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EPA-2151

John Millett/DC/USEPA/US

03/11/2008 06:28 PM

To Alison Davis

cc

bcc

Subject Re: dividing and conquering

History: This message has been forwarded.

okay see below --

there was an unnumbered q below -- but the a below it answers it, so I left it.

~~~~~  
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Alison Davis/RTP/USEPA/US

Alison Davis/RTP/USEPA/US

03/11/2008 05:53 PM

To [REDACTED]@epamail.epa.gov@EPA

cc

Subject dividing and conquering

1st 12 to you

## PRIMARY OZONE STANDARD

### 1. Why is EPA strengthening the primary ozone standard?

A large number of new scientific studies indicate that ozone's effects on human health are more damaging than scientists understood when EPA last revised the ozone standards in 1997.

In addition, studies show that ozone's harmful effects can occur at lower concentrations than previously understood.

#### *More Detail:*

EPA's decision to tighten the ozone standard is based on a large and robust body of scientific evidence – including more than 1700 new studies conducted since the last review.

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Ozone exposure can aggravate asthma, resulting in increased medication use and emergency department visits, and it can increase susceptibility to respiratory infections.

Groups most susceptible and vulnerable to ozone include: people with asthma or other lung diseases, children and adults who are active outdoors, and older adults.

~~The expanded body of scientific and other evidence includes:~~

- ~~(1) clinical studies showing medically significant respiratory responses in healthy people at exposure levels of 0.080 parts per million (ppm) and above, as well as some limited indication of respiratory impacts at lower levels;~~
- ~~(2) clinical and epidemiological evidence indicating that people with asthma are likely to experience larger and more serious effects than healthy people;~~
- ~~(3) epidemiological studies indicating ozone is associated with a wide range of serious health effects, including increased asthma medication use, emergency department visits, hospital admissions, and possibly premature mortality, at and below 0.080 ppm; and~~
- ~~(4) EPA's estimates of the reductions in risk to public health that could be achieved by tightening the standard.~~

**2. Why did you stop at 0.075 ppm? Why didn't you set the standard at 0.070 ppm or lower?**

In the Administrator's judgment, based on the currently available evidence, a standard set at 0.075 ppm would be requisite to protect public health with an adequate margin of safety. This includes protecting the health of sensitive subpopulations such as people with asthma or other lung diseases, children and adults who are active outdoors, and older adults.

A standard set at a level of 0.075 ppm provides a significant increase in public health protection compared to the old standard, which was effectively 0.084 ppm based on rounding.

The new level for the standard, 0.075 ppm, reflects the Administrator's consideration of the full body of evidence available at this time.

*More Detail:*

The most certain evidence of adverse health effects comes from clinical studies, most of which focused on exposures at levels of 0.080 ppm and above. Only one author (Adams) has published results from clinical studies showing potential effects at lower levels, and the Administrator judged this evidence to be too limited to support a focus at these lower levels.

The decision on level was also informed by epidemiological studies which associated ozone exposure with serious health effects such as emergency department visits,

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hospital admissions, and premature mortality. However, significant uncertainties remain regarding what the evidence available from epidemiological studies can tell us about health effects at very low ozone levels.

**3. Why did EPA set a standard that is weaker than EPA's science advisors recommended?**

EPA and CASAC agree on a very important point: the existing (1997) standard is not sufficient to protect public health and needed strengthening. Where we differ is on the level of the standard that is required to protect the public health with an adequate margin of safety.

Current research does not provide evidence of a clear level, a "bright line," below which EPA can be assured that no health effects will occur. In the absence of such a bright line, EPA must rely on a combination of scientific evidence and other information that needs to be considered in making this public health policy judgment.

~~Significant uncertainties remain regarding what the evidence available from clinical studies and epidemiological studies can tell us about health effects at very low ozone levels. Based on consideration of the entire body of evidence and information available at this time, as well as the recommendations of CASAC, the Administrator has concluded that a standard level of 0.075 ppm is requisite to protect public health with an adequate margin of safety.~~

In the Administrator's judgment, based on the currently available evidence, a standard set at 0.075 ppm would be requisite to protect public health with an adequate margin of safety.

**4. Some groups are saying that implementing the revised standard will be prohibitively expensive. Why didn't you consider cost?**

The Clean Air Act clearly requires that decisions regarding the standard may not be based on costs of implementation. The Supreme Court has upheld this interpretation of the Clean Air Act.

*More Detail:*

The Clean Air Act bars the Administrator from considering costs or ease of implementation in setting the NAAQS. For more than 35 years, the nation's program for ensuring clean air has been based on setting standards to protect sensitive populations, like asthmatics, the elderly, and people with heart or lung disease. Costs have not been taken into account in setting these standards. The Supreme Court has

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upheld this interpretation of the Clean Air Act.

Costs are taken into account in devising control strategies and in determining the lengths of time areas have to meet standards. This system has been successful and remains sound today.

**What specifically is EPA doing to help local governments meet the primary standard?**

**5. Why is EPA moving the goal post before many areas have met the 1997 standard?**

The Clean Air Act requires EPA to review the ozone standard every five years based on the current science, and make any revisions that are appropriate in light of the current science. The kinds of control programs developed to meet the 1997 ozone standards also will help meet any new standards.

EPA, state, tribal and local governments have been and will continue to be partners in reducing air pollution, all the way from national car standards to local innovations that improve air quality to regional strategies to reduce emissions from power plants.

*More Detail :*

EPA has issued a number of rules that will help reduce ozone, including rules requiring controls on:

- New cars, and light duty trucks and the fuels they use;
  - Tier 2 tail pipe standards
- Heavy-duty on-road and nonroad diesel engines and the fuels they use;
  - Heavy-Duty Diesel rules
  - The soon-to-be issued Locomotive and Marine Diesel rule
- Power plants
  - Clean Air Interstate Rule
  - NOx SIP call
- Consumer and commercial products, including aerosol coatings, architectural and industrial maintenance coatings, household and institutional commercial products, and manufacturing solvents.
- Stationary sources including combustion sources, coating categories, and chemical manufacturing.

**6. With this standard, is EPA saying that ozone causes premature death? How is this different from 1997?**

Breathing ozone may contribute to premature death in some people with heart and lung disease. When EPA set the ozone standard in 1997, the research available at that time did

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not identify a relationship between ozone exposure and mortality. Today, a significant amount of new research is available to inform our understanding of this relationship. Specifically, several large multi-city studies and three meta-analyses (which are studies combining results from multiple studies) provide evidence of a strong association between ozone exposure and premature death. The results of these studies hold firm even when the data are adjusted for temperature differences and the presence of other pollutants like particulate matter, which is also associated with mortality. Overall, currently available studies are highly suggestive that exposure to ozone contributes to premature mortality.

**SECONDARY STANDARD**

**7. Why did EPA set a different standard for plants than for people?**

Ozone can harm both the environment and human health, but people and plants are exposed to and respond to ozone differently. Unlike people, who spend significant amounts of time indoors, plants remain outside and can be exposed to ozone almost constantly throughout the growing season. Repeated exposure to ozone throughout the growing season can cause significant damage to vegetation, reducing growth and yield, and this can lead to other indirect effects on the ecosystem. EPA set a secondary standard that will address the cumulative damage inflicted on sensitive vegetation and trees, including those in forests and parks by repeated exposure to ozone.

*More Detail:*

The Administrator set a new secondary standard because there is sufficient research showing a significant impact of ozone on plant life. The secondary standard is a cumulative form that accounts for the sum, or total, exposure to ozone over a period of time. It gives relatively more weight to the higher and typically more biologically potent concentrations of ozone. . The new secondary standard is expressed as a sum of weighted hourly ozone concentrations, cumulated over the 12 hour daylight period (8AM to 8PM) during the maximum 3-month period within the ozone monitoring season.

**IMPLEMENTATION**

**8. When is EPA going to designate areas as meeting or not meeting the new (primary ozone) standard?**

EPA plans to make final designations by March 2010 although EPA can take an extra year if EPA has "insufficient information" to promulgate the designations.

*More Detail:-*

~~The Clean Air Act requires EPA to designate areas as attainment (meeting the standards),~~

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~~nonattainment (not meeting the standards), or unclassifiable (insufficient data to classify) after the Agency sets a new standard, or revises an existing standard. The following schedule will apply to the revised ozone standards:-~~

- ~~o States must make recommendations to EPA no later than March 2009 for areas to be designated attainment, nonattainment and unclassifiable.-~~
- ~~o EPA will issue final designations of attainment, nonattainment and unclassifiable areas no later than March 2010 unless there is insufficient information to make these designation decisions. In that case, EPA will issue designations no later than March 2011.-~~

**9. My area was just redesignated to attainment for the current ozone standard. Now that you have revised the standard, does this mean my area will be nonattainment again?**

Many areas that were designated nonattainment under the 1997 8-hour ozone NAAQS have already been redesignated to attainment, indicating that federal, regional, State and local air quality improvement measures have been very successful.

The Clean Air Act requires any area that is violating a new or revised standard or is a nearby area contributing to such a violation to be designated nonattainment, regardless of its status under the 1997 standard. However, the past improvements that let to attaining the 1997 standard will also go a long way toward helping any such areas achieve the 2008 NAAQS.

EPA will make final designations by March 12, 2010 for the new ozone standard (we can take an extra year if there is insufficient information available). Designations for the revised ozone standards likely will be based on air quality data from 2006-2008 at the earliest, so we cannot say now which areas will be designated nonattainment.

**10. The implementation rules for the 1997 standard are still tied up in court. How will the new standard affect implementation of the 1997 standard?**

The litigation concerns the requirements for some but not all aspects of EPA's framework for implementing the 8-Hour ozone National Ambient Air Quality Standard.

Most areas that are still violating the 1997 ozone standards have not been affected for their planning requirements by the litigation over EPA's implementation rule.

For areas that are affected, the EPA is developing a proposed rulemaking that would to clarify the planning requirements they must meet. In the meantime, EPA has encouraged those areas that are affected by the litigation and are still violating the 1997 standards to move forward with plans to attain those standards as expeditiously as practicable.

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**11. When will we see cleaner air as a result of the 2008 primary standard?**

The Clean Air Act allows from three to twenty years for areas to attain the standard. The timing will depend on how EPA classifies an area under the Clean Air Act, and how severe an area's problem is. The more severe an area's problem is, the longer time it will have to meet the standard.

**More detail:**

Further, assuming designations become effective in 2010, the attainment dates are:

For Marginal Areas – 3 years after designation (2013)

Moderate – 6 years (2016)

Serious – 9 years (2019)

Severe-15 – 15 years (2025)

Severe-17 – 17 years (2027)

Extreme – 20 years (2030)

**12. Why is there no deadline for areas to meet the revised secondary standard?**

The Clean Air Act establishes a specific deadline for meeting a primary standard, but not for secondary standards. For secondary standards, the law states that the attainment date should be as expeditiously as practicable.

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