



GROUP AGAINST SMOG & POLLUTION

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VIA EMAIL (A-and-R-Docket@epa.gov)

EPA Docket Center
Mailcode 28221T
1200 Pennsylvania Ave., NW
Washington, DC 20460
Attn: Docket ID No. OAR-2008-0699

Re: Proposed Revisions to National Ambient Air Quality Standards for Ozone

Dear Sir or Madam:

The United States Environmental Protection Agency (“EPA”) is proposing to revise the 8-hour primary (and secondary) National Ambient Air Quality Standards (“NAAQS”) for ozone. Currently, the 8-hour primary NAAQS for ozone is set at a level of 0.075 ppm.¹ In a Proposed Rule published in the Federal Register on December 17, 2014, EPA proposes to reduce the 8-hour primary NAAQS for ozone to an unspecified level between 0.065 ppm and 0.070 ppm, although EPA is also accepting comments on an 8-hour primary NAAQS for ozone that would be set at a level of 0.060 ppm.² EPA is not proposing to revise the indicator, averaging time, or form of the 8-hour primary NAAQS for ozone.³

The Group Against Smog and Pollution (“GASP”) offers these comments to the proposed revisions to the 8-hour primary NAAQS for ozone. GASP is a nonprofit

¹ 40 C.F.R. § 50.15(a).

² National Ambient Air Quality Standards for Ozone, 79 Fed. Reg. 75234, 75310 (proposed Dec. 17, 2014) (to be codified at 40 C.F.R. part 50) (the “Proposed Rule”).

³ *Id.*, at 75236.

organization that works to promote a healthy, sustainable environment. GASP's work focuses particularly on air quality in southwestern Pennsylvania and surrounding regions.

Requirements of the Clean Air Act

Section 109(a) of the Clean Air Act requires that EPA establish National Ambient Air Quality Standards ("NAAQS") for certain pollutants, including ozone. Section 109(b)(1) requires that "primary" NAAQS be established at a level "requisite to protect the public health," while "allowing an adequate margin for safety."⁴ Thus, EPA "is to identify the maximum airborne concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an 'adequate' margin of safety, and set the standard at that level."⁵ In the context of establishing a primary NAAQS, to "protect the public health" means to ensure that member of the public, including sensitive subgroups (such as children and asthmatics), do not suffer "adverse health effects" as a result of exposure to the NAAQS pollutant.⁶ When, as is the case with ozone,⁷ there is no threshold concentration below which a pollutant is known to be harmless, "EPA must select standard levels that reduce risks sufficiently to protect public health even while recognizing that a zero-risk standard is not possible."⁸ Accordingly, a primary NAAQS that EPA set at a level designed to eliminate adverse health effects for 99.5 % of a

⁴ See 42 U.S.C. § 7409(b)(1).

⁵ *Whitman v. American Trucking Ass'ns, Inc.*, 531 U.S. 457, 465 (2001).

⁶ *Lead Indus. Ass'n v. Environmental Prot. Agency*, 647 F.2d 1130, 1152 (D.C. Cir. 1980).

⁷ See National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75244.

⁸ *American Trucking Ass'ns, Inc. v. Environmental Prot. Agency*, 283 F.3d 355, 360 (D.C. Cir. 2002).

particular sensitive subgroup was determined to satisfy the Clean Air Act's "requisite to protect the public health" requirement.⁹

In establishing a NAAQS, EPA may not, consider the costs of implementing the standard.¹⁰ Nor may EPA consider attainability or technological feasibility when it establishes a NAAQS.¹¹

Ozone's Adverse Impacts on Human Health

Ozone in the ambient air can make breathing difficult even for healthy adults. Repeated exposure to ozone can damage the airways and lungs (leading to physical symptoms such as sore throats and coughs), aggravate lung diseases (including asthma, chronic bronchitis, and emphysema), and make the lungs more susceptible to infection. "Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be outside even when ozone levels are high, which increases their exposure."¹²

In controlled human exposure studies, ozone's adverse impact on human health is evidenced by observed decrements in lung function. The Clean Air Scientific Advisory Committee (the "CASAC") appointed by EPA¹³ found that a forced expiratory volumes

⁹ See *Lead Indus.*, 647 F.2d at 1158-61.

¹⁰ *Id.*

¹¹ *American Petroleum Inst. v. Costle*, 665 F.2d 1176, 1185 (D.C. Cir. 1981).

¹² United States Environmental Prot. Agency, Health Effects, *available at* <http://www.epa.gov/airquality/ozonepollution/health.html>.

¹³ The Clean Air Act requires that EPA's Administrator "appoint an independent scientific review committee," see 42 U.S.C. § 7409(d)(2)(A), which, among other purposes, is to review existing NAAQS and make recommendations for new and revised NAAQS, 42 U.S.C. § 7409(d)(2)(B); CASAC is that committee. Any notice of proposed rulemaking that EPA issues with respect to a new or revised NAAQS must include a statement of basis and purpose that summarizes the CASAC's recommendations and explain the reasons for any differences between those recommendations and the proposed new or revised NAAQS. 42 U.S.C. § 7607(d)(3); *American Farm Bureau Fed'n v. Environmental Prot. Agency*, 559 F.3d 512, 521 (D.C. Cir. 2009) (stating "[b]y statute EPA must explain its rejection of the CASAC's recommendation")

in one second (“FEV₁”) decrements of 15 % or more among healthy adults constitutes an adverse health impact.¹⁴ However, asthmatics are more sensitive to ozone than are healthy adults; accordingly, for asthmatics, EPA and the CASAC have found that an FEV₁ of 10 % or more is a statistically-relevant surrogate for an adverse health impact.¹⁵

The CASAC and EPA have acknowledged that a human exposure study found that decrements in lung function occur among healthy adults after 6.6 hours of exposure to ozone at a level of 0.072 ppm.¹⁶ Further, the CASAC and EPA have noted that other studies observed adverse health effects in some (but not all) healthy adult subjects after 6.6 hours of exposure to ozone at levels as low as 0.060 ppm.¹⁷ Thus, adverse health impacts are known to occur among even healthy adults who are exposed to less ozone, and for a shorter time, than would be allowed under the current 8-hour primary NAAQS for ozone. Such adverse impacts will be more pronounced not only among children and asthmatics, but also and among healthy adults who might be exposed to such levels of ozone for a full eight-hour interval.

The conclusions of these controlled human exposure studies are bolstered by several epidemiological studies, which show that adverse health effects (specifically, “respiratory emergency department visits” by children and adults) in cities that would

¹⁴ CASAC Consensus Responses to Charge Questions on the Second Draft Policy Assessment for the Review of the National Ambient Air Quality Standards for Ozone 3 (June 26, 2014) (“CASAC Consensus Responses”) (attached to Letter from Dr. H. Christopher Fry, Chair, CASAC, to Hon. Gina McCarthy, Administrator, EPA (June 26, 2014)), *available at* [http://yosemite.epa.gov/sab/sabproduct.nsf/5EFA320CCAD326E885257D030071531C/\\$File/EPA-CASAC-14-004+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/5EFA320CCAD326E885257D030071531C/$File/EPA-CASAC-14-004+unsigned.pdf).

¹⁵ National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75250; CASAC Consensus Responses, at 3.

¹⁶ National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75246; CASAC Consensus Responses, at 6.

¹⁷ National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75296.

attain the existing 8-hour primary NAAQS for ozone, but have ozone levels that would violate a standard set at a level of 0.070 ppm.¹⁸

Thus, the 8-hour primary NAAQS for ozone does not protect against adverse health impacts from ozone exposure. Accordingly, that standard must be revised to incorporate a lower ozone level if it is to protect the public health, provide an adequate margin for safety, and satisfy section 109(b)(1) of the Clean Air Act.

The CASAC's Determinations Regarding Ozone Levels

The CASAC determined that reducing the 8-hour primary NAAQS for ozone to a level of 0.070 ppm will reduce adverse effects on human health, but will not eliminate them: “[a]t a level of [0.070 ppm] ... clinical and epidemiological studies show adverse effects to human health.”¹⁹ Indeed, at that level, such effect will still be a “significant concern.”²⁰ Specifically,

a standard set at [0.070 ppm] is estimated to allow about 11 to 17 % of children to experience one or more moderate [ozone]-induced lung function decrements (i.e., ≥ 10 %), which could be adverse for people with lung disease.... A standard with a level of [0.070 ppm] is also estimated to allow about 6 to 11 % of children to experience two or more such decrements.²¹

A standard that would permit more than one out of every ten children to suffer repeated, adverse health impacts does not protect the public health.²² Further, the CASAC found

¹⁸ *Id.*, at 75299.

¹⁹ CASAC Consensus Responses, at 7.

²⁰ *Id.*

²¹ *Id.*

²² *Cf. Lead Indus.*, 647 F.2d at 1158-61 (determining that a NAAQS that eliminated adverse health impacts in all but 0.5 % of all children adequately protected the public health).

that “based on scientific evidence, at a level of [0.070 ppm], there is little margin for safety for the protection of public health, particularly for sensitive subpopulations.”²³

The CASAC also found that the frequency of lung function decrements of 15 % or more and the frequency of short-term premature mortality would be reduced by an 8-hour primary NAAQS for ozone with a level of 0.065 ppm, relative to either the existing 0.075 ppm level or the proposed 0.070 ppm level.²⁴ The CASAC did not determine that an 8-hour ozone standard with a level of 0.065 ppm would adequately protect the public health or find that such a standard would provide an adequate margin of safety.²⁵

In contrast, the CASAC determined that an 8-hour primary NAAQS for ozone with a level of 0.060 ppm would better protect the public health than would either a 0.070 ppm level or a 0.065 ppm level,²⁶ and would adequately protect even sensitive subgroups:

based on results for clinical studies of healthy adults, and scientific considerations of differences in responsiveness of asthmatic children compared to healthy adults, there is scientific support that [0.060 ppm] is an appropriate exposure of concern for asthmatic children.²⁷

Further, the CASAC explicitly found that a level of 0.060 ppm “would provide an adequate margin of safety.”²⁸

Conclusion

In the Proposed Rule, EPA exhaustively examines current studies regarding the health impacts of ozone and concludes that the existing 8-hour primary NAAQS for

²³ CASAC Consensus Responses, at 8.

²⁴ *Id.*

²⁵ *See id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

ozone with a level of 0.075 ppm does not protect the public health. EPA also describes how such adverse health impacts will be reduced if the level is revised to either 0.070 ppm or 0.065 ppm. Further, EPA acknowledges that if the level of the 8-hour primary NAAQS for ozone is revised to 0.060 ppm such adverse health impacts will be even further reduced. Indeed, at a level of 0.060 ppm, exposures to ozone of concern among children will almost be eliminated,²⁹ and lung function decrements in children will be cut by several hundred thousand incidents every year.³⁰

Critically, EPA has not found that the public health will be adequately protected by a level set at either 0.070 ppm or 0.065 ppm; nor has EPA found that the 8-hour primary NAAQS for ozone will provide an adequate margin of safety with an ozone level set at either 0.070 ppm or 0.065 ppm.³¹ To the contrary, EPA has found that an 8-hour primary NAAQS for ozone having a level set at either 0.070 ppm or 0.065 ppm will leave hundreds of thousands of individuals, including children, to suffer lung function decrements and other health impacts each year; those injuries would be avoided if the level is set at 0.060 ppm.³² Only an 8-hour primary NAAQS for ozone with a level set at 0.060 ppm will protect the public health and provide an adequate margin for safety, and

²⁹ See National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75297-98 (Table 4).

³⁰ See *id.*, at 75298 (Table 5).

³¹ See National Ambient Air Quality Standard for Ozone, 79 Fed. Reg. at 75309 (describing the predicted impacts of an 8-hour primary NAAQS for ozone with levels at 0.070 ppm and 0.065 ppm).

³² See *id.*, at 75297-98 (Tables 4 and 5).

thus satisfy the requirements of section 109(b)(1) of the Clean Air Act. Accordingly, EPA must establish the 8-hour primary NAAQS for ozone at a level of 0.060 ppm.

Very truly yours,

/s

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Staff Attorney