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10/03/2003 02:13 AM

To: quality.guidelines@epamail.epa.gov
cc: info@thecogs.org, brad@bradmesser.com, cibolomayor@netzero.com, mriley@gvec.net, forrest.mims@ieee.org
Subject: Information Quality Request

Subj: EPA Information Correction Request
Date: 10/03/2003

Greetings:

This request is submitted under the OFFICE OF MANAGEMENT AND BUDGET "Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies;" Federal Register / Vol. 67, No. 36 / Friday, February 22, 2002.

This request is sent to quality.guidelines@epa.gov, because I have never received a reply from the EPA authors of the report in question.

Please acknowledge and respond to this request as quickly as possible, for some of the information reported herein is needed for a PowerPoint presentation being prepared for a Congressional committee considering amendments to the Clean Air Act.

Please note that I have found numerous errors of fact and/or misleading statements in EPA publications. In the interest of time, I am limiting my request to one key document, "2002 Latest Findings on National Air Quality." If EPA declines to correct the errors, omissions and misleading content of this document, then I will appeal such rejection and request that many more examples of misleading EPA publications also be corrected.

1. THIS REQUEST UNDER THE EPA INFORMATION QUALITY GUIDELINES (IQG) IS SUBMITTED BY:

Forrest M. Mims III
Vice-Chairman, Environmental Science Section
Texas Academy of Science

Guadalupe County representative:
Alamo Area Council of Governments (AACOG) AIR Advisory Committee
AACOG AIR Technical Advisory Committee

Air Quality Advisor
Guadalupe County Commissioners Court

Geronimo Creek Observatory
433 Twin Oak Road
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2. INFORMATION WHICH YOU BELIEVE DOES NOT COMPLY WITH THE OFFICE OF MANAGEMENT AND BUDGET OR EPA INFORMATION QUALITY GUIDELINES, INCLUDING SPECIFIC CITATIONS TO THE INFORMATION AND TO THE GUIDELINES, IF APPLICABLE.

The EPA report "2002 Latest Findings on National Air Quality" includes important errors and omissions. Some of these are discussed in detail in my report below.

3. EXPLANATION OF HOW THE INFORMATION DOES NOT COMPLY WITH THE INFORMATION QUALITY GUIDELINES.

The report includes information that is either misleading, erroneous, incomplete, not objective or all the above. Please see my report below.

4. RECOMMENDATION FOR CORRECTIVE ACTION.

The report below lists specific deficiencies in the document. Questions are included to assist EPA staff in correcting the deficiencies.

5. EXPLANATION OF HOW THE ALLEGED ERROR AFFECTS OR HOW A CORRECTION WOULD BENEFIT YOU.

- a. EPA documents are widely used by the media, schools, student science fair projects, and so forth. Elected officials rely on EPA to provide correct, objective, and complete information.
- b. The government air quality committees on which I serve will be far better served if the EPA report is corrected.
- c. Students will gain a much more objective view about air quality if the EPA report is corrected.
- d. Media reporters who lack an environmental background will be much better served if the EPA report is corrected.
- e. The Congressional staff now reviewing HR1891 and various proposed amendments to the

Clean Air Act will be better served by accurate, objective information about air quality.

f. I will need to spend less time explaining the many errors I have found in EPA publications (print and web) if this particular publication is corrected.

My report about deficiencies in "2002 Latest Findings on National Air Quality" is given below the signature block in the form of a previous letter to the EPA that has not yet been acknowledged. .

Please contact me with any questions.

Best regards,

Forrest M. Mims III

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Measurements of and scientific papers about total ozone, total water vapor, solar ultraviolet, aerosol optical thickness and many other Sun and sky parameters since 1988.

The letter over the signature block does not necessarily represent the views of any listed organization.

Subj: Problems: "2002 Latest Findings on National Air Quality"
Date: 9/23/2003 12:56:08 PM Central Daylight Time
From: FMims
To: goforth.prudence@epamail.epa.gov
CC: clark.jeff@epamail.epa.gov
CC: anley-mills.melissa@epa.gov

CC: stapleton.richard@epa.gov, info@thecogs.org
CC: cibolomayor@netzero.com, mriley@gvec.net
CC: forrest.mims@ieee.org

Dear Ms. Goforth,

The EPA report "2002 Latest Findings on National Air Quality" has just been received.

I am deeply concerned by important matters that are not mentioned or which are confusing. I discuss some of these below and list questions about each. Please reply at your earliest convenience, as I am preparing a Power Point about these and related matters for a Congressional Committee.

1. AFRICAN AND ASIAN DUST STORMS

Nowhere does the report discuss the significant increase of PM2.5 and PM10 caused by dust from windstorms originating in North Africa and China. I measure dust from Africa and China here every year. If new PM2.5 standards now under consideration by EPA are implemented, these dust storms alone will be sufficient to cause air quality violations during certain times of the year over broad areas of the U.S.

QUESTION: Why is dust from Asia and Africa ignored in the report?

2. DOMESTIC AGRICULTURAL FIRES

The report properly takes Mexico to task for sending us its smoke. Yet nowhere does the report discuss the massive pollution caused by domestic agricultural fires, some of which reaches Mexico. Louisiana alone burns 450,000 acres of sugarcane each fall, which causes massive air pollution regionally. During September 2002, smoke from Louisiana and Arkansas contributed to major air pollution problems across Texas.

QUESTION: Why is domestic agricultural burning ignored in the report?

3. PRESCRIBED FIRES

Nowhere does the report cover the massive air pollution caused by prescribed burns of timber and brush. So far this year alone, the Federal government has intentionally ignited fires that have burned more than 2.6 million acres. These fires release substantial amounts of methyl chloride and methyl bromide, both of which cause depletion of stratospheric ozone. These fires also cause huge violations of PM2.5 and PM10 air quality guidelines. Moreover, ozone precursors in the smoke from prescribed fires and agricultural burns lead to significant ozone production downwind when cloud cover is not present.

QUESTION: Why is the enormous pollution impact of prescribed fires completely ignored in the report?

4. SMOG

The report states:

"Ground-level ozone (the primary constituent of smog) continues to be a pollution problem throughout many areas of the United States."

It is very confusing to the general public to claim that ozone alone is the "primary" ingredient of smog, when NO_x, CO and particulates are also major ingredients of smog.

QUESTIONS: What is the peer-reviewed reference that concludes that ozone is the primary ingredient of smog? Can you change "the primary constituent of smog" to read "a primary constituent of smog"?

5. OZONE FORMATION

The report states:

"Ozone is not emitted directly into the air...."

This incorrect statement is often repeated by journalists who rely on EPA literature. Ozone is directly emitted into the air by various mechanisms, including naturally by lightning and artificially by many kinds of electrical equipment (including laser printers, xerographic copy machines, DC motors with brushes, high voltage electrical discharges, etc.)

QUESTION: Can the EPA support this assertion with a peer-reviewed reference? If not, when will EPA correct this often quoted but incorrect statement?

6. OZONE PHOTOLYSIS

The report continues:

"[Ozone ...] is formed by the reaction of VOCs and NO_x in the presence of heat and sunlight."

This statement suggests that heat is necessary for the photolysis of ozone. Tropospheric ozone is produced by the photolysis by UV-A sunlight of NO₂ into NO and O, the O quickly combining with O₂ to yield O₃. This reaction is only weakly associated with the temperature dependence of the NO₂ absorption coefficient. (See, for example, R. E. Shetter et al., Photolysis Frequency of

NO2: Measurement and Modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI) (Corrected September 9, 2002). <http://acd.ucar.edu/~cantrell/IPMMI%20jNO2.pdf>.)

Ozone is usually higher on warm summer days when the pressure is high and the air is stagnated. These conditions are often associated with an inversion layer, which caps the lower troposphere and allows ozone and other pollutants to increase. However, this phenomenon does not play a direct role in forming ozone.

VOCs are an essential ingredient of ground-level ozone synthesis, and emissions of biogenic VOCs increase exponentially with temperature (to around 40 degrees C). Emissions of VOCs from asphalt increase with temperature, also. However, these and other reactions do not directly form ozone.

QUESTION: Can the EPA support its "heat" assertion with a peer-reviewed reference? If not, will the EPA revise this and other assertions to remove the implication that the synthesis of tropospheric ozone requires heat?

7. NATURAL AND BIOGENIC OZONE PRECURSORS

The report states:

"VOCs are emitted from a variety of sources, including motor vehicles, chemical plants, refineries, factories, consumer and commercial products, and other industrial sources. NO_x is emitted from motor vehicles, power plants, and other sources of combustion."

This paragraph is highly misleading, for it makes absolutely no mention of natural sources of VOCs and NO_x. Plants are major sources of many VOCs, yet the only plants mentioned are "chemical plants." It is important that the general public be aware that natural processes contribute to air quality problems. For example, the regional transport of VOCs from heavily forested regions to regions with major anthropogenic sources of NO_x can lead to high levels of ozone when sunlight is sufficiently intense.

QUESTION: Will the EPA revise the publication to also list biogenic and other natural sources of VOC and NO_x?

8. UV-B

The report states:

"In humans, UV-B radiation is linked to skin cancer, including melanoma, the form of skin cancer with the highest mortality rate."

Melanoma is also linked with UV-A exposure, which is unaffected by the ozone layer. Moreover,

melanoma is linked with sunburn early in life, which completely independent of ozone decline. It is misleading to suggest that ozone decline is leading to increased melanoma.

QUESTION: Can the discussion of melanoma be expanded to better reflect the current state of knowledge?

9. STRATOSPHERIC OZONE DESTRUCTION

The report states:

"In the 1970s, scientists had linked several substances associated with human activities to ozone depletion, including the use of chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl bromide, and methyl chloroform. These chemicals are emitted from commercial air conditioners, refrigerators, insulating foam, and some industrial processes."

Completely ignored are the methyl chloride and methyl bromide emissions from biomass burning of all kinds. It is inappropriate for the same government that endorses or ignites millions of acres of such fires to fail to list them as being ozone depleting.

QUESTION: Will the EPA revise the publication to mention specific byproducts of biomass burning that lead to stratospheric ozone decline?

10. OZONE LAYER

The report states:

"However, the growth of certain plants can be slowed by excessive UV-B radiation."

This is correct but incomplete. I have studied significant reduction in leaf size in cypress trees and radish plants caused by UV-B. Others have found significant improvements in productivity of certain plants that result from the suppression of various diseases by elevated UV-B.

QUESTION: Will the EPA revise the booklet to point out that UV-B is both beneficial and harmful?

SUMMARY:

The booklet has many other deficiencies and omissions. Typos are also present (e.g., both UV-b and UV-B are used). I trust that the brochure will be reviewed by objective scientists before being released to the general public.

Meanwhile, I look forward to receiving answers to my questions.

Best regards,

Forrest

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