

## INTEROFFICE COMMUNICATION

Date: July 5, 2007

To: All Ohio EPA District and Local Air Agency stack testing witnesses

From: Todd Brown, DAPC through Mike Hopkins, Assistant Chief Permitting, DAPC, and Robert Hodanbosi, Chief, DAPC

Subject: Compliance Demonstration Testing Conditions

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Ohio EPA, Central Office, has received numerous questions regarding required emissions unit operations during compliance demonstration testing. In order to eliminate confusion, Ohio EPA requires that all compliance demonstrations ("performance tests") be completed under "representative testing conditions" as defined in USEPA's "Clean Air Act National Stack Testing Guidance," dated September 30, 2005.

In specific, the Clean Air Act National Stack Testing Guidance requires that performance testing be completed under representative (normal) conditions that:

- represent the range of combined process and control measure conditions under which the facility expects to operate (regardless of the frequency of the conditions); and
- are likely to most challenge the emissions control measures of the facility with regard to meeting the applicable emission standards, but without creating an unsafe condition.

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The following are factors that should be considered in developing the plan for a performance test that challenges to the fullest extent possible a facility's ability to meet emissions limits.

- For a facility operating under an emission rate standard (e.g., lb/hr) or concentration standard (e.g.,  $\mu\text{g}/\text{m}^3$ ), normal process operating conditions producing the highest emissions or loading to a control device would generally constitute the most challenging conditions with regard to the emissions standard. If operating at maximum capacity would result in the highest levels of emissions, operating at this level would not create an unsafe condition, and the facility expects to operate at that level at least some of the time, EPA recommends that the facility should conduct a stack test at maximum capacity or the allowable/permitted capacity. *(Ohio EPA will accept the results of a performance test completed at a facility that was operating*

*at 90%, or higher, of the rated maximum capacity or the allowable/permitted capacity, as operating within these requirements.)*

- For a facility operating under a control or removal efficiency standard (e.g., 98% control or removal of a specified pollutant), lower emissions loading at the inlet of a control device within the range of expected process operating conditions may often be the most challenging emissions control scenario for purposes of achieving the applicable standard. For facilities required to achieve such control or removal efficiency standards, EPA recommends that the performance test include operating the facility under such expected lower emissions loading conditions.

- The test plan should generally include use of fuel, raw materials, and other process/control equipment that the facility expects to use during future operations that would present the greatest challenge in meeting applicable emissions standards. To demonstrate the facility's ability to meet concentration standards and emissions rate standards, for example, the facility generally should use the fuel or raw materials that it expects to use and that have the highest emissions potential for the regulated pollutant(s) being tested. In instances where alternative processing materials are expected to be used by the facility and those materials are known to adversely impact emissions quality or the functioning of control measures, the facility generally should use the material that is likely to cause the greatest challenge in meeting applicable emissions standards. For concentration and emissions rates standards, the facility generally should process the material that it expects to use during future operations that is likely to cause the highest emissions. For control or removal efficiency standards, other factors may apply such as using fuels or raw materials that contain or produce pollutants that are more difficult to combust or otherwise remove.

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### Soot-Blowing:

Soot-blowing is the cleaning of heat exchanger surfaces by the use of steam or air to dislodge accumulated material such as ash. The Agency guidance on this issue states that soot-blowing is a routine operation constituting representative process conditions. Emissions from soot-blowing cannot be discarded as being the result of an upset condition, and it would be erroneous to stop soot-blowing for the purpose of conducting a stack test. Agency guidance outlines the procedures for including soot-blowing while stack testing. The frequency with which facilities perform soot-blowing can vary significantly and the agency guidance addresses this issue by allowing facilities to weight the soot-blowing data in the performance tests based on the frequency of the soot-blowing. See Memoranda from John S. Seitz to David Kee "Inclusion of Soot-Blowing Emissions in Subpart D Compliance Testing" (August 31, 1987); from Kathleen M. Bennett to Directors, Air & Waste Management Divisions "Restatement of Guidance on Emissions Associated with Soot-Blowing" (May 7, 1982); from Edward E. Reich to Sandra S. Gardebring

"Representative Testing Requirements" (November 21, 1980); Memoranda from Edward E. Reich to Leslie Carothers "Integration of Soot-Blowing Emissions with Routine Operating Data for Existing Facilities"(March 12, 1979); from Edward E. Reich to Enforcement Division Directors, Air and Hazardous Material Division Directors, and Surveillance and Analysis Division Directors "NSPS Determination - Subpart D" (March 6, 1979); and Memoranda from Edward E. Reich to Robert L. Markey "Determination of Applicability to Subpart D" (June 29, 1977).

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