HUNTON& WILLIAMS

CLIENT ALERT

February 2008

EPA to Accept Public Comment on Nanomaterial Research Strategy

The Environmental Protection Agency (EPA) is stepping up its efforts to understand the environmental and human health effects of nanotechnology. On February 13, 2008, the EPA made its draft Nanomaterial Research Strategy (NRS) available to the public, announced a meeting of independent experts to evaluate the NRS, and solicited public comment on the draft. The NRS will guide the EPA's Office of Research and Development in its effort to understand the "consequences of nanomaterials and how they may impact human health and ecosystems." (NRS, p. 2)

The EPA has selected five nanomaterials for study (NRS, p. 51): titanium dioxide (generally used for UV protection and enhanced photoreactivity), zero-valent iron (enhanced reactivity promoting groundwater remediation), nanosilver (antibacterial and antiodor uses), and carbon nanotubes and cerium oxide (a wide variety of electrical, medical and structural uses at the nanoscale). These materials were selected to help the EPA develop predictive models and tools applicable to classes of nanomaterials, rather than testing individual materials.

In the draft NRS, four research themes encompassing seven scientific questions are identified. Each of them are extensively discussed in the NRS (pp. 22–51). The themes and their related questions are:

- **Sources, Fate, Transport and Exposure**: (1) What nanomaterials have a high potential for release during entire life-cycle; (2) What technologies are able to detect and quantify nanomaterials in the environment or in biological samples; (3) What processes/properties govern the environmental fate of nanomaterials and how are these related to their physical and chemical properties; and (4) What exposures will result from releases of nanomaterials?
- **Research Informing Risk Assessment**: (5) What are the effects of engineered nanomaterials and their applications on human and ecological receptors, and how can these effects be quantified and predicted?
- **Risk Assessment Methods and Case Studies**: (6) Must current risk assessment approaches be amended to incorporate special characteristics of engineered nanomaterials?
- **Preventing and Mitigating Risks**: (7) What technologies or practices will minimize risks of nanomaterials, and how can nanotechnology's beneficial uses be maximized to protect the environment?

Versar, Inc., will conduct the NRS review in Alexandria, Virginia, on April 11, 2008. Public comments will be accepted by the EPA until March 14, 2008. The expert panel will review these comments and will also consider public comments made at the April meeting. (73 Fed. Reg. 8309 – 8311)

Contact

Raleigh Office
One Bank of America Plaza
Suite 1400
421 Fayetteville Street
Raleigh, North Carolina 27601
(919) 899-3000
(919) 833-6352 Fax

Jason S. Thomas
(919) 899-3416
jsthomas@hunton.com

Richmond Office
Riverfront Plaza, East Tower
951 East Byrd Street
Richmond, Virginia 23219
(804) 788-8200
(804) 788-8218 Fax

James N. Christman
(804) 788-8368
jchristman@hunton.com

Washington Office
1900 K Street NW
Washington, DC 20006
(202) 955-1500
(202) 778-2201 Fax

Brent A. Fewell
(202) 955-1891
bfewell@hunton.com

James W. Rubin
(202) 955-1611
jrubin@hunton.com

Steven P. Solow
(202) 419-2065
ssolow@hunton.com

David J. van Hoogstraten
(202) 955-1519
dvanhoogstraten@hunton.com

Atlanta • Austin • Bangkok • Beijing • Brussels
Charlotte • Dallas • Houston • Knoxville • London
Los Angeles • McLean • Miami • New York • Norfolk
Raleigh • Richmond • Singapore • Washington