



At a Glance

Why We Did This Review

The purpose of this review was to determine how effectively the U.S. Environmental Protection Agency (EPA) is managing the human health and environmental risks of nanomaterials.

Background

Nanomaterials are currently used in a wide variety of applications, including consumer products, health care, transportation, energy, and agriculture. The Agency considers nanomaterials as chemical substances that are controlled at the scale of approximately one-billionth of a meter. EPA has the authority, through several environmental statutes, to regulate nanomaterials. Although the development of nanomaterials and nanomaterial-enhanced products is expanding rapidly, the health implications of nanomaterials have not yet been determined.

For further information, contact our Office of Congressional and Public Affairs at (202) 566-2391.

The full report is at:
www.epa.gov/oig/reports/2012/20121229-12-P-0162.pdf

EPA Needs to Manage Nanomaterial Risks More Effectively

What We Found

We found that EPA does not currently have sufficient information or processes to effectively manage the human health and environmental risks of nanomaterials. EPA has the statutory authority to regulate nanomaterials but currently lacks the environmental and human health exposure and toxicological data to do so effectively. The Agency proposed a policy under the Federal Insecticide, Fungicide, and Rodenticide Act to identify new pesticides being registered with nanoscale materials. After minimal industry participation in a voluntary data collection program, the Agency has proposed mandatory reporting rules for nanomaterials under the Federal Insecticide, Fungicide, and Rodenticide Act, and is also developing proposed rules under the Toxic Substances Control Act.

However, even if mandatory reporting rules are approved, the effectiveness of EPA's management of nanomaterials remains in question for a number of reasons:

- Program offices do not have a formal process to coordinate the dissemination and utilization of the potentially mandated information.
- EPA is not communicating an overall message to external stakeholders regarding policy changes and the risks of nanomaterials.
- EPA proposes to regulate nanomaterials as chemicals and its success in managing nanomaterials will be linked to the existing limitations of those applicable statutes.
- EPA's management of nanomaterials is limited by lack of risk information and reliance on industry-submitted data.

These issues present significant barriers to effective nanomaterial management when combined with existing resource challenges. If EPA does not improve its internal processes and develop a clear and consistent stakeholder communication process, the Agency will not be able to assure that it is effectively managing nanomaterial risks.

What We Recommend

We recommend that the Assistant Administrator for Chemical Safety and Pollution Prevention develop a process to assure effective dissemination and coordination of nanomaterial information across relevant program offices. The Agency agreed with our recommendation and provided a corrective action plan with milestone dates. This recommendation is open with agreed-to actions pending.