

Summary of May 11 discussions of the Waste to Energy (WTE) Workgroup

Participants

Name	Organization	Phone	Email
Dobbins Callahan	C&A Floorcoverings	(706) 259-2039	dcallahan@powerbond.com
Hallie Clemm	Maryland Department of the Environment	(410) 631-3373	hclemm@mde.state.md.us
Hugh Gardner	BP Fabrics & Fibers	(770) 944-4606	gardnehc@bp.com
Jerry Hullander	Carpet & Rug Institute	(706) 226-9925	jhullander@carpet-rug.com
John Leigh	Northeast Recycling Council (NERC)	(802) 254-3636	john@nerc.org
Carey Mitchell	Shaw Industries	(706) 275-2200	carey.mitchell@shawinc.com
Bob Peoples	Solutia	(850) 968-8885	prpeop@solutia.com
Richard Scott	BASF	(706) 259-1474	scott.rl@basf.com

Scope and Terminology

The group thought it appropriate to be charged with discussing issues regarding the disposition of carpet in cement kilns, WTE plants, and “mass burn” incinerators, but that we should draw a distinction between each of these. We agreed that while all of these may be considered different forms of burning or disposal, a sub-hierarchy of preferred use exists among these related management options. Members appeared to agree that incineration without energy recovery is the least desirable of all management options, WTE is preferable to landfilling, and cement kiln use is one step higher than WTE in preferability, but none of these practices constitute “recycling.”

Carpet Composition Implications

The group looked over some draft numbers offered by Carey Mitchell of the constituent breakdown of carpet quantities manufactured currently. Members noted that roughly 30% of carpet by weight is calcium carbonate, an abundant material currently mined and sold for about a penny a pound. Roughly 26% is polypropylene, which sells for about 35 cents per pound, and roughly 7% is SB latex, which sells for about 55 cents per pound. These facts offer strong evidence that at present, it is not economically feasible to find markets for over half of the materials in the carpet waste stream once it is separated into its constituent components. The group agreed that it is possible that market conditions will change or discoveries will be made that will render more of the components feasible to recycle in time, and that this is worth striving toward.

With newly emerging gasification technologies and business models allowing carpet to be used economically as fuel in cement kilns, this becomes one of the most promising landfill-alternative options, in the near term, for significant amounts of discarded carpet. The cement kilns option offers the advantage of building a significant collection infrastructure sooner than later, which the reuse and recycling markets would benefit from as new end use applications are developed.

Current Level

The group made “back of the envelope” estimates of different operations’ carpet WTE activities in order to get a handle on current practices and quantities. Bob Peoples volunteered to do some informal fact checking within the industry in attempt to see if our rough estimates are reasonably credible. We estimated the total national level of carpet going to such facilities to be roughly one percent (1%) of the approximately four billion pounds of carpet discarded each year. We attribute nearly all of this one percent to WTE, with a negligible amount thought to be currently used in cement kilns or mass burn incinerators.

Desirable Level

The group agreed on a rudimentary graph showing the amount of cement kiln use rising rapidly over the next five years or so, then tapering down to a flat level, surpassed by reuse and recycling amounts, which grow more slowly but steadily over time. The group has not yet discussed specific levels or percentages for either cement kilns or WTE, nor the following issues: once the infrastructure is built for feeding cement kilns with carpet, how we ensure that this practice then tapers down; whether the cement kiln and WTE options for carpet should ultimately be phased out; what the cement kiln national capacity is; and whether potential competition exists with other commodities such as tire derived fuel.