



January 31, 2007

Cate Alexander Brennan
Communications Director
National Nanotechnology Coordination Office
4201 Wilson Boulevard, Stafford II Rm. 405
Arlington, VA 22230

Re: **Public Meeting on Research Needs and Priorities Related to the Environmental, Health, and Safety Aspects of Engineered Nanoscale Materials**, Sponsored by the National Nanotechnology Coordination Office on behalf of the Nanoscale Science, Engineering, and Technology (NSET) Subcommittee on Technology, National Science and Technology Council (NSTC)

Dear Ms. Brennan:

The Grocery Manufacturers/Food Products Association (GMA/FPA) (“the Association”) represents the world’s leading food, beverage and consumer products companies. The Association promotes sound public policy, champions initiatives that increase productivity and growth, and helps to protect the safety and security of the food supply through scientific excellence. The GMA/FPA board of directors is comprised of fifty-two chief executive officers from the Association’s member companies. The \$2.1 trillion food, beverage and consumer packaged goods industry employs 14 million workers, and contributes over \$1 trillion in added value to the nation’s economy.

1. Introduction

These comments are submitted by the Association for consideration by the NSET Subcommittee (“the Subcommittee”) in follow up to the public meeting on January 4, 2007, which was held to receive public comment on environmental, health, and safety (“EHS”) research needs and priorities for engineered nanoscale materials and on the findings of the September 2006 report of the National Nanotechnology Initiative entitled, “Environmental, Health, and Safety Research Needs for Engineered Nanoscale Materials” (“Research Needs Report”).

The Association appreciates this opportunity to comment on these important issues. The Association commends the NSET Subcommittee for holding the recent public meeting, and urges the Subcommittee to continue to provide such opportunities for industries having particular expertise and experience with nanotechnology applications to contribute information and views as scientific knowledge develops in this area. In view of the rapidly evolving body of scientific knowledge concerning nanotechnology and the dynamic and speculative nature of many forecasts concerning the nature and range of potential commercial nanotechnology applications, such industry contributions can provide critical information and support to the Subcommittee in “facilitating the identification, prioritization, and implementation of research and other activities required for the responsible research, development, utilization, and oversight of nanotechnology.”¹

2. Key EHS Research Needs and Priorities

As an introductory principle, the Association agrees that EHS research should focus first on *engineered* nanoscale materials, that is, those materials “that have been purposefully manufactured or synthesized to have a size with at least one dimension in the range of approximately 1-100 nm and that exhibit unique properties determined by this size.”² At the same time, the Association believes that significant priority also should be given to ensuring that research concerning EHS implications of engineered nanoscale materials takes appropriate account of the existing body of multidisciplinary knowledge and research concerning common nanoscale materials for which EHS issues and risks have been well characterized, including incidental by-products of industrial and manufacturing processes (e.g., particulates generated from combustion). Research on engineered nanoscale materials should also account appropriately for the scientific knowledge of naturally-occurring nanoscale materials and physiological processes in biological systems including plants, animals, and humans.

In the further development of EHS research needs and priorities concerning engineered nanoscale materials, the Association urges the NSET Subcommittee to account for the following issues, which are critical to safeguard the nation’s food supply and protect public health:

- EHS Implications of Engineered Nanoscale Materials Across the Product Lifecycle

The Association urges the NSET Subcommittee to take a lifecycle approach to identifying risk assessment and risk management issues and research needs for engineered nanoscale materials. Substantial priority should be given to ensuring that EHS risks of engineered nanoscale materials are fully characterized for all applications

¹ The National Nanotechnology Initiative, *Environmental, Health, and Safety Research Needs for Engineered Nanoscale Materials* (Sept. 2006), at iii.

² *Id.* at iv.

and account for the entire lifecycle of each material, “from cradle to grave.” Any work with engineered nanoscale materials, whether involving research investigations or commercial applications, presents the risk that materials will be released accidentally into the environment. Such environmental releases would have the potential to affect the food supply, directly or indirectly, through the contamination of soil, water, and/or air. Therefore, comprehensive EHS research with respect to all applications of engineered nanoscale materials should extend to all lifecycle stages of the material, and should encompass all studies necessary to ensure the safety of the food supply, whether or not application of the engineered nanomaterials in food production is anticipated.

- **Reliable and Validated Methods for EHS Risk Assessment and Management**

Reliable analytical methods must be developed and validated to accurately characterize and manage the potential EHS hazards, exposures, and risks presented by engineered nanoscale materials, including unintentional releases to the environment. In this regard, standardized nomenclature and metrology are fundamental to support the development of the necessary analytical tools and facilitate communication and coordination among scientists engaged in research aimed at characterizing the EHS implications and risks of increasingly large and diverse sets of engineered nanoscale materials.

- **Access to Government-funded EHS Research and Information**

In order to promote EHS research effectively, priority should be given to establishing mechanisms and programs that make the body of existing EHS related research on nanoscale materials readily accessible to industry, governmental, and academic researchers. Understanding and managing EHS risks posed by engineered nanomaterials will depend on an unprecedented degree of collaboration across scientific disciplines. While there is a significant need to conduct new research on the EHS implications of engineered nanoscale materials, a substantial portion of the funds available should be directed toward the development of a system that would make existing EHS research studies readily available to scientists engaged in nanotechnology research and would promote the necessary multidisciplinary collaboration.

- **Public-Private EHS Research Collaboration**

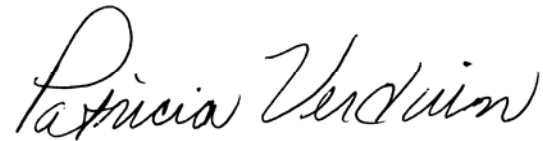
The Association believes companies developing and marketing engineered nanoscale materials for commercial use should continue to be held responsible for EHS research relating to ensuring product safety, occupational health, and EHS implications of intentional or accidental environmental release and related exposures. Collaboration among industry, governmental, and academic scientists is critical to address the significant EHS research needs effectively, and to avoid costly redundancy and delays. To foster such collaboration, mechanisms and safeguards are needed that will encourage scientists to share scientific information concerning the EHS implications of engineered nanoscale materials in ways that are genuinely rewarding, and ensure adequate

safeguards to protect confidential commercial information and proprietary aspects of industry research.

The Association further urges that the Subcommittee remain flexible with respect to these collaborations and to EHS research more generally. New developments in nanomaterials and their applications are advancing rapidly. Research strategies must be appropriately flexible to take into account technological advancements and to reassess research needs and priorities as knowledge accumulates.

The Association would again like to commend the Subcommittee for holding the recent public meeting. Thank you for the opportunity to comment on this important issue.

Sincerely yours,

A handwritten signature in cursive script that reads "Patricia Verduin". The signature is written in black ink and is positioned below the "Sincerely yours," text.

Pat Verduin, Ph.D.

Senior Vice President, Science and
Regulatory Affairs/Chief Science Officer