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Subcommittee on Investigations and Oversight Environment and
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Hearing on "EPA Advisory Committees: How Science Should Inform Decisions"

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Thank you for the opportunity to address the Subcommittees on Investigations and Oversight, and Environment. I am Dr. Thomas Burke, Professor at the Johns Hopkins University Bloomberg School of Public Health. I am also Director of Johns Hopkins Risk Science and Public Policy Institute. I speak today as an individual, informed by a career devoted to public health and protecting our environment. As such, these views do not necessarily represent those of the Johns Hopkins University or Johns Hopkins Health System. Before joining the Hopkins faculty, I worked as a state official, serving as Director of Science and Research for the New Jersey Department of Environmental Protection and then as Deputy Commissioner of Health for New Jersey. I have also been a member of both the EPA Science Advisory Board (SAB) and the EPA Board of Scientific Counselors, and served on numerous committees of the National Academies of Science, Engineering and Medicine. Perhaps most relevant to today's topic, from January 2015 to January 2017 I served as the EPA Science Advisor and Deputy Assistant Administrator for the Office of Research and Development.

The Important Role of Science Advisory Committees at EPA

Science has been called the "backbone" of EPA. Credible and transparent science is essential to the EPA mission and the implementation of our national laws. Far beyond Washington, the credibility of EPA science is essential at the state and community level as public health officials respond to concerns about the drinking water safety and air pollution, or respond to emergencies from chemical releases or harmful algal blooms. The success of these difficult decisions depends upon public trust in the science that supports them. The Advisory Committees of EPA, particularly the Science Advisory

Board, Clean Air Scientific Advisory Committee and the Board of Scientific Counselors have a key role in making sure the Agency does the right science - and gets the science right.

The Advisory Committees have been essential to the credibility and defensibility of EPA actions. They were established and structured to provide EPA with the highest level of independent scientific expertise and peer review. They allow the Agency to recruit the best and the brightest and to include multiple scientific disciplines to review, critique and improve the science that guides EPA decisions. An open nominations process casts a broad net, and there is extensive review of candidates to evaluate their scientific accomplishments and expertise, in addition to an evaluation of any potential conflicts of interest. Historically, appointment to the EPA Science Advisory Board was seen as a great honor, recognition as being among the nation's best.

In addition to expertise and peer review, the Advisory Committee process also provides important oversight and transparency that is essential to developing public understanding and trust in science based decisions. For example, the SAB review process posts all reports and supporting information, is open to the public, and includes opportunities for public and stakeholder comment. I can speak from my own experience at the EPA Office of Research and Development overseeing the major nationwide study *Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States.*(1) The SAB assembled an outstanding committee of experts, provided an extensive and inclusive review, and included public participation and about 100,000 public comments. The review improved both the science and clarity of the report, which advanced our knowledge of the potential impacts

of fracking on our drinking water.

In summary, the SAB and other advisory committees provide essential support to the mission of EPA and have played an important role in assuring the quality of the science that has been the foundation of our nation's great environmental health progress of the past 40 years.

Today's Environmental Health Challenges

The environmental health challenges facing our nation have never been greater. Most urgently, the broad health, economic, and social impacts of climate change are upon us and require unprecedented collaboration across the sciences to mitigate the causes, adapt to changes, and build resilient communities. Let me list a few other examples:

- PFAS (Teflon related) contaminants in our water and food
- The impacts of fracking on our health and environment
- The risks of cancer from widely used pesticides like Roundup
- Lead in our aging drinking water systems
- Harmful algal blooms
- Hazardous exposures from wildfires
- Illness and mortality related to particulate air pollution
- Health risks to fence line communities from industrial chemical emissions

These are not obscure science projects; they are real life health issues facing virtually every community across our Nation. Decisions regarding these issues have high stakes for the public and for the polluters. These decisions will require strong scientific leadership from EPA and the guidance of knowledgeable and balanced advisory boards.

Threats to the Science Advisory Process

Despite the increasing demands upon EPA science, the current Administration has made

major changes that threaten the quality, capacity and balance of the science advisory boards. Starting with Scott Pruitt's dismissal of several members of the Board of Scientific Counselors, the Administrator then moved to dismiss several members of the SAB and CASAC. He issued a directive that barred any member receiving support from EPA grants.(2) The stated purpose of this directive was to strengthen independence, although no similar restriction was imposed for members receiving support from EPA regulated industries. This restriction not only led to the dismissal of several members, but remains as a barrier to the inclusion of the leading researchers who have received competitive grants in the fields most relevant to the EPA mission.

A recent Presidential Executive Order presents an additional threat to the EPA Science Advisory Committees. (3) This order requires each agency to terminate at least one third of their federal advisory committees by September 30, 2019. While the specific committees to be eliminated have not yet been named, the potential impacts on the transparency and credibility of EPA science are troubling.

Dismantling Science at EPA

While our focus today has been the EPA Science Advisory Committees, I would like to close with some observations about the state of EPA science. My former role as Agency Science Advisor has provided me with a unique perspective on this. During the past two years we have witnessed a profound shift in the priorities at the Agency. The fundamental mission of protecting health and the environment has given way to a focus on deregulation. How else can you explain rollbacks that result in thousands of increased deaths each year? (4) Sadly, the rollbacks of science-based policies have been

accompanied by a dismantling of the science infrastructure of EPA by the current political appointees. Science has become collateral damage in the assault on our environmental health regulations. The attached table provides an overview of the actions that have undermined science including: reversal of science based policies, interference with peer review, cuts to research both internal and external, limiting the scientific studies supporting regulatory decisions, and revising the methods of assessing health risks and benefits. These actions, left unchecked, will have lasting impacts not only on the EPA, but also on the future of our environment and the health of all Americans.

Thank you for this opportunity to speak with you today.

References

1. U.S. EPA. Hydraulic Fracturing For Oil And Gas: Impacts From The Hydraulic Fracturing Water Cycle On Drinking Water Resources In The United States (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-16/236F, 2016.

2. Pruitt, E. Scott Strengthening and Improving Membership on EPA Federal Advisory Committees. October 31, 2017. https://www.epa.gov/newsreleases/administrator-pruitt-issues-directive-ensure-independence-geographic-diversity

3.THe White House. Executive Order on Evaluating and Improving the Utility of Federal Advisory Committee June 14, 2019 https://www.whitehouse.gov/presidential-actions/executive-order-evaluating-improving-utility-federal-advisory-committees/

4. Cutler, D and Dominici F. A Breath of Bad Air: Trump Environmental Agenda May Lead to 80,000 Extra Deaths per Decade. Journal of the American Medical Association 2018; 319(22):2261-2262

Deregulation: Dismantling Science at EPA

Rolled back, rescinded or revised Policies and Rules

- **Paris Climate Accord**
- **Clean Power Plan**
- **Waters of the U.S.**
- **Chlorpyrifos ban reversal**

Interference with Scientific Peer Review

- **Dismissal of Board of Scientific Councilors**
- **Science Advisory Board changes**
- **Clean Air Science Advisory realignment**
- **White House Order to reduce Federal Advisory Committees**

Research cuts

- **Climate Change Research**
- **Chemical Safety and Sustainability**
- **Science and Technology budget**
- **Elimination of Science to Achieve Results Program**

Limiting the Evidence Base

- **"Transparency" Rule to restrict scientific studies supporting regulation**
- **Exclusion of historical epidemiologic data**
- **Narrow focus of evidence reviews and exposure assessments for chemical hazards**

Revising Scientific Methods

- **Less protective risk assessment methods**
- **Promoting threshold assumption for "safe" level of chemical exposures**
- **Revision of guidelines for cancer and non cancer effects**
- **Limited scope of benefit cost analysis**