct performance tests or other initial compliance demonstrations?

(a) You must conduct a performance test or design evaluation for each existing affected source within 180 calendar days after the compliance date that is specified in §63.7883.

(b) For each work practice standard that applies to you where initial compliance is not demonstrated using a performance test or design evaluation, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified in §63.7883 for your affected source.

(c) For new sources, you must conduct initial performance tests and other initial compliance demonstrations according to the provisions in §63.7(a)(2).

[88 FR 58190, Oct. 8, 2003, as amended at 71 FR 69019, Nov. 29, 2006]

§63.7941 How do I conduct a performance test, design evaluation, or other type of initial compliance demonstration?

(a) You must conduct a performance test or design evaluation to demonstrate initial compliance for each new or existing affected source that is subject to an emission limit in this subpart. You must report the results of the performance test or design evaluation according to the requirements in §63.7950(e)(1).

(b) If you choose to conduct a performance test to demonstrate initial compliance, you must conduct the test according to the requirements in §63.7(e)(1) and paragraphs (b) (1) through (5) of this section.

(1) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour.

(2) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §63.7(e)(1).

(3) You must conduct each performance test using the test methods and procedures in §63.694(l).

(4) Follow the procedures in paragraphs (b)(4)(i) through (iii) of this section to determine compliance with the facility-wide total organic mass emissions rate in §63.7890(a)(1)(i).

(i) Determine compliance with the total organic mass flow rate using Equation 1 of this section as follows:

$$E_n = (0.04416 \times 10^{-6}) Q_{sd} \sum_{i=1}^{n} C_i \times MW_i$$

(Eq. 1)

Where:

- $E_n$ = Total organic mass flow rate, kg/h;
- $Q_{sd}$ = Volumetric flow rate of gases entering or exiting control device (or exiting the process vent if no control device is used), as determined by Method 2 of 40 CFR part 60, appendix A. dscm/h;
- $n$ = Number of organic compounds in the vent gas;
- $C_i$ = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18 of 40 CFR part 60, appendix A. kg/kg-mol;
- $MW_i$ = Molecular weight of organic compound i in the vent gas. kg/kg-mol;

(ii) Determine compliance with the annual total organic emissions rate...
using Equation 2 of this section as follows:

\[ E_A = E_B \times H \]  
(Eq. 2)

Where:
- \( E_A \): Total organic mass emissions rate, kilograms per year;
- \( E_B \): Total organic mass flow rate for the process vent, kg/h;
- \( H \): Total annual hours of operation for the affected unit, h.

(iii) Determine compliance with the total organic emissions limit from all affected process vents at the facility by summing the total hourly organic mass emissions rates (\( E_A \) as determined in Equation 1 of this section) and summing the total annual organic mass emissions rates (\( E_A \), as determined in Equation 2 of this section) for all affected process vents at the facility.

(5) Determine compliance with the 95 percent reduction limit in \$63.7890(a)(2)(i) for the combination of all affected process vents at the facility using Equations 3 and 4 of this section to calculate control device inlet and outlet concentrations and Equation 5 of this section to calculate control device emission reductions for process vents as follows:

\[ E_i = K_2 \left( \sum_{j=1}^{n} C_{ij} M_{ij} \right) Q_i \]  
(Eq. 3)

\[ E_o = K_2 \left( \sum_{j=1}^{n} C_{oj} M_{oj} \right) Q_o \]  
(Eq. 4)

Where:
- \( C_{ij} \), \( C_{oj} \): Concentration of sample component \( j \) of the gas stream at the inlet and outlet of the control device, dry basis, parts per million by volume. For uncontrolled vents, \( C_{ij} = C_{oj} \) and equal the concentration exiting the vent;
- \( E_i \), \( E_o \): Mass rate of total organic compounds (TOC) (minus methane and ethane) or total HAP, from Table 1 of this subpart, at the inlet to the control device, or exiting the vent for uncontrolled vents, as calculated in this section, kilograms TOC per hour or kilograms HAP per hour;
- \( M_{ij} \), \( M_{oj} \): Molecular weight of sample component \( j \) of the gas stream at the inlet and outlet of the control device, respectively, gram/mole. For uncontrolled vents, \( M_{ij} = M_{oj} \) and equal the molecular weight exiting the vent;
- \( Q_i \), \( Q_o \): Flowrate of gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meters per minute (dscm/min). For uncontrolled vents, \( Q_i = Q_o \) and equals the flowrate exiting the vent;
- \( K_2 \): Constant, \( 2.494 \times 10^{-6} \) (parts per million) \(^{-1}\) (gram/mole per standard cubic meter) (kilogram/gram)/minute/hour, where standard temperature (gram/mole per standard cubic meter) is 20 °C;
- \( n \): the number of components in the sample.

\[ R_v = \frac{\sum_{j=1}^{n} E_i - \sum_{j=1}^{n} E_o}{\sum_{j=1}^{n} E_i} \times 100 \]  
(Eq. 5)

Where:
- \( R_v \): Overall emissions reduction for all affected process vents, percent.

(c) If you use a carbon adsorption system, condenser, vapor incinerator, boiler, or process heater to meet an emission limit in this subpart, you may choose to perform a design evaluation to demonstrate initial compliance instead of a performance test. You must perform a design evaluation according to the general requirements in \$63.7893(b)(8) and the specific requirements in \$63.7893(d)(2)(i) for a carbon adsorption system (including establishing carbon replacement schedules and associated requirements), \$63.7893(e)(2)(ii) for a condenser, \$63.7893(f)(2)(i) for a vapor incinerator, or \$63.7893(g)(2)(i)(B) for a boiler or process heater.

(d) During the performance test or design evaluation, you must collect the
§ 63.7943 How do I determine the average VOHAP concentration of my remediation material?

(a) General requirements. You must determine the average total VOHAP concentration of a remediation material using either direct measurement as specified in paragraph (b) of this section or by knowledge as specified in