



ECM BIOFILMS, INC.

May 19, 2008

Re: Green Packaging Workshop – Comment, Project No.P084200

After seeing the agenda for and participants of the “Green Packaging Claims” Workshop, and attending the workshop, our company feels it is very important for us to respond to the Federal Register Notice and comment on the workshop presentations.

Section VI. C. (6) of the Federal Register Notice asks:

“Are there “degradable,” “biodegradable,” “photodegradable,” or “compostable” claims in the marketplace concerning packaging that are misleading? If so, please describe these claims and provide any evidence that supports your answer.”

Yes, there are claims and information being disseminated to the industry and to the consumer that are intentionally confusing and misleading. This was apparent in the Session 4 of the workshop “Substantiating Green Packaging Claims – Life Cycle Analysis, Third-Party Certification, Logos and Seals”. This segment involved those third party organizations that certify, approve or otherwise endorse products and/or companies and are looked upon as a source of unbiased information, knowledge and integrity. In this session, the audience, which may not be as informed as the third parties, looks to the third party for guidance. These parties, however, are not always representing the betterment of the environment, the consumer or the industry, but its members which have their own, sometimes diverse agenda. When this is permitted to occur, much disinformation is disseminated and the industry and consumer are misled. This could not be illustrated more poignantly than by some of the statements made by one of the workshop panel presenters, Mr. Steve Mojo of the Biodegradable Products Institute. I would like to point out some examples of the misleading and biased information that he presented. It should be understood that this information, coming from a certifiable third party, is held in high esteem by those less understanding of the issues and technology, resulting in the total skewing of their true understanding.

Following are some of the statements made by Mr. Mojo with an explanation of how these statements are misleading and are considered by the unknowing as factual.

Mr Mojo:

“Despite the name, our organization is here to promote the production use and recovery of compostable materials and organics via composting.”

1 Victoria Square • Suite 304 • Painesville, Ohio 44077 • U.S. A.

Phone (440) 350-1400 • Toll Free (888) 220-2792 • Fax (440) 350-1444
www.ecmbiofilms.com • biodeg@ecmbiofilms.com

Two lines into his presentation he admits his organization is deceiving FTC, all in attendance and the industry. BPI doesn't represent biodegradables, as the institute name implies, but compostables. The workshop is about the Green Guide, who's the primary objective is to prevent deception of the consumer and the first words from the presenter are contrary to that premise. He then proceeds to blatantly state that he is here to promote the production, use and recovery of compostable materials.

Mr Mojo:

"Since the guides were reviewed the AFTM has made progress. The American society of testing and materials. One of the largest consensus based organizes in the world. They have made a lot of progress in terms of developing specifications for compostable plastics and compostable paper or compostable plastics used on paper codings on paper."

Yes, the description of the society is correct. Members are the ones that write and approve the standards. As a result these standards can be written to be self fulfilling for organizations as well. In this case, BPI has taken a position on the ASTM committees, prepared these standards to reflect the interests of the members they represent. With standards to support their viewpoint, they want to make it a requirement for everyone in the industry. These standards represent only a portion of technological options to address plastics disposal. Unfortunately, to be an active member of ASTM and author standards it takes resources, resources that are not available to many organizations. As a result, standards are written to be beneficial to certain organizations, resulting in impeding ideas, technologies and options to the consumer.

Mr Mojo:

"And actually to some it may even be a license to litter because they figure if I can throw it out my window and it's biodegradable it's going to disappear on its own. Frankly I think consumers see biodegradability as the pansy of the solid waste. If you can send a Biodegradable Product to a land fill and it somehow or another is going to disappear in your mind, isn't that a terrific thing? We don't have to worry about the waste. It just goes away. But actually I believe that the consumer perceptions are fairly in line with what the FTC promulgated back in the early '90s. Consumers believe biodegradation takes place everywhere. Almost nine out ten said it will take place in a natural environment such as litter. 8 out of 10 in a land fill. And 80% in the backyard..Yet when you look at here we put -- throw away our trash, as Sara pointed out, we're recycling roughly 30% of material which is means the bulk is still either going to land fills or to incinerators."

Of course things biodegrade in a landfill, that's why they are designed for reclamation of methane – a byproduct of anaerobic biodegradation. So if other items biodegrade in a landfill, why should we not landfill plastic that has scientifically shown to biodegrade under those conditions? Since composting will require a collections system as does recycling, and recycling is 30% effective, what makes us think collection rates of compostables will be much better? If compostables aren't composted, they will be incinerated or land filled and won't biodegrade there.

As stated by Seetha Coleman-Kammula, co-founder of Simply Sustain LLC, a Newark, Del., consulting firm focused on the environment in the April 8, 2008 issue of PlasticNews.com, “Bioplastics are potentially biodegradable and compostable, but they are not necessarily good unless systems to compost them exist, and we don’t have an industrial compost structure in the U.S., let alone a recycling structure.”

BPI has promoted composting, but is the issue of collection and how it affects the user addressed? Is it discussed that home composting and composting as defined by ASTM D6400 [municipal/industrial] are drastically different and that the effectiveness of the municipal/industrial composting is dependent on separation and collection of the waste? And what about recycling of compostable plastics, can it be done, is it an adjunct to composting, or will it contaminate the recycle stream? None of these subjects were addressed in the presentation providing a balanced overview.

Mr. Mojo:

“So really leads the question, where is customary disposal and what takes place in a land fill? I don't know how many of you ever read the book rubbish by William Rate published in the early '90s. He's a garbologist. He spent ten, 15 years excavating land fills all across North America. His findings were that he found newspapers still readable after 40 years. He found fresh looking five-year-old lettuce. He found 15-year-old hot dogs that looked fairly good which I think is a testament to preservatives. [Laughter] More importantly 40 to 50% of materials in land fills were organics are paper. These are materials that you would think would readily biodegrade. But actually it's food waste, paper, so in a land fill you're not seeing any significant levels of biodegradation. In his book and Sara can talk at length about why it's a well engineered hole not designed to promote it but in his book he designates a chapter to the myths of biodegradation. The quote is the truth is however that the dynamics of a modern land fill are nearly the opposite of what most people think. Well designed and managed land fills seem to be far more apt to preserve content for posterity than transform them into humus or mulch. They're not composters, they're really mummifiers. That really is at odds with what consumers believe is happening.”

Mr. Mojo is suggesting that ASTM specifications be the standard for determining if a plastic is biodegradable, he says biodegradation does not occur in landfills yet ASTM has an active standard [D 5526] which deals with anaerobic biodegradation of plastics in landfills [ASTM D 5526 “Standard Test Method for Determining Anaerobic Biodegradation of Plastic Materials Under Accelerated Landfill Conditions”]. In addition, the subject of reference 9 of this standard [Dept. of US Army, “Landfill Off-Gas Collection”, ETL 1110-1-160, April 17th. 1995] deals with the design of landfills and effective handling and management of methane. It goes into detail as to the phases of landfill biodegradation and the characteristic of each phase. Biodegradation occurs in landfills and a biodegradable plastic can be a viable adjunct to disposal. This fact should be recognized by this organization.

Mr. Mojo:

“So what do consumers think about the term compostable from the ACC study? It's very much in line with what the FTC has said and it's also in line with what the AFTM specifications call for. And that's compostable means a material can be put back into the ground and make soil mulch or fertilizer and can

be used in a garden or home. The attribute of compostable materials at decomposition is beneficial to the earth so you're turning out something good. Whereas a biodegradable material just disappears. "

We know that composting is type of biodegradation and is just biodegradation done under specific controlled conditions. By making such statements, composting is promoted as good, biodegradation as evil and the consumer will blindly accept this as truth.

"What's important for consumer's perspective is they say this process takes three months to a year. This is based on what the consumer said the thousand consumers and depending on the composting process you go to it can take three months to a year. What's interesting and exciting is the two ASTM specifications that I talked about for compostable materials are actually fairly in line with consumer perceptions. They're required disintegration in a 12 week period, significant amounts of biodegradation within six months. There's plant and safety tests. "

If scientific tests are to determine the biodegradation of a plastic, as stated by Mr. Mojo earlier, why should the consumer's opinion be of concern? If consumers expect an organic to biodegrade in 3 months to year they are not cognizant of their environment. Rather than educating the consumer about the realities of the composting and biodegradation process, the consumer is left to believe that their perception is correct. And since it supports BPI's position on composting, they will not dispute it.

Mr. Mojo:

"I think there should be 12 to 18 month time horizon to get us out of the game of ultimately biodegradable. Because ultimately we all will biodegrade. "

How can a comparison be made between an organic living being and plastic, which if is unmodified, will not degrade for centuries. How can a time table be put on an uncontrolled natural process? We know that organisms will biodegrade at different rates depending on the conditions of disposal. Again the statements are meant not to educate the audience, but to put limitations on the concept of biodegradation so that it supports the philosophy that BPI promotes.

Mr. Mojo:

"The only thing I would urge is they [FTC] add the requirements of ASTM 6400 and 6868 so that folk whose are in the business can feel comfortable that in fact if they meet these specifications they have a material that will perform satisfactorily from the FTC's perspective."

This assumes that composting in a municipal/industrial composter is the only option and, therefore, other effective existing technologies are shut out. BPI is urging FTC to exclude other options from consideration without presenting a full representation of what the technology they promote is and what it is not.

We need as an industry to keep informing consumers that programs are not all available. If you live in San Francisco they are, and if in New York they aren't. Doesn't mean they won't be but they need to look for those things."

To label a plastic item compostable to ASTM D6400 it must be processed in a municipal/industrial composting facility. Such facilities are not readily accessible to consumers. The BPI supported website, findacomposter.com, lists 36 facilities in the state of CA. Less than 50% [17] will accept post-consumer feedstock. In the state of Texas, there are only 11 facilities listed; and 5 facilities [45 %] accept post-consumer feedstock. Effectively, there are 22 facilities to serve the two states with the largest populations in the US.

Add on the non-compostability in back yard operations, the poor rate of collections and transportation considerations; much of the gleam of D6400 composting of plastic items touted by BPI is tarnished.

BPI is promoting a plan that will only be applicable to a very small segment of the consumer population for the foreseeable future. Why is this fact not driven home to the audience? This a major obstacle to the success of a municipal/industrial composting program.

This misrepresentation of facts and misleading information is finding its way to the general public and its legislators. This is not more apparent than the recent legislation of the state of California where AB 1972 is under consideration.

This bill reads;

“Existing law prohibits a person from selling a plastic bag that is labeled as “compostable,” “biodegradable,” “degradable,” or as otherwise specified unless, at the time of sale the bag meets a current American Society for Testing and Materials (ASTM) standard specification for the term used on the label. This bill would change this exemption to the prohibition to require the bag to meet either the ASTM Standard Specification for Compostable Plastics D6400 or the ASTM Standard Specification for Non-Floating Biodegradable Plastics in the Marine Environment D7801.”

In this instance, the misinformation, specifically from BPI, will lead to passage of a bill that will exclude any other plastic disposal approach or technology from participating in the manufacture of plastic bags. This organization has the people of California believing that composting is the only solution to the plastic waste issue in their state. Are the other considerations described earlier being presented, is the public being educated by the institute as to the options for plastic waste handling and the advantages and disadvantages of each? Do they know about the information cited above, that home composting and that municipal/industrial composting specified ASTM D6400 are drastically different, that if its not collected it will be incinerated or land filled where it will not degrade? Has the public been educated about the issues of recycling compostable plastic? No, they have established an ASTM standard, which the public believes must be relevant and accurate because it was issued by ASTM, and promoted the option which best suits the interests of the BPI membership, thus leaving the citizens with less flexibility, increased costs and worst of all deceived.

This leads to another issue, which although not the subject of the workshop, none the less a very important issue for the FTC and the plastics packaging industry. That is, the affect of local and state

legislation, of the nature presented here, on free commerce. When the local/state governments pass laws that restrict products from being sold in their venue, it affects the manufacturers that supply the products. The manufacturer then has to conform to the local/state law so they can participate in the commerce and if this is a large market, such as California, it is most likely critical to their survival. The manufacturer must now invest in the development of a new product to compete in this market. The costs associated with the development and marketing of a new product reduces their ability to compete. So trade is obstructed either by the high costs associated by complying with the local/state law and/or the inability of the manufacturer to market their standard offering. In addition, such legislation impedes the development of new technologies that may provide a solution to the disposal of plastic waste.