

ORAL ARGUMENT NOT YET SCHEDULED

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 08-1200 (and consolidated cases)

STATE OF MISSISSIPPI,
Petitioner,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

Petition for Review of Final Administrative Action of the
United States Environmental Protection Agency

PROOF BRIEF FOR ENVIRONMENTAL PETITIONERS

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Dated: April 17, 2012

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v.)	No. 08-1200
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PROTECTION AGENCY,)	
)	
Respondent.)	
_____)	

**CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED
CASES**

Environmental Petitioners American Lung Association,
Environmental Defense Fund, Natural Resources Defense Council, National
Parks Conservation Association, and Appalachian Mountain Club submit
this certificate as to parties, rulings, and related cases.

(A) Parties and *Amici*

**(i) Parties, Intervenors, and *Amici* Who Appeared in the District
Court**

This case is a petition for review of final agency action, not an appeal
from the ruling of a district court.

(ii) Parties to This Case

Petitioners

The Petitioner in case no. 08-1200 is the State of Mississippi.

The Petitioners in case no. 08-1202 are the State of New York, the State of California, the California Air Resources Board, the State of Connecticut, the State of Delaware, the State of Illinois, the State of Maine, the State of Maryland, the Commonwealth of Massachusetts, the State of New Hampshire, the State of New Jersey, the State of New Mexico, the State of Oregon, the State of Rhode Island, the District of Columbia, and the City of New York.

The Petitioners in case no. 08-1203 are the American Lung Association, Environmental Defense Fund, Natural Resources Defense Council, National Parks Conservation Association, and Appalachian Mountain Club.

The Petitioners in case no. 08-1204 are the Ozone NAAQS Litigation Group and the Utility Air Regulatory Group.

The Petitioner in case no. 08-1206 is the National Association of Home Builders.

Respondent

The U.S. Environmental Protection Agency is the Respondent in all these consolidated cases.

Intervenors

On the side of petitioners New York et al. in case no. 08-1202 is the County of Nassau.

On the side of EPA in case nos. 08-1200, 08-1204, and 08-1206, American Lung Association, Appalachian Mountain Club, Environmental Defense Fund, and Natural Resources Defense Council.

On the side of EPA in case nos. 08-1202 and 08-1203, Mississippi, the Ozone NAAQS Litigation Group, the Utility Air Regulatory Group, and the National Association of Homebuilders.

(iii) Amici in This Case

Amicus Curiae in support of New York et al. and American Lung Association et al. is the Province of Ontario.

(iv) Circuit Rule 26.1 Disclosures for Petitioners

See the attached Environmental Petitioners' Rule 26.1 Disclosure Statement.

(B) Rulings Under Review

Petitioners seek review of the final action taken by respondent at 73 Fed. Reg. 16,436 (March 27, 2008), entitled “National Ambient Air Quality Standards for Ozone.”

(C) Related Cases

This case has not previously been before this Court or any other court. Petitioners are unaware of any related cases within the meaning of Circuit Rule 28(a)(1)(C).

DATED: April 17, 2012

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**ENVIRONMENTAL PETITIONERS'
RULE 26.1 DISCLOSURE STATEMENT**

Pursuant to Fed. R. App. P. 26.1, petitioners make the following disclosures:

American Lung Association: American Lung Association has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the American Lung Association.

American Lung Association, a corporation organized and existing under the laws of the State of Maine, is a national nonprofit organization dedicated to the preventing lung disease and promoting lung health.

Environmental Defense Fund: Environmental Defense Fund has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the Environmental Defense Fund.

Environmental Defense Fund, a corporation organized and existing under the laws of the State of New York, is a national nonprofit organization that links science, economics, and law to create innovative, equitable, and cost-effective solutions to the most urgent environmental problems.

Natural Resources Defense Council: Natural Resources Defense Council has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the Natural Resources Defense Council.

Natural Resources Defense Council, a corporation organized and existing under the laws of the State of New York, is a national nonprofit organization dedicated to improving the quality of the human environment and protecting the nation's endangered natural resources.

National Parks Conservation Association : National Parks Conservation Association has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the National Parks Conservation Association.

National Parks Conservation Association, a corporation organized and existing under the laws of the District of Columbia, is a national nonprofit organization dedicated to protecting and enhancing America's National Parks for present and future generations.

Appalachian Mountain Club: Appalachian Mountain Club has no parent companies, and there are no publicly held companies that have a 10 percent or greater ownership interest in the Appalachian Mountain Club.

Appalachian Mountain Club, a corporation organized and existing under the laws of the State of Massachusetts, is a national nonprofit organization dedicated to promoting the protection, enjoyment, and wise use of the mountains, rivers, and trails of the Northeast Outdoors.

DATED this 17th day of April, 2012.

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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

Pursuant to Circuit Rule 28(a)(3), the following is a glossary of acronyms and abbreviations used in this brief:

ALA Comments	American Lung Association et al. Comments on proposed ozone standards
AMA	American Medical Association et al. Comments on proposed ozone standards
CAA, the Act	Clean Air Act
CASAC	Clean Air Scientific Advisory Committee
CD	EPA Criteria Document, Feb. 2006
Dkt-	Document numbers in EPA docket EPA-HQ-OAR-2005-0172
EPA	U.S. Environmental Protection Agency
NAAQS	National Ambient Air Quality Standards
NPS	National Park Service Comments on proposed ozone standards
Ozone, O ₃	Ozone and other photochemical pollutants
ppm	Parts per million
RIA	EPA Regulatory Impact Analysis, Mar. 2008
RTC	EPA Responses to Significant Comments on the 2007 Proposed Rule on the National Ambient Air Quality Standards for Ozone
SP	EPA Staff Paper, July 2007

JURISDICTIONAL STATEMENT

(A) Agency. Respondent U.S. Environmental Protection Agency (“EPA” or “the agency”) has jurisdiction to revise primary (health-protective) and secondary (welfare-protective) National Ambient Air Quality Standards (“standards” or “NAAQS”) for ozone and other photochemical pollutants (collectively, “ozone” or “O₃”) under Clean Air Act (also called “the Act” or “CAA”) §109, 42 U.S.C. §7409.

(B) Court of Appeals. Pursuant to 42 U.S.C. §7607(b)(1), this Court has jurisdiction to review the final EPA actions, taken at 73 Fed. Reg. 16,436 (Mar. 27, 2008), JA____, challenged in this proceeding.

(C) Timeliness. The petition for review was timely filed within the 60-day window of CAA §307(b)(1), 42 U.S.C. §7607(b)(1), on May 27, 2008.¹

STATUTES AND REGULATIONS

Pertinent statutes and regulations appear in an addendum to this brief.

STATEMENT OF ISSUES PRESENTED

Whether EPA acted illegally and arbitrarily in:

¹ Petitioners are American Lung Association, Environmental Defense Fund, Natural Resources Defense Council, National Parks Conservation Association, and Appalachian Mountain Club (collectively, “American Lung Association” or “Petitioners”).

1. Adopting an ozone health standard that allows premature deaths, hospital admissions, emergency room visits, asthma aggravation, and other serious adverse health effects due to ozone, and is far weaker than the level unanimously recommended by its science advisers.

2. Adopting an ozone welfare standard identical to the health standard without first identifying an ozone level requisite to protect public welfare as the Act requires, and contrary to the unanimous recommendations of its science advisers, its staff, the National Academy of Sciences, and the National Park Service, all of whom found that a separate welfare standard was necessary to protect trees and forests from ozone damage.

STATEMENT OF FACTS

Ozone, the main component of urban smog, is a corrosive air pollutant that can inflame the lungs and leave people gasping for breath. *See Am. Trucking Ass'ns v. EPA*, 283 F.3d 355, 359 (D.C. Cir. 2002) (“ATA”). It is linked to aggravation of asthma, emergency department visits, hospitalizations for serious bronchial conditions, premature deaths, and other serious health harms. *E.g.*, EPA-452/R-07-007 at 3-88 fig.3-5, 6-7, 6-12, 6-14 to -17 (EPA Staff Paper, July 2007) [hereinafter SP], JA____, _____, _____, _____-____; 1 EPA 600/R-05/004aF at 8-74 to -78 (EPA Criteria Document, Feb. 2006) [hereinafter CD], JA____-____. Ozone-induced health problems force people to take medication, and miss work or school.

SP 6-7, JA____; *see* EPA-452/R-08-003 at 6-39 tbl.7-7 (EPA Regulatory Impact Analysis, Mar. 2008) [hereinafter RIA], JA____. Hardest hit are people with lung disease, the elderly, and children, but ozone can affect healthy adults too. *See* 73 Fed. Reg. 16,471/1, JA____. Asthmatics suffer more severe impacts from ozone exposure than healthy individuals do and are more vulnerable at lower levels of exposure. *Id.* 16,444/1-2, JA____.

Ozone also damages vegetation and forested ecosystems, causing or contributing to widespread leaf injury, stunting of plant and root growth, tree deaths, and reduced crop yields. *Id.* 16,486/1-2, 16,496/2, JA____, _____. The damage includes annual biomass loss of 6-30% for some species, widespread visible leaf injury ranging from 21-39%, and tree growth losses reaching 30-50% in some areas. SP 8-3, 8-7, 8-15, JA____, _____, _____; 72 Fed. Reg. 37,818, 37,894/1-2 (July 11, 2007), JA____. By harming vegetation, ozone can also damage entire ecosystems. *Id.* 37,887/2-89/2, JA____-____.

The Clean Air Act requires EPA to set “primary” and “secondary” NAAQS for pollutants like ozone to protect public health and welfare, respectively. 42 U.S.C. §§7408(a), 7409(a)-(b). EPA must review and, as appropriate, revise the NAAQS at least every five years. *Id.* §7409(d)(1). The Act creates “an independent scientific review committee,” now called the Clean Air Scientific Advisory Committee (“CASAC”), to play an important role by recommending to

EPA appropriate revisions to the NAAQS. *Id.* §7409(d)(2)(A)-(B). If EPA departs “in any important respect” from CASAC’s recommendations, EPA must explain why. *Id.* §7607(d)(3), (d)(6)(A).

EPA’s Adoption of an Underprotective Health Standard.

EPA must set primary (“health”) NAAQS at a level “requisite to protect the public health,” “allowing an adequate margin of safety.” *Id.* §7409(b)(1). To meet this health protection mandate, the standard must “be set at a level at which there is ‘an absence of adverse effect’ on [] sensitive individuals” such as children, the elderly, and people with respiratory illnesses. *Lead Indus. Ass’n v. EPA*, 647 F.2d 1130, 1153 (D.C. Cir. 1980). Consistent with the Act’s “‘preventative’ and ‘precautionary’” approach to setting NAAQS, EPA must protect public health from “not just known adverse effects, but those of scientific uncertainty or that research has not yet uncovered.” *American Lung Ass’n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998) (citation and quotation marks omitted). Primary standards must be based exclusively on protection of health, without regard to implementation costs. *Whitman v. Am. Trucking Ass’ns*, 531 U.S. 457, 465-71 (2001).

In 1997, EPA adopted a revised health standard for ozone of 0.08 parts per million (“ppm”) per 8-hour average, a standard upheld by this Court against industry challenges in *ATA*, 283 F.3d 355. In 2008, EPA completed its next review of the ozone NAAQS, and revised it to a level of 0.075 ppm, the action at issue

here. Its choice of the 0.075 level contradicted advice from a unanimous CASAC and the nation's leading medical societies calling for a much more protective standard based on extensive evidence of adverse health effects well below 0.075 ppm.

The evidence included new controlled "chamber" studies, funded by the American Petroleum Institute, showing that ozone levels as low as 0.060 ppm caused breathing impairment. Chamber studies provide powerful evidence of a pollutant's impact on breathing. Unlike studies that expose animals to pollution and then attempt to extrapolate the results to humans, chamber studies directly expose *people* to different ozone levels in a laboratory chamber under carefully controlled conditions that exclude other pollutants. *See* CD 6-1, 8-12, JA____, _____. The studies here, conducted by Professor William Adams, found that healthy young people exposed to ozone levels of 0.060 ppm suffered "statistically significant group mean" lung function decrements and respiratory symptoms, with some suffering "notable effects (e.g., >10 percent [lung function] decrement, pain on deep inspiration)."² 73 Fed. Reg. 16,440/2, 16,444/1, JA____, _____. Because ozone more severely affects people with lung impairments than the healthy people tested here, *id.* 16,440/2, 16,444/1-2, JA____, _____, "considerably" more

² Some of these tests were performed using breathing masks rather than sealed chambers. For brevity, they are collectively referred to herein as "chamber" studies.

asthmatics “would most likely” have suffered effects, Dkt-0142³ (“CASAC 10-24-06 Letter”) 10, JA____. Further, EPA found that breathing impairments shown in these studies “represent a level that should be considered adverse for asthmatic individuals.” 73 Fed. Reg. 16,454/3-55/1, JA____-__.

In addition, more than a dozen new epidemiological studies showed statistically significant associations between 8-hour ozone levels below 0.070 ppm—or even 0.060 ppm—and adverse health impacts including hospitalizations, emergency room visits, and breathing problems. Dkt-4261 (“*ALA Comments*”) 56-80, JA____-__; SP app.3B, JA____; CASAC 10-24-06 Letter 3, JA____. New epidemiological studies also showed “the strongest evidence to date for O₃ effects on acute mortality,” including a finding of significant associations between premature deaths and 8-hour ozone levels below 0.061 ppm. 72 Fed. Reg. 37,836/1, 37,876/1, JA____, ____; SP 6-15, JA____. EPA estimated that a standard of 0.065 ppm would prevent upward of 5,000 premature deaths per year, while a standard of 0.075 ppm would prevent approximately 2,000 premature deaths. See RIA 6-89 tbl.6.51, 6-90 fig.6-7, JA____, _____. New animal toxicology studies provided further evidence of the biological mechanisms through

³ All “Dkt-” references are to document numbers in EPA docket EPA-HQ-OAR-2005-0172 (e.g., “Dkt-4261” means EPA-HQ-OAR-2005-0172-4261).

which ozone caused the kinds of health effects observed in the epidemiological studies. *See* 73 Fed. Reg. 16,440/2, 16,450/2, JA____, ____.

EPA also performed exposure and risk assessments predicting that—in just the few cities studied—tens of thousands of children would suffer adverse breathing impacts at ozone levels just meeting the standard EPA ultimately chose—impacts that would be substantially reduced at lower ozone levels. *Id.* 16,447/1, JA____. In just five cities studied, 40,000 more asthmatic children would suffer adverse lung impairments at 0.074 ppm ozone (just meeting a standard of 0.075 ppm) than would at a standard of 0.064 ppm. 72 Fed. Reg. 37,860 tbl.2 (showing number of asthmatic children expected to suffer 10% or greater lung decrement), JA____; 73 Fed. Reg. 16,454/3-55/1 (10% lung decrement in asthmatics considered adverse), 16,470/2 (lung function decrements estimated in risk assessment represent adverse effects), JA____-__, _____. The assessment further showed that in just twelve cities, at 0.074 ppm ozone, 340,000 school-age children (not just those with asthma) would suffer lung function decrements of 15% or more—a decrement level considered adverse by CASAC and EPA staff. SP 5-47, JA____; CASAC 10-24-06 Letter 12, JA____; *see* 72 Fed. Reg. 37,860 tbl.2, JA____. That total represents 160,000 more children suffering such effects than would at 0.064 ppm, and 80,000 more than at 0.070 ppm. *See id.*, JA____.

CASAC unanimously and repeatedly judged that the evidence called for EPA to set a standard between 0.060 and 0.070 ppm. Dkt-0102 (“CASAC 3-26-07 Letter”) 2, JA____; CASAC 10-24-06 Letter 5, JA____. The American Medical Association, American Thoracic Society, American College of Chest Physicians, and five other leading medical societies called for a standard “no higher than 0.060 ppm,” citing “compelling evidence” supporting that level. Dkt-4305 (“AMA”) at 1, JA____. The American Heart Association, American Lung Association, American Public Health Association, EPA’s Children’s Health Protection Advisory Committee, and numerous other public health organizations concurred. Dkt-4218 at 4, JA____; Dkt-2031 at 1-3, JA____-____. Noting the “special vulnerabilities of infants, children, and adolescents” to air pollution, the American Academy of Pediatrics “strongly” recommended a standard “at or below 0.070 ppm, and preferably at 0.060 ppm.” Dkt-4570 at 1, JA____.

Despite the strong medical consensus that a standard of 0.060-0.070 ppm was necessary to protect health, EPA selected 0.075 ppm. 73 Fed. Reg. 16,436/3, JA____. EPA dismissed the Adams chamber studies as “too limited,” without explaining what limitations rendered the results (which the agency did not dispute) an unworthy basis for setting the NAAQS. *Id.* 16,483/1, JA____. EPA also refused to rely on the numerous epidemiological studies linking ozone levels below 0.070 ppm with premature deaths, hospitalizations, and other serious health

impacts, asserting that ozone's causal role became "increasingly uncertain" at lower ozone levels. *E.g., id.* 16,456/1, JA____. The agency did not contend or show that the degree of alleged uncertainty was so great as to be material at any of the lower ozone levels studied, or explain how the standard it chose provided an adequate margin of safety against such effects. EPA likewise brushed aside its own risk assessment findings that in just five urban areas, tens of thousands of asthmatic children would still suffer adverse effects from ozone at a standard of 0.075 ppm. *Id.* 16,482/2, JA____. Despite Criteria Document, CASAC, and staff findings that the studies supported a causal relationship between ozone and the reported health outcomes, *see, e.g.,* CD 7-175, JA____; SP 3-9, 3-59, JA____, ____; CASAC 10-24-06 Letter 4, JA____, EPA asserted that it was not willing to "assum[e]" such causation, 73 Fed. Reg. 16,483/2, JA____.

EPA's Adoption of an Underprotective Welfare Standard.

For secondary standards, the Act requires EPA to identify "a level of air quality...requisite to protect the public welfare from any known or anticipated adverse effects," including those on vegetation, "associated with" the pollutant's presence in the ambient air. 42 U.S.C. §§7409(b)(2), 7602(h) (defining welfare effects to include effects on crops, vegetation, and wildlife). In 1997, EPA set a secondary ozone standard identical to the primary, with the same 8-hour form and level. 73 Fed. Reg. 16,437/3, JA____. In the 2008 review, however, a

considerable body of evidence showed that ozone damage to plants and forested ecosystems was due mainly to cumulative ozone exposure over a growing season, rather than high ozone levels on any one day. *See id.* 16,486/1, JA____. EPA staff and a unanimous CASAC therefore found that a secondary standard different from the 8-hour primary standard was necessary to target these cumulative effects. *See* SP 8-24 to -25, JA____-__; CASAC 10-24-06 Letter 7, JA____. The National Research Council (National Academy of Sciences) and the National Park Service also recommended such an approach. SP 7-70, 8-25, JA____, ____; Dkt-4980 (“NPS”) 4, JA____. Both EPA staff and CASAC specifically recommended adoption of a “W126 index” limiting cumulative ozone exposures over a three-month growing season. CASAC 10-24-06 Letter 7, JA____; SP 8-25, JA____. CASAC recommended the level for this standard be between 7.5 ppm-hours and 15 ppm-hours, based on evidence that ozone-related damage and growth impairment to trees occurred above and within this range. CASAC 3-26-07 Letter 3, JA____; CASAC 10-24-06 Letter 6-7, 13, JA____-__, _____. The National Park Service “strongly” recommended setting the standard toward the lower end of this range, citing evidence of leaf damage and other harms at those lower levels. NPS 5, JA_____.

In the final rule, EPA “agree[d]” with comments that “a seasonal, cumulative metric *is needed* to protect vegetation” and that the W126 index was

the better option for such a metric. 73 Fed. Reg. 16,499/1 (emphasis added), JA____. It also acknowledged that a cumulative standard was “the most biologically relevant way” to protect growing plants from ozone. *Id.* 16,500/1, JA____. As discussed in the brief of petitioners New York et al., the record further shows that EPA in fact found that a separate secondary standard was warranted, but was ordered by the President not to adopt such a standard. *See id.* 16,497/2-3, JA____. Instead, EPA adopted a secondary standard identical to the primary, without first identifying a target level of vegetation protection requisite for public welfare, or showing that the primary standard would provide such protection. EPA’s own analysis showed that significant tree growth impairment and damage to leaves due to ozone would still occur in many areas even with an 8-hour limit of 0.070 ppm (i.e., *more* stringent than the 0.075 ppm standard EPA adopted). 72 Fed. Reg. 37,893/1-2, 37,894/1, JA____, ____; SP 8-19, JA_____.

Proceedings in This Case

Early in this case, EPA itself raised concerns about whether its 2008 standards complied with the Act, and the Court granted a consent motion by the agency to hold the case in abeyance while the agency reconsidered its action using the record before it in 2008. *See* Order of 3-19-09. Based on that reconsideration, EPA on January 19, 2010 proposed to strengthen the ozone health standard and adopt a separate welfare standard, both within the CASAC-recommended ranges.

75 Fed. Reg. 2938, JA____. The proposal stated that the Administrator “judge[d] that a standard level of 0.075 ppm is not sufficient to provide [health] protection with an adequate margin of safety,” and also that a separate welfare standard was warranted to protect vegetation. *Id.* 2996/2, 3020/2, JA____, _____. EPA thereafter repeatedly assured this Court that it would finalize the reconsideration rule by dates that it never met, and then abruptly announced on September 2, 2011, that it was withdrawing the reconsideration rulemaking at the direction of the President. *See* EPA’s Notice of 9-2-11. The withdrawal directive was not based on any finding that the 2008 standards were adequate to protect health and welfare, but on implementation and economic concerns raised by the White House. *See* Pet. for Review, attachment A, in *American Lung Ass’n v. EPA*, No. 11-1396 (D.C. Cir. Oct. 11, 2011) (Statement by the President). Petitioners challenged the withdrawal action in this Court, but that challenge was dismissed based on EPA’s representations that it was deferring final action on the reconsideration proposal until the next periodic ozone NAAQS review. *American Lung Ass’n*, No. 11-1396 (D.C. Cir.).

STANDARD OF REVIEW

At issue is whether EPA’s action was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 42 U.S.C. §7607(d)(9). For statutory interpretation, “[i]f the intent of Congress is clear, that is the end of the

matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.” *Chevron U.S.A. Inc. v. NRDC*, 467 U.S. 837, 842-43 (1984). If the statute is ambiguous, under *Chevron* step two, a reasonable agency interpretation of the statute is given deference. *Id.* Unless otherwise expressly indicated, references in this brief to “unlawful” agency action address both violation of congressional intent under *Chevron* step one and unreasonable agency interpretation under step two.

Agency action is arbitrary and capricious if, for example, the agency “entirely failed to consider an important aspect of the problem,” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983), reached a conclusion unsupported by substantial evidence, *Ass’n of Data Processing Serv. Orgs. v. Bd. of Governors*, 745 F.2d 677, 683-84 (D.C. Cir. 1984), or failed to “identif[y] and explain[] the reasoned basis for its decision,” *Transactive Corp. v. United States*, 91 F.3d 232, 236 (D.C. Cir. 1996). In setting a NAAQS, EPA “has the heaviest of obligations to explain and expose every step of its reasoning.” *American Lung*, 134 F.3d at 392.

SUMMARY OF ARGUMENT

EPA illegally and arbitrarily adopted an ozone health standard that allows premature deaths, hospitalizations, emergency room visits, asthma aggravation, and other serious adverse health effects due to ozone. The Act requires EPA to set

the health standard at a level where there is an absence of adverse effects on sensitive persons like asthmatics, and EPA failed to rationally explain how its chosen standard of 0.075 ppm met that test given the broad range of evidence showing adverse effects below that level. Chamber studies—the strongest measure of a pollutant’s direct impact on human breathing—showed that ozone levels as low as 0.060 ppm can impair breathing to a degree that is adverse for asthmatics, and EPA’s terse dismissal of those studies as “too limited” was contrary to medical consensus, unexplained, and arbitrary. Numerous peer-reviewed epidemiological studies showed statistically significant links between ozone below 0.075 ppm and serious adverse health impacts, and EPA’s vague assertion of “increasing” uncertainty in ozone’s causal role at “lower” levels did not provide a reasoned basis for discounting these results, when there was no finding that the degree of uncertainty was material, and EPA staff identified a likely causal link at levels as low as 0.060 ppm. EPA also failed to explain how it could rationally dismiss the adverse effects on tens of thousands of children that its risk assessment predicted would occur with a 0.075 ppm standard, when EPA relied on that same assessment to reject standards higher than 0.075 ppm. EPA further failed to rationally consider the collective force of the large body of evidence showing adverse health effects below 0.075 ppm, a body that CASAC found provided “overwhelming scientific evidence” for a standard more protective than the one EPA adopted. And

EPA failed utterly to address, much less show, how its chosen standard provided the safety margin required by the Act to protect people from adverse effects that are less certain or unknown.

EPA further violated the Act in adopting a welfare standard identical to the health standard without first identifying an ozone level requisite to protect public welfare as the Act requires, and contrary to the unanimous recommendations of its science advisers, its staff, the National Academy of Sciences, and the National Park Service, all of whom found that a separate and different welfare standard was necessary to protect trees and forests from ozone damage.

STANDING

Petitioners are national and regional nonprofit organizations dedicated to protecting human health and/or the environment from air pollution. *See* attached declarations. They have members who live, work, and recreate in areas with ozone pollution in excess of levels recommended for protection of their health and welfare by CASAC, the nation's leading medical societies, and other authorities identified herein. *Id.* The final action challenged herein prolongs exposure of Petitioners' members to ozone levels associated with a variety of adverse health and welfare effects, including premature deaths, hospitalizations, emergency room visits, breathing impairment, damage to vegetation and forests, and other serious effects as further described herein, thereby threatening their health and welfare and

depriving them of health and welfare protections the Act guarantees. Further support for Petitioners' standing appears in the materials cited in this brief and in the declarations attached hereto and to the motion to intervene filed June 23, 2008, by American Lung Association et al. Accordingly, petitioners have standing to pursue this case. *See, e.g., Friends of the Earth v. Laidlaw Env'tl. Servs.*, 528 U.S. 167, 183 (2000); *NRDC v. EPA*, 464 F.3d 1, 5-7 (D.C. Cir. 2006).

ARGUMENT

I. EPA'S REFUSAL TO ADOPT A MORE HEALTH-PROTECTIVE OZONE STANDARD WAS UNLAWFUL AND ARBITRARY.

A. The Primary Standard Unlawfully and Arbitrarily Allows Adverse Health Effects to Persist.

To meet the health protection mandate in §109, the primary NAAQS must "be set at a level at which there is 'an absence of adverse effect' on [] sensitive individuals." *Lead Indus.*, 647 F.2d at 1153. Here, EPA directly violated that mandate by setting the primary ozone NAAQS at 0.075 ppm, a level where adverse effects on healthy as well as sensitive people have been shown by a wealth of evidence. As further detailed below, EPA provided no lawful or reasoned grounds for refusing to base the standard on the large body of evidence showing adverse effects below 0.075 ppm, nor was there substantial evidence that 0.075 ppm is a level at which adverse effects are absent.

1. Adams Chamber Studies Showed Adverse Ozone Impacts at 0.060 ppm.

As noted above, the Adams chamber studies showed breathing impairment in healthy young adults exposed to 0.060 ppm ozone, with the degree of impairment sometimes reaching a level considered adverse to asthmatics and other sensitive populations. Because these studies were conducted under carefully controlled laboratory conditions that excluded other pollutants, they provide a high level of confidence that the lung decrements and other effects observed after breathing the ozone-polluted air (as compared with breathing purified air) were due *only* to ozone at the level of exposure. EPA's Criteria Document, prepared pursuant to 42 U.S.C. §§7408(a)(2), 7409(d)(1), found that these types of studies "*provide the clearest and most compelling evidence for human health effects directly attributable to acute exposures to O₃ per se.*" CD 8-73 (emphasis added), JA____. The nation's leading medical societies likewise observed that in chamber studies, "there is no potential for uncertainty as to which of the pollutants in a real world mix is the cause of the effects." AMA 4, JA____. Moreover, results showing lung impairments in healthy people are very strong evidence that sensitive persons would suffer even worse effects. 73 Fed. Reg. 16,444/1-2, JA____; CASAC 10-24-06 Letter 4, JA____. EPA staff concluded that, based on the Adams studies, "the 0.060 ppm exposure level also can be interpreted as representing a level likely to cause adverse lung function decrements and

respiratory symptoms in children with asthma” and people with respiratory disease. SP 6-59, JA____.

EPA did not dispute the accuracy or validity of the Adams studies or the staff’s interpretation thereof. The agency agreed that the studies showed, in a statistically significant way, that exposure to ozone levels of 0.060 ppm impaired healthy adults’ lung function. 73 Fed. Reg. 16,454/2, JA____. Further, CASAC, the Staff Paper (an analysis by EPA’s staff), and EPA all agreed that impairment levels found in the studies would be adverse for asthmatics and others who are more sensitive to ozone pollution than healthy adults. CASAC 10-24-06 Letter 3-4, 10, JA____-__, ____; SP 6-7, 6-59, JA____, ____; 73 Fed. Reg. 16,454/3-55/1 (discussing Adams studies), 16,480/1 (“The Administrator agrees ... that important new evidence shows that asthmatics have more serious responses, and are more likely to respond at lower O₃ levels, than healthy individuals.”), JA____-__, ____.

CASAC further found it likely that “considerably” more asthmatics would suffer such effects. CASAC 10-24-06 Letter 10, JA____. The American Medical Association and other major medical societies found that the Adams studies “show[ed] significant health effects at 0.06 ppm exposure levels,” and “provide[d] compelling rationale for setting the NAAQS for ozone no higher than 0.060 ppm.” AMA 5-6, JA____-__.

Despite the powerful findings of the Adams studies, EPA refused to base the standard on them, asserting in conclusory fashion they were “very limited” evidence. *E.g.*, 73 Fed. Reg. 16,476/1-2, JA____. Such a threadbare assertion is simply not a rational basis for dismissing evidence of this magnitude. *See United Technologies Corp. v. DOD*, 601 F.3d 557, 564-65 (D.C. Cir. 2010) (“naked conclusion ... is not enough” to sustain agency action in the face of contrary technical information). As noted above, chamber studies like Adams’ provide the strongest direct evidence available of ozone’s effects on human breathing. EPA has pointed to no other chamber studies showing an absence of adverse effects at 0.060 ppm, nor does it claim the Adams results are refuted by other types of studies. The agency’s brush-off of the Adams studies is therefore not supported by substantial evidence. *E.g.*, *City of Naples Airport Auth. v. FAA*, 409 F.3d 431, 436 (D.C. Cir. 2005) (remanding because agency conclusion rejecting largely un rebutted “substantial evidence” “is not supported by substantial evidence”); *BFI Waste Sys. of N. Am. v. FAA*, 293 F.3d 527, 535 (D.C. Cir. 2002) (decision that countered evidence with “little more than a conclusion” lacked substantial evidence to support it). Nor did EPA explain why the allegedly “limited” nature of these studies renders them insufficient as a basis for the NAAQS decision. Given the uniquely powerful force of this kind of evidence—and the advice of CASAC, EPA staff, and the nation’s leading medical societies that the studies warranted

serious attention—EPA’s terse dismissal of the studies as “too limited” falls far short of a reasoned explanation. *See Am. Farm Bureau Fed’n v. EPA*, 559 F.3d 512, 524-25 (D.C. Cir. 2009) (EPA unreasonably disregarded study results as being too limited).

At one point, EPA asserted that “[g]iven that the 0.060 ozone exposures and results have not been replicated, some uncertainty exists.” Dkt-7185 (“RTC”) 24, JA____. But the mere assertion of “some” uncertainty—even if accurate—is hardly a finding that the results are not reliable. Moreover, EPA was simply incorrect in claiming that results showing adverse lung decrements at 0.060 ppm had not been replicated. In reality, Adams reported two studies showing significant lung decrements at 0.060 ppm ozone. One, reported in 2002, found that among 30 people exposed to 0.060 ppm ozone, 20% experienced lung function decrements greater than 10% compared to filtered air—a decrement percentage that EPA considers adverse to asthmatics. RTC 22, JA____; 73 Fed. Reg. 16,454/3-55/1, JA____-__. A second study (2006), among 30 different healthy young adults exposed to 0.060 ppm ozone, showed 7% experienced decrements greater than 10%, and a statistically significant number reported symptoms such as pain on deep breathing. RTC 22, JA____; Dkt-0175 at 3, JA____. Thus, findings of significant breathing impairment at 0.060 ppm were replicated.

Even if there were only one chamber study, EPA does not explain why that would justify its effective dismissal of its results, given the compelling nature of such evidence. Indeed, EPA set the 1979 ozone NAAQS based on *a single* “key” clinical study showing “symptoms of discomfort and small but statistically-nonsignificant lung function decrements” at 0.15 ppm (1-hour average). 57 Fed. Reg. 35,542, 35,546 (Aug. 10, 1992) (emphasis added), JA____. Nevertheless, EPA set the standard even lower, at 0.12 ppm.⁴ *Id.* 35,544, JA____. In other rulemakings, EPA has set NAAQS without the benefit of *any* chamber studies at all, relying instead on epidemiological studies. *E.g.*, 71 Fed. Reg. 61,144 (Oct. 17, 2006) (particulate matter NAAQS), JA____; 73 Fed. Reg. 29,184, 29,237/1 (May 20, 2008) (lead NAAQS), JA____. Thus, EPA’s assertion that a single chamber study is “too limited” to rely upon lacks a rational basis.

2. Epidemiological Studies Showed Adverse Effects, Including Death, Below 0.075 ppm.

Epidemiological studies analyze patterns of real world health impacts in human populations to determine linkages between those impacts and types and levels of exposures. *See* CD 7-1, JA____. They include not only research into numbers of health endpoints (e.g., hospitalizations) associated with different ozone

⁴ The Adams studies are even stronger than the key study in the 1979 standard: the Adams studies showed *statistically significant* lung function decrements at 0.060 ppm (8-hour average). 73 Fed. Reg. at 16,454/2, JA____.

levels, but also actual measurement of lung function changes in people exposed to outdoor ozone under real-world conditions. Thus, such studies provide unique and significant evidence of ozone's adverse effects. *See* CASAC 10-24-06 Letter 4 (recommending more emphasis on effects observed in epidemiological studies), JA____. There is a "long history" of using such studies as a basis for setting NAAQS, including the original particulate matter NAAQS adopted in 1971. 62 Fed. Reg. 38,652, 38,659/3 (July 18, 1997), JA____.

Here, EPA acknowledged that epidemiological studies showed harmful health effects at ozone levels well below the old standard, and that "many" showed statistically significant positive associations, with only "a few" showing no positive associations. 73 Fed. Reg. 16,450/2, JA____. More than a dozen such studies showed significant adverse effects due to ozone, including premature death, hospitalizations, emergency room visits, and significant breathing problems at 8-hour ozone levels extending well below 0.075 ppm, including a number showing adverse effects between 0.060 and 0.070 ppm. *ALA Comments* 56-80 (collecting studies from SP app.3B, JA____), JA____-____; *see also* AMA 8-10 (discussing studies linking ozone levels below 0.075 ppm and infant health problems, children's development of asthma, and hospitalizations for people with chronic obstructive pulmonary disease), JA____-____. Table 1 below summarizes some of these studies.

Study Endpoints	98 th percentile 8-hour daily max (ppm) ⁵
Respiratory Symptoms	
Mortimer et al., 2002	0.064
Delfino et al., 2003	0.035
Ross et al., 2002	0.069
Lung Function Changes	
Mortimer et al., 2002	0.064
Naehler et al., 1999	0.074
Brauer et al., 1996	0.055
Emergency Department Visits: Respiratory Diseases	
Delfino et al., 1997	0.058
Emergency Department Visits: Cardiovascular Outcomes	
Rich et al., 2005	0.074
Hospital Admissions: Cardiovascular Diseases	
Koken et al., 2003	0.065
Hospital Admissions: Respiratory Diseases	
Delfino et al., 1994	0.069
Burnett et al., 1997	0.062
Yang et al., 2003	0.043
Burnett et al., 1999	0.068

⁵ Converted here from parts per billion (as shown in SP app.3B) to ppm, rounding last digit.

Table 1. ALA Comments 56-57 (collecting studies from SP app.3B, JA____), JA____-__.

See also 72 Fed. Reg. 37,828/3 (describing study showing lung decrements at O₃ levels ranging from 0.021 to 0.074 ppm), JA____.

New epidemiological studies also found significant associations between premature deaths and 8-hour ozone levels below 0.061 ppm. 72 Fed. Reg. 37,876/1, JA____; SP 6-15, JA____.

The CD, EPA staff, and CASAC carefully evaluated these peer-reviewed studies and found them to provide credible and relevant grounds for decision. *See* CD 8-76 to -78, JA____-__; SP 6-59 to -61, JA____-__; CASAC 10-24-06 Letter 4-5, JA____-__. The CD and staff further concluded that the associations found in these studies were generally consistent and robust (i.e., the effects shown are likely not due to other pollutants). *E.g.*, SP 3-11, 3-42 to -45, JA____, ____-__. The specific studies cited above showed statistically significant associations between the ozone levels indicated and adverse effects, indicating that the evidence of the association was strong.

EPA did not dispute the credibility or scientific quality of this mountain of epidemiological evidence. Nor did EPA suggest that such studies are an insufficient basis for setting the NAAQS. As noted above, EPA has sometimes set NAAQS based *solely* on epidemiological studies. EPA's only explanation for

effectively dismissing these studies was an assertion that ozone's causal role in the observed effects became "increasingly uncertain at lower levels of exposure." *E.g.*, 73 Fed. Reg. 16,456/1, JA____. On its face, this assertion provides no rational basis for dismissing the results, since a mere claim of "increased" uncertainty hardly translates to a finding that uncertainty is so great as to matter at any of the lower ozone levels studied. *See Massachusetts v. EPA*, 549 U.S. 497, 534 (2007) (mere assertion of uncertainty does not justify inaction unless agency finds that uncertainty prevents it from rendering a judgment). Indeed, nowhere did EPA find or show that the uncertainty was "too great" to justify disregarding the adverse effects shown. *See ATA*, 283 F.3d at 367. Accordingly, it was arbitrary for EPA to disregard the epidemiological studies showing effects below 0.075 ppm on this basis. *State Farm*, 463 U.S. at 52 (agency may not "merely recite the terms 'substantial uncertainty' as a justification for its actions").

Further, EPA's effective disregard of the epidemiological studies at lower ozone levels was not supported by any evidence that the epidemiological studies themselves were any less compelling or reliable at lower ozone levels. The Criteria Document found ozone was "likely causally related to the various respiratory health outcomes" shown in those studies, without limiting that finding to studies at higher levels. CD 7-175, JA____; *accord* SP 3-73 (CD finds the epidemiologic studies "support a likely causal association between short-term O₃

exposure and mortality”), JA____. CASAC likewise found that adverse health effects “due to” ozone were found in “the broad range of epidemiologic and controlled exposure studies,” citing the Staff Paper Appendix from which Table 1 above is excerpted. CASAC 10-24-06 Letter 3-4, JA____-____. The Staff Paper further found that 0.060 ppm ozone was “a level likely *to cause* adverse effects in sensitive groups.” SP 6-61 (emphasis added), JA____; *see also id.* 6-9, JA____. EPA did not dispute these specific Criteria Document, CASAC, and Staff Paper findings, much less provide a reasoned explanation for disregarding them. *See* 42 U.S.C. §7607(d)(3).

EPA’s effective dismissal of the epidemiological studies at lower ozone levels was apparently based on the unsupportable rationale that only the chamber studies at and above 0.080 ppm provided credible evidence that ozone caused adverse effects, and therefore causation became increasingly uncertain at lower and lower ozone levels below 0.080 ppm. 73 Fed. Reg. 16,483/2, JA____. This rationale arbitrarily ignored the Adams chamber studies, which clearly **did** show a causal connection between lung decrements and ozone levels as low as 0.060 ppm. Further, chamber studies plainly are *not* the only evidence of causation: epidemiological and toxicological studies are probative as well. SP 3-86, JA____; RTC 36, JA____. CASAC accordingly observed that chamber studies “are not the only measures...of the adverse health effects induced by ozone exposure.”

CASAC 10-24-06 Letter 4, JA____. Indeed, epidemiological studies can assess ozone’s causation of real world impacts that chamber studies do not assess, including hospitalizations, aggravated impacts of ozone when inhaled with other pollutants (much as some drugs can be more dangerous when taken with others), and impacts on sensitive persons such as severe asthmatics and children who (for ethical reasons) are not tested in chamber studies. *See* CD 5-65 (epidemiology is “[t]he only disciplinary approach than can evaluate a ‘real-world’ complex mixture”), JA____; *id.* 7-1, JA____; AMA 4-6 (because ozone can have synergistic effects with other pollutants, chamber studies using only ozone may give “an understated effect of ozone on public health”), JA____-____; Dkt-2031 at 2-3 (comment from EPA Children’s Health Protection Advisory Committee that chamber studies “do[] not reflect the dose-response characteristics of ... the most sensitive subpopulations” and the standard may therefore be underprotective), JA____-____.

3. EPA’s Disregard of Adverse Effects Shown in the Risk and Exposure Assessments at Ozone Levels Below 0.075 ppm Was Arbitrary.

EPA also arbitrarily refused to rely on results of its exposure and risk assessments showing that, in just the few cities studied, tens of thousands more children would suffer adverse health effects under a 0.075 ppm standard than at 0.070 and 0.064 ppm. EPA justified its dismissive treatment of the risk assessment

results at lower ozone levels by asserting that the causal connection between ozone and adverse effects became more uncertain at lower ozone levels, 73 Fed. Reg. 16,465/3, JA____—a rationale refuted above. Moreover, EPA itself found that “these quantitative exposure and risk estimates, as well as the broader array of O₃-related health endpoints that could not be quantified ... are important from a public health perspective and indicative of potential exposures and risks to at-risk groups.” RTC 9, JA____. Further, EPA acknowledged that the assessments would *underestimate* impacts. 73 Fed. Reg. 16,465/2, JA____. EPA staff found that, even considering the “kind and extent of uncertainties,” the assessments were “appropriate for consideration as an input to the decisions on the O₃ standard.” SP 6-21, JA____; *see* CASAC 10-24-06 Letter 4, 12 (risk assessment was “well done” and “balanced”), JA____, _____. EPA did not rationally explain why the staff and CASAC were wrong in relying on the assessments, which included the analysis of impacts below 0.070 ppm. *See Am. Farm Bureau*, 559 F.3d at 521 (noting importance of staff and CASAC recommendations for Court when reviewing EPA action).

EPA’s action was particularly irrational in disregarding the significant increase in adverse effects at 0.074 ppm as compared with 0.064 ppm, given that the agency **did** consider and give weight to adverse effects of comparable magnitude shown by the risk assessment at 0.084 ppm as compared with 0.074

ppm. The risk assessment showed, among other things, that 40,000 more asthmatic children would suffer adverse effects at 0.084 ppm as compared with a standard of 0.074 ppm. *See* 72 Fed. Reg. 37,860 tbl.2, JA____. EPA judged that these additional incidents of adverse effects “would be higher than what is requisite to protect public health, including the health of at-risk groups, with an adequate margin of safety.” 73 Fed. Reg. 16,478/1, JA____. Yet the agency arbitrarily failed to protect against an identical 40,000 increase in the number of asthmatic children suffering adverse effects at a standard of 0.074 ppm as compared with 0.064 ppm. *See Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C. Cir. 1987) (finding agency action arbitrary and capricious because it was “internally inconsistent”).

4. EPA Failed to Rationally Justify Its Decision in Light of the Totality of Evidence Showing Adverse Effects Below 0.075 ppm.

Not only did EPA arbitrarily dismiss the chamber studies, epidemiological studies, and exposure-risk assessments viewed separately, it also failed to rationally justify its decision in light of the large body of evidence viewed collectively. *Am. Farm Bureau*, 559 F.3d at 525 (“Viewed in isolation, of course, the studies are far from conclusive. Viewed together in the context of the studies the EPA considered,” EPA’s decision to discount studies was arbitrary); *Achernar Broadcasting Co. v. FCC*, 62 F.3d 1441, 1446 (D.C. Cir. 1995) (“failure to weigh

the entire record would constitute reversible error”); *see also Ethyl Corp. v. EPA*, 541 F.2d 1, 38 n.80 (D.C. Cir. 1976) (en banc) (“inferences drawn from independent sources, different from each other, but tending to the same conclusion, not only support each other, but do so with an increased weight”) (citation and internal quotation marks omitted); *Al-Adahi v. Obama*, 613 F.3d 1102, 1105-06 (D.C. Cir. 2010).

The agency’s failure to rationally consider the evidence as a whole is particularly evident in its arbitrary rationale for rejecting CASAC’s advice. EPA asserted that its choice of a level outside of the CASAC range was due to CASAC “placing different weight in two areas”: the Adams studies and the risk assessment. 73 Fed. Reg. 16,483/1, JA____. In reality, CASAC did not base its recommendation on just those “two areas” (though they provided compelling evidence, as discussed above) but on the “*broad range* of epidemiologic and controlled exposure [i.e., chamber] studies” linking low ozone levels to increased emergency department visits, hospitalizations, mortality, and respiratory symptoms associated with adverse health effects. CASAC 10-24-06 Letter 3-4 (emphasis added), JA____-____. Indeed, CASAC stated that it “*considers each of these findings to be an important indicator of adverse health effects.*” *Id.* 4 (emphasis in original), JA____. CASAC cited the Criteria Document, Staff Paper, and its own analyses as providing “*overwhelming scientific evidence*” in support of the 0.060-

0.070 ppm recommendation. CASAC 3-26-07 Letter 2 (emphasis added), JA____. EPA nowhere rationally explained why CASAC's reading of the whole body of evidence was flawed. 42 U.S.C. §7607(d)(3) (EPA must explain reasons for differing from CASAC).

Nor did the agency conduct a meaningful collective analysis of the evidence of its own. EPA summarized its overall rationale by asserting that a standard lower than 0.075 ppm "would only result in significant further public health protection if ... there is a continuum of health risks" in areas with ozone levels well below those in the "key controlled human exposure studies" (in EPA's view, only those chamber studies at and above 0.080 ppm), and "if the reported associations observed in epidemiological studies are, in fact, causally related to O₃ at those lower levels." 73 Fed. Reg. 16,483/2, JA____. The agency said it was "not prepared to make these assumptions." *Id.*, JA____. This rationale plainly does not confront the evidence collectively, as it completely ignores the Adams studies, fails to address the causation findings in the Criteria Document and Staff Paper (which were themselves based on a collective view of the evidence, SP 6-6, 6-14 to -17, JA____, ____ - ____), and fails to explain why, in light of all the evidence, EPA was "not prepared" to make the allegedly necessary assumptions.

The rationale further relied on two arbitrary and untenable premises: First, that adverse effects shown below 0.075 ppm can be disregarded due to the alleged

absence of a “continuum of health risks,” and second that none of the adverse effects shown in the epidemiological studies at ozone levels below 0.075 ppm are due to ozone. As to the first, EPA elsewhere in the rule expressly found that there is a continuum of health risks from ozone. 73 Fed. Reg. 16,474/1-2 (“given that there is a continuum of effects associated with exposures to varying levels of O₃, the extent to which public health is affected by exposure to ambient O₃ is related to the actual magnitude of the O₃ concentration”), 16,475/1 (same), JA____, ____.

The agency’s refusal to recognize such a continuum later in the same notice is therefore arbitrary. *See Gen. Chem. Corp.*, 817 F.2d at 846. Further, even if no “continuum” existed, that would hardly justify disregarding the exposure and epidemiological studies showing adverse effects due to ozone exposures below 0.075 ppm. The findings of these studies are not extrapolations based on some assumed continuum, but observations of actual health impacts from real world exposures of people to ozone at various levels below 0.075 ppm.

As to the second premise, EPA failed to rationally explain why the “overwhelming” evidence cited by CASAC of adverse effects due to ozone below 0.075 ppm was not credible. EPA’s own staff found that ozone likely caused adverse effects at levels as low as 0.060 ppm. SP 6-61, JA____. Moreover, as more fully discussed above, there is no EPA finding (or rational support for a finding) that uncertainty at 0.060, 0.070, or other identified ozone levels below

0.075 ppm is so great as to negate the credibility of the large body of studies showing adverse effects due to ozone at those levels.

B. EPA Illegally and Arbitrarily Failed to Provide an Adequate Margin of Safety in the Primary Standard.

Even assuming *arguendo* that there were material uncertainties in the scientific evidence of adverse effects at ozone levels below 0.075 ppm, EPA illegally and arbitrarily resolved them in favor of a less protective standard, thus failing to provide “an adequate margin of safety,” 42 U.S.C. §7409(b)(1). Congress “specifically directed” EPA “to protect against ... effects whose medical significance is a matter of disagreement.” *Lead Indus.*, 647 F.2d at 1154; *accord NRDC v. EPA*, 824 F.2d 1146, 1152 (D.C. Cir. 1987) (en banc) (discussing legislative history). A margin of safety must be provided to “protect the public health from the pollutant’s adverse effects—**not just known adverse effects, but those of scientific uncertainty or that ‘research has not yet uncovered.’**” *American Lung*, 134 F.3d at 389 (emphasis added; citations omitted).

Here, EPA completely failed to consider or explain how its chosen standard of 0.075 ppm provided an adequate margin of safety against adverse effects that it deemed to be less certain at lower ozone levels. As CASAC noted, the “*Staff Paper does not address the issue of a margin of safety*” in discussing possible NAAQS levels, CASAC 3-26-07 Letter 2 (emphasis in original), JA_____, nor did

EPA in the final rule, asserting without explanation that a 0.075 ppm standard “would be sufficient to protect public health with an adequate margin of safety,” 73 Fed. Reg. 16,483/2, JA____. The agency’s bare assertion does not suffice as a reasoned explanation. *See, e.g., Verizon Telephone Cos. v. FCC*, 570 F.3d 294, 304 (D.C. Cir. 2009) (“conclusory statements that ... factors are being considered cannot substitute for...reasoned explanation”) (citation and internal quotation marks omitted). Indeed, EPA’s decision is devoid of any showing that the agency set *any* margin of safety at all. EPA failed to explain how the margin of safety language in §109(b) of the Act caused the agency to set the standard differently than it would have in the absence of such language.

Rather than setting a margin of safety to protect against the adverse effects that EPA deemed less certain, the agency unlawfully and arbitrarily opted to provide no protection against those effects at all. As noted above, EPA arbitrarily rejected consideration of standard levels below 0.070 ppm. Further, in choosing between 0.070 and 0.075 ppm, EPA opted for the **less** protective number, despite finding that there were “likely to be fewer exposures” of concern for asthmatic children at 0.070 than at 0.075 ppm (78,000 fewer), and despite risk assessment findings that among all school-age children in those twelve cities, at least 80,000 more would suffer lung decrements considered adverse by CASAC at a standard of 0.075 than at 0.070 ppm. *See* 73 Fed. Reg. 16,481/3, JA____; 72 Fed. Reg. 37,860

tbl.2, JA____; *see also* SP 6-65 tbl.6-8, JA____. The agency does not and cannot explain how setting the standard to allow these additional adverse effects provides the margin of safety mandated by the Act. Nor has EPA explained how choosing the *less* protective standard comports with the Act's "'preventative' and 'precautionary'" approach to setting NAAQS. *American Lung*, 134 F.3d at 389 (quoting *Lead Indus.*, 647 F.2d at 1155), 392 (EPA "has the heaviest of obligations" to explain reasoning).

II. EPA'S SECONDARY OZONE NAAQS IS NOT REQUISITE TO PROTECT WELFARE.

As further set forth below, EPA's adoption of a secondary ozone standard identical to the primary was unlawful, arbitrary, and contrary to recommendations from CASAC (voting unanimously), the National Academy of Sciences, the National Park Service, and the agency's own staff.

A. EPA Acted Illegally and Arbitrarily in Failing to Identify the Level of Air Quality Requisite to Protect Against Adverse Vegetation Impacts.

The Act requires EPA to "specify a level of air quality the attainment and maintenance of which ... is requisite to protect the public welfare from any known or anticipated adverse effects." 42 U.S.C. §7409(b)(2). The *Farm Bureau* Court held that this language requires EPA to first identify the requisite level of protection for the affected welfare value (there, visibility), and then set the

secondary NAAQS to achieve that level of protection. 559 F.3d at 529-30.

“EPA’s failure to identify such a level when deciding where to set the level of air quality required by the revised secondary ... NAAQS is contrary to the statute and therefore unlawful. Furthermore, the failure to set any target level of visibility protection deprived the EPA’s decisionmaking of a reasoned basis.” *Id.* 530. So too here. EPA completely failed to identify a target level of vegetation protection requisite for protection of public welfare: It set the secondary standard equivalent to the primary as a default approach, without even attempting to identify levels of foliar injury, plant growth impairment, and other adverse vegetation effects that would be tolerable and still represent a requisite level of welfare protection.

EPA justified its approach on the ground that the revised primary standard would provide some additional protection for plants, that setting a separate secondary standard would involve significant uncertainties, and that the agency wanted to avoid the risk of adopting an overly protective standard. 73 Fed. Reg. 16,500/1-2, JA____. But this Court rejected the very same kinds of excuses in *Farm Bureau*, holding they did not overcome EPA’s statutory duty to identify a target level of protection. 559 F.3d at 529-30 (alleged incidental welfare benefits from primary standard and uncertainties in selecting level of welfare protection did not overcome statutory mandate to identify a level of requisite welfare protection).

And as in *Farm Bureau*, EPA's failure to identify a target protection level for vegetation "deprived the EPA's decisionmaking of a reasoned basis." *Id.* 530.

B. EPA's Decision on the Secondary Standard Was Irrational

EPA's decision to set the secondary standard identical to the primary was also irrational because it conflicted with EPA's (and CASAC's) findings and conclusions. The agency found that the 1997 standards allowed ozone levels that caused adverse effects, including "visible [leaf] injury and seedling and mature tree biomass loss," "impaired ability of many sensitive species and genotypes ... to adapt to or withstand other environmental stresses," and "premature plant death." 73 Fed. Reg. 16,496/2, JA____. EPA further found that a cumulative, seasonal ozone standard would "better reflect[] the scientific information on biologically relevant exposures for vegetation," than the 8-hour standard. *Id.* 16,494/1, JA____. CASAC and EPA staff unequivocally concluded that it was "not appropriate" to continue using the primary standard's 8-hour averaging time for the secondary O₃ standard, and that a cumulative, seasonal, concentration weighted form should be used instead. CASAC 10-24-06 Letter 7, JA____; SP 8-15, JA____.

In the final rule, the agency **agreed** with comments stating that "neither the existing secondary standard for ozone nor the proposed primary standards are requisite to protect against adverse welfare effects on vegetation and forested ecosystems," and that "CASAC and Staff ... amply justified the need for a

separate cumulative seasonal welfare standard to protect against these effects, rather than relying solely on the primary standards to provide such protection.”

73 Fed. Reg. 16,498/2-99/1, JA____-__. The agency further found that the form of the primary standard was not biologically relevant to protection of vegetation, and that “ozone-related effects on vegetation ... are not appropriately characterized by the use of a short-term (8-hour) daily measure of ozone exposure.” Dkt-7130 at 4, JA____. Given these findings, EPA’s decision to nonetheless adopt a secondary standard identical to the primary was wholly arbitrary. *State Farm*, 463 U.S. at 43.

Further, EPA’s own analysis showed that its chosen secondary standard (the 0.075 ppm primary standard) would allow significant vegetation and ecosystem damage, including tree growth impairment and leaf damage. EPA observed that “significant biomass loss” had been found at 8-hour ozone levels well below 0.072 ppm—substantially lower than the standard EPA adopted. RTC 126, JA____. Even at an 8-hour standard of 0.070 ppm—significantly more stringent than what EPA adopted—the agency found that “visible foliar injury would still occur in many areas,” and 15 states would still experience ozone exposures associated with 10% growth loss, an effect level found by EPA staff to be significant and potentially adverse. 72 Fed. Reg. 37,889, 37,892, 37,894, JA____, ____, _____. EPA did not even attempt to explain how its even less protective primary standard of 0.075 ppm could provide requisite protection in light of these findings, nor could it.

C. EPA's Attempts to Justify Its Secondary Standard Were Groundless.

EPA's rationalizations for its secondary standards decision lack any lawful or reasoned basis. EPA cited uncertainties in deciding on the appropriate level for separate cumulative standard, 73 Fed. Reg. 16,500/1-2 (concluding that "uncertain benefits" of cumulative standard means cumulative standard "may be more than necessary to provide the requisite degree of protection"), JA____, but did not contend, much less show, that these alleged uncertainties were so great as to prevent EPA from setting a requisite level. *See Coalition of Battery Recyclers Ass'n v. EPA*, 604 F.3d 613, 621 (D.C. Cir. 2010) (in face of uncertainty, EPA must use its judgment to meet the statutory mandate to set standards). Moreover, EPA's "uncertainty" rationale lacks a reasoned basis, given that CASAC, EPA staff, and the National Park Service *were* able to recommend specific ranges and levels for a cumulative standard based on the available data. *E.g.*, CASAC 3-26-07 Letter 3 (range of 7.5-15 ppm-hours), JA____; SP 8-25 to -26 (range of 7-21 ppm-hours), JA____ - ____; NPS 4-6 ("strongly" recommending a level at the lower end of CASAC range, based on evidence of ozone damage to plants at that lower level, and fact that trees in 291 parks would be threatened at higher levels), JA____ - ____.

Staff further identified specific considerations to inform EPA's judgment on the level to pick for the cumulative standard, including the low levels at which visible

foliar injury can occur and the extent to which a secondary standard should be precautionary in nature. SP 8-23, -24, -26 to -27, JA____, ____, ____-__.

EPA did not even try to weigh the evidence or the factors identified by staff to identify a requisite level for the cumulative standard, instead merely asserting that uncertainties created “the potential for not providing the appropriate degree of protection.” 73 Fed. Reg. 16,500/1, JA____. Such a “potential” hardly excused EPA from considering the relevant factors, nor did it provide any reasoned basis for choosing a form for the secondary standard that EPA itself found to be **less** relevant and appropriate than a cumulative standard to protect against adverse ozone impacts on plants.

CONCLUSION AND RELIEF REQUESTED

Petitioners respectfully request that this Court remand the 2008 ozone NAAQS to EPA for the reasons stated above,⁶ and set an expeditious schedule for corrective action as requested by petitioners New York et al.

⁶ Petitioners also concur in the reasons presented by New York and allied State petitioners for finding EPA’s 2008 ozone NAAQS decision arbitrary and unlawful.

DATED: April 17, 2012

Respectfully submitted,

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CERTIFICATE REGARDING WORD LIMITATION

Counsel hereby certifies that, in accordance with Federal Rule of Appellate Procedure 32(a)(7)(C), the foregoing Proof Opening Brief of Petitioners contains 8,938 words, as counted by counsel's word processing system.

DATED: April 17, 2012

/s/ David S. Baron
David S. Baron

STATUTORY AND REGULATORY ADDENDUM

Statutes

42 U.S.C. § 7408

42 U.S.C. § 7409

42 U.S.C. § 7602

42 U.S.C. § 7607

“(3) to ensure that the schedule for implementation of the July 1997 revisions of the ambient air quality standards for particulate matter and the schedule for the Environmental Protection Agency’s visibility regulations related to regional haze are consistent with the timetable for implementation of such particulate matter standards as set forth in the President’s Implementation Memorandum dated July 16, 1997.

“**Sec. 6102. Particulate matter monitoring program.**

“(a) Through grants under section 103 of the Clean Air Act [section 7403 of this title] the Administrator of the Environmental Protection Agency shall use appropriated funds no later than fiscal year 2000 to fund 100 percent of the cost of the establishment, purchase, operation and maintenance of a PM_{2.5} monitoring network necessary to implement the national ambient air quality standards for PM_{2.5} under section 109 of the Clean Air Act. This implementation shall not result in a diversion or reprogramming of funds from other Federal, State or local Clean Air Act activities. Any funds previously diverted or reprogrammed from section 105 Clean Air Act [section 7405 of this title] grants for PM_{2.5} monitors must be restored to State or local air programs in fiscal year 1999.

“(b) EPA and the States, consistent with their respective authorities under the Clean Air Act [Act July 14, 1955, ch. 360, 69 Stat. 322, which is classified generally to section 7401 et seq. of this title], shall ensure that the national network (designated in subsection (a)) which consists of the PM_{2.5} monitors necessary to implement the national ambient air quality standards is established by December 31, 1999.

“(c)(1) The Governors shall be required to submit designations referred to in section 107(d)(1) of the Clean Air Act [subsec. (d)(1) of this section] for each area following promulgation of the July 1997 PM_{2.5} national ambient air quality standard within 1 year after receipt of 3 years of air quality monitoring data performed in accordance with any applicable Federal reference methods for the relevant areas. Only data from the monitoring network designated in subsection (a) and other Federal reference method PM_{2.5} monitors shall be considered for such designations. Nothing in the previous sentence shall be construed as affecting the Governor’s authority to designate an area initially as nonattainment, and the Administrator’s authority to promulgate the designation of an area as nonattainment, under section 107(d)(1) of the Clean Air Act [subsec. (d)(1) of this section], based on its contribution to ambient air quality in a nearby nonattainment area.

“(2) For any area designated as nonattainment for the July 1997 PM_{2.5} national ambient air quality standard in accordance with the schedule set forth in this section, notwithstanding the time limit prescribed in paragraph (2) of section 169B(e) of the Clean Air Act [section 7492(e)(2) of this title], the Administrator shall require State implementation plan revisions referred to in such paragraph (2) to be submitted at the same time as State implementation plan revisions referred to in section 172 of the Clean Air Act [section 7502 of this title] implementing the revised national ambient air quality standard for fine particulate matter are required to be submitted. For any area designated as attainment or unclassifiable for such standard, the Administrator shall require the State implementation plan revisions referred to in such paragraph (2) to be submitted 1 year after the area has been so designated. The preced-

ing provisions of this paragraph shall not preclude the implementation of the agreements and recommendations set forth in the Grand Canyon Visibility Transport Commission Report dated June 1996.

“(d) The Administrator shall promulgate the designations referred to in section 107(d)(1) of the Clean Air Act [subsec. (d)(1) of this section] for each area following promulgation of the July 1997 PM_{2.5} national ambient air quality standard by the earlier of 1 year after the initial designations required under subsection (c)(1) are required to be submitted or December 31, 2005.

“(e) The Administrator shall conduct a field study of the ability of the PM_{2.5} Federal Reference Method to differentiate those particles that are larger than 2.5 micrograms in diameter. This study shall be completed and provided to the Committee on Commerce of the House of Representatives and the Committee on Environment and Public Works of the United States Senate no later than 2 years from the date of enactment of this Act [June 9, 1998].

“**Sec. 6103. Ozone designation requirements.**

“(a) The Governors shall be required to submit the designations referred to in section 107(d)(1) of the Clean Air Act [subsec. (d)(1) of this section] within 2 years following the promulgation of the July 1997 ozone national ambient air quality standards.

“(b) The Administrator shall promulgate final designations no later than 1 year after the designations required under subsection (a) are required to be submitted.

“**Sec. 6104. Additional provisions.**

“Nothing in sections 6101 through 6103 [set out above in this note] shall be construed by the Administrator of Environmental Protection Agency or any court, State, or person to affect any pending litigation or to be a ratification of the ozone or PM_{2.5} standards.”

Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with Act July 14, 1955, as amended by Pub.L. 95-95 [this chapter], see section 406(b) of Pub.L. 95-95, set out as an Effective and Applicability Provisions of 1977 Acts note under section 7401 of this title.

§ 7408. Air quality criteria and control techniques

[CAA § 108]

(a) **Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants**

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant—

AIR POLLUTION PREVENTION

42 § 7408

CAA § 108

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970, but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on—

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(b) Issuance by Administrator of information on air pollution control techniques; standing consulting committees for air pollutants; establishment; membership

(1) Simultaneously with the issuance of criteria under subsection (a) of this section, the Administrator shall, after consultation with appropriate advisory committees and Federal departments and agencies, issue to the States and appropriate air pollution control agencies information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology. Such information shall include such data as are available on available technology and alternative methods of prevention and control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

(2) In order to assist in the development of information on pollution control techniques, the Administrator may establish a standing consulting committee for each air pollutant included in a list published pursuant to subsection (a)(1) of this section, which

shall be comprised of technically qualified individuals representative of State and local governments, industry, and the academic community. Each such committee shall submit, as appropriate, to the Administrator information related to that required by paragraph (1).

(c) Review, modification, and reissuance of criteria or information

The Administrator shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques issued pursuant to this section. Not later than six months after August 7, 1977, the Administrator shall revise and reissue criteria relating to concentrations of NO₂ over such period (not more than three hours) as he deems appropriate. Such criteria shall include a discussion of nitric and nitrous acids, nitrites, nitrates, nitrosamines, and other carcinogenic and potentially carcinogenic derivatives of oxides of nitrogen.

(d) Publication in Federal Register; availability of copies for general public

The issuance of air quality criteria and information on air pollution control techniques shall be announced in the Federal Register and copies shall be made available to the general public.

(e) Transportation planning and guidelines

The Administrator shall, after consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, and with State and local officials, within nine months after November 15, 1990, and periodically thereafter as necessary to maintain a continuous transportation-air quality planning process, update the June 1978 Transportation-Air Quality Planning Guidelines and publish guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of national ambient air quality standards. Such guidelines shall include information on—

(1) methods to identify and evaluate alternative planning and control activities;

(2) methods of reviewing plans on a regular basis as conditions change or new information is presented;

(3) identification of funds and other resources necessary to implement the plan, including inter-agency agreements on providing such funds and resources;

(4) methods to assure participation by the public in all phases of the planning process; and

(5) such other methods as the Administrator determines necessary to carry out a continuous planning process.

(f) Information regarding processes, procedures, and methods to reduce or control pollutants in transportation; reduction of mobile source related pollutants; reduction of impact on public health

(1) The Administrator shall publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after November 15, 1990, and from time to time thereafter—

(A) information prepared, as appropriate, in consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, regarding the formulation and emission reduction potential of transportation control measures related to criteria pollutants and their precursors, including, but not limited to—

- (i) programs for improved public transit;
- (ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;
- (iii) employer-based transportation management plans, including incentives;
- (iv) trip-reduction ordinances;
- (v) traffic flow improvement programs that achieve emission reductions;
- (vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;
- (vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;
- (viii) programs for the provision of all forms of high-occupancy, shared-ride services;
- (ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;
- (x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;
- (xi) programs to control extended idling of vehicles;
- (xii) programs to reduce motor vehicle emissions, consistent with subchapter II of this chapter, which are caused by extreme cold start conditions;
- (xiii) employer-sponsored programs to permit flexible work schedules;
- (xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applica-

ble to new shopping centers, special events, and other centers of vehicle activity;

(xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and

(xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

(B) information on additional methods or strategies that will contribute to the reduction of mobile source related pollutants during periods in which any primary ambient air quality standard will be exceeded and during episodes for which an air pollution alert, warning, or emergency has been declared;

(C) information on other measures which may be employed to reduce the impact on public health or protect the health of sensitive or susceptible individuals or groups; and

(D) information on the extent to which any process, procedure, or method to reduce or control such air pollutant may cause an increase in the emissions or formation of any other pollutant.

(2) In publishing such information the Administrator shall also include an assessment of—

(A) the relative effectiveness of such processes, procedures, and methods;

(B) the potential effect of such processes, procedures, and methods on transportation systems and the provision of transportation services; and

(C) the environmental, energy, and economic impact of such processes, procedures, and methods.

(3) Repealed. Pub.L. 105-362, Title XV, § 1501(b), Nov. 10, 1998, 112 Stat. 3294.)

(4) Repealed. Pub.L. 105-362, Title XV, § 1501(b), Nov. 10, 1998, 112 Stat. 3294.)

(g) Assessment of risks to ecosystems

The Administrator may assess the risks to ecosystems from exposure to criteria air pollutants (as identified by the Administrator in the Administrator's sole discretion).

(h) RACT/BACT/LAER clearinghouse

The Administrator shall make information regarding emission control technology available to the States and to the general public through a central database. Such information shall include all control technology information received pursuant to State plan provisions

requiring permits for sources, including operating permits for existing sources.

(July 14, 1955, c. 360, Title I, § 108, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1678, and amended Aug. 7, 1977, Pub.L. 95-95, Title I, §§ 104, 105, Title IV, § 401(a), 91 Stat. 689, 790; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 108(a) to (c), (o), 111, 104 Stat. 2465, 2466, 2469, 2470; Nov. 10, 1998, Pub.L. 105-362, Title XV, § 1501(b), 112 Stat. 3294.)

HISTORICAL AND STATUTORY NOTES

Codifications

Section was formerly classified to section 1857c-3 of this title.

Reference in subsec. (e) in the original to "enactment of the Clean Air Act Amendments of 1989" has been codified as "November 15, 1990" as manifesting Congressional intent in the date of the enactment of Pub.L. 101-549, Nov. 15, 1990, 104 Stat. 2399, popularly known as the Clean Air Act Amendments of 1990.

Effective and Applicability Provisions

1990 Acts. Amendment by Pub.L. 101-549 effective Nov. 15, 1990, except as otherwise provided, see section 711(b) of Pub.L. 101-549, set out as a note under section 7401 of this title.

1977 Acts. Amendment by Pub.L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub.L. 95-95, set out as a note under section 7401 of this title.

Savings Provisions

Suits, actions or proceedings commenced under this chapter as in effect prior to Nov. 15, 1990, not to abate by reason of the taking effect of amendments by Pub.L. 101-549, except as otherwise provided for, see section 711(a) of Pub.L. 101-549, set out as a note under section 7401 of this title.

Prior Provisions

A prior section 108 of Act July 14, 1955, was renumbered section 115 by Pub.L. 91-604 and is set out as section 7415 of this title.

Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with Act July 14, 1955, as amended by Pub.L. 95-95 [this chapter], see section 406(b) of Pub.L. 95-95, set out as an Effective and Applicability Provisions of 1977 Acts note under section 7401 of this title.

§ 7409. National primary and secondary ambient air quality standards

[CAA § 109]

(a) Promulgation

(1) The Administrator—

(A) within 30 days after December 31, 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality criteria have been issued prior to such date; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after December 31, 1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1)(B) of this subsection shall apply to the promulgation of such standards.

(b) Protection of public health and welfare

(1) National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) of this section shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

(c) National primary ambient air quality standard for nitrogen dioxide

The Administrator shall, not later than one year after August 7, 1977, promulgate a national primary ambient air quality standard for NO₂ concentrations over a period of not more than 3 hours unless, based on the criteria issued under section 7408(c) of this title, he finds that there is no significant evidence that such a standard for such a period is requisite to protect public health.

(d) Review and revision of criteria and standards; independent scientific review committee; appointment; advisory functions

(1) Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2)(A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies.

(B) Not later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 7408 of this title and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate under section 7408 of this title and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

(July 14, 1955, c. 360, Title I, § 109, as added Dec. 31, 1970, Pub.L. 91-604, § 4(a), 84 Stat. 1679, and amended Aug. 7, 1977, Pub.L. 95-95, Title I, § 106, 91 Stat. 691.)

HISTORICAL AND STATUTORY NOTES

Codifications

Section was formerly classified to section 1857c-4 of this title.

Effective and Applicability Provisions

1977 Acts. Amendment by Pub.L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub.L. 95-95, set out as a note under section 7401 of this title.

Prior Provisions

A prior section 109 of Act July 14, 1955, was renumbered section 116 by Pub.L. 91-604 and is set out as section 7416 of this title.

Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with Act July 14, 1955, as amended by Pub.L. 95-95 [this chapter], see section 406(b) of Pub.L. 95-95, set out as an Effective and Applicability Provisions of 1977 Acts note under section 7401 of this title.

Role of Secondary Standards

Pub.L. 101-549, Title VIII, § 817, Nov. 15, 1990, 104 Stat. 2697, provided that:

“(a) **Report.**—The Administrator shall request the National Academy of Sciences to prepare a report to the Congress on the role of national secondary ambient air quality standards in protecting welfare and the environment. The report shall:

“(1) include information on the effects on welfare and the environment which are caused by ambient concentrations of pollutants listed pursuant to section 108 [section 7408 of this title] and other pollutants which may be listed;

“(2) estimate welfare and environmental costs incurred as a result of such effects;

“(3) examine the role of secondary standards and the State implementation planning process in preventing such effects;

“(4) determine ambient concentrations of each such pollutant which would be adequate to protect welfare and the environment from such effects;

“(5) estimate the costs and other impacts of meeting secondary standards; and

“(6) consider other means consistent with the goals and objectives of the Clean Air Act [this chapter] which may be more effective than secondary standards in preventing or mitigating such effects.

“(b) **Submission to Congress; comments; authorization.**—(1) The report shall be transmitted to the Congress not later than 3 years after the date of enactment of the Clean Air Act Amendments of 1990 [Nov. 15, 1990].

“(2) At least 90 days before issuing a report the Administrator shall provide an opportunity for public comment on the proposed report. The Administrator shall include in the final report a summary of the comments received on the proposed report.

“(3) There are authorized to be appropriated such sums as are necessary to carry out this section.”

Termination of Advisory Committees

Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the two-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is re-

newed by appropriate action prior to the expiration of such two-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law, see section 14 of Pub.L. 92-463, Oct. 6, 1972, 86 Stat. 776, set out in Appendix 2 to Title 5, Government Organization and Employees.

§ 7410. State implementation plans for national primary and secondary ambient air quality standards

[CAA § 110]

(a) Adoption of plan by State; submission to Administrator; content of plan; revision; new sources; indirect source review program; supplemental or intermittent control systems

(1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State. In addition, such State shall adopt and submit to the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.

(2) Each implementation plan submitted by a State under this chapter shall be adopted by the State after reasonable notice and public hearing. Each such plan shall—

(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter;

(B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to—

(i) monitor, compile, and analyze data on ambient air quality, and

(ii) upon request, make such data available to the Administrator;

(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter;

(D) contain adequate provisions—

(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C of this subchapter to prevent significant deterioration of air quality or to protect visibility.

(ii) insuring compliance with the applicable requirements of sections 7426 and 7415 of this title (relating to interstate and international pollution abatement);

(E) provide (i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof), (ii) requirements that the State comply with the requirements respecting State boards under section 7428 of this title, and (iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision;

(F) require, as may be prescribed by the Administrator—

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the State agency with any emission limitations or standards

“(IV) Asian Americans.

“(V) Women.

“(VI) Disabled Americans.

“(ii) The presumption established by clause (i) may be rebutted with respect to a particular business concern if it is reasonably established that the individual or individuals referred to in that clause with respect to that business concern are not experiencing impediments to establishing or developing such concern as a result of the individual's identification as a member of a group specified in that clause.

“(C) The following institutions are presumed to be disadvantaged business concerns for purposes of subsection (a):

“(i) Historically black colleges and universities, and colleges and universities having a student body in which 40 percent of the students are Hispanic.

“(ii) Minority institutions (as that term is defined by the Secretary of Education pursuant to the General Education Provision Act (20 U.S.C. 1221 et seq.) [section 1221 et seq. of Title 20], Education).

“(iii) Private and voluntary organizations controlled by individuals who are socially and economically disadvantaged.

“(D) A joint venture may be considered to be a disadvantaged business concern under subsection (a), notwithstanding the size of such joint venture, if—

“(i) a party to the joint venture is a disadvantaged business concern; and

“(ii) that party owns at least 51 percent of the joint venture.

A person who is not an economically disadvantaged individual or a disadvantaged business concern, as a party to a joint venture, may not be a party to more than 2 awarded contracts in a fiscal year solely by reason of this subparagraph.

“(E) Nothing in this paragraph shall prohibit any member of a racial or ethnic group that is not listed in subparagraph (B)(i) from establishing that they have been impeded in establishing or developing a business concern as a result of racial or ethnic discrimination.

“Sec. 1002. Use of quotas prohibited. Nothing in this title [Title X of Pub.L. 101-594, Nov. 15, 1990, 104 Stat. 2708, enacting this note] shall permit or require the use of quotas or a requirement that has the effect of a quota in determining eligibility under section 1001.”

Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with Act July 14, 1955, as amended by Pub.L. 95-95 [this chapter], see section 406(b) of Pub.L. 95-95, set out as an Effective Date of 1977 Acts note under section 7401 of this title.

§ 7602. Definitions

[CAA § 302]

When used in this chapter—

(a) The term “Administrator” means the Administrator of the Environmental Protection Agency.

(b) The term “air pollution control agency” means any of the following:

(1) A single State agency designated by the Governor of that State as the official State air pollution control agency for purposes of this chapter.

(2) An agency established by two or more States and having substantial powers or duties pertaining to the prevention and control of air pollution.

(3) A city, county, or other local government health authority, or, in the case of any city, county, or other local government in which there is an agency other than the health authority charged with responsibility for enforcing ordinances or laws relating to the prevention and control of air pollution, such other agency.

(4) An agency of two or more municipalities located in the same State or in different States and having substantial powers or duties pertaining to the prevention and control of air pollution.

(5) An agency of an Indian tribe.

(c) The term “interstate air pollution control agency” means—

(1) an air pollution control agency established by two or more States, or

(2) an air pollution control agency of two or more municipalities located in different States.

(d) The term “State” means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, and American Samoa and includes the Commonwealth of the Northern Mariana Islands.

(e) The term “person” includes an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof.

(f) The term “municipality” means a city, town, borough, county, parish, district, or other public body created by or pursuant to State law.

(g) The term “air pollutant” means any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and by-product material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has

identified such precursor or precursors for the particular purpose for which the term "air pollutant" is used.

(h) All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being, whether caused by transformation, conversion, or combination with other air pollutants.

(i) The term "Federal land manager" means, with respect to any lands in the United States, the Secretary of the department with authority over such lands.

(j) Except as otherwise expressly provided, the terms "major stationary source" and "major emitting facility" mean any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant (including any major emitting facility or source of fugitive emissions of any such pollutant, as determined by rule by the Administrator).

(k) The terms "emission limitation" and "emission standard" mean a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.¹

(l) The term "standard of performance" means a requirement of continuous emission reduction, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction.

(m) The term "means of emission limitation" means a system of continuous emission reduction (including the use of specific technology or fuels with specified pollution characteristics).

(n) The term "primary standard attainment date" means the date specified in the applicable implementation plan for the attainment of a national primary ambient air quality standard for any air pollutant.

(o) The term "delayed compliance order" means an order issued by the State or by the Administrator to an existing stationary source, postponing the date required under an applicable implementation plan for compliance by such source with any requirement of such plan.

(p) The term "schedule and timetable of compliance" means a schedule of required measures including an enforceable sequence of actions or operations

leading to compliance with an emission limitation, other limitation, prohibition, or standard.

(q) For purposes of this chapter, the term "applicable implementation plan" means the portion (or portions) of the implementation plan, or most recent revision thereof, which has been approved under section 7410 of this title, or promulgated under section 7410(c) of this title, or promulgated or approved pursuant to regulations promulgated under section 7601(d) of this title and which implements the relevant requirements of this chapter.

(r) Indian tribe

The term "Indian tribe" means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is Federally recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

(s) VOC

The term "VOC" means volatile organic compound, as defined by the Administrator.

(t) PM-10

The term "PM-10" means particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers, as measured by such method as the Administrator may determine.

(u) NAAQS and CTG

The term "NAAQS" means national ambient air quality standard. The term "CTG" means a Control Technique Guideline published by the Administrator under section 7408 of this title.

(v) NO_x

The term "NO_x" means oxides of nitrogen.

(w) CO

The term "CO" means carbon monoxide.

(x) Small source

The term "small source" means a source that emits less than 100 tons of regulated pollutants per year, or any class of persons that the Administrator determines, through regulation, generally lack technical ability or knowledge regarding control of air pollution.

(y) Federal implementation plan

The term "Federal implementation plan" means a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (including economic incentives, such as marketable permits or auctions of emissions allowances), and provides for attainment of the relevant national ambient air quality standard.

AIR POLLUTION PREVENTION

42 § 7603

CAA § 303

(z) Stationary source

The term "stationary source" means generally any source of an air pollutant except those emissions resulting directly from an internal combustion engine for transportation purposes or from a nonroad engine or nonroad vehicle as defined in section 7550 of this title.

(July 14, 1955, c. 360, Title III, § 302, formerly § 9, as added Dec. 17, 1963, Pub.L. 88-206, § 1, 77 Stat. 400, renumbered Oct. 20, 1965, Pub.L. 89-272, Title I, § 101(4), 79 Stat. 992, and amended Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 504; Dec. 31, 1970, Pub.L. 91-604, § 15(a)(1), (c)(1), 84 Stat. 1710, 1713; Aug. 7, 1977, Pub.L. 95-95, Title II, § 218(c), Title III, § 301, 91 Stat. 761, 769; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(76), 91 Stat. 1404; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 101(d)(4), 107(a), (b), 108(j), 109(b), Title III, § 302(e), Title VII, § 709, 104 Stat. 2409, 2464, 2468, 2470, 2574, 2684.)

¹ So in original.

HISTORICAL AND STATUTORY NOTES**Codifications**

Section was formerly classified to section 1857h of this title.

Effective and Applicability Provisions

1990 Acts. Amendment by Pub.L. 101-549 effective Nov. 15, 1990, except as otherwise provided; see section 711(b) of Pub.L. 101-549, set out as a note under section 7401 of this title.

1977 Acts. Amendment by Pub.L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub.L. 95-95, set out as a note under section 7401 of this title.

Savings Provisions

Suits, actions or proceedings commenced under this chapter as in effect prior to Nov. 15, 1990, not to abate by reason of the taking effect of amendments by Pub.L. 101-549, except as otherwise provided for, see section 711(a) of Pub.L. 101-549, set out as a note under section 7401 of this title.

Prior Provisions

Provisions similar to subsecs. (b) and (d) of this section were contained in a prior section 1857e, Act July 14, 1955, c. 360, § 6, 69 Stat. 323, prior to the general amendment of this chapter by Pub.L. 88-206.

§ 7603. Emergency powers

[CAA § 303]

Notwithstanding any other provision of this chapter, the Administrator, upon receipt of evidence that a pollution source or combination of sources (including moving sources) is presenting an imminent and substantial endangerment to public health or welfare, or the environment, may bring suit on behalf of the United States in the appropriate United States district court to immediately restrain any person causing or contributing to the alleged pollution to stop the emission of air pollutants causing or contributing to

such pollution or to take such other action as may be necessary. If it is not practicable to assure prompt protection of public health or welfare or the environment by commencement of such a civil action, the Administrator may issue such orders as may be necessary to protect public health or welfare or the environment. Prior to taking any action under this section, the Administrator shall consult with appropriate State and local authorities and attempt to confirm the accuracy of the information on which the action proposed to be taken is based. Any order issued by the Administrator under this section shall be effective upon issuance and shall remain in effect for a period of not more than 60 days, unless the Administrator brings an action pursuant to the first sentence of this section before the expiration of that period. Whenever the Administrator brings such an action within the 60-day period, such order shall remain in effect for an additional 14 days or for such longer period as may be authorized by the court in which such action is brought.

(July 14, 1955, c. 360, Title III, § 303, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1705, and amended Aug. 7, 1977, Pub.L. 95-95, Title III, § 302(a), 91 Stat. 770; Nov. 15, 1990, Pub.L. 101-549, Title VII, § 704, 104 Stat. 2681.)

HISTORICAL AND STATUTORY NOTES**Codifications**

Section was formerly classified to section 1857h-1 of this title.

Effective and Applicability Provisions

1990 Acts. Amendment by Pub.L. 101-549 effective Nov. 15, 1990, except as otherwise provided, see section 711(b) of Pub.L. 101-549, set out as a note under section 7401 of this title.

1977 Acts. Amendment by Pub.L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub.L. 95-95, set out as a note under section 7401 of this title.

Savings Provisions

Suits, actions or proceedings commenced under this chapter as in effect prior to Nov. 15, 1990, not to abate by reason of the taking effect of amendments by Pub.L. 101-549, except as otherwise provided for, see section 711(a) of Pub.L. 101-549, set out as a note under section 7401 of this title.

Prior Provisions

A prior section 303 of Act July 14, 1955, was renumbered section 310 by Pub.L. 91-604, and is set out as section 7610 of this title.

Modification or Rescission of Rules, Regulations, Orders, Determinations, Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue

42 § 7607**FEDERAL ENVIRONMENTAL LAWS**

CAA § 307

§ 7607. Administrative proceedings and judicial review

[CAA § 307]

(a) Administrative subpoenas; confidentiality; witnesses

In connection with any determination under section 7410(f) of this title, or for purposes of obtaining information under section 7521(b)(4) or 7545(c)(3) of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the¹ chapter (including but not limited to section 7413, section 7414, section 7420, section 7429, section 7477, section 7524, section 7525, section 7542, section 7603, or section 7606 of this title),² the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of Title 18, except that such paper, book, document, or information may be disclosed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, to persons carrying out the National Academy of Sciences' study and investigation provided for in section 7521(c) of this title, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person under this subparagraph, the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title, any standard under section 7521 of this title (other than a standard re-

quired to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5) of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title,² under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) Additional evidence.

In any judicial proceeding in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to³ the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(d) Rulemaking

(1) This subsection applies to—

(A) the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under section 7410(e) of this title,

(C) the promulgation or revision of any standard of performance under section 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under section 7429 of this title,

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545 of this title,

(F) the promulgation or revision of any aircraft emission standard under section 7571 of this title,

(G) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under section 7419 of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to

prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under section 7521 of this title and test procedures for new motor vehicles or engines under section 7525 of this title, and the revision of a standard under section 7521(a)(3) of this title,

(L) promulgation or revision of regulations for noncompliance penalties under section 7420 of this title,

(M) promulgation or revision of any regulations promulgated under section 7541 of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under section 7426 of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 7511b(e) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under section 7413(d)(3) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 7547 of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 7552 of this title,

(T) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under section 7511b(f) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of section⁴ 553 through 557 and section 706 of Title 5 shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of Title 5.

(2) Not later than the date of proposal of any action to which this subsection applies, the Administrator shall establish a rulemaking docket for such action (hereinafter in this subsection referred to as a "rule"). Whenever a rule applies only within a particular State,

a second (identical) docket shall be simultaneously established in the appropriate regional office of the Environmental Protection Agency.

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of Title 5, shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the "comment period"). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall include a summary of—

(A) the factual data on which the proposed rule is based;

(B) the methodology used in obtaining the data and in analyzing the data; and

(C) the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under section 7409(d) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

(4)(A) The rulemaking docket required under paragraph (2) shall be open for inspection by the public at reasonable times specified in the notice of proposed rulemaking. Any person may copy documents contained in the docket. The Administrator shall provide copying facilities which may be used at the expense of the person seeking copies, but the Administrator may waive or reduce such expenses in such instances as the public interest requires. Any person may request copies by mail if the person pays the expenses, including personnel costs to do the copying.

(B)(i) Promptly upon receipt by the agency, all written comments and documentary information on the proposed rule received from any person for inclusion in the docket during the comment period shall be placed in the docket. The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings. All documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking shall be placed in the docket as soon as possible after their availability.

(ii) The drafts of proposed rules submitted by the Administrator to the Office of Management and Budget for any interagency review process prior to proposal of any such rule, all documents accompanying such drafts, and all written comments thereon by other agencies and all written responses to such written comments by the Administrator shall be placed in the docket no later than the date of proposal of the rule. The drafts of the final rule submitted for such review process prior to promulgation and all such written comments thereon; all documents accompanying such drafts, and written responses thereto shall be placed in the docket no later than the date of promulgation.

(5) In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data, or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the record of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information.

(6)(A) The promulgated rule shall be accompanied by (i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and (ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

(C) The promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same

procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

(8) The sole forum for challenging procedural determinations made by the Administrator under this subsection shall be in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section) at the time of the substantive review of the rule. No interlocutory appeals shall be permitted with respect to such procedural determinations. In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

(10) Each statutory deadline for promulgation of rules to which this subsection applies which requires promulgation less than six months after date of proposal may be extended to not more than six months after date of proposal by the Administrator upon a determination that such extension is necessary to afford the public, and the agency, adequate opportunity to carry out the purposes of this subsection.

(11) The requirements of this subsection shall take effect with respect to any rule the proposal of which occurs after ninety days after August 7, 1977.

(e) Other methods of judicial review not authorized

Nothing in this chapter shall be construed to authorize judicial review of regulations or orders of the

Administrator under this chapter, except as provided in this section.

(f) Costs

In any judicial proceeding under this section, the court may award costs of litigation (including reasonable attorney and expert witness fees) whenever it determines that such award is appropriate.

(g) Stay, injunction, or similar relief in proceedings relating to noncompliance penalties

In any action respecting the promulgation of regulations under section 7420 of this title or the administration or enforcement of section 7420 of this title no court shall grant any stay, injunctive, or similar relief before final judgment by such court in such action.

(h) Public participation

It is the intent of Congress that, consistent with the policy of subchapter II of chapter 5 of Title 5, the Administrator in promulgating any regulation under this chapter, including a regulation subject to a deadline, shall ensure a reasonable period for public participation of at least 30 days, except as otherwise expressly provided in section⁴ 7407(d), 7502(a), 7511(a) and (b), and 7512(a) and (b) of this title.

(July 14, 1955, c. 360, Title III, § 307, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1707, and amended Nov. 18, 1971, Pub.L. 92-157, Title III, § 302(a), 85 Stat. 464; June 22, 1974, Pub.L. 93-319, § 6(c), 88 Stat. 259; Aug. 7, 1977, Pub.L. 95-95, Title III, §§ 303(d), 305(a), (c), (f)-(h), 91 Stat. 772, 776, 777; Nov. 16, 1977, Pub.L. 95-190, § 14(a)(79), (80), 91 Stat. 1404; Nov. 15, 1990, Pub.L. 101-549, Title I, §§ 108(p), 110(5), Title III, § 302(g), (h), Title VII, §§ 702(c), 703, 706, 707(h), 710(b), 104 Stat. 2469, 2470, 2574, 2681-2684.)

¹ So in original. Probably should be "this".

² So in original.

³ So in original. The word "to" probably should not appear.

⁴ So in original. Probably should be "sections".

HISTORICAL AND STATUTORY NOTES

References in Text

Section 7521(b)(4) of this title, referred to in subsec. (a), was repealed by Pub.L. 101-549, title II, § 203(2), Nov. 15, 1990, 104 Stat. 2529.

Section 7512(b)(5) of this title, referred to in subsec. (b)(1), was repealed by Pub.L. 101-549, Title II, § 203(3), Nov. 15, 1990, 104 Stat. 2529.

Section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977), referred to in subsec. (b)(1), was in the original "section 119(c)(2)(A), (B), or (C) (as in effect before the date of enactment of the Clean Air Act Amendments of 1977)", meaning section 119 of Act July 14, 1955, c. 360, Title I, as added June 22, 1974, Pub.L. 93-319, § 3, 88 Stat. 248, (which was classified to section 1857c-10 of this title) as in effect prior to the enactment of Pub.L. 95-95, Aug. 7, 1977, 91 Stat. 691, effective Aug. 7, 1977. Section 112(b)(1) of Pub.L. 95-95 repealed section 119 of Act July 14, 1955, c. 360, Title I, as added by Pub.L. 93-319, and provided

that all references to such section 119 in any subsequent enactment which supersedes Pub.L. 93-319 shall be construed to refer to section 113(d) of the Clean Air Act and to paragraph (5) thereof in particular which is classified to subsec. (d)(5) of section 7413 of this title. Section 7413(d) of this title was subsequently amended generally by Pub.L. 101-549, Title VII, § 701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, no longer relates to final compliance orders. Section 117(b) of Pub.L. 95-95 added a new section 119 of Act July 14, 1955, which is classified to section 7419 of this title.

Part C of subchapter I of this chapter, referred to in subsec. (d)(1)(J), was in the original "subtitle C of Title I", and was translated as reading "part C of Title I" to reflect the probable intent of Congress, because Title I does not contain subtitles.

Codifications

Section was formerly classified to section 1857h-5 of this title.

In subsec. (h), "subchapter II of chapter 5 of Title 5" was substituted for "the Administrative Procedures Act" on authority of Pub.L. 89-554, § 7(b), Sept. 6, 1966, 80 Stat. 631, the first section of which enacted Title 5, Government Organization and Employees.

Effective and Applicability Provisions

1990 Acts. Amendment by Pub.L. 101-549 effective Nov. 15, 1990, except as otherwise provided, see section 711(b) of Pub.L. 101-549, set out as a note under section 7401 of this title.

1977 Acts. Amendment by Pub.L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub.L. 95-95, set out as a note under section 7401 of this title.

Savings Provisions

Suits, actions or proceedings commenced under this chapter as in effect prior to Nov. 15, 1990, not to abate by reason of the taking effect of amendments by Pub.L. 101-549, except as otherwise provided for, see section 711(a) of Pub.L. 101-549, set out as a note under section 7401 of this title.

Prior Provisions

A prior section 307 of Act July 14, 1955, c. 360, Title III, as added Nov. 21, 1967, Pub.L. 90-148, § 2, 81 Stat. 506, renumbered section 314, Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1705, which related to labor standards, is set out as section 7614 of this title.

Another prior section 307 of act July 14, 1955, c. 360, Title III, formerly § 14, as added Dec. 17, 1963, Pub.L. 88-206, § 1, 77 Stat. 401, was renumbered section 307 by Pub.L. 89-272, renumbered section 310 by Pub.L. 90-148, and renumbered section 317 by Pub.L. 91-604, and is set out as a Short Title of 1963 Acts note under section 7401 of this title.

Modification or Rescission of Rules, Regulations, Orders, Determinations Contracts, Certifications, Authorizations, Delegations, and Other Actions

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub.L. 95-95 [Aug. 7, 1977] to continue

in full force and effect until modified or rescinded in accordance with Act July 14, 1955, as amended by Pub.L. 95-95 [this chapter], see section 406(b) of Pub.L. 95-95, set out as an Effective Date of 1977 Acts note under section 7401 of this title.

Pending Actions and Proceedings

Suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under Act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub.L. 95-95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub.L. 95-95, see section 406(a) of Pub.L. 95-95, set out as an Effective Date of 1977 Acts note under section 7401 of this title.

Termination of Advisory Committees

Advisory Committees established after Jan. 5, 1973, to terminate not later than the expiration of the two-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such two-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law, see section 14 of Pub.L. 92-463, Oct. 6, 1972, 86 Stat. 776, set out in Appendix 2 to Title 5, Government Organization and Employees.

§ 7608. Mandatory licensing

[CAA § 308]

Whenever the Attorney General determines, upon application of the Administrator—

(1) that—

(A) in the implementation of the requirements of section 7411, 7412, or 7521 of this title, a right under any United States letters patent, which is being used or intended for public or commercial use and not otherwise reasonably available, is necessary to enable any person required to comply with such limitation to so comply, and

(B) there are no reasonable alternative methods to accomplish such purpose, and

(2) that the unavailability of such right may result in a substantial lessening of competition or tendency to create a monopoly in any line of commerce in any section of the country,

the Attorney General may so certify to a district court of the United States, which may issue an order requiring the person who owns such patent to license it on such reasonable terms and conditions as the court, after hearing, may determine. Such certification may be made to the district court for the district in which the person owning the patent resides, does business, or is found.

(July 14, 1955, c. 360, Title III, § 308, as added Dec. 31, 1970, Pub.L. 91-604, § 12(a), 84 Stat. 1708.)

American Lung Association Declarations

DECLARATION OF CHARLES D. CONNOR

I, Charles D. Connor, declare as follows:

1. I am the President and Chief Executive Officer for the American Lung Association (ALA). I work in the ALA's Washington, D.C. office located at 1301 Pennsylvania Avenue, NW. I am responsible for the overall management and operation of the organization. In that capacity, I am required to be familiar with the organization's structure, function, purpose, activities, and membership.

2. ALA is incorporated in Maine with headquarters in Washington, D.C. It has chartered organizations (akin to state chapters) covering all fifty states and the District of Columbia. ALA is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code.

3. ALA has a vision of a world free of lung disease. Its mission statement is "to save lives by preventing lung disease and promoting lung health." As scientific research has shown that air pollution is a major contributor to the worsening of lung disease, the ALA has conducted advocacy and litigation to promote full and timely implementation of the Clean Air Act for many years. The ALA is also committed to improving lung health and preventing lung disease through education. The organization's educational efforts include the publication of national air-quality information, such as that provided in the ALA's annual "State of the Air" report (<http://www.stateoftheair.org/>). Our board includes pulmonologists and other experts on lung health.

4. ALA members reside in communities throughout the United States that experience ozone levels in excess of the Environmental Protection Agency's 2008 national ambient air quality standard for the pollutant. These communities include the metropolitan areas

of Houston, Texas; Baltimore, Maryland; and Cleveland, Ohio. Other ALA members reside in communities where the concentrations of ozone in the air are at levels that have been identified by lung health experts as being a threat to public health but which do not (based on recent EPA data¹) exceed the 2008 national ambient air quality standard for ozone. These communities include the metropolitan areas of Evansville, IN-KY (where the design value is 73 ppb in Henderson County, KY); Augusta-Richmond County, GA-SC (71 ppb in Richmond County); and New Orleans-Metairie-Kenner, LA (73 ppb in St. John the Baptist Parish).

5. ALA members living in the above-named communities, among others, have a strong interest in the full, timely, and effective implementation of Clean Air Act requirements designed to protect them and their families from unhealthy air.

6. The EPA's failure to adopt stronger national ambient air quality standards to protect public health and welfare from ozone, as required by the Clean Air Act, threatens the health and welfare of ALA members. EPA's science advisers (CASAC) have recommended that a primary ozone standard in the range of 60-70 parts per billion (ppb) is requisite to protect public health, while EPA's current (2008) ozone standard is set at 75 ppb.

7. Strengthening the ozone NAAQS to assure that it protects public health as required by the Clean Air Act has long been a high priority for ALA, and will continue to be so for the foreseeable future. We (along with others) filed litigation that led to a court ordered deadline (via a consent decree) for EPA to complete the review that resulted in adoption of the 2008 ozone NAAQS. *American Lung Association v. Whitman*, No. 03-778 (D.D.C.).

8. Based on the scientific evidence considered by EPA in adopting the 2008 standard, ALA contends that a standard of 60 ppb is requisite to protect public health with an adequate margin of safety, as have numerous medical organizations including the American

¹ <http://epa.gov/airtrends/values.html>

Thoracic Society and American Academy of Pediatrics. ALA bases this view on both clinical and epidemiological studies showing associations between adverse health effects and ozone levels at 60 ppb. ALA presented oral testimony and filed comments urging adoption of a 60 ppb health standard both in the rulemaking that led to the 2008 standard, and in the reconsideration rulemaking initiated by EPA on January 19, 2010. These comments also argued that the Clean Air Act requires EPA to base the standard exclusively on protection of public health, and that the agency was legally precluded from considering implementation costs of the standard. Comments of American Lung Association et al, July 11, 2007 and March 22, 2010, EPA docket No. EPA-HQ-OAR-2005-0172 ("ALA Comments"). ALA will continue to so argue, and to vigorously advocate prompt adoption of an ozone health standard that is more protective than EPA's 2008 standard and fully requisite to protect public health with an adequate margin of safety.


9. Although ALA contends that a standard weaker than 60 ppb would not be fully requisite to protect public health with an adequate margin of safety, any strengthening of the 75 ppb standard to within the range recommended by CASAC, even if not to 60 ppb, would materially reduce the health risk to our members and the public from ozone pollution. This would be true even in communities that already violate the 75 ppb standard, because a stronger standard would require such communities to achieve greater pollution reductions that would reduce health risks from ozone exposure.

10. I am aware that EPA has announced that it will not consider strengthening the ozone standards until its next 5-year review of the standards, which it now says will not be done until 2014. This delay threatens the health and welfare of ALA members by prolonging their exposure to unsafe levels of ozone pollution. The delay also impairs ALA's ability to fulfill its

mission of protecting lung health, and advocating for stronger measures to limit ozone pollution that impairs lung health.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 26 day of March, 2012.



Charles D. Connor

DECLARATION OF ROBERT LEEK

I, Robert Leek, declare:

1. I am a resident of Williamsburg, Virginia. I have been a member of the American Lung Association (ALA) for more than a decade. I sit on the ALA's Nationwide Assembly. I am also state chair of the ALA's Virginia Leadership Council.

2. I have been passionate about promoting respiratory health since the beginning of my professional career. After training at Winthrop-University Hospital in Mineola, New York, I began work as a respiratory therapist in 1969—serving first at the U.S. Army hospital in Fort Monroe, Virginia, and later at a base in Germany. In 1972, I joined Williamsburg Community Hospital as Director of Respiratory Care. Williamsburg Community Hospital later became a Sentara Healthcare hospital; nearly four decades later, I remain with Sentara. As a Senior Physician Liaison for Sentara Healthcare, I am now responsible for organizing strategic and business planning functions; performing market assessment and development in selected service areas; and leading physician recruitment and retention efforts by monitoring market demand and facilitating succession planning. In performing these functions, I routinely travel to Sentara facilities in Norfolk and Newport News, Virginia. While my work with Sentara is currently focused on the business of medicine, my passion for respiratory health has not diminished—as demonstrated by my ongoing commitment to the mission and efforts of the American Lung Association.

3. I am aware from published research that ozone is a severe lung irritant that threatens the well-being of both healthy adults and the more vulnerable, including children. I am also aware from published reports that the U.S. Environmental Protection Agency's science advisers and other experts have found that a federal ozone standard more protective than that adopted in 2008 is necessary to protect human health.

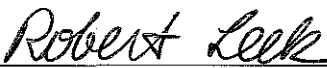
4. I understand from published information that ozone levels in the Virginia Beach–Norfolk–Newport News region where I live and travel for work sometimes exceed the stronger standard recommended by the EPA’s science advisers to protect human health. For this reason, I am concerned that ozone pollution poses a threat to my health and my enjoyment of outdoor activities, including golfing and walking. I am also concerned about the threat ozone pollution poses to my family, including my twelve-year-old stepdaughter.

5. I understand that the EPA has failed to adopt a strengthened ozone standard as required to protect human health and welfare. Any additional delay in implementing and strengthening the Clean Air Act’s protections threatens my interests in my health and the health of my family.

6. I strongly support the American Lung Association’s efforts to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 29th day of December, 2011.



Robert Leek

DECLARATION OF JANE Z. REARDON

I, Jane Z. Reardon, declare:

1. I am a resident of Granby, Connecticut, a rural town approximately fifteen miles north of Hartford. Since 1975 I have been a member of the American Lung Association (ALA), where I have been sitting on their National Board of Directors since July 1, 2011. I have previously served as Chair of the American Lung Association of Connecticut and most recently of the ALA of New England's Chartered Association.

2. In addition to my work with the American Lung Association, I have served on the board of the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR); the AACVPR's Racial and Cultural Diversity Task Force; and the AACVPR's National Strategic Planning Committee.

3. Throughout my career in medical nursing, I have focused on issues of respiratory health. After graduating from nursing school in 1966, I worked for nine years as a nurse in the respiratory intensive care unit of Hartford's St. Francis Hospital. It was there that I first observed the impact the region's dirty air was having on those with chronic respiratory conditions. During Hartford's hot and humid summer months, air pollution forced many with respiratory ailments to make frequent trips to the emergency room, often then requiring the intensive care unit. The struggle of these patients—which often came from Hartford's most-impoverished populations—provided me with the initiative to become involved in the work of the American Lung Association. It also inspired my work with several other Hartford nurses on an informational book, "Living with Lung Disease," that was published by the ALA in the 1970s.

4. After nearly 3 decades at St. Francis Hospital, I joined Hartford Hospital's Pulmonary Care Unit, then a ventilator-weaning unit. There, I developed further interest and expertise in matters of pulmonary health.

5. In 1988, I graduated from Yale University School of Nursing with a Master of Science in Nursing degree and worked for many years as a Pulmonary Clinical Nurse Specialist and later as a nurse practitioner hospitalist at the Hartford Hospital. In my current position, I continue to assist patients that are hospitalized as a result of respiratory ailments, among other conditions.

6. In my decades of providing hospital care, I have observed a definite correlation between poor air quality—including elevated levels of ozone pollution—and an increased incidence of respiratory-related hospital admissions. I am also aware from published research that ozone is a severe lung irritant that threatens the well-being of both healthy adults and the more vulnerable, including children, the elderly, and especially those with asthma and Chronic Obstructive Pulmonary Disease (COPD).

7. I understand that ozone levels in and around Hartford sometimes exceed the national ambient air quality standard established in 2008 to protect human health and welfare. I am also aware from published reports that the U.S. Environmental Protection Agency's science advisers and other experts have found that an ozone standard more protective than that adopted in 2008 is necessary to protect human health. I am accordingly concerned that the Hartford region's ozone pollution threatens my own health and that of my patients.

8. I understand that the U.S. Environmental Protection Agency has delayed implementation of Clean Air Act protections designed to eliminate unhealthy air pollution. I also understand that the EPA has failed to adopt a strengthened ozone standard as required to

protect human health and welfare. Any additional delay in implementing and strengthening the Clean Air Act's protections threatens my interests in my health and the health of my patients.

9. I strongly support the American Lung Association's efforts to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 16th day of December, 2011.



Jane Z. Reardon

Appalachian Mountain Club Declarations

DECLARATION OF ANDREW J. FALENDER

I, Andrew J. Falender, state as follows:

1. I am the President of the Appalachian Mountain Club (AMC), a non-profit corporation organized under the laws of the Commonwealth of Massachusetts and have been in this position since 1989. In that capacity, I am responsible for managing the overall operation, planning, and directing of AMC's programs and operations. My work requires that I be familiar with the AMC's purpose, organization, activities, and with environmental interests and concerns of members. My work also requires me to be familiar with the nature and scope of the Club's membership programs, its membership records, and the manner in which information on members can be retrieved.

2. AMC is a nonprofit organization dedicated to promoting the protection, enjoyment, and wise use of the mountains, rivers, and trails of the Northeast outdoors. In furtherance of those purposes, AMC has long engaged in advocacy for policies and programs to protect and enhance environmental quality in Northeast outdoors, including air quality.

3. AMC regularly maintains membership records that include the address of each member. These records are regularly updated to add new members, reflect address changes, and remove the names of persons who are no longer members.

4. AMC has approximately 81,600 members who reside in many states, including (for example) North Carolina, Virginia, West Virginia, Maryland, District of Columbia, Delaware, Pennsylvania, New Jersey, New York, Massachusetts, Rhode Island, Vermont, New Hampshire, Maine. AMC members use and enjoy many of the national and state parks and forests in these states for hiking, paddling, wildlife watching, aesthetic enjoyment, and other forms of recreation. For example, areas used and enjoyed by AMC members for these purposes include Shenandoah National Park, Acadia National Park, the Mid-Atlantic Highlands region, and the Bay Circuit Trail in eastern Massachusetts the Mid-State Trail in Worcester, Massachusetts region, and many other state parks and national forests. In addition, AMC and our member volunteers maintain sections of the Appalachian Trail in Pennsylvania, New Jersey, Connecticut, Massachusetts, New Hampshire and Maine. Our member volunteers also maintain the New England National Scenic Trail, which passes through the Springfield and Holyoke region in Massachusetts.

5. AMC is very concerned about the threats posed by ozone to the health of its members and to the health of the ecosystems they use and enjoy. As an AMC member myself, and as one very familiar with the interests and concerns of our members, I know that AMC members are also deeply concerned about threats posed by ozone pollution to their health and to the environment in the places where they live and recreate. I know from published reports that ozone is a severe lung irritant, and that it also can cause serious damage to trees and other vegetation in the places where I and other AMC members recreate, thereby impairing our use and enjoyment of these areas.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 5th, day of December 2011.


Andrew J. Falender

DECLARATION OF JOHN SCHEMP

I, John Schempp, state as follows:

1. I am a member of Appalachian Mountain Club (AMC), and have been a member since 1994. I am also an active AMC Chapter volunteer. My Chapter position requires me to be familiar with AMC's structure and purpose. AMC is a nonprofit organization dedicated to promoting the protection, enjoyment, and wise use of the mountains, rivers, and trails of the Northeast Outdoors.

2. I live in Providence, Rhode Island, and frequently recreate in outdoor areas within Rhode Island's Kent, Providence, and Washington counties,

including: *Kent County Wickaboxet management area* *Providence County Snake Den S.P. George Parlier wilderness (Ardoban)* *Washington Arcadia Management area Carolina management area* *Burlingame S.P.*

My outdoor activities include walking, biking, and cross-country skiing. During these activities I enjoy breathing fresh air and viewing the trees and other vegetation. Because I have no plans to move out of Providence, I intend to continue recreating outdoors in the above areas many times each year.

3. I am aware from published reports that ozone is a severe lung irritant that poses a health threat even to healthy adults, and that ozone air pollution can damage trees and other plant life. In addition, I have frequent sinusitis, and I know that ozone pollution is linked to triggering respiratory ailments. I am also

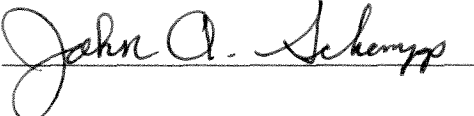
aware from public information that ozone pollution in my community and the surrounding places in which I recreate periodically reaches levels that scientists say are unsafe to human health. For these reasons, I am very concerned that ozone pollution poses a threat to my health and to my use and enjoyment of the outdoor areas described above.

4. I am aware from public information that EPA's science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health and to protect trees and plants from ozone damage. I am also aware from published reports that ozone levels in my community and the surrounding areas in which I recreate sometimes exceed stronger standards recommended by the EPA's science advisers. I am therefore very concerned that any delay in strengthening federal ozone standards will prolong the threat to my health and welfare from unsafe levels of ozone pollution in the places where I live, work, and recreate.

5. I strongly support litigation by AMC to ensure that ozone standards are fully sufficient to protect my health and that of my family members.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 15 day of December, 2011.



John Schempp

Environmental Defense Fund Declarations

DECLARATION OF JOHN STITH

I, John Stith, declare as follows:

1. I am a Senior Data Analyst at Environmental Defense Fund. I have had this position for more than six years.
2. My duties include maintaining an accurate list of members. My colleagues and I provide information to members, acknowledge gifts and volunteer actions and manage the organization's member databases. My work requires me to be familiar with Environmental Defense Fund's purposes, staffing and activities.
3. Environmental Defense Fund is a membership organization incorporated under the laws of the State of New York. It is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code.
4. The purpose of Environmental Defense Fund is to use science, economics and law to protect and restore the quality of our air, water and other natural resources. Our logo is "Finding the Ways that Work". Environmental Defense Fund employs more than 150 scientists, economists, engineers, graduates of business schools and lawyers to help solve challenging environmental problems in a scientifically sound and cost-effective way.

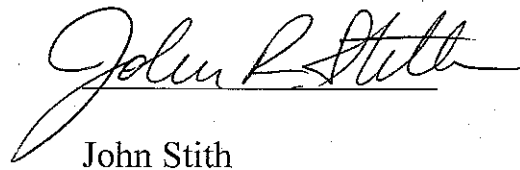
5. Through its programs aimed at protecting human health, Environmental Defense Fund is pursuing initiatives at the state and national levels designed to reduce emissions of harmful ozone forming pollutants.

6. When an individual becomes a member of Environmental Defense Fund, his or her current residential address is recorded in our membership database. The database entry reflecting the member's residential address is verified or updated as needed. The database is maintained in the regular course of business and each entry reflecting a member's residential address and membership status is promptly updated to reflect changes. I obtained the information about our membership discussed below from the database.

7. Environmental Defense Fund currently has 338,577 members in the United States, and we have members in all 50 states. For example, Environmental Defense Fund has members in San Francisco County, CA; Denver, CO; New York, NY; Washington, D.C.; Baltimore, MD; Philadelphia, PA; Cleveland, OH; and Dallas, TX; Middlesex County, MA; Providence, RI; Albany County, NY; Jefferson County, AL; and Sarasota County, FL. The communities identified above are only examples. Environmental Defense Fund members live in numerous other communities with ozone levels higher than the 60-70 ppb range recommended by EPA's science advisers. These members likewise have a strong interest in protecting human health and the environment from air pollution.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed in Washington, D. C. on December 20, 2011.



John Stith

DECLARATION OF VICKIE PATTON

I, Vickie Patton, declare as follows:

1. I serve as General Counsel of Environmental Defense Fund (EDF). I am also responsible for managing the organization's national and regional clean air programs.

2. For two decades, I have worked to protect human health and the environment from air pollution. After obtaining my law degree from the New York University School of Law in 1990, I worked at the U.S. Environmental Protection Agency's Office of General Counsel in Washington, D.C., where I provided legal counsel on a variety of national air quality initiatives. During my time with the agency, I earned an EPA Gold Medal for Exceptional Service; four EPA bronze medals; an EPA Special Achievement Award; and a U.S. Department of Justice commendation.

3. Since joining Environmental Defense Fund in 1998, I have testified before congressional and state legislative committees on air quality issues; authored several articles on air quality protection and environmental policy; and participated in numerous Clean Air Act rulemakings and related litigation, including several successful cases before the U.S. Supreme Court. In addition, I am presently serving as a member of EPA's national Clean Air Act Advisory Committee.

4. As the manager of Environmental Defense Fund's air quality programs, my responsibilities include planning and coordinating the organization's clean air advocacy and litigation; developing and articulating the organization's positions on national and regional air quality issues; overseeing the organization's comments on national, regional, and local actions proposed under the Clean Air Act; and otherwise advocating for the protection of clean air and public health. Because of my work within EDF, I am very familiar with the organization's

purposes, the nature and scope of its membership, and the activities it undertakes to protect air quality across the country.

5. The purpose of Environmental Defense Fund is to use science, economics, and law to protect and restore the quality of our air, water, and other natural resources. The organization is dedicated to “Finding the ways that work.” EDF employs more than 150 scientists, economists, engineers, business school graduates, and lawyers to help solve challenging environmental problems in a way that is both cost effective and scientifically sound.

6. Since its establishment more than four decades ago, Environmental Defense Fund has been committed to protecting the quality of the nation’s air and the health of those who breathe it. The organization has accordingly undertaken advocacy and litigation aimed at ensuring full and effective implementation of the Clean Air Act—advocacy and litigation that continue to this day.

7. As part of its Clean Air Act work, Environmental Defense Fund has long advocated the adoption of National Ambient Air Quality Standards (NAAQS) that fulfill EPA’s statutory mandate to protect public health and welfare from ozone pollution. Along with others, EDF filed the lawsuit that led to a court ordered deadline (via a consent decree) for EPA to complete the review that resulted in adoption of the 2008 NAAQS for ozone. American Lung Association, et al. v. Whitman, No. 03-778 (D.D.C.). Along with others, EDF also filed extensive comments on EPA’s reconsideration proposal of January 19, 2010 to strengthen the ozone NAAQS. These comments argued, among other things, that EPA’s March 2008 standards were not requisite to protect public health with an adequate margin of safety, as required by the Clean Air Act, and that the evidence before the agency when it adopted its 2008 ozone NAAQS supported a health standard of 60 parts per billion (ppb). The comments also argued the Clean

Air Act requires EPA to base the establishment of the health-based standard exclusively on protection of public health, and the agency was legally precluded from considering the implementation costs in setting the health-based standard. Comments of American Lung Association, et al., July 11, 2007 and March 22, 2010, EPA docket No. EPA-HQ-OAR- 2005-0172 (“EDF Comments”). EDF will continue to make these arguments, and to strongly advocate immediate adoption of an ozone health standard that is more protective than EPA’s 2008 standard and requisite to protect public health with an adequate margin of safety.

8. EDF has also publicly and repeatedly argued that EPA’s refusal in 2008 to adopt a separate welfare standard for ozone was both unlawful and contrary to the scientific evidence. EPA’s statutorily-established science advisers (the Clean Air Scientific Advisory Committee, or “CASAC”) concluded that a separate cumulative seasonal ozone standard, with a maximum index value set within the range of 7 to 15 parts per million/hours (ppm/hrs), was requisite to protect public welfare against adverse effects from ozone damage to vegetation and forested ecosystems. EDF filed detailed comments arguing for adoption of this CASAC-recommended approach, both on the proposal that led to adoption of the 2008 standards and the January 19, 2010 reconsideration proposal to strengthen those standards. Comments of Environmental Defense Fund, Oct. 9, 2007, and of Earthjustice on behalf of EDF, March 22, 2010, EPA docket No. EPA-HQ-OAR- 2005-0172. In these comments, EDF argued for adoption of a welfare-protective standard of 7 ppm/hrs based on evidence that ozone causes damage to vegetation at (and even below) such levels. EDF will continue to argue for the adoption of a separate welfare-protective ozone NAAQS that is fully sufficient to protect vegetation and forested ecosystems against ozone damage.

9. As noted in the declaration of John Stith, Environmental Defense Fund currently has over 300,000 members in the United States. That declaration, along with the others submitted by EDF in this case (collectively, "EDF Declarations"), show EDF has members in communities and areas with ozone levels that exceed EPA's 2008 health-based ozone NAAQS of 75 ppb, based on recent EPA data. Examples include the San Francisco Bay Area, in California (80 ppb); the Denver, Colorado area (77 ppb); the New York City, New York area (84 ppb); the Washington, D.C. area (81 ppb); the Baltimore, Maryland area (89 ppb); the Philadelphia, Pennsylvania area (83 ppb); the Pittsburgh-Beaver Valley, Pennsylvania area (81 ppb); the Cleveland, Ohio area (77 ppb); the Houston-Galveston-Brazoria, Texas area (84 ppb), and the Dallas, Texas area (86 ppb). Compare EDF Declarations with http://epa.gov/airtrends/pdfs/Ozone_DesignValues_20082010_FINAL.xlsx (excel file showing ozone design values for 2008-10) and <http://epa.gov/ozonedesignations/2008standards/state.htm> (collection of states' recommended area designations under 2008 ozone standard and EPA responses).

10. EDF members also live in communities that meet EPA's 2008 ozone NAAQS but have ozone levels that experts say are unsafe and that are higher than the top end of the range recommended by CASAC (60-70 ppb). For example, EDF has members in the following areas with ozone levels ranging from 71 to 75 ppb: Middlesex County, Massachusetts (71 ppb); Providence County, Rhode Island (72 ppb); Albany County, New York (71 ppb); Jefferson County, Alabama (75 ppb); Wake County, North Carolina (73 ppb); and Sarasota County, Florida (73 ppb). Compare EDF Declarations with http://epa.gov/airtrends/pdfs/Ozone_DesignValues_20082010_FINAL.xlsx (excel file showing ozone design values for 2008-10).

11. Environmental Defense Fund members living in the areas referenced in paragraphs 9 and 10, among others, have a strong basis for concern about the health threat presented to themselves and their families by the ozone pollution where they live, work, and recreate. They have a strong interest in the full, timely, and effective implementation of Clean Air Act requirements designed to protect them and their families from unhealthy ozone levels.

12. EPA's failure to adopt a stronger health-based national ambient air quality standard, as required by the Clean Air Act, threatens the health of EDF members, including those living in the areas referenced above. EPA's science advisers (CASAC) have unanimously concluded that a health-based ozone standard in the range of 60-70 ppb is requisite to protect public health. Leading medical organizations have called for a primary standard of 60 ppb as requisite to protect public health. Clinical and epidemiological studies cited in EDF's Comments show that ozone levels as low as 60 ppb are associated with adverse health impacts. Yet EPA's March 2008 ozone standard is set at 75 ppb, thereby allowing much higher ozone levels than CASAC and health experts recommend.

13. Any strengthening of the 75 ppb standard to a limit within the range recommended by CASAC, even if not as protective as 60 ppb, would materially reduce the health risk to EDF's members and the larger public from ozone pollution. This is true even in communities that already violate the 75 ppb standard. Although the Clean Air Act requires such "nonattainment" areas to adopt ozone reduction measures, the "attainment" plans required by the Act for such communities only need to provide for pollution reductions sufficient to attain the existing standard—75 ppb. See, e.g., 42 U.S.C. §§ 7502(c), 7511a(b)(1)(A). If the standard was strengthened, the states would need to adopt additional pollution control measures to reduce ozone levels sufficiently to meet the more protective standard in these "nonattainment" areas,

reductions that would reduce the health risks from ozone exposure. *Id.* Likewise, communities that currently meet the 75 ppb standard but would violate a strengthened one would also become “nonattainment” areas and would be required by the Act to adopt specific pollution control measures, as well as any additional controls needed to reduce ozone pollution as necessary to meet the more protective health standard. *Id.* §§ 7502, 7511a; see also *id.* § 7407.

14. Ozone pollution also adversely affects the interests of EDF members concerned about the threat from ozone pollution to their enjoyment of forests and plant life in places where they live and engage in outdoor recreation. In its January 19, 2010 reconsideration proposal, EPA recognized that ozone causes damage to forests and plants, and, as recommended by CASAC, proposed a separate welfare ozone standard to protect against such damage. 75 Fed. Reg. 2,938, 2,999-3,027 (Jan. 19, 2010). The standard would have been different from the health standard, limiting cumulative ozone levels over the growing season rather than limiting only peak 8-hour averages. EPA’s failure to adopt this standard allows ozone damage to forests and plants in places where EDF members live and recreate, thereby threatening their use and enjoyment of such areas. See, e.g., Declarations of EDF Members Denise Fort, Dan Grossman, and Preston Shimer. Ozone levels in areas where these and other EDF members live and/or recreate have in recent years exceeded the 7 to 15 ppm/hrs range recommended by CASAC for protection of vegetation and forested ecosystems. See, e.g., EPA, Counties Violating Secondary Seasonal Ground-Level Ozone Standard, available at <http://www.epa.gov/glo/pdfs/CountySecondaryOzoneLevels0608.pdf>; Supplement to the March 2008 Regulatory Impact Analysis at S4-3, available at http://www.epa.gov/ttn/ecas/regdata/RIAs/s1-supplemental_analysis_full.pdf.

15. I am aware that EPA has announced that it will not consider strengthening the ozone standards until its next five-year review of the standards, which it now says will not be done until 2014. This delay will prolong the exposure of EDF members and their families to unsafe levels of ozone pollution, and will prolong the exposure of vegetation and forested ecosystems where members live and recreate to damaging ozone levels that threaten members' use and enjoyment of those areas. The delay will also impair EDF's ability to fulfill its mission of protecting and restoring the quality of our air, water, and other natural resources, and of protecting public health from environmental harms.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 1st day of January, 2012.



Vickie Patton

DECLARATION OF DR. HAROLD FARBER

I, Dr. Harold Farber, under penalties of perjury, declare as follows:

1. I respectfully submit this declaration on behalf of Environmental Defense Fund in support of its standing. I am a member of Environmental Defense Fund (“EDF”) and have been a member since 2010. I am a pediatric pulmonologist at Texas Children’s Hospital in Houston and hold an appointment as Associate Professor of Pediatrics at Baylor College of Medicine. I specialize in both asthma and pediatric pulmonary medicine. I am board certified by the American Board of Pediatrics with a subspecialty in Pediatric Pulmonology. I have published extensively on the subject of asthma in children in the lay literature, including a book entitled “Control your Child’s Asthma; A Breakthrough Program for the Treatment and Management of Childhood Asthma,” and the scientific literature, with over 20 peer-reviewed scientific publications. I am the author or co-author of three chapters in professional textbooks, and I currently serve as editor for the scientific journal *Pediatric Allergy, Immunology, and Pulmonology*. I reside at 715 Mosby Circle, Houston, TX.

2. As a pediatric pulmonologist, I am acutely aware of the negative health effects of ozone. Peak (1- to 3-hour) and sustained (6- to 8-hour) exposures to ozone have serious health consequences. Short-term ozone exposure can irritate the respiratory system, making breathing more difficult and thereby limiting a

person's normal activity. Short-term ozone exposure has been clearly shown to increase risk for asthma attacks, resulting in increased need for hospitalizations and emergency department visits for asthma, and thereby substantially adding to costs of medical care and lost productivity. Reductions in ambient ozone levels associated with changes in traffic patterns during the 1996 Olympics in Atlanta reduced childhood asthma emergency department visits by 40% and asthma hospitalizations by 20%.

Long-term ozone exposure is similarly dangerous, with reductions in lung function and lung growth well documented.

3. I work with children in the greater Houston area who have asthma and other chronic respiratory problems. Poor air quality, including short-term and long-term exposure to ozone adversely impacts their health.

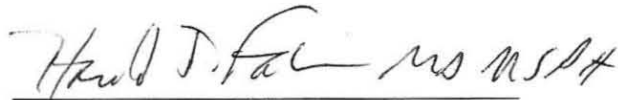
4. I understand that the U.S. Environmental Protection Agency ("EPA") sets National Ambient Air Quality Standards ("NAAQS") for ozone in order to protect public health, and that states are required under the Clean Air Act ("CAA"), to take steps to attain compliance with the NAAQS throughout their borders. I am also aware from published reports that ozone levels in Houston often exceeds the federal air-quality standard established in 2008 to protect human health and welfare. Likewise, I am aware from published reports that the U.S. Environmental Protection Agency's science advisers and other experts have found that ozone

standards more protective than those adopted in 2008 are necessary to protect human health and to protect forests from ozone damage. For these reasons, I am very concerned that ozone pollution poses a threat to my health and the health of the children I treat in the greater Houston area.

5. I expect that the air quality in Houston will be improved by implementing the 2008 ozone standard, and I am concerned that any delay in implementing and strengthening ozone standards will prolong the threat ozone pollution poses to my health and welfare and to the health and welfare of the patients I care for. I strongly support the efforts of the Environmental Defense Fund to require full compliance with all requirements of the Clean Air Act to reduce ozone pollution.

6. I declare under the penalty of perjury that the foregoing is true and correct.

Signed on December 7, 2011.


Harold J. Farber, MD, MSPH

DECLARATION OF DENISE FORT

I, Denise Fort, declare as follows:

1. I am currently a member of Environmental Defense Fund, and I have been a member for several years. I reside in Santa Fe County, New Mexico. I have resided in New Mexico for more than 25 years and am a tenured faculty member at the University of New Mexico School of Law, with the title of Professor of Law. My area of expertise is environmental and natural resources law.

2. I am familiar with the effects of ozone pollution because of my professional work as an environmental law professor. I teach classes in environmental law and a seminar on climate change. I am aware from published reports that ozone air pollution presents a health threat even to healthy adults, that it can seriously impair breathing, and that ozone air pollution can damage trees and other plant life. I am also aware that ozone is damaging to plants and terrestrial ecosystems, and is associated with impairment of growth in trees, tree biomass loss, foliar injury (such as the mottling of leaves and pine needles), and associated ecosystem disruption.

3. I enjoy hiking, river sports, and bird watching in New Mexico. I hike at all elevations in the nearby Santa Fe and Cibola National Forests, as well as in natural areas surrounding Albuquerque, in Bernalillo County. I

am often accompanied by my daughter and friends on these outings. We kayak on the Rio Grande and the Chama rivers. Bird watching happens everywhere, but especially in our backyard. On these excursions, I derive great pleasure from viewing the trees and natural vegetation.

4. I understand that the Environmental Protection Agency (“EPA”) revised the National Ambient Air Quality Standards (“NAAQS”) for ozone in 2008, establishing identical primary (health) and secondary (welfare) standard.

5. I am aware from published reports that EPA’s science advisors and other experts have found that a separate secondary ozone standard more protective than the standard adopted in 2008 is necessary to protect forests, plants, and natural environments from ozone damage. I am also aware that ozone levels in Sandoval and Bernalillo Counties—where I have frequently recreated outdoors, and where I will continue to recreate outdoors in the future—have in recent years exceeded limits that EPA’s science advisors and other experts have recommended to protect against ozone damage to trees and vegetation.

6. For all the foregoing reasons, I am very concerned that a delay in strengthening the secondary ozone standard will prolong exposure of forests and plants where I live and recreate to ozone levels that threaten their

survival, health, and natural beauty, thereby significantly diminishing my enjoyment of the outdoor activities described in paragraph 3.

7. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief.

Dated: December 19, 2011.

A handwritten signature in dark ink, appearing to read "Denise Fort", written in a cursive style.

Denise Fort

DECLARATION OF DAN GROSSMAN

I, Dan Grossman, under penalties of perjury, declare as follows:

1. I am a member of Environmental Defense Fund (EDF), and I have worked at EDF since 2006, serving as the Regional Director for EDF's Rocky Mountain Regional Office. Prior to working at EDF, I served six years in the Colorado House of Representatives, including two years as House Minority Leader, and likewise served four years in the Colorado Senate, where I was the chairman of the Judiciary Committee and vice chairman of the Agriculture, Natural Resources and Energy Committee. I currently reside at 2864 Yosemite Street in Denver.

2. I am aware from published reports that ozone is a severe lung irritant that poses a health threat even to healthy adults, and that ozone air pollution can damage trees and other plant life. Short-term (1- to 3-hour) and longer term (6- to 8-hour) exposures to ozone have serious health consequences like aggravated asthma attacks, which can result in more frequent hospital visits. I am also aware that the American Medical Association has stated that adults who exercise outdoors are at a "much higher" risk for adverse health effects from exposure to ozone.

3. I am an avid runner and cyclist. I run three to four times per week, often near my home. I also enjoy spending time with my family outdoors. We enjoy

Denver's parks and the open space in Boulder County as well as the trails in Rocky Mountain National Park and Arapahoe National Forest.

4. I understand that the Environmental Protection Agency ("EPA") set National Ambient Air Quality Standards ("NAAQS") for ozone in 2008, which are standards designed to protect public health. I am also aware from published reports that ozone levels in areas around my home sometimes exceed the federal air-quality standard established in 2008 to protect human health and welfare. I am aware from published reports that the EPA's science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health and to protect natural environments from ozone damage. For these reasons, I am very concerned that ozone pollution poses a threat to my health and to my use and enjoyment of the outdoor areas around my home and in my community.

5. I expect that the air quality in the greater Denver area will be improved by implementing the 2008 ozone standard, and I am concerned that any delay in implementing and strengthening ozone standards will prolong the threat to my health and welfare from ozone pollution in the places where I live, work, and recreate. I strongly support the efforts of the Environmental Defense Fund to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

6. I declare under the penalty of perjury that the foregoing is true and correct.

Signed on December 8, 2011.

A handwritten signature in black ink on a light yellow background. The signature is cursive and appears to read "Dan Grossman".

Dan Grossman

DECLARATION OF MARILYNN MARSH-ROBINSON

I, Marilyn Marsh-Robinson, declare as follows:

1. I respectfully submit this declaration on behalf of Environmental Defense Fund in support of its standing. I am a member of Environmental Defense Fund ("EDF") and have worked there since 1999. Currently, I am a program coordinator and my duties include activities that help promote energy efficiency in diverse populations. I reside in Knightdale, North Carolina, in eastern Wake County.

2. I have suffered from asthma since childhood. In the last decade, my asthma and respiratory infections have worsened. I have used several medications and inhalers throughout the years to treat my asthma, and I keep an emergency albuterol inhaler with me at all times. In the last two years, I started giving myself breathing treatments with a nebulizer and albuterol. I've given myself at least twenty treatments since May 2010. As a result of my asthma, I limit the time I spend outside, and if I stay outside for long periods of time, my breathing becomes labored. Therefore, at times, I am not able to see my son participate in baseball or other activities, nor am I able to enjoy walks outdoors on a regular basis.

3. I am aware of the compelling scientific evidence linking ozone exposure with aggravation of respiratory ailments like asthma. I am aware from published reports that ozone exposure causes increased airway responsiveness to allergens in subjects with allergic asthma and allergic rhinitis. I am also aware from published

reports that breathing air containing ozone can reduce lung function and increase respiratory symptoms, thereby aggravating asthma and other respiratory conditions; that ozone exposure has been associated with increased susceptibility to respiratory infections, medication use by asthmatics, doctors visits, and emergency-department visits and hospital admissions for individuals with respiratory disease; and that ozone exposure may also contribute to premature death, especially in people with heart and lung disease.


4. I am aware that in 2008 EPA revised its National Ambient Air Quality Standards (NAAQS) for ozone. I am also aware from public information that EPA's science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health from ozone. I am further aware that ozone pollution levels in my community exceed the stronger standards recommended by the EPA's science advisers.

5. For all the above reasons, I am very concerned that ozone pollution in my community endangers my health and welfare. I am further very concerned that any delay in strengthening federal ozone standards will prolong the threat to my health and welfare, as well as that of my family, from unsafe levels of ozone pollution in the places where I live, work, and recreate.

6. I strongly support litigation by EDF to ensure that ozone standards are fully sufficient to protect my health and that of my family members.

I declare under the penalty of perjury that the foregoing is true and correct.

Signed on December 20, 2011.


Marilynn Marsh-Robinson
Marilynn Marsh-Robinson

DECLARATION OF ANNETTE SHIMER

I, Annette Shimer, under penalties of perjury, declare as follows:

1. I respectfully submit this declaration on behalf of Environmental Defense Fund in support of its standing. I am a member of Environmental Defense Fund (“EDF”) because I share EDF’s belief that we, as a society, can and should do more to protect our environment and, in particular, to reduce air pollution like ozone. I have lived in the Pittsburgh area of Allegheny County, Pennsylvania, since 1977. Although now retired from paid pursuits, I currently serve as President of USC Citizens for Land Stewardship, a local environmental organization in Upper St. Clair, Pennsylvania, and as Vice-President of the League of Women Voters of Greater Pittsburgh. I am also a past member of the Air Quality Advisory Committee for the Allegheny County Bureau of Air Pollution Control and a past board member and continuing supporter of the Group Against Smog and Pollution (“GASP”), a nonprofit organization that seeks to improve air quality with a focus on the Pittsburgh region. I reside at 1609 Terrie Drive, Upper St. Clair (Pittsburgh), Pennsylvania, 15241.

2. I enjoy spending time outdoors, particularly walking and birdwatching in Boyce Mayview Park and the Laurel Highlands near my home. I find that walking outdoors is physically more difficult for me when the air quality is poor; my

breathing becomes more labored and I cannot walk for as great a distance or for as long a time.

3. As a long-time advocate for improved air quality, I keep myself informed regarding the health impacts of air pollution. I am aware from published reports that ozone is a severe lung irritant that poses a health threat even to healthy adults, and that ozone air pollution can damage trees and other plant life. The potential consequences of these adverse health impacts include not just suffering but also lost income and extra health care costs.

4. I understand that the U.S. Environmental Protection Agency (“EPA”) sets National Ambient Air Quality Standards (“NAAQS”) for ozone in order to protect public health, and that states are required under the Clean Air Act (“CAA”), to take steps to attain compliance with the NAAQS throughout their borders. I am also aware from published reports that ozone levels in Allegheny County and in my community sometimes exceed the federal air-quality standard established in 2008 to protect human health and welfare. Likewise, I am aware from published reports that the U.S. Environmental Protection Agency’s science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health and to protect forests from ozone damage. For these reasons, I am very concerned that ozone pollution poses a

threat to my health and to my use and enjoyment of the natural areas described above.

5. I expect that the air quality in Allegheny County will be improved by implementing the 2008 ozone standard, and I am concerned that any delay in implementing and strengthening ozone standards will prolong the threat to my health and welfare from ozone pollution in the places where I live, work, and recreate. I strongly support the efforts of the Environmental Defense Fund to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

6. I declare under the penalty of perjury that the foregoing is true and correct.

Signed on December 7, 2011.

A handwritten signature in cursive script, reading "Annette Shimer", written over a horizontal line.

Annette Shimer

DECLARATION OF PRESTON SHIMER

I, Preston Shimer, under penalties of perjury, declare as follows:

1. I respectfully submit this declaration on behalf of Environmental Defense Fund in support of its standing. I am a member of Environmental Defense Fund (“EDF”), and have received and responded to the organization’s “action alerts” for at least five years, because I agree with EDF’s goals for improving our environment, including achieving cleaner air. I have been a resident of the Pittsburgh area, in Allegheny County, Pennsylvania, for more than three decades. Since 2001, I have worked as Foundation Administrator for the ARMA International Educational Foundation. In addition, for the last eight years, I have been an elected Commissioner for the Township of Upper St. Clair, Pennsylvania. I also serve on the boards of the Local Government Academy, a nonprofit organization that strives to improve the capability of local governments in southwestern Pennsylvania, and USC Citizens for Land Stewardship, a nonprofit organization that acts on local environmental issues in Upper St. Clair, Pennsylvania. I reside at 1609 Terrie Drive, Upper St. Clair (Pittsburgh), Pennsylvania, 15241.

2. I enjoy a number of outdoor activities, including hiking in the Laurel Highlands (a mountainous area east of my home), bicycling on the Rails to Trails network in Allegheny County, and swimming in an outdoor pool. My son-in-law

has experienced many respiratory difficulties living in this area throughout his life, as did my daughter while she lived here, and I am concerned about the potential adverse impacts on my own health from inhaling air pollution. Because of these concerns, on days when ozone air quality in Allegheny County is poor I restrict my time outdoors, getting less outdoor exercise than I would prefer.

3. I first learned of the health risks of air pollution at an early age from my father, who worked on air pollution control issues for the New Jersey Department of Health. Scientific understanding of those risks has grown over my lifetime, and it is now well known that ozone pollution contributes to asthma and other respiratory disorders. For some individuals these health impacts can result in premature death, but even lesser cases can cause severe suffering as well as serious economic consequences in the form of missed work and increased demand for health care services. I am also aware from published reports that ozone air pollution can damage trees and other plant life.

4. I understand that the U.S. Environmental Protection Agency (“EPA”) sets National Ambient Air Quality Standards (“NAAQS”) for ozone in order to protect public health, and that states are required under the Clean Air Act (“CAA”), to take steps to attain compliance with the NAAQS throughout their borders. I am also aware from published reports that ozone levels in Allegheny County and in my community sometimes exceed the federal air-quality standard established in 2008

to protect human health and welfare. Likewise, I am aware from published reports that the U.S. Environmental Protection Agency's science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health and to protect forests from ozone damage. For these reasons, I am very concerned that ozone pollution poses a threat to my health, the health of my family, and to my use and enjoyment of the natural areas described above.

5. I expect that the air quality in Allegheny County will be improved by implementing the 2008 ozone standard, and I am concerned that any delay in implementing and strengthening ozone standards will prolong the threat to my health and welfare from ozone pollution in the places where I live, work, and recreate. I strongly support the efforts of the Environmental Defense Fund to require full compliance with all requirements of the Clean Air Act to limit ozone pollution.

6. I declare under the penalty of perjury that the foregoing is true and correct.

Signed on December 7, 2011.

A handwritten signature in cursive script, appearing to read "Preston Shimer", is written over a horizontal line.

Preston Shimer

Natural Resources Defense Council Declarations

I, Linda Lopez, declare as follows:

1. I am the director of membership and public education at the Natural Resources Defense Council, Inc. ("NRDC"). I have been the director of membership and public education for over twenty-three years.

2. My duties include supervising the preparation of materials that NRDC distributes to members and prospective members. Those materials describe NRDC and identify its mission. My duties also require that I be very familiar with the database in which information on NRDC members is regularly maintained.

3. NRDC is a membership organization incorporated under the laws of the State of New York. It is recognized as a not-for-profit corporation under section 501(c)(3) of the United States Internal Revenue Code.

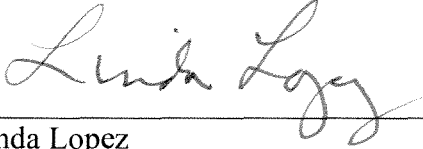
4. NRDC's mission statement declares that "The Natural Resources Defense Council's purpose is to safeguard the Earth: its people, its plants and animals, and the natural systems on which all life depends." The mission statement goes on to declare that NRDC works "to restore the integrity of the elements that sustain life - air, land, and water - and to defend endangered natural places."

5. NRDC's member database is maintained in the regular course of business. When an individual becomes a member of NRDC, his or her current residential address is recorded in NRDC's membership database. When a member renews his or her membership or otherwise makes a contribution to NRDC, the database entry reflecting the member's residential address is verified or updated. I obtained the information about our membership discussed below from the database.

6. NRDC currently has 357,472 members. There are NRDC members residing in each of the fifty United States and in the District of Columbia and Puerto Rico. For example, NRDC has 2,896 members in San Francisco County, CA; 5,910 members in New York County, NY; 1,188 members in Washington, D.C.; 571 members in Baltimore City County, MD; 1,231 members in Philadelphia County, PA; 1,548 members in Cuyahoga County, OH; 3,766 members in Middlesex County, MA; 540 members in Albany County, NY; 290 members in Jefferson County, AL; 838 members in Sarasota County, FL; and 1,016 members in Lake County, IL. These are only examples. NRDC members also live in many other cities, towns, and counties throughout the United States.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 19, 2011.



Linda Lopez

DECLARATION OF JOHN D. WALKE

1. I am Director of the Clean Air Program for the Natural Resources Defense Council (NRDC), and have held that position for ten years. I obtained a J.D. degree from Harvard Law School in 1993 and was admitted to the Virginia and D.C. bars in 1993 and 1994, respectively. Prior to working for NRDC, I was an attorney in the Office of General Counsel for the U.S. Environmental Protection Agency (EPA), where I specialized in advising the agency on legal issues arising under the Clean Air Act.

2. My responsibilities at NRDC include coordinating and planning the organization's clean air advocacy and litigation; developing and articulating NRDC's positions on national clean air policy issues; participating in the drafting of comments on proposed national, regional and local EPA actions under the Clean Air Act; and generally acting as an advocate for protection of public health and the environment from air pollution. My position requires that I be familiar with NRDC's purposes, its activities on clean air issues, and the nature and scope of its membership.

3. NRDC's mission includes protecting the Earth, its people, wildlife and the natural systems on which all life depends. NRDC uses law and science to promote a safe and healthy environment, and to prevent the fouling and depleting of the resources that support all life on Earth, including air, land and water. We also work to foster people's rights to have a voice in decisions that affect their environment.

4. Since its founding more than 35 years ago, NRDC has consistently made the protection of air quality a high priority for its environmental protection efforts. Those efforts have included (and continue to include) extensive advocacy and litigation to promote full and effective implementation of the Clean Air Act, evidenced, for example, by scores of reported

cases over more than three decades in which NRDC has been a petitioner or plaintiff seeking to enforce Clean Air Act requirements.

5. NRDC's clean air work has long included advocacy for adoption of National Ambient Air Quality Standards (NAAQS) that are fully adequate to protect public health and welfare as required by the Clean Air Act. Such advocacy will continue to be a priority for NRDC for the foreseeable future. We (along with others) filed litigation that led to a court ordered deadline (via a consent decree) for EPA to complete the review that resulted in adoption of the 2008 ozone NAAQS. American Lung Association, et al. v. Whitman, No. 03-778 (D.D.C.).

6. NRDC has also repeatedly advocated before EPA, elected officials, and the public for adoption of strong ozone NAAQS. Among other things, NRDC (along with others) filed extensive comments on EPA's reconsideration proposal of January 19, 2010 to strengthen the ozone NAAQS. These comments argued, among other things, that EPA's March 2008 standards were not adequate to protect public health with an adequate margin of safety, as required by the Clean Air Act, and that the evidence before the agency when it adopted its 2008 ozone NAAQS supported a primary (health) standard of 60 parts per billion (ppb). The comments also argued that the Clean Air Act requires EPA to base the primary standard exclusively on protection of public health, and that the agency was legally precluded from considering implementation costs of the standard. Comments of American Lung Association et al., July 11, 2007 and March 22, 2010, EPA docket No. EPA-HQ-OAR- 2005-0172 ("NRDC Comments"). NRDC will continue to so argue, and to strongly advocate prompt adoption of an ozone health standard that is more protective than EPA's 2008 standard and sufficient to protect public health with an adequate margin of safety.

7. NRDC has also publicly and repeatedly argued that EPA's refusal in 2008 to adopt a separate secondary (welfare) standard for ozone was both unlawful and contrary to the scientific evidence. EPA's science advisers (CASAC) recommended that such a separate standard was requisite to protect public welfare against adverse effects from ozone damage to forests and plants. NRDC will continue to argue for adoption of a separate secondary ozone NAAQS that is fully requisite to protect against such damage.

8. As noted in the declaration of Linda Lopez, NRDC has more than 357,000 members throughout the United States. That declaration and the others submitted by NRDC in this case (collectively, "NRDC Declarations") show that, based on recent EPA data, NRDC members live and recreate in communities and areas with ozone levels that exceed EPA's 2008 ozone NAAQS of 75 ppb. Examples include the San Francisco Bay area, in California (80 ppb); the New York City area (84 ppb); the Washington, D.C. area (81 ppb); the Baltimore, Maryland area (89 ppb); the Philadelphia, Pennsylvania area (83 ppb); and the Cleveland, Ohio area (77 ppb). Compare NRDC Declarations with http://epa.gov/airtrends/pdfs/Ozone_DesignValues_20082010_FINAL.xlsx (excel file showing ozone design values for 2008-10) and <http://epa.gov/ozonedesignations/2008standards/state.htm> (collection of states' recommended area designations under 2008 ozone standard and EPA responses).

9. NRDC members also live in communities that meet EPA's 2008 ozone NAAQS, but that have ozone levels that lung experts say are unsafe and that are higher than the top end of the range recommended by CASAC (60-70 ppb). For example, NRDC has members in the following areas with ozone levels ranging from 71 to 75 ppb: Middlesex County, Massachusetts (71 ppb); Albany County, New York (71 ppb); Jefferson County, Alabama (75 ppb); Sarasota

County, Florida (73 ppb); Lake County, Illinois (74 ppb); and Wake County, North Carolina (73 ppb). Compare NRDC Declarations with http://epa.gov/airtrends/pdfs/Ozone_DesignValues_20082010_FINAL.xlsx (excel file showing ozone design values for 2008-10).

10. NRDC members living in the areas referenced in paragraphs 8 and 9 above, among others, are justifiably concerned about the health threat presented to themselves and their families by ozone pollution in their communities. They have a strong interest in the full, timely, and effective implementation of Clean Air Act requirements designed to protect them and their families from unhealthy ozone levels.

11. EPA's failure to adopt stronger national ambient air quality standards to protect public health from ozone as required by the Clean Air Act threatens the health of NRDC members, including those living in the areas referenced above. EPA's science advisers (CASAC) have unanimously recommended that a primary ozone standard in the range of 60-70 ppb is requisite to protect public health. Clinical and epidemiological studies cited in NRDC's Comments show that ozone levels as low as 60 ppb are associated with adverse health impacts. Yet EPA's 2008 ozone standard allows ozone levels to be as high as 75 ppb.

12. Any strengthening of the 75 ppb standard to a limit within the range recommended by CASAC, even if not as protective as 60 ppb, would materially reduce the health risk to our members and the larger public from ozone pollution. This is true even in communities that already violate the 75 ppb standard. Although the Clean Air Act requires such "nonattainment" areas to adopt ozone reduction measures, the "attainment" plans required by the Act for such communities only need to provide for pollution reductions sufficient to attain the existing standard—75 ppb. See, e.g., 42 U.S.C. §§ 7502(c), 7511a(b)(1)(A). If the standard were strengthened, the states would have to adopt the additional pollution reductions needed to


meet the more stringent standard in these “nonattainment” areas, reductions that would reduce the health risks from ozone exposure. Id. Likewise, communities that currently meet the 75 ppb standard but violate a strengthened one would become “nonattainment” areas required by the Act to adopt specific pollution reduction measures to reduce ozone pollution sufficient to meet the health standard. Id.; see also id. § 7407.

13. NRDC members are also justifiably concerned about the threat from ozone pollution to their enjoyment of forests and plant life in places where they live and engage in outdoor recreation. In its January 19, 2010 reconsideration proposal, EPA recognized that ozone causes damage to forests and plants, and, as recommended by CASAC, proposed a separate secondary ozone standard requisite to protect against such damage. 75 Fed. Reg. 2,938, 2,999-3,027 (Jan. 19, 2010). The standard would have been different from the primary standard, limiting cumulative ozone levels over the growing season rather than limiting only peak 8-hour averages. EPA’s failure to adopt this standard allows ozone damage to forests and plants in places where NRDC’s members live and recreate, thereby threatening their use and enjoyment of such areas. See, e.g., Declaration of NRDC member Jean Jolly (expressing concern about impact of ozone pollution on natural ecosystem of Great Smoky National Park where she recreates); see also http://www.epa.gov/glo/pdfs/201107_OMBdraft-OzoneRIA.pdf at 49.

14. I am aware that EPA has announced that it will not consider strengthening the ozone standards until its next five-year review of the standards, which it now says will not be done until 2014. This delay will prolong the exposure of NRDC members and their families to unsafe levels of ozone pollution. The delay will also impair NRDC’s ability to fulfill its mission of promoting a safe and healthy environment for all.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 22nd day of December, 2011.



John D. Walke

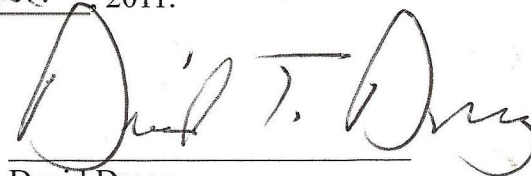
DECLARATION OF DAVID DROOZ

I, David Drooz, state as follows:

1. I have been a member of Natural Resources Defense Council since 1984.
2. I have resided in Raleigh, North Carolina, Wake County, since 1968.
3. I regularly engage in outdoor activities such as working in my yard and jogging. I have been a jogger for over 30 years and have found myself to be particularly susceptible to respiratory ailments. I also spend time outside with my children, particularly watching them play sports.
4. My children spend a significant amount of time playing outside. My middle child had asthma throughout elementary school, and at times used an inhaler repeatedly to get through soccer games and practices.
5. I am worried about the health effects of ozone pollution on my family and myself. I monitor the weather report periodically and take note when high ozone levels are predicted. When my children were younger, I would limit their outdoor activities on those days. Though my son's asthma has improved since he was younger, I am particularly worried about how ozone pollution will affect his health, since he spends so much time engaging in outdoor activities.
6. I am aware from published reports that ozone is a severe lung irritant that poses a health threat even to healthy adults. I am also aware from public information that ozone pollution in Wake County periodically reaches levels that scientists say are unsafe to human health. For these reasons, I am very concerned that ozone pollution poses a threat to my health and that of my family.
7. I am aware from public information that EPA's science advisers and other experts have found that an ozone standard more protective than that adopted in 2008 is necessary to protect human health. I am also aware from published reports that ozone levels in Wake County sometimes exceed the stronger standard recommended by the EPA's science advisers to protect human health. I am therefore very concerned that any delay in strengthening federal ozone standards will prolong the threat to my health and that of my family from unsafe levels of ozone pollution in the places where I live, work, and recreate.
8. I am very concerned about the human health impacts from ozone pollution, and think that more attention should be placed on cleaning up the air.
9. I strongly support litigation by NRDC to ensure that ozone pollution requirements of the Clean Air Act are fully and expeditiously implemented so as to protect my health and that of my family.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 19th day of December 2011.


David Drooz

DECLARATION OF JEAN JOLLY

I, Jean Jolly, state as follows:

1. I am a member of Natural Resources Defense Council, and have been a member since 1996.
2. I live in Knoxville, Tennessee, Knox County, and have lived there for over 70 years.
3. I regularly spend time outdoors gardening, doing yard work, walking, and jogging. Additionally, I regularly visit Great Smoky Mountains National Park where I walk, hike and look for wildlife. During my visits, I derive great aesthetic enjoyment from viewing the natural vegetation, landscapes and wildlife.
4. I am aware that ozone poses a health threat to people and can damage trees and other plant life. I am also aware that ozone levels in my community and in Great Smoky Mountains National Park sometimes exceed levels safe for human health.
5. I am concerned about the threat ozone poses to my health. I am 76 years old and have suffered from asthma for about 30 years. On days when ozone pollution levels are high, I often have symptoms including difficulty breathing, scratchy throat, and sinus inflammation. Additionally, I am concerned about the impact of ozone pollution on the health of natural ecosystems like that of Great Smoky Mountains National Park.
6. I pay attention to the ozone level in my area. I check the levels on the weather report daily. When ozone levels are high, I will choose to engage in less strenuous activity, such as walking instead of jogging or limiting the time I spend working in my yard.

7. I strongly support litigation by NRDC to ensure that ozone pollution requirements of the Clean Air Act are fully and expeditiously implemented so as to protect my health.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 9th day of December, 2011.

Jean Jolly
Jean Jolly

DECLARATION OF KATHRYN KUPPERS

I, Kathryn Koppers, state as follows:

1. I am a member of Natural Resources Defense Council (NRDC), and have been a member since 2001.

2. I live in Midland, North Carolina, Cabarrus County, and have lived there for over 20 years.

3. My husband and I often spend time outdoors. I go on walks regularly and occasionally ride my bicycle. My husband spends time gardening, splitting wood, and fixing up the exterior of our house. Additionally, we spend approximately two hours each day outside when we let our flock of chickens out to forage.

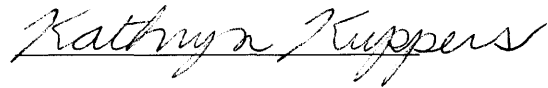
4. I am very concerned about the health threat that ozone pollution poses to my community. I am aware from published reports that ozone is a severe lung irritant that poses a health threat, even to healthy adults. Ozone levels in my community sometimes are classified as “code red” and I am aware that on those days it can be unsafe to be outside.

5. I am concerned about the health threat presented to me and my husband by ozone pollution, especially as we get older. I pay attention to the ozone level in my area. For example, I check on the reported ozone level in the newspaper. On days classified as “code red” for ozone, I sometimes experience burning in my eyes and throat, as well as fatigue. My husband experiences similar symptoms. Since I have read in various health advisories that ozone levels are lower in the morning, I try to avoid high ozone levels by bicycling and spending time outdoors only in the early morning.

requirements of the Clean Air Act are fully and expeditiously implemented so as to protect my health.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this fifth day of December, 2011.

A handwritten signature in cursive script that reads "Kathryn Koppers". The signature is written in black ink and is positioned above the printed name.

Kathryn Koppers

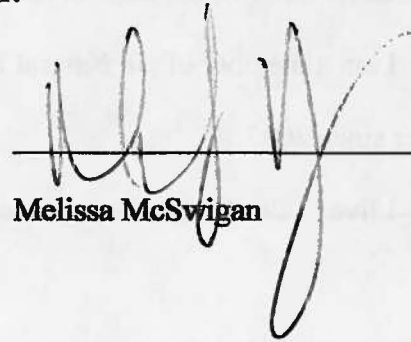
DECLARATION OF MELISSA M. MCSWIGAN

I, Melissa M. McSwigan, state as follows:

1. I am a member of the Natural Resources Defense Council (NRDC), and have been a member since 2002.
2. I live in Pittsburgh, Pennsylvania and have lived at my current address for over 40 years.
3. I regularly engage in outdoor activities including walking, hiking, skiing, bicycling, gardening and performing yard work. On days when air quality is poor, I make sure not to mow the lawn, fill up the gas tank, or engage in other activities that would further contribute to poor air quality.
4. Members of my extended family suffer from asthma, and I am aware that ozone pollution is linked to triggering asthma attacks and added hospital visits due to lung problems. I am concerned about my family's health, and for this reason, I'm concerned about national ozone standards. I am aware from published reports that ozone is a severe lung irritant that poses a health threat, even to healthy adults. I am also aware that ozone levels in my community sometimes exceed the federal air-quality standard. I am also aware from published reports that the U.S. Environmental Protection Agency's science advisers and other experts have found that ozone standards more protective than those adopted in 2008 are necessary to protect human health and to protect forests from ozone damage. For these reasons, I am very concerned that ozone pollution poses a threat to the health of my family and me.
5. I strongly support litigation by NRDC to ensure that ozone pollution requirements of the Clean Air Act are fully and expeditiously implemented so as to protect my health.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 2 day of December, 2011.



A handwritten signature in black ink, consisting of several loops and a long vertical stroke, positioned above a horizontal line.

Melissa McSwigan

DECLARATION OF MICHELLE PAGE

I, Michelle Page, state as follows:

1. I am a member of the Natural Resources Defense Council (NRDC), and have been a member since 1988.
2. I live in Hillsboro, Missouri in Jefferson County, which is adjacent to St. Louis County. I have lived in Jefferson County for 27 years. I grew up in St. Louis County and visit that county frequently.
3. I regularly engage in outdoor activities including: walking, hiking, bicycling, gardening and performing yard work. I often go to St. Louis to walk or bike in Forest Park, Tower Grove Park or on Grant Trail.
4. My daughter and I suffer from mild asthma and are required to use asthma inhalers. I know from my doctor that ozone pollution is linked to triggering asthma attacks and to added hospital visits. On days when ozone reaches elevated levels, I notice my asthma and my daughter's asthma and breathing are negatively affected.
5. These effects are worse when I am in St. Louis, where ozone pollution levels are often higher. When ozone reaches elevated levels, I avoid engaging in outdoor activities or going to St. Louis. Moreover, I have learned from health publications to close all windows in my home and car and use air conditioning to prevent prolonged exposure to the elevated ozone levels.. I worry that poor air quality will worsen my asthma symptoms over time and am concerned for those in my community who suffer from more server asthma or respiratory diseases.
6. I am very concerned about the threat that ozone pollution poses to my health and the health of my family. I am aware from published reports that ozone is a severe lung irritant that poses a health threat, even to healthy adults, and that ozone levels in my community sometimes exceed the federal air-quality standards established in 2008 to protect human health

and welfare. I believe that standards for ozone should be as strong as possible to protect all Americans from these health impacts.

7. I strongly support litigation by NRDC to ensure that ozone pollution requirements of the Clean Air Act are fully and expeditiously implemented so as to protect my health.

I declare under penalty of perjury that the foregoing is true and correct.

DATED this 4TH day of December, 2011.

A handwritten signature in cursive script that reads "Michelle Page". The signature is written in black ink and is positioned above the printed name.

Michelle Page

Addendum to Declarations

EPA, Ozone Design Values, 2008-2010, Table 6 (excerpt), downloaded from http://epa.gov/airtrends/pdfs/Ozone_DesignValues_20082010_FINAL.xlsx (visited 1/3/12)(cited in Conner, Patton, and Walke declarations)

Table 6. County-Level Maximum Design Values for the 2008 8-hour Ozone NAAQS

AQS Data Query: 6/27/2011

Last Updated: 7/12/2011

State	County	State FIPS	County FIPS	EPA Region	Site ID	POC	2008-2010	Met NAAQS?
							Design Value (ppm) ^{1,2}	
Alabama	Baldwin	01	003	04	010030010	1	0.071	Yes
Alabama	Colbert	01	033	04	010331002	1	0.065	Yes
Alabama	Elmore	01	051	04	010510001	1	0.067	Yes
Alabama	Etowah	01	055	04	010550011	1	0.063	Yes
Alabama	Houston	01	069	04	010690004	1	0.063	Yes
Alabama	Jefferson	01	073	04	010732006	1	0.075	Yes
Alabama	Madison	01	089	04	010890014	1	0.070	Yes
Alabama	Mobile	01	097	04	010972005	1	0.073	Yes
Alabama	Montgomery	01	101	04	011011002	1	0.068	Yes
Alabama	Morgan	01	103	04	011030011	1	0.066	Yes
Alabama	Russell	01	113	04	011130002	1	0.067	Yes
Alabama	Shelby	01	117	04	011170004	1	0.074	Yes
Alabama	Sumter	01	119	04	011190002	1	0.060	Yes
Alabama	Tuscaloosa	01	125	04	011250010	1	0.061	Yes
Alaska	Denali	02	068	10	020680003	1	0.058	Yes
Arizona	Cochise	04	003	09	040038001	1	0.068	Yes
Arizona	Coconino	04	005	09	040051008	1	0.069	Yes
Arizona	Gila	04	007	09	040070010	1	0.073	Yes
Arizona	La Paz	04	012	09	040128000	1	0.072	Yes
Arizona	Maricopa	04	013	09	040131004	1	0.077	No
Arizona	Navajo	04	017	09	040170119	1	0.067	Yes
Arizona	Pima	04	019	09	040190021	1	0.069	Yes
Arizona	Pinal	04	021	09	040218001	1	0.074	Yes
Arizona	Yuma	04	027	09	040278011	1	0.073	Yes
Arkansas	Crittenden	05	035	06	050350005	1	0.074	Yes
Arkansas	Newton	05	101	06	051010002	1	0.066	Yes
Arkansas	Polk	05	113	06	051130003	1	0.070	Yes
Arkansas	Pulaski	05	119	06	051190007	1	0.070	Yes
Arkansas	Washington	05	143	06	051430005	1	0.064	Yes

California	Alameda	06	001	09	060010007	1	0.080	No
California	Amador	06	005	09	060050002	1	0.081	No
California	Butte	06	007	09	060070007	1	0.079	No
California	Calaveras	06	009	09	060090001	1	0.083	No
California	Colusa	06	011	09	060111002	1	0.066	Yes
California	Contra Costa	06	013	09	060131002	1	0.076	No
California	El Dorado	06	017	09	060170010	1	0.090	No
California	Fresno	06	019	09	060195001	1	0.103	No
California	Glenn	06	021	09	060210003	1	0.066	Yes
California	Humboldt	06	023	09	060231004	1	0.047	Yes
California	Imperial	06	025	09	060250005	1	0.078	No
California	Inyo	06	027	09	060270101	1	0.072	Yes
California	Kern	06	029	09	060295001	1	0.104	No
California	Kings	06	031	09	060310500	1	0.091	No
California	Lake	06	033	09	060333001	1	0.061	Yes
California	Los Angeles	06	037	09	060370016	1	0.103	No
California	Madera	06	039	09	060390004	1	0.084	No
California	Marin	06	041	09	060410001	1	0.054	Yes
California	Mariposa	06	043	09	060430003	1	0.083	No
California	Mendocino	06	045	09	060450008	1	0.053	Yes
California	Merced	06	047	09	060470003	1	0.091	No
California	Monterey	06	053	09	060530002	1	0.060	Yes
California	Napa	06	055	09	060550003	1	0.066	Yes
California	Nevada	06	057	09	060570005	1	0.084	No
California	Orange	06	059	09	060592022	1	0.081	No
California	Placer	06	061	09	060610006	1	0.090	No
California	Riverside	06	065	09	060650012	1	0.102	No
California	Sacramento	06	067	09	060670012	1	0.102	No
California	San Benito	06	069	09	060690003	1	0.076	No
California	San Bernardino	06	071	09	060710005	1	0.112	No
California	San Diego	06	073	09	060731006	1	0.088	No
California	San Francisco	06	075	09	060750005	1	0.047	Yes
California	San Joaquin	06	077	09	060773005	1	0.081	No
California	San Luis Obispo	06	079	09	060798005	1	0.084	No
California	San Mateo	06	081	09	060811001	1	0.057	Yes
California	Santa Barbara	06	083	09	060831025	1	0.076	No
California	Santa Clara	06	085	09	060852006	1	0.075	Yes

Table 6

California	Santa Cruz	06	087	09	060870007	1	0.056	Yes
California	Shasta	06	089	09	060890007	1	0.075	Yes
California	Siskiyou	06	093	09	060932001	1	0.060	Yes
California	Solano	06	095	09	060953003	1	0.071	Yes
California	Sonoma	06	097	09	060970003	1	0.054	Yes
California	Stanislaus	06	099	09	060990006	1	0.093	No
California	Sutter	06	101	09	061010004	1	0.076	No
California	Tehama	06	103	09	061030004	1	0.080	No
California	Tulare	06	107	09	061070009	1	0.101	No
California	Tuolumne	06	109	09	061090005	1	0.082	No
California	Ventura	06	111	09	061112002	1	0.086	No
California	Yolo	06	113	09	061130004	1	0.072	Yes
Colorado	Boulder	08	013	08	080130011	1	0.073	Yes
Colorado	Denver	08	031	08	080310014	2	0.068	Yes
Colorado	Douglas	08	035	08	080350004	1	0.076	No
Colorado	El Paso	08	041	08	080410016	1	0.069	Yes
Colorado	Jefferson	08	059	08	080590006	1	0.078	No
Colorado	La Plata	08	067	08	080671004	1	0.071	Yes
Colorado	Larimer	08	069	08	080690011	1	0.074	Yes
Colorado	Montezuma	08	083	08	080830101	1	0.068	Yes
Colorado	Weld	08	123	08	081230009	1	0.071	Yes
Connecticut	Fairfield	09	001	01	090011123	1	0.081	No
Connecticut	Hartford	09	003	01	090031003	1	0.074	Yes
Connecticut	Middlesex	09	007	01	090070007	1	0.077	No
Connecticut	New Haven	09	009	01	090093002	1	0.076	No
Connecticut	New London	09	011	01	090110124	1	0.076	No
Connecticut	Tolland	09	013	01	090131001	1	0.079	No
Delaware	Kent	10	001	03	100010002	1	0.074	Yes
Delaware	New Castle	10	003	03	100031010	1	0.076	No
Delaware	Sussex	10	005	03	100051002	1	0.077	No
District Of Columbia	District of Columbia	11	001	03	110010043	1	0.079	No
Florida	Alachua	12	001	04	120013011	1	0.064	Yes
Florida	Baker	12	003	04	120030002	1	0.062	Yes
Florida	Bay	12	005	04	120050006	1	0.070	Yes
Florida	Brevard	12	009	04	120090007	1	0.065	Yes
Florida	Broward	12	011	04	120118002	1	0.062	Yes
Florida	Columbia	12	023	04	120230002	1	0.064	Yes

Florida	Duval	12	031	04	120310077	1	0.068	Yes
Florida	Escambia	12	033	04	120330018	1	0.074	Yes
Florida	Highlands	12	055	04	120550003	1	0.067	Yes
Florida	Hillsborough	12	057	04	120570081	1	0.075	Yes
Florida	Holmes	12	059	04	120590004	1	0.063	Yes
Florida	Lake	12	069	04	120690002	1	0.066	Yes
Florida	Lee	12	071	04	120712002	1	0.065	Yes
Florida	Leon	12	073	04	120730012	1	0.064	Yes
Florida	Marion	12	083	04	120830003	1	0.066	Yes
Florida	Miami-Dade	12	086	04	120860027	1	0.068	Yes
Florida	Orange	12	095	04	120950008	1	0.069	Yes
Florida	Osceola	12	097	04	120972002	1	0.067	Yes
Florida	Palm Beach	12	099	04	120990009	1	0.065	Yes
Florida	Pasco	12	101	04	121010005	1	0.068	Yes
Florida	Pinellas	12	103	04	121030018	1	0.067	Yes
Florida	Polk	12	105	04	121056006	1	0.069	Yes
Florida	Santa Rosa	12	113	04	121130015	1	0.075	Yes
Florida	Sarasota	12	115	04	121151005	1	0.073	Yes
Florida	Seminole	12	117	04	121171002	1	0.065	Yes
Florida	Volusia	12	127	04	121275002	1	0.063	Yes
Florida	Wakulla	12	129	04	121290001	1	0.067	Yes
Georgia	Bibb	13	021	04	130210012	1	0.073	Yes
Georgia	Chatham	13	051	04	130510021	1	0.064	Yes
Georgia	Chattooga	13	055	04	130550001	1	0.066	Yes
Georgia	Clarke	13	059	04	130590002	1	0.072	Yes
Georgia	Cobb	13	067	04	130670003	1	0.076	No
Georgia	Columbia	13	073	04	130730001	1	0.069	Yes
Georgia	Coweta	13	077	04	130770002	1	0.068	Yes
Georgia	Dawson	13	085	04	130850001	2	0.071	Yes
Georgia	DeKalb	13	089	04	130890002	1	0.079	No
Georgia	Douglas	13	097	04	130970004	1	0.075	Yes
Georgia	Fulton	13	121	04	131210055	1	0.080	No
Georgia	Glynn	13	127	04	131270006	1	0.063	Yes
Georgia	Gwinnett	13	135	04	131350002	1	0.074	Yes
Georgia	Henry	13	151	04	131510002	1	0.079	No
Georgia	Murray	13	213	04	132130003	1	0.073	Yes
Georgia	Muscogee	13	215	04	132150008	1	0.068	Yes

Georgia	Paulding	13	223	04	132230003	1	0.070	Yes
Georgia	Richmond	13	245	04	132450091	1	0.071	Yes
Georgia	Rockdale	13	247	04	132470001	1	0.078	No
Georgia	Sumter	13	261	04	132611001	2	0.065	Yes
Hawaii	Honolulu	15	003	09	150031004	2	0.045	Yes
Idaho	Ada	16	001	10	160010010	1	0.068	Yes
Idaho	Butte	16	023	10	160230101	1	0.062	Yes
Idaho	Kootenai	16	055	10	160550003	1	0.056	Yes
Illinois	Adams	17	001	05	170010007	1	0.064	Yes
Illinois	Clark	17	023	05	170230001	1	0.064	Yes
Illinois	Cook	17	031	05	170311601	1	0.070	Yes
Illinois	DuPage	17	043	05	170436001	1	0.060	Yes
Illinois	Effingham	17	049	05	170491001	2	0.067	Yes
Illinois	Hamilton	17	065	05	170650002	1	0.068	Yes
Illinois	Jersey	17	083	05	170831001	1	0.069	Yes
Illinois	Kane	17	089	05	170890005	1	0.066	Yes
Illinois	Lake	17	097	05	170971007	1	0.074	Yes
Illinois	McHenry	17	111	05	171110001	1	0.065	Yes
Illinois	McLean	17	113	05	171132003	1	0.068	Yes
Illinois	Macon	17	115	05	171150013	1	0.067	Yes
Illinois	Macoupin	17	117	05	171170002	1	0.066	Yes
Illinois	Madison	17	119	05	171191009	1	0.072	Yes
Illinois	Peoria	17	143	05	171431001	1	0.068	Yes
Illinois	Randolph	17	157	05	171570001	1	0.063	Yes
Illinois	Rock Island	17	161	05	171613002	1	0.057	Yes
Illinois	Saint Clair	17	163	05	171630010	2	0.068	Yes
Illinois	Will	17	197	05	171971011	1	0.062	Yes
Illinois	Winnebago	17	201	05	172012001	1	0.063	Yes
Indiana	Allen	18	003	05	180030004	1	0.067	Yes
Indiana	Boone	18	011	05	180110001	1	0.071	Yes
Indiana	Carroll	18	015	05	180150002	1	0.066	Yes
Indiana	Clark	18	019	05	180190008	1	0.073	Yes
Indiana	Delaware	18	035	05	180350010	1	0.065	Yes
Indiana	Elkhart	18	039	05	180390007	1	0.064	Yes
Indiana	Floyd	18	043	05	180431004	1	0.070	Yes
Indiana	Greene	18	055	05	180550001	1	0.071	Yes
Indiana	Hancock	18	059	05	180590003	1	0.071	Yes

Indiana	Hendricks	18	063	05	180630004	1	0.068	Yes
Indiana	Huntington	18	069	05	180690002	1	0.061	Yes
Indiana	Jackson	18	071	05	180710001	1	0.067	Yes
Indiana	Johnson	18	081	05	180810002	1	0.070	Yes
Indiana	Lake	18	089	05	180892008	1	0.067	Yes
Indiana	LaPorte	18	091	05	180910005	1	0.065	Yes
Indiana	Madison	18	095	05	180950010	1	0.064	Yes
Indiana	Marion	18	097	05	180970050	1	0.073	Yes
Indiana	Morgan	18	109	05	181090005	1	0.067	Yes
Indiana	Perry	18	123	05	181230009	1	0.070	Yes
Indiana	Porter	18	127	05	181270024	1	0.067	Yes
Indiana	Posey	18	129	05	181290003	1	0.068	Yes
Indiana	St. Joseph	18	141	05	181411007	1	0.063	Yes
Indiana	Shelby	18	145	05	181450001	1	0.070	Yes
Indiana	Vanderburgh	18	163	05	181630013	1	0.070	Yes
Indiana	Vigo	18	167	05	181670024	1	0.063	Yes
Indiana	Warrick	18	173	05	181730008	1	0.068	Yes
Iowa	Bremer	19	017	07	190170011	1	0.062	Yes
Iowa	Clinton	19	045	07	190450021	1	0.063	Yes
Iowa	Harrison	19	085	07	190851101	1	0.063	Yes
Iowa	Linn	19	113	07	191130028	1	0.062	Yes
Iowa	Montgomery	19	137	07	191370002	1	0.062	Yes
Iowa	Palo Alto	19	147	07	191471002	1	0.060	Yes
Iowa	Polk	19	153	07	191530030	1	0.056	Yes
Iowa	Scott	19	163	07	191630014	1	0.063	Yes
Iowa	Story	19	169	07	191690011	1	0.058	Yes
Iowa	Van Buren	19	177	07	191770006	1	0.062	Yes
Iowa	Warren	19	181	07	191810022	1	0.061	Yes
Kansas	Johnson	20	091	07	200910010	1	0.065	Yes
Kansas	Leavenworth	20	103	07	201030003	1	0.065	Yes
Kansas	Linn	20	107	07	201070002	1	0.063	Yes
Kansas	Sedgwick	20	173	07	201730010	1	0.071	Yes
Kansas	Shawnee	20	177	07	201770013	1	0.065	Yes
Kansas	Sumner	20	191	07	201910002	1	0.072	Yes
Kansas	Trego	20	195	07	201950001	1	0.067	Yes
Kansas	Wyandotte	20	209	07	202090021	1	0.061	Yes
Kentucky	Bell	21	013	04	210130002	1	0.066	Yes

Kentucky	Boone	21	015	04	210150003	1	0.065	Yes
Kentucky	Boyd	21	019	04	210190017	1	0.070	Yes
Kentucky	Bullitt	21	029	04	210290006	1	0.069	Yes
Kentucky	Campbell	21	037	04	210373002	1	0.072	Yes
Kentucky	Carter	21	043	04	210430500	1	0.068	Yes
Kentucky	Christian	21	047	04	210470006	2	0.069	Yes
Kentucky	Daviess	21	059	04	210590005	1	0.070	Yes
Kentucky	Edmonson	21	061	04	210610501	1	0.070	Yes
Kentucky	Fayette	21	067	04	210670012	1	0.068	Yes
Kentucky	Greenup	21	089	04	210890007	1	0.069	Yes
Kentucky	Hancock	21	091	04	210910012	1	0.071	Yes
Kentucky	Hardin	21	093	04	210930006	1	0.070	Yes
Kentucky	Henderson	21	101	04	211010014	1	0.073	Yes
Kentucky	Jefferson	21	111	04	211110051	1	0.075	Yes
Kentucky	Jessamine	21	113	04	211130001	1	0.067	Yes
Kentucky	Livingston	21	139	04	211390003	1	0.066	Yes
Kentucky	McCracken	21	145	04	211451024	1	0.070	Yes
Kentucky	Oldham	21	185	04	211850004	1	0.074	Yes
Kentucky	Perry	21	193	04	211930003	1	0.068	Yes
Kentucky	Pike	21	195	04	211950002	1	0.067	Yes
Kentucky	Pulaski	21	199	04	211990003	1	0.064	Yes
Kentucky	Simpson	21	213	04	212130004	1	0.070	Yes
Kentucky	Warren	21	227	04	212270008	1	0.064	Yes
Louisiana	Ascension	22	005	06	220050004	1	0.075	Yes
Louisiana	Bossier	22	015	06	220150008	2	0.074	Yes
Louisiana	Caddo	22	017	06	220170001	2	0.072	Yes
Louisiana	Calcasieu	22	019	06	220190002	1	0.074	Yes
Louisiana	East Baton Rouge	22	033	06	220330003	1	0.078	No
Louisiana	Iberville	22	047	06	220470009	1	0.073	Yes
Louisiana	Jefferson	22	051	06	220511001	2	0.075	Yes
Louisiana	Lafayette	22	055	06	220550007	1	0.072	Yes
Louisiana	Lafourche	22	057	06	220570004	1	0.071	Yes
Louisiana	Livingston	22	063	06	220630002	1	0.075	Yes
Louisiana	Orleans	22	071	06	220710012	2	0.071	Yes
Louisiana	Ouachita	22	073	06	220730004	1	0.064	Yes
Louisiana	Pointe Coupee	22	077	06	220770001	1	0.075	Yes
Louisiana	St. Bernard	22	087	06	220870009	1	0.069	Yes

Louisiana	St. Charles	22	089	06	220890003	1	0.070	Yes
Louisiana	St. James	22	093	06	220930002	1	0.068	Yes
Louisiana	St. John the Baptist	22	095	06	220950002	1	0.073	Yes
Louisiana	West Baton Rouge	22	121	06	221210001	1	0.071	Yes
Maine	Androscoggin	23	001	01	230010014	2	0.065	Yes
Maine	Aroostook	23	003	01	230031100	1	0.053	Yes
Maine	Cumberland	23	005	01	230052003	1	0.070	Yes
Maine	Hancock	23	009	01	230090102	1	0.074	Yes
Maine	Kennebec	23	011	01	230112005	1	0.064	Yes
Maine	Knox	23	013	01	230130004	2	0.066	Yes
Maine	Oxford	23	017	01	230173001	1	0.056	Yes
Maine	Penobscot	23	019	01	230194008	1	0.059	Yes
Maine	Sagadahoc	23	023	01	230230006	1	0.063	Yes
Maine	Washington	23	029	01	230290019	1	0.060	Yes
Maine	York	23	031	01	230312002	1	0.072	Yes
Maryland	Anne Arundel	24	003	03	240030014	1	0.079	No
Maryland	Baltimore	24	005	03	240053001	1	0.078	No
Maryland	Calvert	24	009	03	240090011	1	0.077	No
Maryland	Carroll	24	013	03	240130001	1	0.076	No
Maryland	Cecil	24	015	03	240150003	1	0.080	No
Maryland	Charles	24	017	03	240170010	1	0.075	Yes
Maryland	Frederick	24	021	03	240210037	1	0.075	Yes
Maryland	Garrett	24	023	03	240230002	1	0.071	Yes
Maryland	Harford	24	025	03	240251001	1	0.089	No
Maryland	Kent	24	029	03	240290002	1	0.075	Yes
Maryland	Montgomery	24	031	03	240313001	1	0.074	Yes
Maryland	Prince George's	24	033	03	240330030	1	0.078	No
Maryland	Washington	24	043	03	240430009	1	0.072	Yes
Maryland	Baltimore (City)	24	510	03	245100054	1	0.067	Yes
Massachusetts	Barnstable	25	001	01	250010002	1	0.074	Yes
Massachusetts	Bristol	25	005	01	250051002	1	0.075	Yes
Massachusetts	Dukes	25	007	01	250070001	1	0.078	No
Massachusetts	Essex	25	009	01	250092006	1	0.074	Yes
Massachusetts	Hampden	25	013	01	250130008	1	0.076	No
Massachusetts	Hampshire	25	015	01	250154002	1	0.077	No
Massachusetts	Middlesex	25	017	01	250171102	1	0.071	Yes
Massachusetts	Norfolk	25	021	01	250213003	1	0.073	Yes

Table 6

Massachusetts	Suffolk	25	025	01	250250041	1	0.072	Yes
Massachusetts	Worcester	25	027	01	250270015	1	0.076	No
Michigan	Allegan	26	005	05	260050003	1	0.074	Yes
Michigan	Benzie	26	019	05	260190003	1	0.069	Yes
Michigan	Berrien	26	021	05	260210014	1	0.071	Yes
Michigan	Cass	26	027	05	260270003	2	0.070	Yes
Michigan	Clinton	26	037	05	260370001	2	0.065	Yes
Michigan	Genesee	26	049	05	260490021	1	0.068	Yes
Michigan	Huron	26	063	05	260630007	1	0.067	Yes
Michigan	Ingham	26	065	05	260650012	2	0.068	Yes
Michigan	Kalamazoo	26	077	05	260770008	1	0.069	Yes
Michigan	Kent	26	081	05	260810022	1	0.069	Yes
Michigan	Macomb	26	099	05	260990009	1	0.074	Yes
Michigan	Manistee	26	101	05	261010922	1	0.067	Yes
Michigan	Mason	26	105	05	261050007	1	0.068	Yes
Michigan	Missaukee	26	113	05	261130001	1	0.065	Yes
Michigan	Muskegon	26	121	05	261210039	1	0.074	Yes
Michigan	Oakland	26	125	05	261250001	2	0.073	Yes
Michigan	Ottawa	26	139	05	261390005	1	0.069	Yes
Michigan	St. Clair	26	147	05	261470005	1	0.071	Yes
Michigan	Schoolcraft	26	153	05	261530001	1	0.067	Yes
Michigan	Washtenaw	26	161	05	261610008	1	0.066	Yes
Michigan	Wayne	26	163	05	261630019	2	0.075	Yes
Minnesota	Anoka	27	003	05	270031002	1	0.062	Yes
Mississippi	Adams	28	001	04	280010004	1	0.066	Yes
Mississippi	Bolivar	28	011	04	280110001	1	0.068	Yes
Mississippi	DeSoto	28	033	04	280330002	1	0.073	Yes
Mississippi	Harrison	28	047	04	280470008	1	0.076	No
Mississippi	Hinds	28	049	04	280490010	1	0.065	Yes
Mississippi	Jackson	28	059	04	280590006	1	0.074	Yes
Mississippi	Lauderdale	28	075	04	280750003	1	0.061	Yes
Mississippi	Lee	28	081	04	280810005	1	0.066	Yes
Missouri	Cass	29	037	07	290370003	1	0.065	Yes
Missouri	Cedar	29	039	07	290390001	1	0.065	Yes
Missouri	Clay	29	047	07	290470003	1	0.072	Yes
Missouri	Clinton	29	049	07	290490001	1	0.073	Yes
Missouri	Greene	29	077	07	290770042	1	0.068	Yes

Table 6

Missouri	Jefferson	29	099	07	290990019	1	0.072	Yes
Missouri	Lincoln	29	113	07	291130003	1	0.072	Yes
Missouri	Monroe	29	137	07	291370001	1	0.065	Yes
Missouri	Perry	29	157	07	291570001	1	0.072	Yes
Missouri	Saint Charles	29	183	07	291831002	1	0.077	No
Missouri	Sainte Genevieve	29	186	07	291860005	1	0.070	Yes
Missouri	Saint Louis	29	189	07	291890014	1	0.071	Yes
Missouri	St. Louis City	29	510	07	295100085	1	0.069	Yes
Montana	Flathead	30	029	08	300298001	1	0.055	Yes
Nebraska	Douglas	31	055	07	310550035	1	0.061	Yes
Nebraska	Lancaster	31	109	07	311090016	1	0.051	Yes
Nevada	Churchill	32	001	09	320010002	1	0.063	Yes
Nevada	Clark	32	003	09	320030075	1	0.076	No
Nevada	Washoe	32	031	09	320312009	1	0.070	Yes
Nevada	White Pine	32	033	09	320330101	1	0.069	Yes
New Hampshire	Belknap	33	001	01	330012004	1	0.065	Yes
New Hampshire	Cheshire	33	005	01	330050007	1	0.064	Yes
New Hampshire	Coos	33	007	01	330074001	1	0.072	Yes
New Hampshire	Grafton	33	009	01	330090010	1	0.062	Yes
New Hampshire	Hillsborough	33	011	01	330115001	1	0.075	Yes
New Hampshire	Merrimack	33	013	01	330131007	1	0.066	Yes
New Hampshire	Rockingham	33	015	01	330150016	1	0.069	Yes
New Jersey	Atlantic	34	001	02	340010006	1	0.074	Yes
New Jersey	Bergen	34	003	02	340030006	1	0.076	No
New Jersey	Camden	34	007	02	340071001	1	0.080	No
New Jersey	Cumberland	34	011	02	340110007	1	0.076	No
New Jersey	Gloucester	34	015	02	340150002	1	0.081	No
New Jersey	Hudson	34	017	02	340170006	1	0.077	No
New Jersey	Hunterdon	34	019	02	340190001	1	0.078	No
New Jersey	Mercer	34	021	02	340210005	1	0.078	No
New Jersey	Middlesex	34	023	02	340230011	1	0.078	No
New Jersey	Monmouth	34	025	02	340250005	1	0.080	No
New Jersey	Morris	34	027	02	340273001	1	0.075	Yes
New Jersey	Ocean	34	029	02	340290006	1	0.081	No
New Jersey	Passaic	34	031	02	340315001	1	0.074	Yes
New Mexico	Bernalillo	35	001	06	350011012	1	0.068	Yes
New Mexico	Dona Ana	35	013	06	350130021	1	0.070	Yes

Table 6

New Mexico	Eddy	35	015	06	350151005	1	0.067	Yes
New Mexico	Grant	35	017	06	350171003	1	0.063	Yes
New Mexico	Lea	35	025	06	350250008	1	0.059	Yes
New Mexico	Luna	35	029	06	350290003	1	0.057	Yes
New Mexico	Sandoval	35	043	06	350431001	1	0.060	Yes
New Mexico	San Juan	35	045	06	350451005	1	0.063	Yes
New Mexico	Santa Fe	35	049	06	350490021	1	0.063	Yes
New York	Albany	36	001	02	360010012	1	0.071	Yes
New York	Bronx	36	005	02	360050133	1	0.072	Yes
New York	Chautauqua	36	013	02	360130006	1	0.077	No
New York	Chemung	36	015	02	360150003	1	0.067	Yes
New York	Dutchess	36	027	02	360270007	1	0.075	Yes
New York	Erie	36	029	02	360290002	1	0.071	Yes
New York	Essex	36	031	02	360310002	3	0.072	Yes
New York	Hamilton	36	041	02	360410005	1	0.068	Yes
New York	Herkimer	36	043	02	360430005	1	0.067	Yes
New York	Jefferson	36	045	02	360450002	1	0.072	Yes
New York	Madison	36	053	02	360530006	1	0.069	Yes
New York	Monroe	36	055	02	360551007	1	0.069	Yes
New York	New York	36	061	02	360610135	1	0.073	Yes
New York	Niagara	36	063	02	360631006	1	0.069	Yes
New York	Oneida	36	065	02	360650004	2	0.061	Yes
New York	Onondaga	36	067	02	360671015	1	0.068	Yes
New York	Orange	36	071	02	360715001	1	0.073	Yes
New York	Oswego	36	075	02	360750003	1	0.069	Yes
New York	Putnam	36	079	02	360790005	1	0.075	Yes
New York	Queens	36	081	02	360810124	1	0.074	Yes
New York	Rensselaer	36	083	02	360830004	1	0.072	Yes
New York	Richmond	36	085	02	360850067	1	0.075	Yes
New York	Saratoga	36	091	02	360910004	1	0.072	Yes
New York	Schenectady	36	093	02	360930003	1	0.068	Yes
New York	Steuben	36	101	02	361010003	1	0.066	Yes
New York	Suffolk	36	103	02	361030009	2	0.084	No
New York	Ulster	36	111	02	361111005	1	0.068	Yes
New York	Wayne	36	117	02	361173001	1	0.068	Yes
New York	Westchester	36	119	02	361192004	1	0.077	No
North Carolina	Alexander	37	003	04	370030004	1	0.070	Yes

Table 6

North Carolina	Avery	37	011	04	370110002	1	0.067	Yes
North Carolina	Buncombe	37	021	04	370210030	1	0.068	Yes
North Carolina	Caldwell	37	027	04	370270003	1	0.069	Yes
North Carolina	Caswell	37	033	04	370330001	1	0.073	Yes
North Carolina	Chatham	37	037	04	370370004	1	0.068	Yes
North Carolina	Cumberland	37	051	04	370511003	1	0.071	Yes
North Carolina	Durham	37	063	04	370630015	1	0.072	Yes
North Carolina	Edgecombe	37	065	04	370650099	1	0.071	Yes
North Carolina	Forsyth	37	067	04	370670022	1	0.076	No
North Carolina	Franklin	37	069	04	370690001	1	0.071	Yes
North Carolina	Graham	37	075	04	370750001	1	0.073	Yes
North Carolina	Granville	37	077	04	370770001	1	0.074	Yes
North Carolina	Guilford	37	081	04	370810013	1	0.076	No
North Carolina	Haywood	37	087	04	370870036	1	0.072	Yes
North Carolina	Johnston	37	101	04	371010002	1	0.072	Yes
North Carolina	Lenoir	37	107	04	371070004	1	0.069	Yes
North Carolina	Lincoln	37	109	04	371090004	1	0.072	Yes
North Carolina	Martin	37	117	04	371170001	1	0.069	Yes
North Carolina	Mecklenburg	37	119	04	371191009	1	0.082	No
North Carolina	Person	37	145	04	371450003	1	0.072	Yes
North Carolina	Pitt	37	147	04	371470006	1	0.070	Yes
North Carolina	Rockingham	37	157	04	371570099	1	0.075	Yes
North Carolina	Rowan	37	159	04	371590021	1	0.077	No
North Carolina	Swain	37	173	04	371730002	1	0.064	Yes
North Carolina	Union	37	179	04	371790003	1	0.072	Yes
North Carolina	Wake	37	183	04	371830016	1	0.073	Yes
North Dakota	Billings	38	007	08	380070002	1	0.059	Yes
North Dakota	Burke	38	013	08	380130004	1	0.060	Yes
North Dakota	Burleigh	38	015	08	380150003	1	0.057	Yes
North Dakota	Cass	38	017	08	380171004	1	0.058	Yes
North Dakota	McKenzie	38	053	08	380530002	1	0.060	Yes
North Dakota	Mercer	38	057	08	380570004	1	0.059	Yes
North Dakota	Oliver	38	065	08	380650002	1	0.059	Yes
Ohio	Allen	39	003	05	390030009	1	0.070	Yes
Ohio	Ashtabula	39	007	05	390071001	1	0.077	No
Ohio	Athens	39	009	05	390090004	1	0.068	Yes
Ohio	Butler	39	017	05	390170004	1	0.073	Yes

Ohio	Clark	39	023	05	390230001	1	0.073	Yes
Ohio	Clermont	39	025	05	390250022	1	0.071	Yes
Ohio	Clinton	39	027	05	390271002	1	0.074	Yes
Ohio	Cuyahoga	39	035	05	390350034	1	0.075	Yes
Ohio	Delaware	39	041	05	390410002	1	0.073	Yes
Ohio	Franklin	39	049	05	390490029	1	0.077	No
Ohio	Geauga	39	055	05	390550004	1	0.077	No
Ohio	Greene	39	057	05	390570006	1	0.072	Yes
Ohio	Hamilton	39	061	05	390610006	1	0.079	No
Ohio	Jefferson	39	081	05	390810017	1	0.069	Yes
Ohio	Knox	39	083	05	390830002	1	0.071	Yes
Ohio	Lake	39	085	05	390850003	1	0.076	No
Ohio	Lawrence	39	087	05	390870011	1	0.068	Yes
Ohio	Licking	39	089	05	390890005	1	0.072	Yes
Ohio	Lorain	39	093	05	390930018	1	0.070	Yes
Ohio	Lucas	39	095	05	390950034	1	0.072	Yes
Ohio	Madison	39	097	05	390970007	1	0.070	Yes
Ohio	Mahoning	39	099	05	390990013	1	0.069	Yes
Ohio	Medina	39	103	05	391030003	1	0.070	Yes
Ohio	Miami	39	109	05	391090005	1	0.070	Yes
Ohio	Montgomery	39	113	05	391130037	1	0.075	Yes
Ohio	Portage	39	133	05	391331001	1	0.067	Yes
Ohio	Preble	39	135	05	391351001	1	0.069	Yes
Ohio	Stark	39	151	05	391510016	1	0.074	Yes
Ohio	Summit	39	153	05	391530020	1	0.075	Yes
Ohio	Trumbull	39	155	05	391550011	1	0.074	Yes
Ohio	Warren	39	165	05	391650007	1	0.078	No
Ohio	Washington	39	167	05	391670004	1	0.073	Yes
Ohio	Wood	39	173	05	391730003	1	0.069	Yes
Oklahoma	Adair	40	001	06	400019009	1	0.067	Yes
Oklahoma	Canadian	40	017	06	400170101	1	0.071	Yes
Oklahoma	Cherokee	40	021	06	400219002	1	0.068	Yes
Oklahoma	Cleveland	40	027	06	400270049	1	0.069	Yes
Oklahoma	Comanche	40	031	06	400310651	1	0.069	Yes
Oklahoma	Creek	40	037	06	400370144	1	0.070	Yes
Oklahoma	Dewey	40	043	06	400430860	1	0.066	Yes
Oklahoma	Kay	40	071	06	400719010	1	0.066	Yes

Oklahoma	Lincoln	40	081	06	400819005	1	0.060	Yes
Oklahoma	McClain	40	087	06	400871073	1	0.068	Yes
Oklahoma	Mayes	40	097	06	400979014	1	0.067	Yes
Oklahoma	Oklahoma	40	109	06	401091037	1	0.074	Yes
Oklahoma	Ottawa	40	115	06	401159004	1	0.065	Yes
Oklahoma	Pittsburg	40	121	06	401210415	1	0.067	Yes
Oklahoma	Tulsa	40	143	06	401430137	1	0.075	Yes
Oregon	Clackamas	41	005	10	410050004	1	0.067	Yes
Oregon	Columbia	41	009	10	410090004	1	0.056	Yes
Oregon	Jackson	41	029	10	410290201	1	0.065	Yes
Oregon	Lane	41	039	10	410391007	1	0.061	Yes
Oregon	Marion	41	047	10	410470004	1	0.064	Yes
Oregon	Multnomah	41	051	10	410510080	1	0.058	Yes
Oregon	Umatilla	41	059	10	410591003	1	0.062	Yes
Pennsylvania	Adams	42	001	03	420010002	1	0.071	Yes
Pennsylvania	Allegheny	42	003	03	420031005	1	0.081	No
Pennsylvania	Armstrong	42	005	03	420050001	1	0.076	No
Pennsylvania	Beaver	42	007	03	420070005	1	0.073	Yes
Pennsylvania	Berks	42	011	03	420110011	1	0.079	No
Pennsylvania	Blair	42	013	03	420130801	1	0.070	Yes
Pennsylvania	Bucks	42	017	03	420170012	1	0.083	No
Pennsylvania	Cambria	42	021	03	420210011	1	0.067	Yes
Pennsylvania	Centre	42	027	03	420270100	1	0.070	Yes
Pennsylvania	Chester	42	029	03	420290100	1	0.076	No
Pennsylvania	Clearfield	42	033	03	420334000	1	0.073	Yes
Pennsylvania	Dauphin	42	043	03	420431100	1	0.073	Yes
Pennsylvania	Delaware	42	045	03	420450002	1	0.074	Yes
Pennsylvania	Erie	42	049	03	420490003	1	0.072	Yes
Pennsylvania	Franklin	42	055	03	420550001	1	0.067	Yes
Pennsylvania	Greene	42	059	03	420590002	1	0.072	Yes
Pennsylvania	Indiana	42	063	03	420630004	1	0.074	Yes
Pennsylvania	Lackawanna	42	069	03	420690101	1	0.072	Yes
Pennsylvania	Lancaster	42	071	03	420710007	1	0.077	No
Pennsylvania	Lawrence	42	073	03	420730015	1	0.066	Yes
Pennsylvania	Lehigh	42	077	03	420770004	1	0.076	No
Pennsylvania	Luzerne	42	079	03	420791100	1	0.069	Yes
Pennsylvania	Lycoming	42	081	03	420810100	1	0.073	Yes

Pennsylvania	Mercer	42	085	03	420850100	1	0.074	Yes
Pennsylvania	Monroe	42	089	03	420890002	1	0.070	Yes
Pennsylvania	Montgomery	42	091	03	420910013	1	0.078	No
Pennsylvania	Northampton	42	095	03	420950025	1	0.075	Yes
Pennsylvania	Perry	42	099	03	420990301	1	0.072	Yes
Pennsylvania	Philadelphia	42	101	03	421010024	1	0.082	No
Pennsylvania	Tioga	42	117	03	421174000	1	0.070	Yes
Pennsylvania	Washington	42	125	03	421255001	1	0.071	Yes
Pennsylvania	Westmoreland	42	129	03	421290008	1	0.072	Yes
Pennsylvania	York	42	133	03	421330008	1	0.074	Yes
Rhode Island	Kent	44	003	01	440030002	1	0.071	Yes
Rhode Island	Providence	44	007	01	440071010	1	0.072	Yes
Rhode Island	Washington	44	009	01	440090007	1	0.076	No
South Carolina	Abbeville	45	001	04	450010001	1	0.067	Yes
South Carolina	Aiken	45	003	04	450030003	2	0.069	Yes
South Carolina	Berkeley	45	015	04	450150002	1	0.062	Yes
South Carolina	Charleston	45	019	04	450190046	1	0.067	Yes
South Carolina	Chesterfield	45	025	04	450250001	1	0.068	Yes
South Carolina	Colleton	45	029	04	450290002	2	0.066	Yes
South Carolina	Darlington	45	031	04	450310003	1	0.070	Yes
South Carolina	Edgefield	45	037	04	450370001	1	0.065	Yes
South Carolina	Pickens	45	077	04	450770002	1	0.072	Yes
South Carolina	Richland	45	079	04	450791001	1	0.071	Yes
South Carolina	Spartanburg	45	083	04	450830009	1	0.076	No
South Carolina	York	45	091	04	450910006	1	0.067	Yes
South Dakota	Brookings	46	011	08	460110003	3	0.059	Yes
South Dakota	Jackson	46	071	08	460710001	3	0.055	Yes
South Dakota	Meade	46	093	08	460930001	3	0.058	Yes
South Dakota	Minnehaha	46	099	08	460990008	3	0.062	Yes
Tennessee	Anderson	47	001	04	470010101	1	0.070	Yes
Tennessee	Blount	47	009	04	470090101	1	0.077	No
Tennessee	Davidson	47	037	04	470370026	1	0.067	Yes
Tennessee	Hamilton	47	065	04	470654003	1	0.075	Yes
Tennessee	Jefferson	47	089	04	470890002	1	0.074	Yes
Tennessee	Knox	47	093	04	470931020	1	0.076	No
Tennessee	Loudon	47	105	04	471050109	1	0.073	Yes
Tennessee	Meigs	47	121	04	471210104	1	0.071	Yes

Table 6

Tennessee	Rutherford	47	149	04	471490101	1	0.069	Yes
Tennessee	Sevier	47	155	04	471550101	1	0.076	No
Tennessee	Shelby	47	157	04	471570021	1	0.076	No
Tennessee	Sullivan	47	163	04	471632003	1	0.071	Yes
Tennessee	Sumner	47	165	04	471650007	1	0.076	No
Tennessee	Williamson	47	187	04	471870106	1	0.068	Yes
Tennessee	Wilson	47	189	04	471890103	1	0.072	Yes
Texas	Bexar	48	029	06	480290032	2	0.075	Yes
Texas	Brazoria	48	039	06	480391004	1	0.084	No
Texas	Brewster	48	043	06	480430101	1	0.064	Yes
Texas	Cameron	48	061	06	480610006	1	0.065	Yes
Texas	Collin	48	085	06	480850005	1	0.077	No
Texas	Dallas	48	113	06	481130075	1	0.078	No
Texas	Denton	48	121	06	481210034	1	0.080	No
Texas	Ellis	48	139	06	481390016	1	0.072	Yes
Texas	El Paso	48	141	06	481410037	2	0.071	Yes
Texas	Gregg	48	183	06	481830001	2	0.074	Yes
Texas	Harris	48	201	06	482010024	2	0.083	No
Texas	Harrison	48	203	06	482030002	1	0.070	Yes
Texas	Hidalgo	48	215	06	482150043	1	0.061	Yes
Texas	Hood	48	221	06	482210001	1	0.075	Yes
Texas	Hunt	48	231	06	482311006	1	0.064	Yes
Texas	Jefferson	48	245	06	482450011	1	0.074	Yes
Texas	Johnson	48	251	06	482510003	1	0.080	No
Texas	Kaufman	48	257	06	482570005	1	0.067	Yes
Texas	McLennan	48	309	06	483091037	1	0.070	Yes
Texas	Montgomery	48	339	06	483390078	1	0.071	Yes
Texas	Nueces	48	355	06	483550026	1	0.071	Yes
Texas	Orange	48	361	06	483611001	2	0.071	Yes
Texas	Parker	48	367	06	483670081	1	0.075	Yes
Texas	Rockwall	48	397	06	483970001	1	0.074	Yes
Texas	Smith	48	423	06	484230007	1	0.073	Yes
Texas	Tarrant	48	439	06	484392003	2	0.086	No
Texas	Travis	48	453	06	484530014	2	0.074	Yes
Texas	Victoria	48	469	06	484690003	1	0.066	Yes
Texas	Webb	48	479	06	484790016	1	0.057	Yes
Utah	Box Elder	49	003	08	490030003	1	0.069	Yes

Table 6

Utah	Cache	49	005	08	490050004	1	0.062	Yes
Utah	Davis	49	011	08	490110004	1	0.074	Yes
Utah	Salt Lake	49	035	08	490350003	1	0.075	Yes
Utah	San Juan	49	037	08	490370101	1	0.069	Yes
Utah	Tooele	49	045	08	490450003	1	0.071	Yes
Utah	Utah	49	049	08	490490002	2	0.070	Yes
Utah	Washington	49	053	08	490530130	1	0.070	Yes
Utah	Weber	49	057	08	490571003	1	0.071	Yes
Vermont	Bennington	50	003	01	500030004	1	0.068	Yes
Vermont	Chittenden	50	007	01	500070007	1	0.064	Yes
Virginia	Albemarle	51	003	03	510030001	1	0.069	Yes
Virginia	Arlington	51	013	03	510130020	1	0.079	No
Virginia	Caroline	51	033	03	510330001	1	0.073	Yes
Virginia	Charles	51	036	03	510360002	1	0.075	Yes
Virginia	Chesterfield	51	041	03	510410004	1	0.075	Yes
Virginia	Fairfax	51	059	03	510590030	1	0.081	No
Virginia	Fauquier	51	061	03	510610002	1	0.065	Yes
Virginia	Frederick	51	069	03	510690010	1	0.068	Yes
Virginia	Hanover	51	085	03	510850003	1	0.075	Yes
Virginia	Henrico	51	087	03	510870014	1	0.076	No
Virginia	Loudoun	51	107	03	511071005	1	0.075	Yes
Virginia	Madison	51	113	03	511130003	1	0.073	Yes
Virginia	Page	51	139	03	511390004	1	0.066	Yes
Virginia	Prince William	51	153	03	511530009	1	0.070	Yes
Virginia	Roanoke	51	161	03	511611004	1	0.069	Yes
Virginia	Rockbridge	51	163	03	511630003	1	0.065	Yes
Virginia	Rockingham	51	165	03	511650003	1	0.066	Yes
Virginia	Stafford	51	179	03	511790001	1	0.070	Yes
Virginia	Wythe	51	197	03	511970002	1	0.066	Yes
Virginia	Alexandria City	51	510	03	515100009	1	0.074	Yes
Virginia	Suffolk City	51	800	03	518000005	1	0.072	Yes
Washington	Clallam	53	009	10	530090013	1	0.055	Yes
Washington	Clark	53	011	10	530110011	1	0.058	Yes
Washington	King	53	033	10	530330023	1	0.073	Yes
Washington	Pierce	53	053	10	530531008	1	0.063	Yes
Washington	Spokane	53	063	10	530630046	1	0.057	Yes
Washington	Thurston	53	067	10	530670005	1	0.058	Yes

West Virginia	Berkeley	54	003	03	540030003	1	0.070	Yes
West Virginia	Cabell	54	011	03	540110006	1	0.066	Yes
West Virginia	Greenbrier	54	025	03	540250003	1	0.066	Yes
West Virginia	Hancock	54	029	03	540291004	1	0.073	Yes
West Virginia	Kanawha	54	039	03	540390010	1	0.069	Yes
West Virginia	Monongalia	54	061	03	540610003	1	0.068	Yes
West Virginia	Ohio	54	069	03	540690010	1	0.073	Yes
West Virginia	Wood	54	107	03	541071002	1	0.068	Yes
Wisconsin	Ashland	55	003	05	550030010	1	0.057	Yes
Wisconsin	Brown	55	009	05	550090026	1	0.064	Yes
Wisconsin	Columbia	55	021	05	550210015	1	0.063	Yes
Wisconsin	Dane	55	025	05	550250041	1	0.062	Yes
Wisconsin	Door	55	029	05	550290004	1	0.073	Yes
Wisconsin	Florence	55	037	05	550370001	1	0.060	Yes
Wisconsin	Fond du Lac	55	039	05	550390006	1	0.063	Yes
Wisconsin	Forest	55	041	05	550410007	1	0.062	Yes
Wisconsin	Jefferson	55	055	05	550550002	1	0.066	Yes
Wisconsin	Kenosha	55	059	05	550590019	1	0.074	Yes
Wisconsin	Kewaunee	55	061	05	550610002	1	0.071	Yes
Wisconsin	La Crosse	55	063	05	550630012	1	0.061	Yes
Wisconsin	Manitowoc	55	071	05	550710007	1	0.073	Yes
Wisconsin	Marathon	55	073	05	550730012	1	0.061	Yes
Wisconsin	Milwaukee	55	079	05	550790085	1	0.074	Yes
Wisconsin	Outagamie	55	087	05	550870009	1	0.062	Yes
Wisconsin	Ozaukee	55	089	05	550890009	1	0.071	Yes
Wisconsin	Racine	55	101	05	551010017	1	0.071	Yes
Wisconsin	Rock	55	105	05	551050024	1	0.065	Yes
Wisconsin	St. Croix	55	109	05	551091002	1	0.062	Yes
Wisconsin	Sauk	55	111	05	551110007	1	0.061	Yes
Wisconsin	Sheboygan	55	117	05	551170006	1	0.078	No
Wisconsin	Vernon	55	123	05	551230008	1	0.063	Yes
Wisconsin	Walworth	55	127	05	551270005	1	0.066	Yes
Wisconsin	Washington	55	131	05	551310009	1	0.063	Yes
Wisconsin	Waukesha	55	133	05	551330027	1	0.060	Yes
Wyoming	Campbell	56	005	08	560050123	1	0.063	Yes
Wyoming	Fremont	56	013	08	560130099	1	0.071	Yes
Wyoming	Sublette	56	035	08	560350099	1	0.078	No

Wyoming	Sweetwater	56	037	08	560370200	1	0.064	Yes
Wyoming	Teton	56	039	08	560391011	1	0.064	Yes
Wyoming	Uinta	56	041	08	560410101	1	0.063	Yes
Puerto Rico	Catano	72	033	02	720330008	1	0.040	Yes
Puerto Rico	Juncos	72	077	02	720770001	1	0.040	Yes

Notes:

1. The level of the 2008 8-hour ozone NAAQS is 0.075 parts per million (ppm). The design value is the 3-year average hour ozone concentration.

2. The design values shown here are computed for the latest design value period using Federal Reference Method or Local monitoring agencies to EPA's Air Quality System (AQS) as of May 9, 2011. Concentrations flagged by State, Tri affected by an exceptional event (e.g., wildfire, volcanic eruption) and concurred by the associated EPA Regional Off

CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of April, 2012 I have served the foregoing **Proof Opening Brief of Petitioners** on all registered counsel through the Court's electronic filing system (ECF).

/s/ David S. Baron
David S. Baron