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TESTIMONY

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**HEARING ON
The Office of Research and Development FY 2011 President's Budget
Before the
U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE AND TECHNOLOGY
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Good morning Chairman Gordon, Ranking Member, Hall and other members of the Committee. My name is Paul Anastas. I am the Assistant Administrator for Research and Development (ORD). It is a pleasure to be here with you this morning to discuss EPA's FY 2011 President's Budget the Office of Research and Development.

ORD is a leader in cutting-edge environmental and human health research, providing the scientific underpinnings to EPA's decisions in support of our mission to protect human health and the environment. We focus our efforts and resources on those areas where we can add the most value to identifying hazards, quantifying exposures, assessing risk, and enhancing environmental risk management decisions that both prevent and mitigate risks.

ORD is unique in the environmental science community because we conduct intramural and extramural research across the entire spectrum of disciplines necessary to support environmental and human health decision making. ORD conducts mission critical research that is multi-disciplinary, integrated and rigorously peer-reviewed. We also synthesize research, conduct assessments, and provide impartial advice to ensure EPA uses science credibly in its decisions.

Introduction

President Obama has proposed a budget of \$10 billion for the U.S. Environmental Protection Agency. At a time of significant economic challenges faced by families across the nation, the proposed budget aims to increase efficiencies across the Agency while at the same time allowing us to continue our critically important work.

The proposed budget clearly demonstrates that science is one of the priorities for the Agency. The Office of Research and Development's total budget request is \$605.7 million, an increase of \$11 million over the 2010 enacted.

In January, Administrator Jackson laid out her themes to guide our work for the coming year and beyond. She expressed to me personally that ORD will play a critical role in

addressing these priorities. These themes provide a framework to guide our research efforts and help the Agency achieve measurable results to protect human health and the environment. Important ways the EPA's research and development effort supports these themes include:

Taking Action on Climate Change - ORD research on the impacts of climate change on health and the environment has been used as the scientific foundation for Agency decisions. Our future efforts will provide the scientific roadmap EPA needs to reduce greenhouse gases and help our nation adapt to the effects of climate change.

Improving Air Quality - ORD provides timely scientific information that supports Agency decisions to reduce harmful air pollution. Our future research efforts to better understand and prevent the effects of air pollution will ensure that our nation's communities have healthier air to breathe.

Assuring the Safety of Chemicals - Our work in chemical assessment provides the foundation for our regulatory actions that improve the management of chemicals. Our fundamental research in this area in the coming year and beyond will transform not only the pace, but also the depth of our analysis.

Cleaning Up Our Communities - Our science informs Agency decisions on effective ways to clean up communities all across our nation. This research, and the expert scientific consultation that ORD scientists and engineers offer, will provide critical tools and information needed by the Agency to meet the environmental challenges posed by contaminants in local communities. Additionally, our research on human exposure and exposure metrics will help schools and communities design risk mitigation strategies.

Protecting America's Waters - ORD researchers develop both analytical methods needed to evaluate chemical and microbial contaminants in water distribution systems and approaches for managing watersheds and controlling sources of water quality impairment. Our future water research will advance methods and practices to promote the safety and sustainability of the nation's water resources.

2011 Budget Highlights

Strengthening Science, Technology, Engineering and Mathematics (STEM) Education

We are proposing \$14 million for fellowships through the Science to Achieve Results (STAR) program, an increase of \$6 million over the FY 2010 enacted level. This will enable EPA to award approximately 240 new STAR fellowships and support an estimated 120 continuing STAR fellows. New fellowships will be awarded through nationwide competition in academic areas that are top priorities for EPA including nanotechnology, climate and clean air issues, and green infrastructure.

Assuring the Safety of Chemicals

We are proposing \$17.4 million for research on endocrine disrupting chemicals (EDC), including an increase of \$7 million in STAR Grants. These resources will help to accelerate the application of the latest state of the art innovations to advance the assessment and management of EDCs and other emerging contaminants of concern.

We are proposing \$21.9 million for computational toxicology research. This includes an increase of \$1.8 million to develop the next-generation tools that will greatly accelerate the evaluation of chemicals in the Agency's Endocrine Disruptor Screening Program (EDSP).

E-Waste

Our 2011 budget includes \$1 million to lay the groundwork for research effort on sustainable design methods and management strategies for electronic devices to mitigate human exposure and environmental releases from the recycling and disposal of electronic waste.

Protecting America's Waters

Natural gas plays a role in our nation's energy future. Hydraulic fracturing is one way of accessing that resource. This process involves drilling a well, dewatering the formation, and then injecting fluids under high-pressure to fracture the rock so gas can be extracted. Recently, concern has been growing that hydraulic fracturing may impact ground water and surface water quality which may threaten human health and the environment. To address those concerns, the president's Budget includes \$4.4 million for hydraulic fracturing research, an increase of \$2.5 million. We are proposing to begin the research in FY 2010

We are proposing \$10.3 million for green infrastructure research, including an increase of \$5 million in STAR Grants. These resources will fund green chemistry and green engineering approaches to advance the design of sustainable solutions to clean water challenges faced by EPA's Office of Water, states, and municipalities. Consistent with the President's goals of addressing the "grand challenges" of the 21st century, this EPA research program has the potential to spur innovative solutions to America's aging water infrastructure challenges through approaches that could have significant long term cost savings.

Conclusion

I would like to conclude by providing you with my views on the way we at EPA's Office of Research and Development approach our work. Sustainability is our true north. The work that we do—the research, the assessments, the policy development—is part of ensuring that we have a sustainable society; a sustainable civilization. While science and technology alone cannot lead us to a sustainable civilization, the path toward

sustainability must have scientific and technological innovation as essential elements. This means that our work at EPA must not merely review, assess, and quantify problems; it must inform the design of innovative new products, processes, and systems that incorporate sustainability as a design criterion. The traditional, piece-by-piece approach to research has enabled a tremendously deep understanding of our world. We will complement this approach with an integrative systems approach. Our work must be catalytic to inform and empower the broader collection of people who seek to protect the environment. Research is a promise that if we engage in the often difficult scientific endeavor, we can understand the world better and be able to make the world a better place.

I look forward to working with the Committee to address current and emerging environmental problems that will help our Agency protect the environment and human health. Thank you for the opportunity to appear before you today.