

**Statement of William P. Gulledge**  
**On behalf of the American Chemistry Council**  
**Nanotechnology Panel**  
**Before the U.S. Environmental Protection Agency**  
**Science Advisory Board**  
**March 2, 2006**

Good morning. My name is Bill Gulledge. I am Manager of the American Chemistry Council Nanotechnology Panel and am pleased to offer comments today on behalf of Panel. Panel members consist of companies that are engaged in the manufacture, distribution, and/or use of chemicals and have a business interest in the products of nanotechnology. Panel member companies are strongly committed to the responsible development of nanotechnology, product stewardship, and sustainable development. The Panel commends the SAB for convening this meeting to elicit views on research priorities that reflect the Agency's mission to protect human health and the environment. We appreciate this opportunity to share our strong view that it is critically important that federal research related to the environmental, safety, and health implications of nanotechnology be commensurate with the growing development and future of nanotechnology. EPA, other federal agencies, and publicly funded projects must be coordinated and strategically targeted to achieve the maximum impact in the shortest period of time.

The Panel strongly supports the views articulated by the SAB at its December 2004 Workshop, *Nanotechnology, Biotechnology, and Information Technology: Implications for Future Science at EPA*. In its June 2005 report on the Workshop, the SAB "urged the Agency to develop a new science vision for human health and environmental protection that incorporates the latest scientific and technological advancements. Developments and emerging applications in Nanotechnology, Biotechnology and Information Technology over the past decade have been dramatic, and will continue into the foreseeable future. Advancements within and between these and other technologies will revolutionize industrial production and economic expansion, as well as the environmental sciences."

Importantly, the SAB recognized in its Workshop deliberations that the use of new technologies demand “new ideas in reviewing EPA projects, programs, planning documents, and the science budget.” The Panel wholeheartedly concurs, and urges the SAB to embrace this key finding and to review EPA’s projects, programs, and planning documents in order to focus on EHS nanotechnology research that is strategically targeted and coordinated to achieve the Agency’s mission to protect human health and the environment. The SAB is uniquely well positioned to recommend that EPA’s future research priorities, which is the sole topic of today’s meeting, fully reflect the SAB’s urging in its Workshop report for EPA to create and embrace a new science vision that efficiently deploys a flat or declining EPA science budget.

To that end, we wish to bring to the SAB’s attention a letter sent to Members of the House and Senate Appropriates Committee on February 14, 2006 and signed by large and small companies, non-governmental organizations, and other entities engaged in various aspects of nanotechnology research and development<sup>1</sup> calling for increased federal funding for nanotechnology research. The letter notes: “Although the National Nanotechnology Initiative (NNI) has an annual budget of more than \$1 billion, health and environmental implications research currently accounts for less than 4% of that amount (\$38.5 million for FY06).” The letter also notes: “Federal research is essential to providing the underlying methods and tools critical to developing a fundamental understanding of the risk potential of nanomaterials and nanotechnologies- methods and tools that all producers and users can then use.” This statement is entirely consistent with several of the key findings and cross-cutting recommendations emerging from the SAB Workshop.

The Panel also offered to EPA very similar recommendations in the context of comments recently submitted to the Nanotechnology Workgroup of the EPA Science Policy Council on its *Nanotechnology White Paper External Review Draft* (Draft White Paper).<sup>2</sup> In its comments, the Panel urged EPA to prioritize its research needs to ensure that limited

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<sup>1</sup> See attached letter dated February 14, 2006 addressed to members of the House and Senate Appropriations Committees

<sup>2</sup> See attached comments dated January 31, 2006 in response to 70 Fed. Reg. 75812

research dollars are deployed wisely; a sentiment fully grounded in the SAB's urging EPA to develop a "new science vision" for human health and environmental protection that incorporates the latest scientific and technological advancements. Additionally, the challenges identified by the SAB to developing nanotechnology, including encouraging public discussion, life cycle assessment, and standards and measurements (protocols for research) are among priorities that the Panel assessed with Environmental Defense in the "Joint Statement of Principals" – a shared view upon which to base a governmental program for addressing potential risks of nanoscale materials.

The Panel believes that EPA should reprioritize its nanotechnology research priorities. Specifically, the Panel urged EPA in its comments on the Draft White Paper to focus research efforts in the following order: chemical identification and characterization; metrology; exposure, fate, and effects; risk assessment; work place practices/best manufacturing practices; and green manufacturing/end use applications. These priorities provide a logical structure to maximize the consistency, timeliness, and value of the information generated by the research.

In conclusion, the Panel urges the SAB to continue to develop recommendations to EPA for future research priorities that reflect the growing development and future of nanotechnology and the importance of EHS nanotechnology research that is strategically targeted and coordinated to achieve the maximum impact within the shortest period of time.

Thank you for the opportunity to make this statement. I would happy to answer any questions.