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NanoWaste Needs Attention of EPA, Industry and Investors
Better toxicity data and private-sector outreach strategy required to manage potential risks

WASHINGTON, DC – The Environmental Protection Agency (EPA) must make key decisions about how to apply the two major end-of-life statutes to nanotechnology waste in order to ensure adequate oversight for these technologies, concludes a new report from the Wilson Center’s Project on Emerging Nanotechnologies. However, the report notes that the Agency lacks much of the data on human health and eco-toxicity that form the basis for such determinations, creating some tough challenges ahead in EPA’s decision-making process.

In addition, firms that manufacture nanomaterials, investors, and insurers should consider the new kinds of liabilities and environmental risks that may emerge as a result of the release and disposal of waste nanomaterials into the environment. The report, *Where Does the Nano Go? End-of Life Regulation of Nanotechnologies*, written by environmental law experts Linda Breggin and John Pendergrass of the Environmental Law Institute, was commissioned by the Project on Emerging Nanotechnologies, an initiative of the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts. The report is available online at: www.nanotechproject.org/132.

The report provides the most comprehensive analysis to date of two key EPA-administered laws that regulate the end-of-life management strategies for nanotechnology materials and products. These are the Resource Conservation and Recovery Act (RCRA), and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as the Superfund statute.

According to the report, companies must recognize that as a result of CERCLA, RCRA and other environmental statutes, the environmental due diligence that accompanies many commercial transactions and securities offerings should include an examination of the handling and disposal of nanomaterials. Insurers also need to “take into account the potential for CERCLA and RCRA liability arising from releases or disposal of waste nanomaterials and products in drafting new insurance policies, interpreting existing policies, and planning for future potential liabilities.” Central to all risk management efforts is the need for the EPA to “conduct outreach and education to the private sector, particularly to small companies and start-ups, about how RCRA and CERCLA could apply to nanomaterials.”

“Today, with hundreds of nanotechnology products already on the market, one of the questions in greatest need of attention is how various forms of nanomaterials will be disposed of and treated at the end of their use. They may find their way into landfills or incinerators, and, eventually, into the air, soil, or water. When we throw something away, there really is no ‘away,’ and this report takes a crucial step forward in analyzing how such concerns can be addressed within the current legal framework,” said David Rejeski, director of the Project on Emerging Nanotechnologies.

Leslie Carothers, president of the Environmental Law Institute, noted at the release of the report that, “the end-of-life regulation of nanotechnology is a topic that must be addressed *now*, before the EPA, other agencies, and the business community are forced to respond to uncertainties in the law and its interpretation without any guidance. Moreover, we must take a lifecycle approach to managing the potential risks posed by engineered nanomaterials which takes into account the full range of uses, from production, to use, to disposal. We do not want a nanowaste problem to be a legacy of this technology.”

About Nanotechnology

Nanotechnology is the ability to measure, see, manipulate and manufacture things usually between 1 and 100 nanometers. A nanometer is one billionth of a meter; a human hair is roughly 100,000 nanometers wide. More than \$30 billion in products incorporating nanotechnology were sold globally in 2005. By 2014, Lux Research estimates this figure will grow to \$2.6 trillion.

The **Project on Emerging Nanotechnologies** is an initiative launched by the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts in 2005. It is dedicated to helping business, government and the public anticipate and manage possible health and environmental implications of nanotechnology. For more information about the project, log on to www.nanotechproject.org.

The Pew Charitable Trusts (www.pewtrusts.org) is driven by the power of knowledge to solve today’s most challenging problems. Pew applies a rigorous, analytical approach to improve public policy, inform the public and stimulate civic life. We partner with a diverse range of donors, public and private organizations and concerned citizens who share our commitment to fact-based solutions and goal-driven investments to improve society.

The **Woodrow Wilson International Center for Scholars** is the living, national memorial to President Wilson established by Congress in 1968 and headquartered in Washington, D.C. The Center establishes and maintains a neutral forum for free, open, and informed dialogue. It is a nonpartisan institution, supported by public and private funds and engaged in the study of national and international affairs.

The Environmental Law Institute® is an independent, non-profit research and educational organization based in Washington, DC. The Institute serves the environmental profession in business, government, the private bar, public interest organizations, academia, and the press. For further information about the Environmental Law Institute, please contact Brett Kitchen at 202-939-3833 or <mailto:mpressrequest@eli.org>.

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