



E. SCOTT PRUITT  
ADMINISTRATOR

May 23, 2018

Louis Anthony Cox, Jr., Ph.D.  
Chair  
Clean Air Scientific Advisory Committee  
Science Advisory Board  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

Dear Dr. Cox:

I thank you and the members of the Clean Air Scientific Advisory Committee's Sulfur Oxide Panel for your comments on the U.S. Environmental Protection Agency's *Risk and Exposure Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides, External Review Draft* (draft REA) and *Policy Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides, External Review Draft* (draft PA). My staff and I appreciate the detailed review and advice provided by the panel during the public meeting held on September 18-19, 2017, public teleconference on April 20, 2018, and in your letters dated April 30, 2018.

In the final REA and final PA, issued on May 9, 2018, the EPA fully considered the panel's comments and recommendations. We will be transmitting the final REA and final PA to the Science Advisory Board's staff office, along with a memorandum highlighting key changes made in each document in response to comments from the panel.

Again, my thanks to you and the members of the panel for your efforts in support of the EPA's review of the primary national ambient air quality standards for sulfur oxides.

Respectfully yours,

A handwritten signature in black ink that reads "E. Scott Pruitt". The signature is stylized and includes a long horizontal flourish extending to the right.

E. Scott Pruitt



**E. SCOTT PRUITT**  
**ADMINISTRATOR**

May 23, 2018

Ana Diez Roux, M.D., Ph.D.  
Immediate Past Chair  
Clean Air Scientific Advisory Committee  
Science Advisory Board  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D.C. 20460

Dear Dr. Roux:

I thank you and the members of the Clean Air Scientific Advisory Committee's Sulfur Oxide Panel for your comments on the U.S. Environmental Protection Agency's *Risk and Exposure Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides, External Review Draft* (draft REA) and *Policy Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides, External Review Draft* (draft PA). My staff and I appreciate the detailed review and advice provided by the panel during the public meeting held on September 18-19, 2017, public teleconference on April 20, 2018, and in your letters dated April 30, 2018.

In the final REA and final PA, issued on May 9, 2018, the EPA fully considered the panel's comments and recommendations. We will be transmitting the final REA and final PA to the Science Advisory Board's staff office, along with a memorandum highlighting key changes made in each document in response to comments from the panel.

Again, my thanks to you and the members of the panel for your efforts in support of the EPA's review of the primary national ambient air quality standards for sulfur oxides.

Respectfully yours,

E. Scott Pruitt



May 9, 2018

**MEMORANDUM**

**SUBJECT:** Release of the Final *Policy Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides* and Response to CASAC Comments on the External Review Draft of this Document

**FROM:** Erika Sasser, Director  
Health and Environmental Impacts Division  
Office of Air Quality Planning and Standards

**TO:** Aaron Yeow  
Designated Federal Officer  
Clean Air Scientific Advisory Committee  
EPA Science Advisory Board Staff Office

Attached is the final document, *Policy Assessment for the Review of the Primary National Ambient Air Quality Standard for Sulfur Oxides* (PA). The PA has been prepared by staff in the Environmental Protection Agency's (EPA) Office of Air Quality Planning and Standards (OAQPS) as part of the ongoing review of the primary National Ambient Air Quality Standard (NAAQS) for sulfur oxides (SO<sub>x</sub>). The draft PA was released in August 2017 and was reviewed by the Clean Air Scientific Advisory Committee (CASAC) Sulfur Oxides Panel at a public meeting held on September 18-19, 2017. The Panel held a follow-up teleconference on April 20, 2018 and provided its advice to the EPA Administrator in a letter dated April 30, 2018.

The PA reflects consideration of comments from the Panel, as well as public comments, on the draft PA. Key changes include:

- Updated characterization of current air quality, including use of most recently available monitoring data for SO<sub>2</sub> concentrations in ambient air (Chapter 2);
- Augmented description of uncertainties related to potential modification of SO<sub>2</sub> effects by copollutants, such as inorganic sulfur-containing particulate compounds (section 3.2.1.4);
- Expanded discussion of population subgroups with elevated prevalence of asthma, related uncertainties in the health effects evidence and public health implications (sections 3.2.1.4, 3.2.1.5 and 3.4);
- Updated presentation and discussion of REA results, based on revisions to the quantitative analyses in the final REA, in consideration of CASAC comments on the draft REA;

- Added information about the role of the air quality scenario and case studies assessed in the quantitative assessment and expanded discussion of potential public health implications of the REA estimates (sections 3.2.2.2 and 3.2.2.4);
- Incorporation of summaries of CASAC advice, including a subsection in Chapter 3, based on the Panel's review of the draft PA (section 3.2.3);
- Expanded discussion on the four basic elements of the standard in Chapter 3 (section 3.3.3); and
- Updated discussion of areas of uncertainty in the evidence, data gaps and areas for future research that could potentially reduce the various uncertainties for future NAAQS reviews (section 3.4).

I am requesting that you forward this memorandum and the attached electronic file containing the PA to members of the Panel. This document is also available on the EPA's website at <https://www.epa.gov/naaqs/sulfur-dioxide-so2-primary-air-quality-standards>.

Please accept my gratitude for the advice the Panel has provided throughout our review of the primary SO<sub>2</sub> NAAQS. Should you have any questions regarding the final PA, please contact Dr. Nicole Hagan (919-541-3153; [hagan.nicole@epa.gov](mailto:hagan.nicole@epa.gov)).

#### Attachment

cc: Thomas Brennan, SAB, OA  
Karen Wesson, OAQPS/HEID  
Bob Wayland, OAQPS/HEID  
Nicole Hagan, OAQPS/HEID  
Deirdre Murphy, OAQPS/HEID  
Stephen Graham, OAQPS/HEID  
Richard Wayland, OAQPS/AQAD  
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