Alternative Technology Review Committee Meeting Minutes – May 12, 2008

In Attendance:

Jennifer Allen – Portland State University/BEST Center (Bio-Economy and Sustainable Technologies)

Aron Faegre – Aron Faegre & Associates, Architect, Engineer and Landscape Architect Ron Hays – Eagle Creek Natural Buildings, Remodeling Contractor and Natural Builder Joshua Klyber – Living Walls – Natural Builder and Portland ReCode Member Andy Peterson – BDS Plan Review/Permitting Services Supervisor Terry Whitehill – BDS Plan Review Section Manager Hank McDonald - BDS Commercial Inspections Supervisor Debbie Cleek – BDS Green Building Specialist

Discussion:

Andy began the meeting by providing an overview of his meeting with the City Attorney. The City Attorney is concerned with the City taking on unnecessary liability risk by approving untested products. Therefore the recommendation was to create a strong mission statement for the committee to hold proposed products against. As part of this, the committee should not be approving a material that does not have any better attributes then the products already available that do have testing. Debbie indicated that she would write up a draft mission statement and send it to the group for review.

The group went on to review the Air Krete product. Debbie acted as the "advocate" for the product by explaining why the product should be considered green, and summarizing the testing results provided by the manufacturer. Initial questions from the group involved where the product comes from (ie. where/how is the silicate mined)? And where and how is it manufactured. It was decided that these should be standard questions on the application form, since they would come up every time.

Jennifer had a question about the environmental evaluation from Green Spec – if is was based on product testing or just PR from the manufacturer. Debbie said she would try to figure this out. Ron had questions about what the blowing agent for the product was. It was determined from the product literature that the product was blown in with air.

Joshua expressed concerns with what would happen to the product after the practical life was finished. Would the product particulates become air-born as it was being ripped out as part of a remodel project? Breathing in the product particles could possibly lead to Toxic Silicosis. Jennifer expressed similar concerns with the product during the installation process. She wondered if we would have the authority to require installers to wear masks during the installation process. It is unlikely that the City could regulate installation requirements, but the committee should be asking for the installation information for the product, such as the OSHA standards, to see what is recommended by the manufacturer. It is possible that the committee could deny a product if the installation instructions do not seem to adequately address potential health concerns. In the case of Air Krete, this information was not provided, and should be requested from the company.

Joshua wanted further information about the chemical content of the product, and what the PH value was. Portland Cement is typically very alkaline, and it is possible that

because the product is cement-based it could have a high PH value. It was discussed whether there is some sort of testing facility in town that could do a simple test chemical make up/PH test on the product.

The group discussed the new building code requirements for un-vented attics. The new code has specific requirements for "air permeable" insulations, but there was no information provided about Air Krete in this regard. The product information stated that if a vapor barrier is required in a ceiling it should only be used if the product can be aircured from above. It was assumed that this was necessary because the product is sprayed in wet and needs to dry out (the sample in the jar was still moist). Based on this information the group concluded that the product was most likely vapor permeable. Questions were raised about what the length of the required curing time was. Terry mentioned that testing a product in an attic was a good idea, since an attic is easily accessible, and the product could be easily removed if it failed (as compared to inside wall cavities.)

Hank expressed concerns about the product's R-value tests. The two tests were conducted at two different temperatures, with two different thicknesses of product. There was also no information about what the change in temperature from one side of the product to the other was during the testing. This change in temperature is typical of most insulation testing. Terry and Debbie commented that the code requires the testing to be done in accordance with ASTM standards, but the tests do not indicate how the tests were done. They had looked up the testing facility, and their website indicates that testing is done in accordance with ASTM standards but there was no way to confirm that the tests provided were done this way. Therefore the group decided that the information on the R-Value of the product should be considered inconclusive.

The group determined that there were too many unresolved questions about the product to be able to make a recommendation. It was decided that Debbie should contact the manufacturer and see if more information could be obtained, and then reviewed at the next meeting.

Joshua also felt that it would be good to do a test run of a building system too. It was suggested that the group could look at a clay plaster material that replaces drywall. Joshua and Ron were familiar with someone local who was looking at creating this product, however the test run would be more about looking at how the product works as part of a wall system. There were concerns that the product is not far enough along in its creation to introduce it to the group, however most believed that early in the creation process was a good time to start talking to people. It was agreed that Joshua and Ron would bring this product/system to the next meeting for discussion.