**Section 218.503 Performance and Testing Requirements for Batch Operations**

a) Upon the Agency's request, the owner or operator of a batch operation shall conduct testing to demonstrate compliance with Section 218.501 of this Subpart. The owner or operator shall, at its own expense, conduct such tests in accordance with the applicable test methods and procedures specified in Section 218.503(d), (e), and (f) of this Subpart.

b) Notwithstanding subsection (a) of this Section, flares and process boilers used to comply with control requirements of Section 218.501 of this Subpart shall be exempt from performance testing requirements.

c) When a flare is used to comply with the control requirements of Section 218.501 of this Subpart, the flare shall comply with the requirements of 40 CFR 60.18, incorporated by reference at Section 218.112 of this Part.

d) The owner or operator of a batch operation that is exempt from the control requirements of Section 218.501 of this Subpart shall demonstrate, upon the Agency's request, the absence of oversized gas moving equipment in any manifold. Gas moving equipment shall be considered oversized if it exceeds the maximum requirements of the exhaust flow rate by more than 30 percent.

e) For the purpose of demonstrating compliance with the control requirements in Section 218.501 of this Subpart, the batch operation shall be run at representative operating conditions and flow rates during any performance test.

f) The following methods in 40 CFR 60, Appendix A, incorporated by reference at Section 218.112 of this Part, shall be used to demonstrate compliance with the reduction efficiency requirement set forth in Section 218.501 of this Subpart:

1) Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is not a rotameter. The control device inlet sampling site for determination of vent stream VOM composition reduction efficiency shall be prior to the control device and after the control device;

2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate flow measurements, which shall be taken continuously. No traverse is necessary when the flow measuring device is an ultrasonic probe;

3) Method 25A or Method 18, if applicable, to determine the concentration of VOM in the control device inlet and outlet;

A) The sampling time for each run shall be as follows:

i) For batch cycles less than eight hours in length, readings shall be taken continuously over the entire length of the batch cycle with a maximum of 15-minute intervals between measurements if using Method 25A. If using Method 18, readings shall be taken continuously with a maximum of 15-minute intervals between measurements throughout the batch cycle unless it becomes necessary to change the impinger train, in which case a 30-minute interval shall not be exceeded.

ii) For batch cycles of eight hours and greater in length, the owner or operator may either test in accordance with the test procedures defined in subsection (f)(3)(A)(i) of this Section or the owner or operator may elect to perform tests, pursuant to either Method 25A or Method 18, only during those portions of each emission event which define the emission profile of each emission event occurring within the batch cycle. For each emission event of less than four hours in duration, the owner or operator shall test continuously over the entire emission event as set forth in subsection (f)(3)(A)(i) of this Section. For each emission event of greater than four hours in duration, the owner or operator shall elect either to perform a minimum of three one hour test runs during the emission event or shall test continuously over the entire emission event within each single unit operation in the batch process train. To demonstrate that the portion of the emission event to be tested define the emission profile for the emission event, the owner or operator electing to rely on this option shall develop an emission profile for the entire emission event. Such emission profile shall be based upon either process knowledge or test data collected. Examples of information that could constitute process knowledge include, but are not limited to, calculations based on material balances and process stoichiometry. Previous test results may be used provided such results are still relevant to the current process vent stream conditions.

iii) For purposes of subsection (f)(3) of this Section, the term "emission event" shall be defined as a discrete period of venting that is associated with a single unit operation. For example, a displacement of vapor resulting from the charging of a single unit operation with VOM will result in a discrete emission event that will last through the duration of the charge and will have an average flow rate equal to the rate of the charge. The expulsion of expanded single unit operation vapor space when the vessel is heated is also an emission event. Both of these examples of emission events and others may occur in the same single unit operation during the course of the batch cycle. If the flow rate measurement for any emission event is zero, in accordance with subsection (f)(2) of this Section, then such event is not an emission event for purposes of this Section.

B) The mass emission rate from the process vent or inlet to the control device shall be determined by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout the batch cycle;

C) The mass emission rate from the control device outlet shall be obtained by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subsection (f)(1) of this Section throughout the batch cycle; and

D) The efficiency of the control device shall be determined by integrating the mass emission rates obtained in subsections (f)(3)(B) and (f)(3)(C) of this Section, over the time of the batch cycle and dividing the difference in inlet and outlet mass flow totals by the inlet mass flow total.

g) Upon request by the Agency to conduct testing, an owner or operator of a batch operation which has installed a scrubber, a shell and tube condenser using a non-refrigerated cooling media, or any other control device which meets the criteria of Section 218.501(c) of this Subpart, shall demonstrate that such device achieves the control efficiency applicable within Section 218.501 of this Subpart upon the earlier to occur of the date the device is replaced or December 31, 1999.

h) The owner or operator of a batch operation may propose an alternative test method or procedures to demonstrate compliance with the control requirements set forth in Section 218.501 of this Subpart. Such method or procedures shall be approved by the Agency and USEPA as evidenced by federally enforceable permit conditions.

i) In the absence of a request by the Agency to conduct performance testing in accordance with the provisions of this Section, a source may demonstrate compliance by the use of engineering estimates or process stoichiometry.

(Source: Added at 19 Ill. Reg. 7359, effective May 22, 1995)