



June 7, 2019

VIA ELECTRONIC MAIL

Dr. Thomas Armitage, Designated Federal Officer, armitage.thomas@epa.gov  
Dr. Michael Honeycutt, Chair  
Board Members  
Scientific Advisory Board  
U.S. Environmental Protection Agency

**Re: Clarifying Comments for the Science Advisory Board's Consideration Following the June 2019 Meeting: EPA Must Follow the Best Available Science**

Dear Dr. Armitage, Dr. Honeycutt, and Members of the Science Advisory Board:

Thank you for the opportunity to provide clarifying comments on two issues following the Science Advisory Board (“SAB’s”) June 2019 meeting. Earthjustice submits these short clarifying comments to aid the SAB in defining the scope and focus of (1) its review of proposed regulatory action on the Mercury and Air Toxics Standards (MATS) for power plants and (2) its consultation on updating EPA’s Cancer and Non-Cancer Risk Assessment Guidelines. These comments are in addition to the written comments submitted on May 29, 2019, and oral testimony provided by Michelle Mabson on June 5, 2019.<sup>1</sup>

**1. On the issue of the SAB’s review of the Mercury and Air Toxics Standards for Coal- and Oil-Fired Power Plants:**

It is essential for the SAB to review **both** the cost-benefit analysis in EPA’s proposed reconsideration of the Mercury Air Toxics Standards (“MATS”) “appropriate and necessary” finding **and** the risk and technology review. For the cost-benefit analysis, at least three problems require attention:

1. The SAB should review EPA’s decision to dismiss the benefits of reducing particulate emissions. The Courts have **not** instructed EPA to exclude co-benefits. That is this administration’s decision, and—putting aside the legal validity of that choice—it is important for the SAB to review whether it is scientifically and methodologically sound.<sup>2</sup>
2. The SAB should review EPA’s drastic underestimation of the benefits of reducing the **many** listed hazardous air pollutants—not just mercury—addressed by MATS. EPA’s proposal treats an earlier partial estimate of one benefit of reducing mercury as if it were the full benefit of reducing all the hazardous air pollution from power plants, and that partial mercury estimate is itself based on outdated science.<sup>3</sup> Prior consideration of EPA work products associated with MATS cannot substitute for review of the science

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<sup>1</sup> Earthjustice, Comments For the Science Advisory Board’s Consideration in Advance of Its June 2019 Meeting: EPA Must Follow the Best Available Science (May 29, 2019), [https://yosemite.epa.gov/sab/sabproduct.nsf/C8DC97CD16CBF8808525840B0068C228/\\$File/Public+comments+from+Earthjustice.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/C8DC97CD16CBF8808525840B0068C228/$File/Public+comments+from+Earthjustice.pdf).

<sup>2</sup> *Id.* at 9-10.

<sup>3</sup> *Id.* at 10.



- underlying the current proposal, because prior agency analyses did not treat this partial estimate of mercury benefits as if it represented the full benefit of MATS.
3. The SAB should review whether EPA’s continued reliance on ex ante compliance cost estimates that are now known to be inaccurate is methodologically sound.

It is also essential for the SAB to review EPA’s risk and technology review (“RTR”) for the MATS rule, including EPA’s failure to correct previously identified flaws in the general RTR methodology and flaws in the particular application of that methodology to MATS. Among other things, EPA’s risk estimate is based on the assumption that the entire industry emits just 3 tons of organic hazardous air pollutants each year, even though available data indicate its actual emissions are closer to 3,000 tons each year.<sup>4</sup> In addition, EPA assumes that power plants meet their emission standards at all times, despite abundant evidence to the contrary.<sup>5</sup> And, where EPA does not have a dose-response value for a hazardous air pollutant, it treats the cancer risk from that pollutant as zero, even though there is no factual basis for doing so.<sup>6</sup> EPA’s risk assessment methodology for the MATS rule underestimates risk to public health, particularly for children and overburdened communities, as further discussed in the general comments on EPA’s risk assessment guidelines.

## **2. On the Issue of the SAB’s Consultation for Updating EPA’s Cancer and Non-Cancer Risk Assessment Guidelines:**

The SAB should advise EPA to strengthen its risk assessment guidelines to follow the best available science on the need to evaluate particular health risks for children, pregnant women and the developing fetus, and other populations who are the most vulnerable and most exposed to toxic contaminants including air pollution. EPA must stop ignoring any known or likely health risks because this contradicts the best available science and harms public health, especially for children. These guidelines form the basis for EPA’s regulatory decision-making under many statutes that require EPA to consider health risks and provide an ample margin of safety to protect public health. They apply to the MATS rule—a Clean Air Act rulemaking that addresses mercury, lead, arsenic, hazardous organics, and many other toxic pollutants emitted by power plants, as well as Clean Air Act standards for many other large industrial sources of pollution such as petroleum refineries, chemical and plastics manufacturers, and lead smelters, also before the agency. Therefore, ensuring that the SAB’s comments on the guidelines provide EPA with advice on the best available science carries vital importance. EPA is currently moving forward with those actions based on outdated guidelines that miss or inadequately account for important public health risks (and thus also fail to adequately assess the health benefits).

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<sup>4</sup> Comments of Chesapeake Climate Action Network, Clean Air Task Force, Earthjustice, Environmental Integrity Project, and Sierra Club On Proposed Residual Risk And Technology Review, EPA-HQ-OAR-2018-0794-XXXX, at 2-12 & Attachment 1, Sahu, Underestimation of Organic HAP Emissions from Coal-Fired Boilers by EPA.

<sup>5</sup> *Id.* at 13-16.

<sup>6</sup> *Id.* at 20-22.



The SAB should prioritize updates that will strengthen health protections, not weaken them – and should advise EPA to add components to its guidelines that address three priority scientific areas that are currently missing from or inadequately addressed in the guidelines:

1. EPA must follow the National Academies of Science guidance in *Science and Decisions* and California EPA’s example to apply at least 10X default adjustment or safety factors, each, to account for the additional cancer and non-cancer vulnerability and resulting risks due to: (a) prenatal exposure, (b) exposure in childhood (to all carcinogens and many other pollutants, not just known mutagens), and (c) exposure while burdened with socioeconomic vulnerabilities or multiple exposures.<sup>7</sup>
2. EPA must recognize that many pollutants, such as lead and PM2.5, have no known reference value or safe level of exposure and must not place a zero risk value on any exposure to such pollutants. PM2.5 is particularly dangerous – even at low levels – in part because its speciated constituents from industrial facilities like coal plants contain lead, arsenic, and other toxic metals that have no safe level of human exposure. EPA must account for and consider those health risks by applying a linear (non-threshold) model to non-carcinogens as it does for carcinogens.<sup>8</sup>
3. EPA must quantitatively account for cumulative risks from chemicals and sources through multiple simultaneous pathways of exposure, instead of treating each kind of risk as its own separate silo. Studies show that cancer, chronic non-cancer, and acute risks and impacts from multiple pathways, pollutants, and sources, happen to vulnerable children and pregnant women, in communities that are disproportionately communities of color and low-income. EPA must account for these additive and synergistic effects.<sup>9</sup>

As the 30-day deadline EPA has set for the SAB is likely to be inadequate to provide sufficient or complete scientific input on the charge questions that EPA has provided, the SAB should also advise EPA to consider the SAB’s own prior guidance on how its risk assessment guidelines fall short, to consult and consider guidance from the NAS and the Children’s Health Protection Advisory Committee, and to follow a meaningful notice-and-comment process in which EPA engages children’s health and epidemiological experts and the affected public. This clarifying comment cannot do justice to the scientific importance of the broad range of issues described in EPA’s charge questions and we have not had adequate time to address or consider those, or consult with additional experts who are likely to have valuable input and peer-reviewed scientific literature to provide that is relevant to each question.

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Commenters appreciate EPA and members of the SAB’s time and consideration of these comments. For additional information, please contact Michelle Mabson at

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<sup>7</sup> Earthjustice, Comments For the Science Advisory Board’s Consideration in Advance of Its June 2019 Meeting: EPA Must Follow the Best Available Science (May 29, 2019), [https://yosemite.epa.gov/sab/sabproduct.nsf//C8DC97CD16CBF8808525840B0068C228/\\$File/Public+comments+from+Earthjustice.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf//C8DC97CD16CBF8808525840B0068C228/$File/Public+comments+from+Earthjustice.pdf). (citing Attachments 6-10).

<sup>8</sup> *Id.* & Attachment 1.

<sup>9</sup> *Id.* at 8-9.



mmabson@earthjustice.org, (202) 797-5254 or any of the Earthjustice commenters listed in our May 29, 2019 Comments.

Sincerely,

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