

Meeting of Representatives of the  
Environmental Council of the States (ECOS) Cross-Media Committee (CMC)  
and the  
White House Office of Science and Technology Policy (OSTP)  
and the Leadership of the  
National Science and Technology Council  
Subcommittee on Nanoscale Science, Engineering and Technology (NSET)  
Nanotechnology and Environmental Health Implications (NEHI) Working Group

October 14, 2009

10:00 – 11:30am Eastern

Location: Office of Science and Technology Policy  
Executive Office of the President  
Front Conference Room  
New Executive Office Building, 5<sup>th</sup> Floor  
725 17<sup>th</sup> Street, NW  
Washington, DC 20502

Notes Compiled by Matthew Jones, Senior Project Manager,  
Environmental Council of the States (ECOS)

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Mr. Earles (OSTP) began the meeting by welcoming participants and asking them to introduce themselves.

Some members of the ECOS Cross-Media Committee joined the meeting by conference call:

- Ginger Jordan-Hillier, Environmental Public Health Coordinator, Office of the Commissioner, Maine Department of Environmental Protection (sitting in for Commissioner David Littell, Cross-Media Committee Chairman)  
[ginger.jordan-hillier@maine.gov](mailto:ginger.jordan-hillier@maine.gov) 207-287-7863
- David Wright, Remediation and Waste Management Bureau, Maine Dept. of Environmental Protection (ECOS Emerging Contaminants Work Group Member)  
[david.w.wright@maine.gov](mailto:david.w.wright@maine.gov) 207-287-7673
- Doug Fine, Assistant Commissioner for Planning and Policy, Massachusetts Dept. of Environmental Protection (ECOS Emerging Contaminants Work Group Chairman)  
[douglas.fine@state.ma.gov](mailto:douglas.fine@state.ma.gov) 617-292-5792
- Carol Rowan West, Research and Standards Office Director, Massachusetts Dept. of Environmental Protection (ECOS Emerging Contaminants Work Group Member)  
[carol.rowanwest@state.ma.us](mailto:carol.rowanwest@state.ma.us) 617-292-5510
- Maria Victoria Peeler, Senior Policy Analyst, Hazardous Waste and Toxics Reduction, Washington State Department of Ecology (ECOS Emerging Contaminants Work Group Member) [peel461@ecy.wa.gov](mailto:peel461@ecy.wa.gov) 360-407-6704

Those in attendance sat around the table as such:

	<p><b>Jed Miller</b></p> <p>ECOS/ CMC/ EC WG Member</p> <p>Environmental Health Advisor</p> <p>Maryland Dept. of Environment (MDE)</p> <p>Baltimore, MD</p> <p>410-537-3851</p> <p><a href="mailto:jlmliller@mde.state.md.us">jlmliller@mde.state.md.us</a></p>	<p><b>Jeffrey T. Morris</b></p> <p>NSET/ NEHI Member</p> <p>National Program Director for Nanotechnology, US Environmental Protection Agency Office of Research and Development (EPA ORD)</p> <p>Washington, DC</p> <p>202-564-6756</p> <p><a href="mailto:morris.jeff@epa.gov">morris.jeff@epa.gov</a></p>	<p><b>Sally S. Tinkle</b></p> <p>NSET Co-Chair/ NEHI Member</p> <p>Senior Science Advisor, Office of the Director, National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health (NIH)</p> <p>Research Triangle Park, NC</p> <p>919-541-0993</p> <p><a href="mailto:stinkle@niehs.nih.gov">stinkle@niehs.nih.gov</a></p>	<p><b>E. Clayton Teague</b></p> <p>NSET/ NEHI Member</p> <p>Director, National Nanotechnology Coordination Office (NNCO)</p> <p>National Science and Technology Council, Executive Office of the President</p> <p>Arlington, VA</p> <p>703-292-4319</p> <p><a href="mailto:cteague@nncn.nano.gov">cteague@nncn.nano.gov</a></p>	
<p><b>Richard Eskin</b></p> <p>ECOS/ CMC/ EC WG Member</p> <p>Director, Science Services Admin.</p> <p>Maryland Dept. of Environment (MDE)</p> <p>Baltimore, MD</p> <p>410-537-3572</p> <p><a href="mailto:reskin@mde.state.md.us">reskin@mde.state.md.us</a></p>					<p><b>Travis M. Earles</b></p> <p>NSET Co-Chair</p> <p>Office of Science and Technology Policy (OSTP), Executive Office of the President</p> <p>Washington, DC</p> <p>202-456-6025</p> <p><a href="mailto:travis.m.earles@ostp.eop.gov">travis.m.earles@ostp.eop.gov</a></p>
	<p><b>Matthew Jones</b></p> <p>ECOS/ CMC/ EC WG Staff</p> <p>Environmental Council of the States (ECOS)</p> <p>Washington, DC</p> <p>202-624-3665</p> <p><a href="mailto:mjones@sso.org">mjones@sso.org</a></p>	<p><b>Laurie Burt</b></p> <p>ECOS/ CMC/ EC WG Member</p> <p>Commissioner</p> <p>Massachusetts Department of Env. Protection (MA DEP)</p> <p>Boston, MA</p> <p>617-292-5856</p> <p><a href="mailto:laurie.burt@state.ma.us">laurie.burt@state.ma.us</a></p>	<p><b>Norris E. Alderson</b></p> <p>NSET Member/ NEHI Chair</p> <p>Associate Commissioner for Science, Office of Science and Health Coordination, US Food and Drug Admin. (FDA)</p> <p>Rockville, MD</p> <p>301-827-3340</p> <p><a href="mailto:norris.alderon@fda.hhs.gov">norris.alderon@fda.hhs.gov</a></p>	<p><b>Shari T. Wilson</b></p> <p>ECOS CMC Vice-Chair/ EC WG Member</p> <p>Secretary</p> <p>Maryland Dept. of Environment (MDE)</p> <p>Baltimore, MD</p> <p>410-537-3084</p> <p><a href="mailto:stwilson@mde.state.md.us">stwilson@mde.state.md.us</a></p>	

Next, Mr. Earles (OSTP) gave an overview of the National Nanotechnology Initiative (NNI). The NNI is broken into eight component areas. One of these is Environmental Health and Safety (EHS) research. Copies of the NNI report titled “Strategy for Nanotechnology-Related Environmental, Health, and Safety Research” were distributed. The report may also be viewed at:

[http://www.nano.gov/NNI\\_EHS\\_Research\\_Strategy.pdf](http://www.nano.gov/NNI_EHS_Research_Strategy.pdf)

Mr. Alderson (FDA) noted that this document attempted to answer “what is the state of nanomaterials science”? The NEHI Working Group plans to update the document over the coming months.

It was mentioned that the federal government requested \$ 35M for nanomaterials EHS research in 2005, but that \$ 88M was requested for 2010. It was noted that neither NSET nor NNCO officials have control over how this money is requested or spent; the various federal agencies decide upon this. However, the NEHI Working Group is comprised of representatives from each of the major agencies, so the Group has some influence in the funding/ decision-making process.

Mr. Teague (NNCO) noted that DOD, DOE, NIH and NSF have nanomaterials EHS research funds, as well as other agencies. Mr. Teague handed out copies of a May 2009 document titled: “The National Nanotechnology Initiative: Supplement to the President’s 2010 Budget.” The document may also be viewed at:

[http://www.nano.gov/NNI\\_2010\\_budget\\_supplement.pdf](http://www.nano.gov/NNI_2010_budget_supplement.pdf)

Ms. Tinkle (NIH) noted that a workshop on nanomaterials EHS research methods is scheduled to occur Nov. 17- 18, 2009 at the Holiday Inn- Rosslyn in Arlington, Virginia. Ms. Tinkle noted that all state officials are welcome to attend. More information about the workshop is at: <http://www.nano.gov>

Mr. Morris (EPA ORD) mentioned that a capstone meeting on nanomaterials risk management methods is also scheduled for March 30- 31, 2010. Contact Mr. Morris for more information.

Mr. Teague (NNCO) noted that workshops have been held in the past regarding state, regional and local initiatives in nanomaterials research and that more would likely be held in the future. The last workshop was held in April in Oklahoma. The workshop had an EHS component. Prior to that, another such workshop was held in 2003. A report about the workshop’s outcomes was distributed and is available at:

<http://www.nano.gov/041805Initiatives.pdf>

Mr. Earles (OSTP) noted that other nanomaterials EHS workshops have been held, and that more would be planned for the future. Contact Mr. Earles for more information.

Ms. Wilson (Maryland) thanked the NEHI members for meeting with ECOS and described the ECOS Cross-Media Committee and the ECOS Emerging Contaminants Work Group. Ms. Wilson noted that she was currently serving as Vice-Chair of the Committee. She noted that state environmental agencies have a range of expertise and perspectives to lend to the nanomaterials risk research effort. Despite this, however, state environmental agencies are finding themselves inundated with questions about the safety of nanomaterials for which they still have no adequate response prepared. She gave an example of the Maryland Pesticide Investigatory Council questioning the safety of nanomaterials in cosmetics.

Mr. Wright (Maine) offered another example of the Ford Motor Company questioning whether it was safe to buff the fenders of cars covered in paints containing nanomaterials.

Mr. Teague (NNCO) answered that the National Institute for Occupational Safety and Health (NIOSH) has information on occupation worker safety protections. He suggested clicking the “NIOSH” link at: <http://www.nano.gov>

Ms. Wilson (Maryland) noted that states want to follow developments regarding the federal nanomaterials EHS research agenda, and that states also want to provide input/recommendations in the process. Ms. Wilson also noted that state environmental agencies are without an inventory of government-sponsored nanomaterials production sites. Oftentimes nanomaterials are being manufactured at locations unbeknownst to state government.

Ms. Burt (Massachusetts) mentioned that nanomaterials production and research has become a growing business in Massachusetts but the state is seeing similar concerns expressed by citizens there regarding safety of nanomaterials. The Massachusetts Dept. of Environmental Protection is trying to take a proactive approach by convening businesses and state agency stakeholders in an attempt to begin developing a better understanding of worker safety, nanomaterials fate and transport, and best management practices (BMPs) for nanomaterials. MassDEP hosted a conference in the autumn of 2007 on these topics. At first, it was difficult to enlist the participation of business leaders. Commissioner Burt called various CEOs on the telephone to assure them that the press would not be present, and to encourage them to attend and participate in the dialogue. Another similar conference was held in January 2009. Some BMPs are emerging as a result of this effort.

Ms. Burt noted that – while more risk research is undertaken – it is important to continue to pursue development of BMPs in the meantime.

State participants expressed their desire for a nanomaterials prioritization/ screening tool.

It was mentioned that, through ECOS, states have worked to develop a prioritization tool for emerging contaminants but that the tool was generalized so it could be used as a starting point by any state. The tool is intended to be used by states to help them begin to think about how they might prioritize their limited resources for addressing various

unregulated contaminants. The tool is set to be reviewed by ECOS for possible finalization and approval by November. Nevertheless, it was expressed that there is an overwhelming need for a *federal* framework (additional peer reviewed toxicological information; handling guidance; etc). States want to advocate that more federal guidance should be forthcoming, and they wish to help provide input into the process.

It was mentioned that the Dupont/ EDF Framework is a good model, but that not very much data has been generated by it yet.

It was mentioned that MassDEP is interested in advocating for adoption of some sort of framework by other state environmental agencies.

Mr. Morris (EPA ORD) said he thinks there should be a network for communication.

Ms. Tinkle (NIH) mentioned the TOXNET and TOXCAST systems. TOXNET is a collection of toxicology and environmental health databases maintained by NIH. More information about TOXNET is at: <http://toxnet.nlm.nih.gov/>. TOXCAST is EPA's effort to glean information from data provided by the pharmaceutical industry to better prioritize toxicity testing for large numbers of chemicals and to undertake development of toxicological profiles of those chemicals. More information about TOXCAST is at: <http://www.epa.gov/ncct/toxcast/>

Mr. Morris (EPA ORD) said that, heretofore, EPA's decisions regarding nanomaterials have been based on *exposure* considerations.

Ms. Jordan-Hillier (Maine) asked if Mr. Morris could share more detail about EPA's decision-making logic.

Mr. Morris said that there was not much more to it than what he had just outlined. EPA has focused on nanomaterials exposure. Nonetheless, Mr. Morris mentioned that perhaps a more active line of communication could be established between EPA and the states so that, hereafter, EPA could share its prioritization approaches with the states as decisions are made along the way.

Ms. Tinkle noted that FDA is required to take a product-by-product approach. FDA can regulate *products* that happen to contain nanomaterials. FDA may not be able to take a blanket approach to nanomaterials because of this.

Ms. Jordan-Hillier acknowledged that a federal framework for nanomaterials will be years in the making, but emphasized that we need to develop screening programs in the meantime in an attempt to prevent creation of the "Superfund sites of tomorrow."

Ms. Wilson noted that ECOS would like to meet with EPA to discuss these ideas further, and that state officials would look into the opportunity of attending the various upcoming workshops. Ms. Wilson asked whether there were other ways ECOS could follow up with the federal family on this issue.

Mr. Teague (NNCO) noted that membership on the NEHI Working Group is for federal agencies only, but that he would encourage ECOS to present the same “needs points” to the entire membership of the NSET Subcommittee and the NEHI Working Group the next time the two bodies meet.

Ms. Tinkle recommended that ECOS also invite a representative of NSET or NEHI to speak to ECOS members at an upcoming ECOS meeting.

Ms. Burt added that perhaps the speakers could address “what is the framework we are developing”?

Mr. Alderson suggested that ECOS set up a more permanent liaison with NIOSH, EPA, FDA and the Consumer Product Safety Commission (CPSC). He suggested that ECOS propose appropriate methods for follow-up through a memorandum of understanding (MOU). He noted that it is a common practice of FDA to formalize its interactions through MOUs.

Ms. Burt said that it would be helpful to memorialize any ongoing collaboration.

Mr. Earles said that a formally instituted mechanism would be good. One option might be to arrange a relationship with the National Science and Technology Council (NSTC). Another option might be for NEHI to meet with ECOS on a quarterly basis.

Ms. Tinkle and Ms. Peeler agreed that quarterly meetings with NEHI and ECOS would be a good idea.

It was suggested that states should provide feedback on their thoughts regarding the nano.gov website. Ms. Burt suggested that the ECOS Emerging Contaminants Work Group focus on this.

Mr. Teague noted that NNCO is considering redesigning the nano.gov website and that any feedback regarding its usefulness would be helpful.

Ms. Peeler (Washington state) suggested that a good addition to the nano.gov website would be to enable visitors to drop their ideas into a website drop box.

The group reviewed possible next steps:

- The ECOS Emerging Contaminants Work Group could provide feedback to Mr. Teague regarding the nano.gov website
- The ECOS Cross-Media Committee could arrange to meet on a quarterly basis with OSTP and the NEHI Working Group to discuss developments in nanomaterials EHS risk research and funding.
- The ECOS Cross-Media Committee could invite a representative of NSET and/ or NEHI to speak to the state environmental agency directors at the ECOS Spring Meeting in Sausalito, California in March 2010.

- NSET/ NEHI could invite a representative of ECOS to speak about “state needs” regarding nanomaterials risk research at the next NSET/ NEHI meeting.
- ECOS members could consider attending the EHS research methods workshop to be held in Arlington, Virginia in November as well as the nanomaterials risk management methods capstone meeting scheduled for March 2010.
- ECOS could hold direct meetings with EPA, NIOSH and other agencies to reiterate their needs and interests.
- ECOS could propose an MOU to EPA, FDA and other agencies to establish a formal mechanism for interaction and communication.

It was agreed that Matthew Jones (ECOS Staff) should compile notes from the meeting and distribute them with a scanned copy of participants’ business cards to all attendees and to the rest of the ECOS Cross-Media Committee membership.