

**U.S. Environmental Protection Agency (EPA)
Science Advisory Board (SAB)**

**Summary Minutes of the Public Meeting held on
August 11, 2020**

Meeting Participants:

SAB Members:

Dr. Michael Honeycutt, Chair	Dr. Sue Marty
Dr. Rodney Andrews	Mr. Robert Merritt
Dr. Hugh Barton	Dr. Larry Monroe
Dr. Deborah Bennett	Dr. Thomas Parkerton
Dr. Frederick Bernthal	Dr. Robert Phalen
Dr. Bob Blanz	Dr. Kenneth Portier
Dr. Todd Brewer	Dr. Tara Sabo-Attwood
Dr. Joel Burken	Dr. Mara Seeley
Dr. Janice Chambers	Dr. Anne Smith
Dr. John Christy	Dr. Richard Smith
Dr. Samuel Cohen	Dr. Jay Turner
Dr. Tony Cox	Dr. Brant Ulsh
Dr. Alison Cullen	Dr. Donald van der Vaart
Dr. Otto Doering	Ms. Carrie Vollmer-Sanders
Dr. Susan Felter	Dr. Kimberly White
Dr. Joseph Gardella	Dr. Mark Wiesner
Dr. John Guckenheimer	Dr. Peter Wilcoxon
Dr. Margaret MacDonell	Dr. Richard Williams
Dr. Clyde Martin	Dr. Stanley Young

Board Liaisons:

Dr. Paul Gilman, Chair, EPA Board of Scientific Counselors

SAB Staff Office:

Dr. Thomas Armitage, Designated Federal Officer (DFO) for Chartered SAB
Mr. Thomas Brennan, SAB Staff Office Director
Dr. Holly Stallworth, Designated Federal Officer, SAB Staff Office

Other Attendees:

See Attachment A.

Meeting Summary:

Convene the Meeting

Dr. Thomas Armitage, Designated Federal Officer (DFO) for the Chartered SAB convened the meeting and provided an opening statement. Dr. Armitage indicated that the SAB meeting was being held to review the scientific and technical basis of EPA's proposed rule titled Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process. Dr. Armitage noted that the Chartered SAB was an independent federal expert advisory committee chartered under the Federal Advisory Committee Act (FACA). He noted the SAB was empowered by law to provide scientific and technical advice to the EPA Administrator and that SAB meetings and deliberations were conducted in accordance with the requirements of FACA. Dr. Armitage indicated that the SAB Staff Office had determined that members of the Chartered SAB were in compliance with ethics requirements. He noted that three individuals had registered to provide public comments during the public comment period on the agenda. Dr. Armitage noted that the meeting was being held remotely as a video conference and members of the public could view the meeting via webcast or listen via telephone. Dr. Armitage indicated that all meeting materials were available on the SAB website. He noted that these meeting materials included Chartered SAB roster,¹ and meeting agenda.²

Mr. Tom Brennan, SAB Staff Office Director, welcomed the meeting participants and indicated that this was the first regulatory review conducted under Administrator Wheeler's new process for engaging the SAB on regulatory matters.

Purpose of the Meeting and Review of the Agenda

SAB Chair Dr. Michael Honeycutt noted the purpose of the meeting and reviewed the agenda. He indicated that the SAB would review the scientific and technical basis of EPA's proposed benefit cost rule.³ He said the proposed rule had been published in the Federal Register on June 11, 2020 and that, pursuant to the SAB engagement process for the review of EPA regulatory actions, he had discussed the rule with a workgroup of SAB members and decided it should be reviewed by the full SAB.

Dr. Honeycutt indicated that the SAB would begin the discussion of the rule at this meeting and that an SAB workgroup would develop a draft report on the rule after the meeting. He indicated that the full SAB would meet again on September 15, 2020 to discuss the draft report developed by the workgroup.

Dr. Honeycutt said that the Board would first hear public comments from registered speakers. After hearing public comments, the Board would receive a briefing from EPA on the proposed rule. Following the EPA briefing, the Board would discuss the topics to be covered in the review of the proposed rule. He noted that a list of suggested topics to be covered had been developed by SAB members who had considered whether the Board should review the proposed rule. Dr. Honeycutt asked if members had questions about the agenda or the review process. There were no questions so Dr. Honeycutt called for public comments.

Public Comments

Dr. Honeycutt called individuals on the list of public speakers⁴ to provide oral comments. He asked each speaker to limit the comments to three minutes.

Hayden Hashimoto, Clean Air Task Force

Hayden Hashimoto of the Clean Air Task Force raised concerns about EPA's proposed rule. He commented that proposed rule downplayed benefits, exaggerated costs, and could generally thwart Clean Air Act protections. In particular, he indicated that the EPA was seeking to disallow the consideration of co-benefits. He noted strong support for the consideration of co-benefits from economists at Resources for the Future (RFF). He also noted that, in its report on EPA's proposed Mercury and Air Toxics Standards (MATS) Rule, the SAB had recommended including co-benefits in benefit-cost analysis. He commented that EPA's proposed benefit-cost rule would require multiple presentations of benefit cost analysis (BCA) and require consideration of a scenario that excluded co-benefits, thus offering a way to devalue co-benefits. He noted that, while dose-response relationships must be causal or likely causal under the proposed rule, no such strict criteria were applied to the estimation of costs in the proposed BCA rule. Mr. Hashimoto also indicated that the proposed requirements concerning concentration-response functions (C-R) were confusing. He commented that EPA staff should have the discretion to evaluate the available C-R functions. Written comments from Mr. Hashimoto may be found on the SAB meeting webpage.⁵

Jason Schwartz, Institute for Policy Integrity (IPI), New York University (NYU)

Jason Schwartz of the Institute for Policy Integrity, New York University Law School commented that the proposed rule failed its own standards by failing to demonstrate its own need. He commented that the proposed rule did not assess the significance of the problem it supposedly addressed. He noted that the proposed rule did not explain why codification of best practices was necessary given the current revision and review of EPA's *Guidelines for Preparing Economic Analyses*. He commented that the rule failed its own standards for assessing costs and benefits. He also commented that, while EPA claimed the proposed rule would not have an economic effect on regulated entities, there was an administrative burden. He raised questions about the alleged transparency benefit of the rule and obscuring or delegitimizing co-benefits. Mr. Schwartz commented that EPA's attempt in the proposed rule to undermine co-benefits was a departure from best practices. Mr. Schwartz cited an August 4, 2017 article in *Science* by McGartland, Revesz, and others that indicated the best quantitative weight for uncertain health effects was not zero. Mr. Schwartz submitted a link to the article as a written comment.⁶ Mr. Schwartz also indicated that the proposed rule reprised EPA's transparency rule and he noted objections to that rule. Written comments from Mr. Schwartz may be found on the SAB meeting webpage.⁷

Kevin Bromberg, Bromberg Regulatory Strategy

Kevin Bromberg of Bromberg Regulatory Strategy commented that a binding rule was needed for EPA and other agencies to do their jobs. Mr. Bromberg cited examples demonstrating the

need for binding regulations to require rigorous regulatory impact analyses. He indicated that the EPA's proposed rule would provide a legal impetus for improved BCA. Dr. Richard Williams of the SAB asked Mr. Bromberg to submit examples of problems concerning regulatory analyses.

Dr. Honeycutt thanked members of the public for their comments and indicated that the Board would next hear a presentation from EPA on the proposed rule.

EPA Remarks

Kelley Raymond, Senior Policy Advisor, EPA Office of Air and Radiation

Ms. Kelley Raymond of EPA's Office of Air and Radiation said the purpose of the proposed rule was to ensure that regulatory analyses were conducted in a consistent and transparent manner. She noted that EPA was sued on nearly 100% of all major rules and thus the proposed rule, codifying the process of BCA, was needed to provide greater consistency and transparency in the process by which the Agency promulgated rules.

Elizabeth Kopits, National Center for Environmental Economics (NCEE)

Dr. Elizabeth Kopits of EPA's National Center for Environmental Economics presented the information shown in the slides posted on the meeting webpage.⁸ She said the proposed rule established procedural requirements for BCA. She indicated that whether and how the Agency uses the information that stemmed from this process would still be governed by the relevant statutes. As shown in the slides, the proposed rule has three requirements:

1. It requires the Agency to prepare a BCA for all significant Clean Air Act (CAA) proposed and final regulations. Dr. Kopits noted that EPA already does this for all economically significant regulations pursuant to Executive Order 12866. The proposed rule codifies this practice and requires that EPA prepare formal BCA for other rules that meet the definition of "significant" (although that is undefined). Other rules may be deemed "significant" for policy reasons.
2. It requires adherence to best practices for the development of BCA. Proposed best practices are consistent with EPA's guidelines for conducting economic analysis and Office of Management and Budget (OMB) Circular A-4. The proposed rule also states that risk assessments should follow best methodological practices for risk characterization/assessment.
3. It requires a transparent presentation of BCA results in the rule preamble. The preamble must include a section that contains a summary presentation of the overall BCA results; an additional reporting of the public health and welfare benefits that pertain to the specific objectives of the CAA provision under which the rule is promulgated; and a transparent presentation of how specific costs contemplated in the CAA provision relate to total costs.

Dr. Kopits indicated that in the proposal, EPA had requested additional comment on the following topics: specifying how BCA results should inform regulatory decisions; applicability

of the proposed rule; additional best practices; additional presentation requirements to increase transparency; and retrospective analysis.

With respect to coordinating the proposed BCA rule with EPA's update of the *Guidelines for Preparing Economic Analyses*, Dr. Kopits noted that the *Guidelines* provided greater detail than the proposed rule but the proposed requirements pertaining to conducting BCA were consistent with the current iteration of the *Guidelines* and a draft update that was under SAB review.

Al McGartland, EPA National Center for Environmental Economics (NCEE)

Dr. Al McGartland, Director of EPA's National Center for Environmental Economics stressed that EPA will ensure that consistency is maintained as both the *Guidelines* are updated and the BCA rule is finalized. He said NCEE was anxious to receive the comments of the SAB Economic Guidelines Review Panel and stressed the importance of not getting conflicting advice from the SAB on this proposed rule.

SAB members asked questions and provided comments to the EPA speakers. A member called attention to the proposed rule language on dose-response functions. He noted that the BCA rule specified location criteria that must be met if studies were to be used by EPA (i.e., the location of a study must be consistent with what's needed for EPA's purposes). The member questioned whether the proposed BCA rule would rule out EPA's use of epidemiological studies conducted in Canada for U.S. purposes. The member questioned why EPA would choose to codify such a practice rather than letting scientists present their arguments and decide using scientific criteria.

Dr. Neal Fann of the Office of Air and Radiation said the language in the proposed rule reflected EPA's understanding of best practices for air pollution regulatory analyses. Dr. Fann said EPA had not traditionally used Canadian studies of the health impacts of air pollution, partly out of concern for differences in access to health care.

A member asked EPA staff how the Agency would address situations in which there was a low probability of occurrence of potentially catastrophic events. As an example, he mentioned events that might occur as a result of sea level rise. He questioned how benefits and costs would be handled in such situations. Ms. Raymond replied that EPA did not have the authority to promulgate a rule specific to sea level rise without statutory change.

A member asked why EPA's internal controls were not sufficient to ensure the consistent and transparent use of best practices. Ms. Raymond replied that the proposed rule was needed to provide regulatory consistency.

A member posed the hypothetical case of a regulatory intervention that had a 50% chance of producing \$2 trillion dollars of benefits and a 50% of producing a negative benefit and asked how EPA's guidance would handle such a scenario of lumpy risks like those associated with sea level rise. Ms. Raymond again replied that EPA is not statutorily enabled to promulgate a climate change rule. Dr. McGartland responded, indicating that EPA treated uncertainty in a case-specific manner, using hundreds of thousands of Monte Carlo analysis with expert judgements about different outcomes. He noted that in EPA's regulatory impact analyses on air quality, EPA uses epidemiological information where there had been a "causal" or "likely causal" finding with

respect to the pollutant being regulated. Dr. McGartland acknowledged that the Administrator's judgment in weighing risks and the law were instrumental in making final decisions.

In response to a question from a member about job losses that may result from environmental regulation, Dr. McGartland indicated that the revised *Guidelines* contained a new section on employment effects and health consequences. In response to a question from another member, Dr. Kopits said the proposed rule would not specify the exact model to be used in calculating the Social Cost of Carbon. Instead, the proposed rule required transparency in all analytic assumptions and model choices.

A member questioned whether the rule would preclude EPA from using information that did not go through peer review. Dr. Fann replied that EPA used peer reviewed epidemiological studies and noted that this was consistent with the guidance in EPA's own *Guidelines* and Circular A-4. A member asked why EPA thought there was a need to address the co-benefits question in the proposed rule. Ms. Raymond said the Agency would continue assessing all co-benefits but it would separate out co-benefits in an effort to be transparent.

In response to a question from another member about why the public commenters were concerned that the rule would devalue co-benefits, Ms. Raymond indicated that the rule merely disaggregated co-benefits from benefits derived directly from the pollutant being regulated. She noted that the rule did not prohibit the consideration of co-benefits.

A member questioned how the rule would affect benefit transfer, given the language requiring the matching of the pollutant being analyzed to the study from which information is drawn. Dr. McGartland said he interpreted the language in the proposed rule as referring to risk assessment, not benefits transfer.

In response to a question from another member about the geographic restrictions on epidemiological studies, Dr. Fann said EPA's goal was always to select concentration-response parameters that were appropriately matched to a location. He also noted that EPA took into account the underlying susceptibility of the population when calculating risks.

A member asked why EPA was relaxing the \$100 million threshold for requiring BCA. Dr. Kopits responded, indicating that there were already cases where BCAs were performed when the \$100 million threshold was not met.

A member asked how the proposed rule would affect the analysis of hazardous air pollutants, which had less available data than National Ambient Air Quality Standard (NAAQS) pollutants. Dr. Fann replied that for hazardous air pollutants, toxicological evidence was used for the analysis, often drawing dose-response parameters from animal rather than human data.

The member asked whether the proposed rule applied to hazardous air pollutants where the issues of causality, epidemiology, study matching, and population matching were very different from criteria pollutants. The member said he thought the SAB should consider whether the language in the proposed rule was appropriate for all of the different kinds of scientific data that might be used, especially given that hazardous air pollutants had different databases and review processes. Another member noted that economists could not do much analysis with only a

reference dose or reference concentration. He noted that, to calculate benefits, a slope was needed.

Dr. Honeycutt thanked EPA staff for their presentations and indicated the SAB would next discuss the topics to be addressed by the SAB in its review of the proposed rule.

SAB Discussion of Topics to be Considered in the Review of the Proposed Rule

Dr. Honeycutt indicated that an SAB workgroup had already discussed whether to review the proposed rule and had developed a list of seven potential charge questions⁹ to focus the Board's review. The charge questions covered topics in different sections of the rule. Dr. Honeycutt indicated that he wanted to consider these topics, decide which charge questions should be addressed in the SAB review, and then have the Board discuss the charge questions.

Dr. Honeycutt noted that the first potential charge question focused on the definitions in the proposed rule. He asked Drs. Graham and Williams to offer an opinion on whether the SAB needed to weigh in on the definitions. Dr. Graham replied that some of the definitions applied more to risk assessments than BCA. He indicated that for most of the definitions, the EPA's revised guidelines for economic analyses were more specific than the proposed BCA rule.

Mr. David Dunlap, Deputy Assistant Administrator in the Office of Research and Development, cautioned the SAB against providing guidance that would conflict with advice that would be coming from the SAB Economic Guidelines Review Panel later in the year.

Dr. Graham said the Economic Guidelines Review Panel was not addressing the topic of selecting epidemiological studies that found "causal" versus "likely causal" dose-response relationships. Drs. Graham and Williams suggested the SAB deliberate and respond to charge question 4 on health endpoints and question 5 on characterizing uncertainty. Other members offered comments on the charge questions. Dr. Honeycutt summarized the discussion by saying he thought the SAB should respond to questions 1 (proposed rule section on definitions), 3 (proposed rule section on estimating benefits), 4 (proposed rule section on health endpoints) and 5 (proposed rule section on characterizing uncertainty). There was no disagreement from SAB members. Dr. Honeycutt then called for SAB discussion of the topics addressed in charge questions 3, 4, and 5.

Discussion of Charge Question 3 - Section 83.3(a)(7) on estimating benefits (85 FR 35626)

The Board discussed Section 83.3(a)(7) of the rule. This section addressed estimating benefits. Dr. Cox suggested the SAB should recommend that "EPA use causal analysis to draw causal conclusions." He viewed the current approach used to estimate the benefits of regulating criteria pollutants as insufficient because the studies often showed association not causation. Dr. Barton indicated that the SAB should not recommend restricting EPA to a certain kind of analysis. Dr. Cox modified his suggestion to say that EPA should clearly indicate what is meant by "causality" and BCA should use techniques appropriate to "interventional causation," (i.e., whether changing the level of the pollutant in question will change the impact of concern)

Dr. Barton again warned against recommending methodologies that excluded the full range of mechanistic biology information that was relevant to the issue at hand. He noted that much of the criticism of statistical causation could be addressed with lab data that explained how a chemical caused a particular biological effect.

Dr. Honeycutt asked Drs. Barton, Cox, and Richard Smith to work on developing a draft text addressing charge question 3. A member indicated that it was important to consider a “weight of evidence” approach. Other members spoke about the need to consider all data.

Discussion of Charge Question 4 - Section 83.3(a)(9) on health endpoints (85 FR 35626)

The Board discussed Section 83.3 (a)(9) of the rule. This section addressed health endpoints. A member noted that some of the bullets in the charge question had already been discussed (e.g., study location and study population characteristics) but his overarching concern was why all these issues should be codified into regulation when it was normally left to scientific review. Another member agreed and commented on the difficulty of finding precise studies that matched all the characteristics of the chemical being considered for regulation (e.g., benzene). Another member commented that she agreed these issues should be left to risk assessors.

Dr. Honeycutt cautioned SAB members against crossing over into policy. Ms. Raymond asked SAB members to provide advice that would be useful in improving the rule. A member asked whether the language in the proposed BCA rule on concentration-response functions was consistent with other EPA guidance. Another member reiterated her opinion that best practices need not be codified in federal law. A member stressed that, for many chemicals, the proposed rule language stating EPA “must characterize ...” was unrealistic. A member offered a criticism of the particulate matter (PM) literature where small p values were found in two-thirds of the studies.

Discussion of Charge Question 5 - Section 83.3(a)(10) on characterizing uncertainty

The Board discussed Section 83.3(a)(10) of the proposed rule. This section addressed characterizing uncertainty. A member suggested that the SAB recommend using a “value of information” approach for situations with high uncertainty (i.e., EPA could decide to invest more resources and collect more information while trying to understand how and when to regulate). A member reminded other SAB members that they needed to make sure there was no gap between the SAB’s advice on the BCA rule and its advice on the revised *Guidelines*.

Dr. Honeycutt thanked SAB members for discussing the charge question topics and assigned members to take the lead in developing draft text for the SAB report. He asked Drs. Williams and Graham to work on charge question 1 (definitions) and asked Dr. Williams to be the lead writer. For question 3, (estimating benefits), Dr. Honeycutt asked Drs. Barton, Cox, Smith, Phalen, Bennett, White and Beck to develop draft text and he asked Dr. Barton to be the lead writer. For question 4 (health endpoints), he asked Drs. Smith, Barton, Martin, White, Marty and Parkerton to develop the report text and asked Dr. White to be the lead writer. For question 5 (characterizing uncertainty), he asked Drs. Wilcoxon, Graham and Williams to develop the text and asked Dr. Wilcoxon to be the lead writer.

Dr. Honeycutt then called for discussion of other issues that should be addressed in the SAB report. A member indicated that he was uncomfortable with the proposed rule text on Confidential Business Information (CBI) and Personally Identifiable Information (PPI). Another member commented that he was surprised by Dr. Fann's comment that EPA used coefficients published in the literature without reviewing data sources that underpin those studies. A member questioned whether EPA was contradicting its proposed science and transparency rule by saying that the SAB would make the underlying inputs available while protecting CBI and PPI. Dr. Honeycutt asked Dr. Barton to take the lead on drafting comments for the SAB to consider on this subject.

A member said he thought the rule could create potential bureaucratic and legal problems and extra work that diverted from attention from the sorts of scientific judgments that should rest with scientists. Another member countered by saying that the quality of the benefit-cost analysis was related to the chance of surviving a lawsuit. The first member said he thought the SAB should ask EPA to consider how the proposed BCA rule would affect the length of time needed to complete assessments. A member commented that he did not think it was the SAB's role to question EPA on how the BCA rule would complicate matters and increase the time spent on the regulatory process.

A member pointed out that the criteria in Section 83.3(a)(10) on health endpoints were not realistic and the SAB should comment on the extent to which it was feasible to meet these criteria. Dr. Honeycutt then asked Dr. Doering to join the group on health endpoints to address this issue.

A member questioned how EPA's revision of the human health risk assessment guidelines was connected to the BCA rule and suggested that this be discussed in the SAB report. Another member agreed that the SAB should comment on the risk assessment issues.

Closing Remarks

There were no further comments so Dr. Honeycutt thanked SAB members for participating the meeting and summarized the next steps and action items. Dr. Honeycutt asked members to send any additional comments in response to the charge questions to the DFO by August 18, 2020. He indicated that the SAB members and lead writers assigned to develop responses to each of the charge questions would send write-ups to the DFO for incorporation into a draft report. He noted that the DFO would send the draft report to all Board for discussion on the next meeting to be held on September 15, 2020. Dr. Honeycutt again identified the SAB members and lead writers assigned to address each charge question:

Question 1: Drs. Williams (lead writer), Graham

Question 3: Drs. Barton (lead writer), Cox, Phalen, Smith, White, Bennett, Beck

Question 4: Drs. White (lead writer), Richard Smith, Barton, Martin, Parkerton,
Marty

Question 5: Drs. Wilcoxon (lead writer), Graham, Doering, Williams

Meeting Adjourned

Dr. Armitage thanked members for their participation and adjourned the meeting at approximately 4:45 pm (Eastern Time).

Respectfully Submitted:

Certified as Accurate:

/s/

/s/

Dr. Thomas Armitage
Designated Federal Officer

Dr. Michael Honeycutt
Chartered SAB Chair

November 30, 2020

Date

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by committee members during the course of deliberations within the meeting. Such ideas, suggestions, and deliberations do not necessarily reflect definitive consensus advice from the panel members. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.

Appendix A: Additional participants (who participated in the meeting via video conference, viewed the meeting via webcast, or the requested the call-in number to listen via telephone)

Name	Affiliation
Lea Anderson	EPA
David Bael	Minnesota Pollution Control Agency
Kevin Bromberg	Bromberg Regulatory Strategy
Elizabeth Chan	EPA
Daniel Conrad	EPA
David Conrad	EPA
Chris Dockins	EPA
David Dunlap	EPA
Neal Fann	EPA
Char Fawkes	Minnesota Pollution Control Agency
Lynn Flowers	EPA
Art Fraas	Resources for the Future
Timothy French	Truck and Engine Manufacturers Association
Teresa Gorman	LPI
Charles Griffiths	EPA
Alex Guillen	Politico
Zack Hale	S&P Global Market Intelligence
Hayden Hashimoto	Clean Air Task Force
Gloria Helfand	EPA
Sean Helle	Earthjustice
Sophia Hill	M.J. Bradley & Associates
Shaunta Hill-Hammond	EPA
Leif Hockstad	EPA
Ann Jaworski	Environmental Law and Policy Center
Ali Kamal	EPA

Name	Affiliation
Brian Kettl	
Elizabeth Kopits	EPA
Amy Lamson	EPA
Matthew Marks	EPA
Carl Mazza	EPA
Emily McAuliffe	U.S. House of Representatives Science Committee
Al McGartland	EPA
Julie McNamara	Union of Concerned Scientists
Lori Miyasato	California Air Resources Board
Jon Monger	House Committee on Energy and Commerce
Ken Munis	EPA
Paul Noe	American Forest and Paper Association
Sara Palasits	U.S. House of Representatives Science Committee
Sean Paul	EPA
Tony Pendola	NC SBEAP
Kelley Raymond	EPA
Sean Reilly	E&E News
Cindy Roberts	EPA
Dave Rostker	U.S. Small Business Administration
Karyn Schmidt	American Chemistry Council
Jason Schwartz	Institute for Policy Integrity, New York University
John Shoaff	EPA
Gautam Srinivasan	EPA
Melissa Sullivan	EPA

Name	Affiliation
Janie Thompson	U.S. House of Representatives Science Committee
Lisa Thompson	EPA
Robert Wayland	EPA
Darryl Weatherhead	EPA
Chad Whiteman	U.S. Chamber of Commerce

Materials Cited:

All meeting materials are available on the SAB website (<http://www.epa.gov/sab>) at the page for the August 11, 2020 meeting. The direct web link is:

<https://yosemite.epa.gov/sab/sabproduct.nsf/a84bfee16cc358ad85256ccd006b0b4b/686212a2e0b35517852585ac004c3aa6!OpenDocument&Date=2020-08-11>

¹ SAB Roster

² Agenda

³ A Proposed Rule Titled "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process."

⁴ Registered Public Speakers (updated August 11, 2020)

⁵ Comments from Hayden Hashimoto, Clean Air Task Force

⁶ Additional Comments from Jason Schwartz, Institute for Policy Integrity, New York University School of Law, August 11, 2020

⁷ Comments from Jason Schwartz, Institute for Policy Integrity, New York University School of Law

⁸ EPA Presentation - Overview of EPA's Proposed Rule, "Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process"

⁹ Charge for Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process - Advice and Comment on the Proposed Rule