



Dr. John P. Holdren, Director
White House Office of Science Technology and Policy (OSTP)
Executive Office of the President
725 17th Street, Room 5228
Washington, DC 20502

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THE
ENVIRONMENTAL
COUNCIL OF
THE STATES

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Dear Dr. Holdren:

We are writing to you on behalf of the Environmental Council of the States (ECOS), the non-profit, non-partisan association of state environmental commissioners, to express our interest in working closely with your office and various federal partners regarding the human health and ecological impacts and lifecycle consequences of intentional and unintentional releases of engineered nanoparticles into the environment. The states appreciate the value of the promising new nanoscale materials and technologies and also share concerns about potential hazards that engineered nanoparticles may pose to human health and the environment. The state environmental agencies would like to participate in national efforts to develop best assessment and management practices as our knowledge of hazards evolves. One option is for ECOS to join one or more of the Nanoscale Science, Engineering, and Technology (NSET) Subcommittee Working Groups within the National Nanotechnology Initiative (NNI) framework – particularly the Nanotechnology Environmental & Health Implications (NEHI) Working Group. ECOS would like to meet with you, preferably this summer, to get your feedback on our key areas of interest (summarized below), and to discuss the best opportunities for our involvement in national efforts, including your advice on our participation in NSET.

Overview: ECOS is interested in working to improve the speed of development of information on the risks posed by engineered nanoparticles along with coordination of, and information sharing on federal and state efforts regarding engineered nanoparticle product life-cycles, research needs, multi-media pollution prevention and best management practices, risk assessment approaches, and proper disposal methods. Our interest in coordination is consistent with previous resolutions passed by ECOS. For example, in Resolution 08-11 which addresses risk communication for emerging contaminants, ECOS recognizes the benefits of materials and devices at the nanoscale level for innovation in virtually every field, including energy, the environment, medicine, electronics and transportation. ECOS also recognizes the uncertainties regarding the potential impacts of engineered nanoparticles in the environment and urges the federal government to direct the appropriate resources to more rapidly generate information to better understand the emerging risks associated with these compounds, and address their human and environmental impacts as expeditiously as possible. In Resolution 4-04 which promotes pollution prevention, ECOS requested that EPA increase and enhance its efforts to promote and institutionalize pollution prevention through funding, research, individual environmental program implementation strategies, and in its overall strategic plan.

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By collaborating with your office, and other federal partners (including the NNI/NSET), the states hope to provide input on strategic planning and receive timely information on impact assessments and pollution prevention techniques to minimize the health threats and external costs posed by engineered nanomaterials, while maintaining the advancement and functionality of these vital new materials. As a guiding principle, ECOS asks that federal resources dedicated to nanoparticle risk assessment and mitigation be commensurate with the resources dedicated to research on engineered nanoparticle applications.

Conduct More Rigorous Risk Assessments:

The ECOS Cross-Media Committee believes that the current state of engineered nanomaterials risk assessment science must be significantly expanded. As stated above, ECOS seeks a federal policy wherein the federal dollars spent on researching engineered nanoparticle risks and risk management are commensurate with those spent researching uses of engineered nanoparticles. The states would like a seat at the table among federal partners on the need to evaluate and reduce the risk posed by engineered nanomaterials at the product development and design level, rather than only after products are made and distributed in commerce. We would like to work with federal agencies to identify the technical information, tools and models that are presently missing in order to adequately assess risks. The issue is particularly important given the growing public perception that the approach for evaluating chemicals under the Toxic Substances Control Act (TSCA) is not working well with the exception for EPA's recent requirements for reporting data on carbon nanotubes. This perception is underscored by the fact that Congress is considering TSCA reform and EPA Administrator Jackson has identified chemical safety as one of her five priorities.

Adopt an Approach(es) that Evaluates Complete Product Lifecycles:

The ECOS Cross-Media Committee feels that federal policy should approach the health and safety issues associated with engineered nanomaterials by evaluating complete product lifecycle impacts. One possible approach that could be an excellent first step for assessing the risks posed by engineered nanomaterials and managing those risks is the DuPont-EDF Framework. The DuPont-EDF Framework recommends involving a broad collaboration of stakeholders, looking at product lifecycles, developing informational profiles, using reasonable worst case assumptions, and filling in data gaps before new products are launched. Included in the approach of examining risk throughout product lifecycles is the issue of disposal, which is a direct challenge to states today. For example, states are currently being asked to determine the proper procedures for disposing of spent nano tubes and other engineered nano material wastes in the absence of clear protocols and procedures from the federal government. Other options include EPA's Nanoscale Materials Stewardship Program, a voluntary program whereby companies provide information on material characterization, hazard, use, potential exposures, and risk management practices. To date, only a small number of companies have signed up for the program suggesting that voluntary programs may not provide the comprehensive and timely information needed to properly manage risk. By contrast, California passed a law in January 2009 requiring information regarding analytical test methods, fate and transport in the environment, and other relevant information from manufacturers of nanomaterials starting with carbon nanotubes. Whatever the approach, data availability is paramount. ECOS understands that an agency's ability to share the information that it collects is sometimes restricted because of confidential business agreements. However, states also have the capabilities of keeping proprietary data confidential and we would benefit from having access to the data if EPA were willing to share it.

Collaborate to Identify Research Gaps and Research Priorities:

The NNI, among many topics, compiles research regarding the environmental health and safety of nanoparticles. The National Institute of Occupational Safety and Health (NIOSH) leads research efforts within the federal government on the occupational aspects of nanomaterial production and handling, and is providing recommendations to prevent possible work-related injury and illness from these materials. The Food and Drug Administration (FDA) is responsible for evaluating the potential health risks of engineered nanoparticles/drug combinations, food safety and food additives, and consumer products. ECOS would like the federal government

to concentrate a significant portion of its research efforts on those issues of greatest concern to the states, which include generating information on the toxicity of nanoparticles on human health and ecosystems, suitable monitoring techniques, fate and transport in the environment, the capacity of engineered nanomaterials to bioaccumulate, and proper product and waste disposal methods, among others. ECOS would like to help our federal partners – perhaps via participation in NNI/NSET – identify research gaps, priority research topics, risk reduction and prevention opportunities.

Share Information on Publicly-Funded Production Facilities:


ECOS would like the federal government to identify locations where federal agencies and their contractors are involved in nanotechnology research and production, as well as the types of nanomaterials they are manufacturing or importing, and uses of the engineered nanomaterials. More comprehensive reporting by these facilities will help states begin to understand the realities of nanotech production and develop responsive risk communication strategies for their constituents.

Proposed Next Step: As a proposed next step, we respectfully seek the opportunity to meet with you in person – preferably sometime before September 1, 2009 if your schedule allows. When we meet, we would like some feedback from you on the key issues summarized in this letter. We also seek your advice on the appropriate federal contact with whom to discuss concrete steps for an enhanced federal/state partnership on nanotechnology risk evaluation, management and communication, potentially including ECOS involvement in NNI/NSET.

Sincerely,



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