Frequently Asked Questions (FAQs) for Method 2

8/24/16

1. Our permit requires that we monitor the gas flow through a collection hood using a pitot and keeping the velocity pressure within a certain limit. We have had trouble lately with the standard pitot we had at the time we had to install something. Now, it gets plugged a lot and I think the calibration has changed. My boss says we should change to another type of pitot, maybe an S-type, for more durability. She wants me to spend less time fixing the pitot and more time doing real work. Can I just change the pitot and press on with my work? What if I change from a stainless pitot to a Teflon one for more durability.

You have several potential problems. You get plugging in the standard pitot because dirt fills the tiny holes. You are also probably correct that the calibration has changed as a result of corrosion in those tiny holes. Changing to an S-type pitot will help solve these problems; although, you will have another, more important one. This is, the calibration coefficients for the standard pitot and the S-type are different by as much as 20 percent. That means simply changing the pitot and using the same velocity pressure to monitor flow will result in decreased flow through your hood. The best solution to this is to conduct another hood effectiveness and flow rate test with the S-type pitot in place and reset the velocity pressure values. This makes good sense, too, if you are going to use a pitot of a different material like Teflon. The calibrations of different S-type pitots even with very similar dimensions, can vary by a couple of percent.