

**Summary Minutes of the  
U.S. Environmental Protection Agency  
Clean Air Scientific Advisory Committee (CASAC) Ozone Review Panel for the  
Reconsideration of the 2008 NAAQS  
Public Teleconference  
March 3, 2011  
10:00am – 1:00pm**

**ATTENDANCE**

CASAC Panelists:

Dr. Jonathan Samet, Chair  
Dr. Kathy Weathers  
Dr. Chris Frey  
Mr. George Allen  
Dr. Helen Suh  
Dr. Joe Brain  
Dr. Charlie Plopper  
Dr. Fred Miller  
Dr. Phil Hopke  
Dr. Rogene Henderson  
Dr. John Balmes  
Dr. Lianne Sheppard  
Dr. Sverre Vedal  
Dr. Morton Lippmann  
Dr. James Gauderman  
Dr. James Ultman  
Dr. Michael Kleinman  
Dr. Maria Morandi  
Dr. Barbara Zielinska  
Dr. Allen Legge

Other EPA Staff:

Margaret Zawacki  
Rudolph Kapichak  
Dave Sosnowski  
Monica Silver  
Barbara Buckley  
Lydia Wegman  
John Vandenberg  
Lisa Vinikoor-Imler  
Christine M. Zachek  
Susan Stone  
Karen Martin  
Lydia Wegman

Tom Long  
Doug Johns  
Steve Dutton

Public:

Leon Ashford, Oklahoma Department of Environmental Quality  
Bryan Baldwin, Southern Company  
Deborah Shprentz , American Lung Association  
Chris Rabideau, ChevronCalifornia Dump Truck Owners Association  
Gabriel Nelson, Energy and Env. News  
Nicholas Moustakas, Health Effects Institute  
Stuart Parker, Clean Air Report  
Ed Hopkins, Sierra Club  
Jon Heuss, Air Improvement Resource  
Michelle Morgan, Louisiana Department of Environmental Quality  
Frank M. Forsgren, Nevada Division of Environmental Protection  
George Wolff, Alliance of Auto Manufacturers  
Mark Jones, NMED Air Quality Bureau  
Scott DiBiase, Pinal County Air Quality  
Jacqueline Smith, Harris County PHES  
Linda Wilson, NYS Office of the Attorney General  
Bruce Pendery, Wyoming Outdoor Council  
Carl Selnick, San Diego County Air Pollution Control District  
Leon Ashford, Oklahoma DEQ  
Dave Wolkins, Indiana State Representative  
Lou Pocalujka, CMS Energy  
Jack Evans, Miami County Commissioner  
Jodie Hickman, South Dakota Cattlemen's Association  
Michael Held, South Dakota Farm Bureau  
Annabeth Reitter, New Page Corporation  
Anya Caudill, Washington Department of Ecology  
Jennifer Stenger, Progress Energy  
Cindy Langworthy, Hunton & Williams LLP  
Larry Gephart, ExxonMobil Biomedical Sciences, Inc  
Blake Hardwich, Manufacture Alabama  
Julie Goodman, Gradient  
Harvey Richmond, Abt Associates  
Andrew Childers, Daily Environment Report  
Larry Gephart, ExxonMobil Biomedical Sciences, Inc  
Jody Hickman, Cattlemans' Association  
Vivian Aucoin, Louisiana Department of Environmental Quality  
Katrina Curry, Commonwealth Foundation  
Jennifer Stenger, Progress Energy  
Linda Wilson, New York Attorney General's Office  
Steve Gouze, California Air Resources Board  
Katrina Curry, Commonwealth Foundation

James Enstrom, University of California, Los Angeles  
Sue Linkston , Oregon Department of Environmental Quality  
Elena Kraft, Environmental Defense Fund  
Kevin Stewart, American Lung Association of the Mid-Atlantic  
Gail Cook, New Mexico Air Quality  
Jim Griffin, American Chemistry Council  
Alan Leston, American Petroleum Institute  
Bruce Pendery, Wyoming Outdoor Council  
Julie Goodman, Gradient  
Frank Scott, National Petroleum and Refiners Association  
Frank Forsgren, Nevada Division of Environmental Protection  
George Wolff, Alliance of Automobile Manufacturers  
Rick Catlin, Nevada County Commissioner  
Dan Jaffe, University of Washington - Bothell  
Jon Heuss, Air Improvement Resource  
Alisa Meads, National Association of Manufacturers  
Carl Selnick, San Diego County Air Pollution Control District  
Doug Schneider, Washington Department of Ecology  
Anya Caudill , Washington Department of Ecology  
Lou Pocalujka, Consumers Energy  
Cathy Kalisz, American Petroleum Institute

Purpose: To discuss EPA's charge questions on the ozone reconsideration and deliberative draft letter.

Designated Federal Officer: Dr. Holly Stallworth, Designated Federal Officer

Meeting Materials and Meeting Webpage:

The materials listed below may be found on the meeting webpage at:

<http://yosemite.epa.gov/sab/sabproduct.nsf/bf498bd32a1c7fdf85257242006dd6cb/1df99ba3bfc401b88525781d006d0c7e!OpenDocument&Date=2011-03-03>

- Agenda
- Federal Register Notice
- Public Comments
- Deliberative Draft Letter of 3-1-11

Meeting Summary

The discussion followed the plan presented in the meeting agenda.

**THURSDAY, MARCH 3, 2011**

Dr. Stallworth convened the meeting and explained that CASAC operates under the Federal Advisory Committee Act.

## **PUBLIC COMMENTS**

Alicia Meads of the National Association of Manufacturers presented comments that emphasized the price effects of tighter ozone regulations, particularly the impact on energy prices and the manufacturing sector. Richard Smith of the University of North Carolina emphasized the confounding effects of particulate matter on ozone as well as the deficiencies of NMMAP data. Stephen Cole, of Cole Law Firm, challenged the assumption of ozone's effects of mortality, citing two studies that did not find a correlation. Alan Leston, on behalf of the American Petroleum Institute, described shortcomings in the Federal Equivalent Method (ultraviolet photometric technique) for measuring ozone concentrations. Charlotte W. Collins, Asthma and Allergy Foundation of America, said an 8 hour standard of 60 ppb would avoid 46,000 asthma attacks per year. Ms. Collins also emphasized the economic burden of respiratory illnesses in terms of lost wages for patients, lost productivity, medical costs (hospital admissions, drugs, emergency rooms), etc. Elena Craft of the Environmental Defense Fund stressed the multi-step CASAC review of EPA's ozone assessments that has already occurred, while listing the size of the U.S. population at risk for respiratory illnesses and thus ozone exposure.

Ed Hopkins of the Sierra Club criticized the argument that EPA should wait and set a new standard after the new NAAQS review. John Dunn, Heartland Institute of Chicago, and the American Council on Science and Health, called on EPA to rescind all ozone regulations. Kristen Welker-Hood, Physicians for Social Responsibility, spoke about her personal experience as a nurse caring for children who struggle to breathe on bad ozone days. Kevin M. Stewart, American Lung Association of the Mid-Atlantic, said CASAC's proposed range is, if anything, too lax a range for the Administrator to consider because adverse health consequences are shown to occur from one end to the other. Blake Hale Hardwich, Manufacture Alabama, emphasized the job losses that would occur as a result of a tighter standard. Mike Wang of the Western States Petroleum Association said that western states would not be able to meet a tighter standard and thus the incremental benefit of tightening the standard was negligible. Katrina Currie, Commonwealth Foundation, said 21 Pennsylvania counties will not be able to meet the new standard and that the costs of meeting the standard would be too high for a state already struggling with a deficit. Greg Scott, National Petrochemicals and Refiners Association, said recent studies support retaining the current standard and that we have not yet realized much of the benefit of lower sulfur fuels introduced over the past decade.

Kathleen Sgamma of the Western Energy Alliance criticized the Adams 2006 study, pointing out that only 2 of the 30 subjects in the Adams study experienced statistically significant decreased lung function. Anthony Holt, County Executive for Sumner County, Tennessee, said his county can't meet current standards due to a coal-fired plant nearby and that tighter standards would deter industry from locating there. Rick Catlin, Catlin Engineers & Scientists and County Commissioner, New Hanover County Commissioners, North Carolina, asked EPA to give ample notice and time to meet the new standard without slowing the economic recovery. Jim Griffin of the American Chemistry Council said that 75 ppb will continue to provide ample health protection for

the American public and that the Adams studies showed no significant effects below 80 ppb. Christopher Sutherland, speaking as a small business person, said a tighter standard would cost Missouri \$3 – 5 billion dollars annually and expressed a concern about job losses that would result from a tightened standard. Dan Jaffe, of the University of Washington, described higher ozone levels found in mountain sites in Oregon while suggesting that the monthly mean concentration was not the most appropriate metric for EPA's analysis. Erica Frank, Past President, Physicians for Social Responsibility described her experiences as a physician specializing in preventive medicine, saying the costs of not cleaning the air are too high.

#### **PANEL DISCUSSION:**

In references to Charge Question 4, the Panel discussed the statistically significant deficit in ozone-induced FEV1 after 6.6 hours based on the distribution of the decrements. It was pointed out that in the EPA reanalysis of the Adams study, EPA controlled for both Type 1 and Type 2 errors. Several panelists commented that study results were based on healthy subjects not diseased individuals because of the ethics of exposing diseased individuals to increased ozone. It was also pointed out that the Adams study showed no evidence of a threshold below which people are not affected.

In reference to Charge Question 5, panelists discussed the increased difficulty for asthmatics with FEV1 greater than 10%. It was suggested that 60 ppb was the greatest lower bound. The suggestion was made to add a sentence emphasizing the importance of both chamber studies and epidemiological studies and that judgment was still needed. Another suggestion was made to point out that a large segment of the population already has compromised pulmonary function.

In reference to Charge Question 6, panelists agreed that their confidence in the causal relationship between ozone and health effects did not change over the range being considered (60 – 70 ppb). One panelist suggested that uncertainty at the lower ranges comes from the experimental data. Another panelist said the width of the distribution of response is wider at lower levels. Another panelist raised the issue of other photochemical oxidants and their exacerbating role and whether the co-pollutant problem should be raised in the context of this charge question.

In reference to Charge Question 7, Table 1 in the Proposed Rules (which presented number and percentage of children with exposure at three ozone benchmark levels) was thought to be reasonable. Panelists discussed how to communicate the fact that the contribution to the overall public health impact comes at lower levels due to greater numbers of people being exposed at lower levels.

In reference to Charge Question 8, there was some confusion between numbers of exposures at lower ozone levels. Panelists discussed the redundancy between Charge Questions 7 and Charge Question 8. Dr. Samet distinguished between the population distribution of exposure, the numbers of people responding and the magnitude of the response. It was pointed out that going from 74 ppb to 64 ppb would reduce the number

of affected children from 340,000 to 180,000. One panelist warned against saying that risk is higher at lower levels due to the confusion that language could create. The suggestion was made to include Table 1 in CASAC's response to Charge Question 7 and Table 2 in Charge Question 8.

One panelist asked whether CASAC should get into issues concerning the policy relevant background. Dr. Samet suggested we acknowledge the broad range of comments received covering issues ranging from economics to policy-relevant background. Dr. Stallworth said this acknowledgement could be written into the revised letter to be discussed on March 23, 2011.

In reference to Charge Question 1, panelists discussed their confidence in the clinical studies and epidemiological studies. It was noted that most of the studies that have influenced conclusions about the proposed range were studies that involved exercise as a necessary factor for revealing adverse responses to ozone. It is also noted that controlled exposure studies usually do not include sensitive and vulnerable populations (SVP) as subjects, making it more difficult to extrapolate results to the SVP population. Should we say something about how acute effects are found in exercising individuals whereas diseased individuals are not likely to be exercising. Panelists discussed how to handle the "margin of safety" issue in the letter to the Administrator given that because of the variations in susceptibility and exposure, there is no level that presents a margin of safety.

A panelist mentioned that when the Clean Air Act was written, there was an assumption of a threshold whereas the ozone data indicate neither the existence of a threshold or zero risk.

Panelists asked whether future Federal Register Notices could urge the public to restrict their comments to topics that fall within CASAC's jurisdiction. Dr. Stallworth said she would check and report back at the next teleconference.

Dr. Samet asked lead discussants to revise their draft responses by Monday, March 7, 2011.

On Behalf of the Committee,  
Respectfully Submitted,

Holly Stallworth, Ph.D. /s/  
Designated Federal Officer

Certified as True:

Jonathan Samet, M.D. /s/  
Chair, Clean Air Scientific Advisory Committee  
Sulfur Oxides Primary NAAQS Review Panel

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 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