



Andy's Corner - Technical Newsletter

I can hardly believe that I joined the team at CBPCA as Quality Control and Infield Trainer almost a year ago. It's been my pleasure to work with many of you and I look forward to meeting all the Participating Contractors in the SMUD program.

A Big Reminder:

SMUD pays for five free mentoring sessions! I highly recommend that you take advantage of these sessions. SMUD knows that HOME PERFORMANCE (using the whole house approach) is a new concept for many contractors who have entered the program. SMUD and CBPCA want contractors in the program to be excellent at their craft. I am biased, but I think that the CBPCA has the top trainers this side of the Pecos, so set your appointment with us by completing a [Mentoring Request Form](#) in the VISION system!

QA Focus for November:

The focus for this month is on air sealing requirements during an attic insulation upgrade. We have received a lot of questions about whether Participating Contractors are required to air seal an attic before insulating it. Currently, air sealing an attic before insulating is HIGHLY recommended on ALL jobs in the program when attic insulation is part of the work scope, and not just when communication is discovered between the attic and living space.

* NEW Program Requirement: Beginning December 1, 2011, on any job that includes in its workscope an attic insulation upgrade, air sealing must take place in that attic prior to upgrading its insulation (prior to 12/1/11, it is only "highly recommended" that air sealing take place). CBPCA/BKi will review contractors' implementation of this new air sealing requirement as follows:

- Pre-retrofit desktop JRT review will include the following as of Dec.

1st: The reviewer will confirm that air sealing has been included in the job's written workscope and will require the proposed post-retrofit infiltration rate to be provided in the JRT as a target infiltration rate CFM50.

- Post-retrofit desktop review will include the following as of December 1st: The reviewer will ensure that the final workscope performed will be reviewed in both the JRT and EnergyPro to ensure consistency, and will confirm that the workscope includes proper air sealing and a final post-retrofit infiltration rate.
- Field QA as of December 1st: The verifier will conduct a blower door test to measure leakage and compare it to the target post-retrofit infiltration rate, and conduct a visual inspection of the attic.
- Appeals process: If the contractor believes that it would be a mistake to air seal the attic in question, s/he should contact Andy Simms of CBPCA (andy@thebpc.org) and discuss the issue.

To effectively air seal an attic, a contractor learns where communication exists between the attic and the living space. Below are the BPI Technical Standards for work scope requirements.

BPI Technical Standards – Work Scope Requirements (p. 16-17):

Insulation and Air Sealing: Attic ventilation shall not be recommended or installed without first verifying the presence of an effective air barrier and thermal barrier between the attic and the living space or specifying appropriate attic air sealing as part of the work scope.

Work Scope: The work scope for a BPI-trained contractor who is installing insulation, performing air sealing, and ensuring appropriate ventilation must contain appropriate inspection and diagnostic tests, including: Pressure differential diagnosis, visual inspection, and blower door test. (Download Standards from BPI.org)

The effectiveness of the air barrier shall be determined using the following techniques:

Communication between attic and living space: If air flows between the attic and living space, the attic must be sealed before installing insulation and/or ventilation in the attic.

- a. Leakage paths to the attic must be given the highest priority on the work scope
- b. Local codes will require minimum insulation levels
- c. Enclosed cavity insulation representing 15% or more of the total building shell area, or sealing of ducts outside the thermal envelope, are recommended

Visual inspection of the attic: The BPI-trained contractor must perform an attic inspection, which includes:

- d. Inspecting the attic floor underneath the insulation to locate thermal bypasses and cavities requiring air sealing (most of the time this means removing the existing insulation that is contaminated by rodents feces or roofing materials – isn't our job fun sometimes?)
- e. Finding areas where moisture migrates into the attic is apparent and determine the source of the moisture (insulation that has turned black is an indicator of air movement through the a space)
- f. Verify the integrity of installed air sealing measures by using a smoke stick in the attic while running the blower door under depressurization
- g. The work scope must include pre- and post-installation blower door testing

Examples of good insulation and air sealing practices:



Increasing the knee wall to 8" thick and extending the height by 2' to dense pack with cellulose, then add an air-barrier over the knee wall. (the height is so the loose fill cellulose installed on the vaulted ceiling does not taper off)



Installed air-baffle at eve vent and air-sealing



Air-sealing and insulation dam at attic hatch

One thing to remember: I've never worked on a house in which I haven't learned something new about being a contractor – maybe you feel that way, too. Reviewing BPI technical standards when we do our original work scope usually saves me a lot of time and

trouble!

-- Andy Simms

Thank you for your continued participation and feedback! Please contact contractorsupport@theebpca.org if you have any questions.

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