



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

SEP 27 2010

THE ADMINISTRATOR

Deborah L. Swackhamer, Ph.D.
Chairwoman
Science Advisory Board
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Dr. Swackhamer:

I greatly appreciate your July 8, 2010, letter regarding the U.S. Environmental Protection Agency's Office of Research and Development's strategic research directions. I agree with your general observations and recommendations. It should be no surprise that our strategic directions for EPA research mirror many of the Science Advisory Board's recommendations. Thanks to your previous advice, we are placing unprecedented emphasis on sustainability and innovation.

Sustainability should serve as a foundation for all of the EPA's work, requiring us to do more than simply identify current environmental problems and apply traditional, one-dimensional solutions. The EPA must develop innovative solutions based on "first principles" and new ways of thinking about the environment and public health. In my March 8, 2010, address to the National Press Club I said, "I want an EPA that is a leader in innovations that protect our health and our environment and expand new opportunities. I'm not interested in leading an agency that only tells us what we can't do. I want to work together on all the things we can do."

I affirmed that lasting economic development and job growth depend on sustainable solutions to our combined environmental and energy challenges. The EPA most certainly has the capacity to lead the federal government and the nation in developing these solutions.

Innovation is a priority for EPA research and development, and it will play a central role in our reorientation around sustainability. Accordingly, ORD has just created the position of chief innovation officer to foster a series of initiatives to catalyze and advance innovation. As part of this process, ORD will encourage divergent thinking that is not limited by today's constraints but instead focuses on provocative ideas and solutions that can transform environmental protection strategies. In addition, this team will promote the creative application of new tools for environmental and public-health protection and work with ORD scientists to help identify and eliminate barriers to innovation. ORD soon will announce an opportunity for its scientists to apply for internal innovation grants, and ORD will begin to use online networking

tools to promote collaboration among scientists in the EPA and other organizations. ORD also will pilot the use of open, collaborative innovation platforms, which engage a much broader group of people in environmental-problem identification and formulation and in the joint development of innovative solutions.

We appreciate your affirming the SAB's support for our goal to move toward integrated transdisciplinary research, a process to develop sustainable solutions to environmental problems by bringing together stakeholders from different disciplines, perspectives and experiences to define problems, conduct research and deliver products and outcomes. ITR requires the EPA to assess environmental problems in the context of larger economic, social and environmental systems, spurring unprecedented partnerships and stakeholder involvement. ITR also demands that the EPA's skill in scientific and technical analysis be balanced with an increased emphasis on synthesis. This capability will allow us to truly integrate information across disciplinary boundaries at each stage of the research process. With these elements, we believe that ITR can potentially be a driving force in the EPA's pursuit of sustainable environmental solutions.

I also appreciate your summary of the SAB's interactions with ORD staff in November 2009 and April 2010. I am pleased that you see clear alignment between the EPA's priorities and ORD's research activities and products. In response to the SAB's request for more clarity on charge questions, I have asked the SAB's staff office to organize a discussion to allow the EPA, including ORD and others, to convey advisory needs for strategic research directions. We will consider the SAB's comments and then provide a set of charge questions that will establish a foundation for future strategic directions meetings. In response to the SAB's request for more information to respond to charge questions, I also have asked that the SAB's staff office work with you to assess which previously provided information was most helpful to board members and which was less so, as well as identify the board's additional information needs. I am committed to ensuring that the SAB has all it needs to provide advice to the EPA on strategic research directions.

I understand the SAB's desire for more information about ORD's ITR implementation plans. ITR is an important pillar of ORD's strategic directions. As you may know, ORD Assistant Administrator Paul Anastas issued the *Path Forward* memorandum to ORD staff in March 2010. The document is available on the EPA's Research and Development website and also is enclosed. I have spoken with Dr. Anastas, and he is eager to meet with the SAB to discuss implementation.

In your letter the SAB offered insight and advice in four principal areas: (1) the importance of a systems approach and ITR, (2) opportunities and challenges in implementing ITR, (3) the role of social and behavioral sciences, and (4) the importance of research partnerships.

First, I agree that it will be important for the EPA to adopt a systems approach to research planning. Since the success of ITR in ORD will depend on the full participation of the EPA's program and regional offices, intra-agency partnerships will be essential. ORD will work closely with the program and regional offices to ensure that ITR reinforces and enhances their priority efforts. The ITR approach can be applied across the continuum of ORD research projects,

including transformative, targeted and highly targeted research. Transformative research generates new knowledge and game-changing solutions to sustainability problems, which have general applications to many similar problems. This type of research requires ITR to incorporate environmental, social and economic factors, among others. It also involves generating new knowledge and uses of ITR to solve specific, high-priority EPA needs in a timely manner. Highly targeted research and technical support might require ITR, as they involve applying existing knowledge to address specific, short-term research problems for the EPA's national program and regional offices. In sum, ORD will continue to address the highest-priority needs of the EPA's program and regional offices with a combination of transformative, targeted and highly targeted research products.

Also, given the SAB's ongoing interest in the scientific and technical work conducted by the EPA's program and regional offices and the relationship to ORD's research efforts, I have asked that the EPA's Science and Technology Policy Council, formerly the Science Policy Council, engage the SAB on strategic directions in EPA science and technology.

Second, I appreciate your insight on the opportunities and challenges in implementing ITR. As you suggest, research visions and strategies should be developed closely with national program and regional offices. We recognize that the success of ITR will require end-to-end partnerships with program and regional managers to ensure that ORD research informs EPA decisions. The success of ITR also requires that our management approach work hand-in-hand with ITR efforts. ORD's national program directors will play important roles in realizing this goal. As much as possible, we will strive toward a balanced matrix-management approach to implement ITR.

In response to another SAB comment on ITR, I agree that well-designed research on chemical safety and environmental justice can promote innovation to improve our environmental and economic well-being. I take to heart your suggestion to conduct ITR in partnership with select communities facing environmental-justice problems. This approach might provide opportunities to combine ITR and the social sciences to identify root problems and help to develop sustainable solutions. I would like EPA staff working in the safe communities and environmental-justice areas to further discuss these opportunities with the SAB.

Third, I value your direct comment on the potential role of social and behavioral sciences in EPA research. During the past few years, the SAB has consistently called upon the EPA to strengthen its expertise in these areas. Indeed, social and behavioral sciences must play important roles in helping us to understand and solve environmental problems. I support the integration of social and behavioral sciences into EPA research programs as part of the ITR approach. I have asked Dr. Anastas to develop one or more approaches to incorporate social and behavioral sciences into research planning and implementation.

Fourth, thank you for affirming the EPA's leadership on environmental issues. We will continue to seek partnerships at the federal level to leverage our expertise and resources. Also, we are mindful of state budget constraints for environmental research, so we will continue to look for ways to collaborate with state and tribal agencies. As an example, the EPA has signed a memorandum of understanding with the California Environmental Protection Agency to work

more closely on risk information. Intergovernmental partnerships, as well as partnerships with private organizations, can help us to pursue our mission more effectively and efficiently.

Thank you once more for your letter. The SAB's frank advice is most valuable, and I appreciate the time and careful consideration invested in providing this guidance. We look forward to the next discussion between the EPA and the SAB on strategic research directions. In the meantime, we intend to make progress in many of the areas highlighted in your letter.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lisa P. Jackson', with a large, sweeping flourish at the end.

Lisa P. Jackson

Enclosure

cc: Bob Perciasepe, Deputy Administrator
Paul Anastas, Assistant Administrator, Office of Research and Development
Vanessa Vu, Director, Science Advisory Board