LA-UR-11-11815
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Title:	Request for Approval for Use of Differential Pressure Gauge of Greater Sensitivity for Low Velocity Stack Flow Measurements at Los Alamos National Laboratory
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Intended for:	Request for EPA Region 6 approval US EPA Air quality Environmental monitoring and surveillance Reading Room Radionuclide NESHAP / Clean Air Act

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Date: October 24, 2011
Refer to: ENV-ES: 11-0237

Mr. George Brozowski
U.S. Environmental Protection Agency
1445 Ross (6-PDT), Suite 1200
Dallas, TX 75202

Request for Approval for Use of Differential Pressure Gauge of Greater Sensitivity for Low-Velocity Stack Flow Measurements at Los Alamos National Laboratory

Dear Mr. Brozowski:

The purpose of this memo is to gain your approval for the use of an Electronic Digital Manometer (EDM) with a sensitivity of 0.001 inches of water, which is used in determining stack gas velocity and volumetric flow rate for stationary sources.

When making stack flow pressure measurements, Section 6.2 of EPA Method 2 calls for the use of a differential pressure gauge with sensitivity of 0.01 inches of water. This assumes the differential pressure (ΔP) measurements in the stack are at least 0.05 inches of water. However, when the average ΔP measurement is less than 0.05 inches of water, Section 6.2 requires the use of a differential pressure gauge with greater sensitivity, and also states that use of the more sensitive pressure gauge is subject to the approval of the EPA Administrator. One of the new LANL stacks that went into operation in 2010 is a low-velocity stack, with an average ΔP of just under 0.05 inches of water. LANL therefore requests your approval to use an Electronic Digital Manometer (EDM) with a sensitivity of 0.001 inches of water.

This range of sensitivity is nothing unusual; standard "off-the-shelf" EDM units are readily available in this sensitivity range. All EDM units in use at LANL have this expanded sensitivity range, but the average differential pressure at other LANL stacks all exceed 0.05 inches of water, so the need for EPA Administrator approval is not required.

All of LANL's EDMs are calibrated annually by the LANL Standards & Calibration Laboratory. In addition, Rad-NESHAP team members perform a calibration check after each test series, as is required in the note at the end of Section 6.2 of EPA Method 2. Since there are several different EDMs in use at LANL, we are requesting blanket approval for the use of Electronic Digital Manometers with sensitivity of 0.001 inches of water as a differential pressure gauge in accordance with EPA Method 2, Section 6.2.

Response via an electronic mail message or written memo would be appreciated. If you need any additional information, please contact David Fuehne of my staff. David can be reached at davef@lanl.gov or by telephone at (505) 665-3850.

Thank you,

Patricia Gallagher
Group Leader, ENV-ES

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ENV-ES Rad-NESHAP Records, 2010 Section 1.6, EPA Correspondence