DE 13-248

From: Dutch Dresser [mailto:dutch@maineenergysystems.com]
Sent: Wednesday, October 09, 2013 10:50 AM
To: Bernstein, Barbara; Les Otten; Skip Bennett; Ray Albrecht
Subject: study

Hi Barbara,

We are considering reasonable sites for the CO study to be conducted by UNH this winter.

I do have some observations, as an old scientist, about the study design. I'm not sure what can be done with them, but let me share them with you as a first step.

I note that the study will include several (4, I think) homes in which there is no pellet storage. The assumption must be that those will serve as a control group of sorts to typify CO levels in non pellet storing homes. I suppose the inherent error in that assumption will be adjusted for statistically, but I can imagine the error being significant because it will be difficult to match other environmental variables within the homes between the target and control populations.

I've been in basements in which there has been significant foam insulation adhered to the walls and ceiling and in basements in which there are just old wooden floors and joist and stone/concrete walls. Surely those basements will have very different air flows and, probably, gas analyses with or without pellets. At any rate, I see the selection of the control sample homes as a possible source of significant error.

A pre-, post-install study would remove the issues created by this model. Measuring CO levels over time in a home about to install a pellet boiler and then measuring CO levels in the same home after installation of the pellet boiler would provide much more meaningful data, but would, of course, take more time and planning.

I have no reason to doubt the qualifications and intentions of the researchers, but I've seen plenty of study interpretations that far outstrip those which are permissible based on the study designs. I'll hope we don't see that here.

All the best, Dutch

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