

## ACAA REPLY and VINYL ISSUES

Including a special article from Dave Goss Executive Director American Coal Ash Association



In the last issue of the Commercial Flooring Report I wrote an article about fly ash content in concrete and the issues this material presents relative to installation and in particular its relevance to gaining LEED credits for new buildings. The article prompted a response from

David Goss the Executive Director of the American Coal Ash Association, which resulted in us opening a very fruitful dialogue. Following is a response from the American Coal Ash Association prompted by my article. At the end of the response I'll provide you with the outcome of our conversations and phone conference meeting we had with several participants and the resultant benefits this new relationship will bring to the floor covering industry.

### Response of the American Coal Ash Association

**ACAA** Advancing the Management & Use of Coal Combustion Products



Dear Lew:

ACAA and the ash industry appreciate the opportunity to respond to the article that appeared in the March issue of the Commercial Flooring Report.



Volcanic ash was used extensively by the Romans to engineer enduring concrete/mortar structures such

as the Roman Coliseum. A modern day version of the volcanic ash they so successfully utilized is Coal Fly Ash (CFA), a by-product of the combustion of coal in order to produce electricity from steam driven turbines. A technical description of these materials is an amorphous glass (calcium aluminum silicate) in the shape of tiny glass spheres ranging in size from sub-1 micron to over 100 microns in diameter (you need a powerful microscope to resolve their spherical nature).

The first well documented use of CFA in the United States took place back in the 1930's when government engineered projects utilized the material in large concrete structures, such as in dam construction, in order to reduce cracking of the concrete resulting from excessive internal heating generated as the concrete cured.

As cement prices soared in the 1970's much research was conducted on the utilization of CFA and it was found that if used as a partial replacement for cement, it behaved as a "functional filler". Meaning; the fly ash consumed one of the by-products of cement hydration (calcium hydroxide) and formed more of the cementitious product that is responsible for the inherent strength of concrete. It was also found to reduce the permeability of concrete and required less chemicals (including water which decreases the strength of concrete) used to place the concrete. As such, for the last forty years, CFA has been utilized extensively in all applications of concrete from lightweight concrete up to ultra high strength load bearing columns used in high rise buildings.

In recent years, more emphasis has been

placed on "green" construction practices to include the use of recycled materials. CFA has always qualified as a post-industrial/pre-consumer recycled material and is approved as one by the USGBC LEED Rating System. In fact, the US EPA endorses the utilization of coal combustion by-products and supports this endeavor with their "Coal Combustion Products Partnership" (C2P2) program. As a partial replacement of cement in concrete, CFA reduces pound for pound the amount of CO<sub>2</sub> (the greenhouse gas carbon dioxide) generated by the manufacture of cement. In other words, for each ton of cement replaced by CFA in concrete, one less ton of CO<sub>2</sub> is liberated into the atmosphere.

There have been many successful projects where CFA has replaced more than the typical 20% to 30% replacement levels. However, as the replacement levels are increased, a change in the typical concrete placement and curing process should be observed. In other words, more can be better, provided the unique characteristics of fly ash are accounted for during the engineering phase of the program.

To this end, it has been noted while the "bonding characteristics" of certain flooring compounds are

acceptable in applications where typical CFA replacement levels are used, very little is known about these characteristics when higher levels of CFA are utilized. The historical mechanisms of concrete failure (pH, moisture and type of finish) need to be evaluated as a function of CFA loading to determine if the loading levels are relevant. We believe that sound research evaluating various mix designs under simulated operating conditions will help identify any precautions or finishing processes that will enable your industry to provide high quality flooring for any application.

We look forward to the opportunity to work in conjunction with the flooring industry in order to extract the facts of this situation. While many people are only now becoming aware of the benefits of using CFA in construction materials, it really has been the "unsung" hero that has been "greening" up concrete and other construction materials for over 80 years.

Sincerely,  
David Goss  
Executive Director  
American Coal Ash Association

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As you've just read Coal Fly Ash is not new in its use in concrete or in the levels of its content in concrete - it's only when the content increases significantly that issues have arisen. The last two paragraphs are the basis of the American Coal Ash Association, LGM and the floor covering industry working together to answer questions regarding the use of high concentrations of CFA in concrete. Our combined efforts will endeavor to bring together the concrete industry and associations of the floor covering industry, as well as manufacturers. We have planned a meeting to begin to look at what tests should be conducted and how. They will consist of pouring a number of slabs and ingots with varying amounts of CFA and finishes that will receive various floor covering product installations to determine the bonding strength, how it is affected and what has to be done to the substrate to overcome whatever compromise may exist. We hope to have this program underway soon. The ultimate goal is to prevent anyone from being broadsided by the potential for floor covering installation failures that will result in millions of dollars in claims and loss of reputation. I applaud the ACAA for their response, their willingness to help initiate testing and eagerness to work with the floor covering industry toward answers and to suggest that we bring in the concrete industry

as well. I'm looking forward to our association and being able, with the participating parties, to bring everyone involved in floor covering and new construction the answers to the question we all have on this very important subject. A mutually agreeable proactive approach by all parties as opposed to reacting to the issues when they arise resulting in finger pointing and animosity will keep us all enlightened and out of trouble.

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### VINYL FLOORING ISSUE

When placing vinyl flooring it's important to understand that the adhesive can be compromised if some important steps aren't followed which could result in a failed installation. Recently we worked with a client that had large vinyl tile installation fail. When questioning their procedures we found that they had rolled the tile with a 100 pound roller. The tile should have been rolled with a 35 pound roller. The heavier roller pushed out the glue, created hollow spots and caused loss of adhesion. Had the correct roller been used for this particular vinyl tile product the flooring contractor would not have suffered a major loss.

*Upcoming LGM Seminars*  
*Carpet - June 18, 19, 20<sup>th</sup>*  
*Concrete, Moisture, and*  
*Flooring Failures - August 13-14*  
*See Page 5 and 6 for details.*



## **The Commercial FLOORING REPORT**

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*President and Owner*

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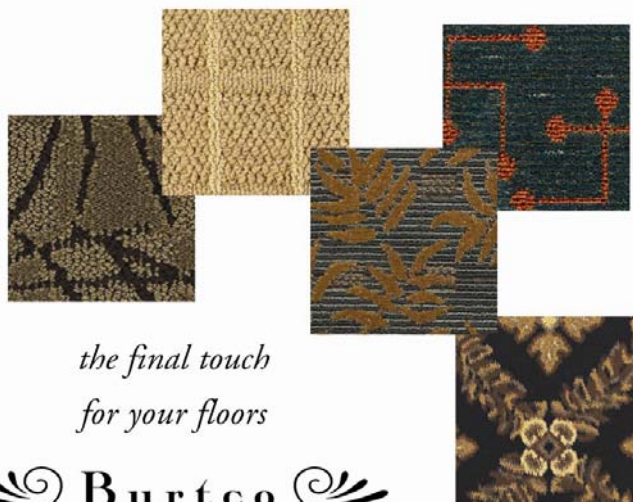
You have to keep in mind the ramifications of your actions as well as the consequences whether you're a supplier, designer, architect or contractor. Thinking you know something that you don't and forging ahead anyway will eventually get you in trouble.

And speaking along similar lines we had a manufacturer we do quite a bit of technical work for forward us a carpet spec for a project being bid. The specifier, a design firm in this case, included a section titled "Special Carpet Warranty." This special warranty, which the manufacturer, contractor and installer are required to sign, stipulates that the special warranty shall supersede any manufacturers disclaimers that may exclude any of the failures defined such as matting and crushing prior to the occupancy of the space. Also random permanent shading to the extent defined by any one of the following: more extensive than 3% of the total carpet area, within a defined room or space or within any 4,000 square feet of contiguous carpet area. Remediation or replacement is required when said failures as defined occur. The warranty period is 5 years for all failures and 2 years for random permanent shading both from the date of substantial completion of the project.

Now I can understand trying to protect the carpet or any other flooring material but I have some

concerns about the way this warranty is put together. What is random, permanent shading and how is it defined? Who makes the determination if this condition exists? What constitutes 3% of the carpet in any one of the three space definitions? Which one of the three parties is most responsible, or all three, and how is that determined? This thing is fraught with interpretive landmines. Rather than start off with a contentious nightmare why not just say what you mean, explain what it is and define it, followed by how the carpet or flooring material is to be protected to prevent these things and who is to do what. And if the carpet is a cut pile product, which in this case it is, forget about it not shading within 3 percent of any area. Cut pile carpet, by the very nature of its makeup and the laws of physics will shade, mat, crush or flatten guaranteed, which makes the warranty ludicrous. Did someone forget this most obvious fact? One of my favorite sayings is "words don't change science and the laws of physics". Common sense, so valuable yet so elusive and lacking, should always be employed.

Remember, if you need help with a flooring problem give us a call. Lots of times just asking a question and getting it answered will head off an accident. There's no charge for asking questions. And if you have a situation you'd like to share that we can write about so it helps others in the industry, no matter what your involvement in the industry is or what the flooring material may be, talk to me so we can keep others out of harms way.



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## Between a Rock and a Hard Place? Plan Now to Attend the LGM Seminar Concrete, Moisture and Flooring Failures on August 13<sup>th</sup> and 14<sup>th</sup> 2008

"This is just to formally thank you for consistently providing the most definitive expertise and thorough technical information available anywhere on any and all topics regarding floor covering products and their installation. Your technical conference on concrete vapor emission last week was your best yet and clearly stands head and shoulders above a number of hit and miss attempts by others at this same topic. As you well know, concrete vapor emission and elevated chemical pH has, in varying degrees, plagued all floor covering manufacturers, installers, and too many of our customers for many years. Unfortunately, it's also a topic that over the years has generated much misinformation and, subsequently, ineffective, snake oil-type "cures." Thank you for bringing together the most credible experts available anywhere to provide information that was logical, concise, and well founded in research, evidence, and real world experience. The speakers were engaging and equipped us all with valuable tools that will immediately serve our companies and our customers. Thank you."

**Chris Drummond**  
Vice President Customer  
Quality Assurance Bentley  
Prince Street

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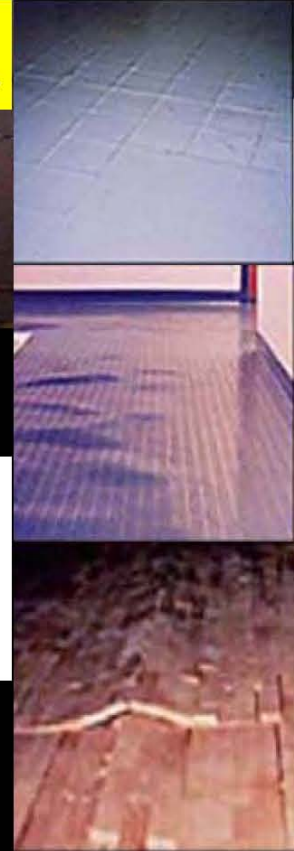
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- Who is to blame?



Contact Anita Drennon  
for your registration  
form or visit our  
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### ADDITIONAL TESTIMONIALS:

- "Many seminars in our trade today offer the same or near-same subject matters and information sharing that has been repeated and shared many times over many years. Be it carpet cleaning methods, industry installation standards, indoor air quality, GREEN, etc., ours is an industry that is deep and replete with a lot of information that has been talked about many times, reviewed, touted and sometimes trashed, hurrahed and hackled. Not so with the recent LGM Moisture Seminar. Lew Migliore and his associates brightened their astral burn by making certain that when their seminar was completed the participants knew more about concrete, moisture, alkalinity, moisture vapor barriers/retarders, floorcovering adhesives and plasticizer migration in two and a half days than all that Moses learned during his forty days of wandering. And he did so because of both the knowledge and messianic qualities of the four expert speakers he had on board to lecture on their individual areas of expertise.

LGM events are all about learning, cooperating, conciliation and bridge building. They are historically known for the quintessentially good quality of the information provided. Spin Masters beware. The information offered here will leave your lip service silenced and your credibility withering on a vine."

**Mark Johnston – Beaulieu of America – Technical Services**

- "Congratulations to LGM on your concrete and moisture seminar. I have been in the flooring industry many years and this is one of the most important and educational seminars I have attended. The instructors were all very knowledgeable. The information I received was on the cutting edge of Technology. I was thrilled that FCICA sent me the information on the seminar. I would urge anyone involved with the installation of textile or resilient flooring to attend this seminar. The information I received will give me a much better opportunity to guide and direct my customers on their flooring needs and problems. The only regret that I have is that there were not more flooring contractors in attendance. The information I received will also help me protect my company from flooring issues that were never my fault to start with. Again great job!" **G.Fred Acton, Acton Flooring Inc**



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Testing Methods, Industry Overview  
Including Lab and Mill Tours**

November 9, 2007

Lewis G. Migliore  
LGM and Associates  
519 Oxford Street  
Dalton, Ga 30720



Re: Carpet Seminar

Nancy M. Nee  
Corporate Director  
Strategic Sourcing

Dear Lew,

I wanted to take the time to thank you for putting together one of the most educational seminars I've ever attended. Anyone in the hospitality industry that specifies or purchases carpet should take advantage of the opportunity to attend one of your seminars. You and your team demystified the carpet manufacturing, specifying and problem solving issues that we deal with in our industry on a daily basis.

Thank you again and keep up the good work!

Sincerely,

Nancy Nee

**"WE ARE SO PLEASED THAT LEW IS DOING THESE SEMINARS. SO MANY ARE HELD EACH YEAR BY THOSE WHO HAVE NOT EVEN HALF THE KNOWLEDGE OR EXPERIENCE OF LEW AND HIS ASSOCIATES."**

THANK YOU.  
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