

Trey T.

MEMORANDUM OF UNDERSTANDING
Between U. S. CONSUMER PRODUCT SAFETY COMMISSION and
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
Building and Fire Research Laboratory

The National Institute of Standards and Technology (NIST) and the U.S. Consumer Product Safety Commission (CPSC) agree that it is in the best interests of both parties and the American people to develop a strategic partnership that leverages each Agency's core expertise and resources to facilitate science and technology innovation that can improve human health.

GOAL: To develop best practices to identify the presence of and characterize and quantify potential release of nanomaterials from flame retardant consumer products, in order to help assess the safety of these products.

PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to establish a framework for cooperation between the U.S. Consumer Product Safety Commission (CPSC) and the U.S. Department of Commerce's (DoC) National Institute of Standards and Technology (NIST) Building and Fire Research Laboratory (BFRL). The cooperating Agencies plan to work closely to expedite the development and availability of methods for the characterization and quantification of the release of nanomaterials from a variety of products (e.g. textiles, plastics) which are assessed using any of a number of standard fire tests. CPSC and BFRL also intend to utilize and strengthen relevant existing programs, enhance coordination of existing federally-supported programs, and determine the need for new initiatives that serve to determine the potential exposure to and health effects of nanomaterials to humans.

BACKGROUND

There is a growing use of compounds or materials that have been produced using technologies (i.e., nanotechnologies) that directly manipulate matter at the atomic level and fabricate molecules and materials that could not have been produced in the past. Nanomaterials are defined as materials/particles that range from 1 to 100 nanometers (nm) in length. Although they may have the same name as a material currently in use, because of their small size, these nanomaterials may demonstrate different physical and chemical properties. Some of these new nanomaterials are reportedly being used in consumer products with the stated purpose of improving the flammability performance of these products.

Nanomaterials represent a wide range of compounds that may vary significantly in their structure, physical and chemical properties, and potentially in their behavior in the environment and in the human body. Because of the wide variation in potential health effects and the dearth of data on release rates, exposure, and toxicity of specific nanomaterials, there is currently little information about the potential consumer

exposures to, or the health effects that may result from, exposure to nanomaterials during consumer use and disposal.

The responsible development of nanotechnology has become a national priority for the United States. The National Nanotechnology Initiative (NNI) is a federal research and development program established to coordinate the multiagency efforts in nanoscale science, engineering, and technology. The NNI through the National Nanotechnology Coordinating Office (NNCO) has supported communication and collaboration among relevant federal agencies in the responsible development and regulation of nanotechnology and has encouraged the federal agencies with regulatory responsibility to be vigilant and proactive in their efforts regarding nanotechnology and its applications.

The 21st Century Nanotechnology Research and Development Act (Public Law 108-153 Dec. 3, 2003) outlines the importance of developing nanotechnology as well as addressing the potential health implications that may result from the incorporation of materials made with nanotechnology (nanomaterials) into consumer products.

The complementary roles of NIST and CPSC motivate the cooperation planned by this MOU. NIST is charged with developing and promoting measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life. The mission is carried out intramurally through scientific research in seven major laboratories, as well as extramurally through research grants, both in close collaboration with U.S. industry. NIST, the lead agency for measurement science infrastructure, provides new tools, standards and data for validation and implementation of technology. These tools will be critical in conducting exposure assessments of nanomaterials that are incorporated into consumer products.

CPSC is the agency that has the responsibility to protect human health from potential health hazards that could result from the reasonably foreseeable use of consumer products. As part of this mission, laboratory studies are carried out to quantify the potential exposures to chemicals, which now include compounds that are considered nanomaterials.

AUTHORITY

This MOU is authorized under Section 3 of the National Institute of Standards and Technology Act (15 U.S.C. 271 et.seq.) which provides for cooperation between NIST and other federal agencies and by Section 5(c) of the Consumer Product Safety Act (15 U.S.C. 2054(c)) which provides for cooperation between CPSC and other governmental entities.

AGREEMENT

The CPSC and NIST agree to collaboratively undertake specific activities that will assist in quantifying nanoparticle release rates from nanomaterials used in flame retardant consumer products. These activities are expected to include but are not limited to the

development of analytical methods and approaches for identifying and characterizing release rates of nanomaterials from a variety of matrices commonly found in flame retardant consumer products.

NIST will provide laboratory space, equipment and technical expertise in the use of analytical instrumentation. CPSC will provide staff to operate equipment and conduct exposure studies. NIST staff will participate in these activities in a training and supervisory capacity. Release of data to the public will occur when appropriate and acceptable to both agencies.

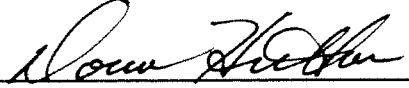
PERIOD OF AGREEMENT

This agreement becomes effective upon acceptance by both parties, and will continue in effect indefinitely. It may be modified by mutual written consent or terminated by either party upon a 30-day advance written notice to the other party.

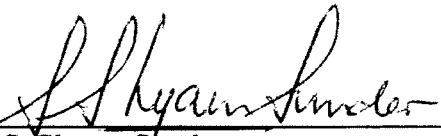
FUNDING

Activities undertaken pursuant to this MOU shall be subject to the availability of funds.

APPROVAL SIGNATURES



Donna Hutton
Contracting Officer
U.S. Consumer Product Safety Commission
Date: 4/23/08



S. Shyam Sunder
Director
Building and Fire Research Laboratory
Date: 4/16/08