ORAL ARGUMENT NOT YET SCHEDULED

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF MISSISSIPPI, et al., Petitioners, v. ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	Docket No. 08-1200 (and consolidated cases)

On Petitions for Review of Final Actions
of the United States Environmental Protection Agency

OPENING BRIEF OF STATE PETITIONERS

Petitioners New York, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, New Hampshire, New Mexico, Oregon, Rhode Island, the District of Columbia, and the City of New York

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Dated: April 17, 2012

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), the undersigned counsel of record certifies as follows:

A. PARTIES AND AMICI

Petitioners

The following parties appear in these consolidated cases as petitioners:

In case no. 08-1200, filed May 23, 2008, the State of Mississippi.

In case no. 08-1202, filed May 27, 2008, New York, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, the District of Columbia, and the City of New York. (On August 5, 2011, the Court granted the Pennsylvania Department of Environmental Protection's motion to withdraw as a party.)

In case no. 08-1203, filed May 27, 2008, American Lung Association, Environmental Defense Fund, Natural Resources Defense Council, National Parks Conservation Association, and Appalachian Mountain Club.

In case no. 08-1204, filed May 27, 2008, the Ozone NAAQS Litigation Group and the Utility Air Regulatory Group.

In case no. 08-1206, filed May 27, 2008, the National Association of Homebuilders.

Respondent

The Environmental Protection Agency (EPA) is respondent in these consolidated cases.

Intervenors

The following parties have intervened in these consolidated cases:

On the side of New York, et al.: the County of Nassau, New York.

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

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.

Amici

The following parties appear as amici in these consolidated cases:

In support of New York, et al. and American Lung Association, et al., the Province of Ontario, Canada.

B. RULINGS UNDER REVIEW

A rule entitled "National Ambient Air Quality Standards for Ozone; Final Rule," published at 73 Fed. Reg. 16,435-16,514 (Mar. 27, 2008), which amends 40

C.F.R. § 50.15, Appendix P and § 58, Appendix G.

C. RELATED CASES

The rule at issue has not been previously reviewed in this or any other court.

Dated: April 17, 2012

Respectfully submitted,

/s/ Michael J. Myers

By: _____

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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:

Act	Clean Air Act
CASAC	Clean Air Scientific Advisory Committee
EPA	United States Environmental Protection Agency
NAAQS	National Ambient Air Quality Standards
NYSDEC	New York State Department of Environmental Conservation
O_3	Ground-level ozone
OMB	White House Office of Management and Budget
$PM_{2.5}$	Fine particulate matter
ppm	Parts per million
RTC	Response to Comments document
Rule	2008 Ozone NAAQS rule, published at 73 Fed. Reg. 16,436 (Mar. 27, 2008)
SIP	State Implementation Plan
W126	An index used to measure harm from exposure to ozone based on a weighted average of cumulative, seasonal ozone concentrations

PRELIMINARY STATEMENT

In 2008, EPA promulgated air quality standards to address public health and welfare impacts from ground-level ozone. The EPA Administrator did not follow the unanimous recommendations of his independent science advisors on the primary (health-based) or secondary (welfare-based) standards, instead adopting less protective standards in the rule. More than a dozen states challenged the rule, but the case was held in abeyance for several years based on EPA's representations that it would voluntarily reconsider the standards to make them comply with the Clean Air Act. After EPA abandoned that effort in September 2011, the litigation resumed. Because neither the primary nor secondary standard is consistent with the statute or supported by the record, the Court should remand the standards to EPA. Given the lengthy delays by the agency to date and the resulting harm to public health and welfare from insufficiently protective standards, the Court should require EPA to expeditiously issue revised standards that comply with the statute.

JURISDICTIONAL STATEMENT

The Court has exclusive jurisdiction under the Clean Air Act (the "Act") to review any challenge to the promulgation of a national ambient air quality standard ("NAAQS"). 42 U.S.C. § 7607(b). The undersigned petitioners ("State Petitioners") challenge EPA's nationally-applicable regulations published at 73 Fed. Reg. 16,436

(Mar. 27, 2008) (the "Rule"), establishing primary and secondary NAAQS for ground-level ozone ("ozone"). As set forth in the Certificate as to Parties, *supra* at i-iii, State Petitioners filed a timely petition for review pursuant to 42 U.S.C. § 7607(b).

STATEMENT OF ISSUES

1. Whether the EPA Administrator acted arbitrarily, capriciously, and contrary to law when he set the primary standard for ozone at a level that his independent science advisors concluded does not protect public health with an adequate margin of safety.

2. Whether the EPA Administrator acted arbitrarily, capriciously, and contrary to law when he adopted a secondary standard identical to the primary standard despite the recommendations of his independent science advisors that a separate standard based upon the cumulative, seasonal effects of ozone exposure is necessary to protect public welfare.

3. Whether given the more than three-year delay caused by EPA's representations that it would voluntarily revise the Rule and the resulting harm to public health from further delay in promulgating more protective ozone standards, the Court should retain jurisdiction and order EPA to expeditiously issue revised standards.

STATUTES AND REGULATIONS

The relevant statutory and regulatory provisions and legislative history excerpts are contained in the Addendum at the end of this brief.

STATEMENT OF THE CASE

This case involves challenges to EPA's primary and secondary standards for ozone promulgated in March 2008. In the Rule, EPA revised the primary NAAQS to 0.075 parts per million ("ppm") and adopted an identical secondary NAAQS. 73 Fed. Reg. 16,436. Although the 0.075 ppm primary standard is more stringent than the previous standard of 0.08 ppm set in 1997, it exceeds the 0.060-0.070 ppm range recommended unanimously by the Clean Air Scientific Advisory Committee ("CASAC"), the independent body of science advisors created by the Act to advise EPA on the NAAQS. State Petitioners challenge the Rule on grounds that the primary NAAQS does not protect public health with an adequate margin of safety and the secondary NAAQS does not protect public welfare, as required under the Act. *See* 42 U.S.C. § 7409(b)(1), (2). American Lung Association, et al. also challenge the standards on these grounds. Mississippi and several industry petitioners contend that the same standards are too stringent. By order dated June 6, 2008, these petitions were consolidated and *Mississippi v. EPA* was designated lead case.

In December 2008, this Court established a briefing schedule. Subsequently, on

March 10, 2009, EPA successfully moved to have the case held in abeyance for six months so the new Administrator could "determine whether the standards established in the [] Rule should be maintained, modified, or otherwise reconsidered." Dkt. 1169527. In September 2009, EPA decided to reconsider the Rule due to "concerns regarding whether the revisions to the primary and secondary NAAQS adopted in the [] Rule satisfy the requirements of the Clean Air Act." Dkt. 1206476. The Court ordered the case held in abeyance during the reconsideration process. Dkt. 1226738.

After issuing a formal proposal to reconsider the Rule, 75 Fed. Reg. 2,938 (Jan. 19, 2010), EPA represented that it would complete reconsideration by August 31, 2010, then by October 31, 2010, then by December 31, 2010, and finally by July 29, 2011. *See* Dkts. 1211554, 1261654, 1274843, and 1281979. After missing the last deadline, EPA moved on August 12, 2011 to continue the abeyance, stating that the final rule package had been sent to the Office of Management and Budget ("OMB"), interagency review would be completed "shortly," and it would then issue a final rule "expeditiously." Dkt. 1324030. But, on September 2, 2011, EPA filed a notice advising that it "no longer expects that it will take final action to complete its reconsideration of the [Rule] in the near future." Dkt. 1327617. Subsequently, EPA stated that it would "conclude its rulemaking on reconsideration of the 2008 ozone NAAQS in conjunction with its ongoing [statutory] review of the ozone NAAQS,"

which it expected to complete by July 2014. *See* Declaration of EPA Assistant Administrator McCarthy (Dec. 8, 2011), Doc. 1346703 in Case No. 11-1396 ("McCarthy Decl."), ¶¶ 5, 8 (J.A.____).

Subsequently, the abeyance was lifted and the Court established a new briefing schedule. Dkt. 1359125.

STATEMENT OF FACTS

The NAAQS Process

Every five years EPA must complete a thorough review of the NAAQS and "make such revisions in such criteria and standards and promulgate such new standards as may be appropriate." 42 U.S.C. § 7409(d)(1). The NAAQS must be based on air quality criteria reflecting "the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health and welfare which may be expected from the presence of such pollutant in the ambient air." 42 U.S.C. § 7408(a)(2).

The statute directs the Administrator to set the primary NAAQS at a level "requisite to protect the public health with an adequate margin of safety." 42 U.S.C. § 7409(b)(1). The Administrator must identify the maximum airborne concentration of a pollutant that the public health can tolerate, decrease the concentration to provide an adequate margin of safety, and set the standard at that level. *Whitman v. Am.*

Trucking Ass'ns, 531 U.S. 457, 465 (2001). The primary NAAQS must protect not only average healthy individuals, but also groups more susceptible to harm, such as children with asthma. *Am. Lung Ass'n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998).

EPA also must establish a secondary NAAQS "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." 42 U.S.C. § 7409(b)(2). Effects on "welfare" include impacts on, *inter alia*, soils, water, crops, vegetation, wildlife, weather, visibility and climate. *Id.* § 7602(h). "EPA may not consider implementation costs in setting primary and secondary NAAQS." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. at 486.

Once EPA establishes NAAQS for a pollutant, the standard becomes the centerpiece of a complex statutory approach aimed at reducing the pollutant's atmospheric concentration. *Am. Trucking Ass'ns v. Whitman*, 283 F.3d 355, 358-59 (D.C. Cir. 2002). EPA and the States must first designate areas that fail to meet the NAAQS. *Id.* (citing 42 U.S.C. § 7407(d)(1)-(2)). Subsequently, each State must adopt a plan providing for the implementation, maintenance, and enforcement of the NAAQS through, for example, the regulation of power plant and automobile emissions. *Id.* at 359 (citing 42 U.S.C. § 7410(a)(1)). States must submit their implementation plans to EPA for approval. *Id.*

The Role of CASAC

Congress created CASAC, an independent scientific review committee, to "recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate." 42 U.S.C. § 7409(d)(2)(B); *see* H.R. Rep. No. 95-924, 95th Cong., 1st Sess. (1977) at 182 (J.A._____) (citing the "need for greater research, the importance of the national ambient air quality standards, and . . . the desire for continued independent scientific review of the [EPA's] exercise of judgment"). By independently evaluating EPA staff's analysis of the scientific evidence, CASAC provides an objective justification for the pollution standards the Agency selects. *Am. Trucking Ass'ns v. Browner*, 175 F.3d 1027, 1059 (D.C. Cir. 1999) (Tatel, J., dissenting), *rev'd sub nom. Whitman v. Am. Trucking Ass'ns*, 531 U.S. at 457. When EPA proposes a NAAQS, it must "set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by [CASAC]." 42 U.S.C. § 7607(d)(3). If the proposal "differs in any important respect from any of [CASAC's] recommendations," EPA must explain the reasons for the difference. *Id.*

Congress intended that CASAC's recommendations "will not only aid the Administrator and the Congress, but also the courts in judicial review of any national ambient air quality standard or of the Administrator's failure or refusal to set or revise

such a standard with respect to any pollutant." H.R. Rep. No. 95-924 at 183 (J.A._____). Thus, the basis for the Administrator's rejection of CASAC's advice should be carefully considered in deciding whether EPA has engaged in reasoned decision-making.

Ozone Pollution

Ozone, or "O_3," is a colorless, odorless gas that forms when other atmospheric pollutants, known as ozone "precursors," such as nitrogen oxide and volatile organic compounds, react in the presence of sunlight. *Am. Trucking Ass'ns v. Whitman*, 283 F.3d at 359. EPA has found significant health effects in individuals exposed to elevated levels of ozone, including coughing, throat irritation, lung tissue damage, and aggravation of existing conditions like asthma, bronchitis, heart disease, and emphysema. *Id.* Exposure to ozone has also been linked to premature mortality. *See* 73 Fed. Reg. at 16,450. Some individuals are particularly at-risk from exposure to ozone pollution, including children, the elderly, and those with existing lung diseases, such as asthma. 72 Fed. Reg. at 37,846.

Ozone pollution also inhibits photosynthesis. 72 Fed. Reg. at 37,885. By interfering with the ability of plants and trees to produce and store food, ozone renders them more susceptible to disease, insect pests, and other stressors. *Id.* Ozone further can inhibit the ability of vegetation to absorb carbon dioxide, thereby making it more

difficult for plants and trees to mitigate harms from climate change. *Id.* at 37,889.

The Proposed Rule

In the proposal, EPA evaluated whether the primary standard of 0.08 ppm, measured as the annual fourth-highest daily maximum concentration averaged over three years, and the identical secondary standard, both promulgated in 1997,[1] should be revised in light of subsequent scientific evidence. 72 Fed. Reg. 37,818 (July 11, 2007). EPA staff concluded that new evidence "clearly calls into question the adequacy of the current primary standard in protecting at-risk groups, notably including asthmatic children and other people with lung disease . . . against an array of adverse health effects." *Id.* at 37,868/3. Agency staff therefore recommended that the Administrator adopt a standard in the range "somewhat below 0.080 ppm" down to 0.060 ppm. *Id.* at 37,876/2. Similarly, CASAC unanimously concluded that there was "no scientific justification for retaining" the current standard, and recommended a standard in the range of 0.060-0.070 ppm. *Id.* at 37,869/1, 37,877/3.

Regarding the secondary standard, EPA staff and CASAC both concluded that the existing 8-hour standard of 0.08 ppm does not adequately protect plants and trees from exposure to ozone. 72 Fed. Reg. at 37,898-99. A separate type of a standard is

[1] After missing the five-year statutory deadline for revising the ozone NAAQS, EPA was required under consent decree to propose NAAQS by June 2007 and promulgate NAAQS by March 12, 2008. 73 Fed. Reg. at 16,438/2.

necessary because vegetation reacts differently to ozone exposure than do people. *See* Staff Paper at 8-25 (J.A.____) (finding it "not appropriate to continue to use an 8-hour averaging time for the secondary standard"); CASAC 10/24/06 Letter at 5 (J.A.____) ("[V]egetation effects are more dependent on the *cumulative* exposure to, and uptake of, ozone over the course of the entire growing season (defined to be a minimum of at least three months.") (emphasis original).

Therefore, EPA staff and CASAC proposed a cumulative, seasonal standard, which uses a weighted average to measure adverse effects of ozone on plants and trees. Such a standard takes into account that "exposures of concern to plants are not based on discrete 8-hour periods but on the repeated occurrence of elevated ozone levels throughout the plant's growing season." Response to Comments at 111 (J.A.____). This standard (the "W126 index"), weights ozone concentrations during a consecutive 3-month period when ozone levels are the highest, which corresponds to the growing season of many plant and tree species. *See* 72 Fed. Reg. at 37,900. EPA staff recommended that the level be set within a range of 7-21 ppm-hours based on a 3-month, 12-hour weighted average of ozone concentrations at monitored sites. 72 Fed. Reg. at 37,903/1. CASAC found that a more protective range of 7-15 ppm-hours was necessary to protect public welfare. *Id.*

Then-Administrator Stephen Johnson proposed to revise the primary standard in

the range of 0.070-0.075 ppm, above the range CASAC recommended. 72 Fed. Reg. at 37,882/2. He also proposed to adopt the cumulative, seasonal standard recommended by EPA staff and CASAC as secondary standard and solicited comment on a level within the 7-21 ppm-hours range. *Id.* at 37,882-83. The Administrator proposed alternatively to adopt an 8-hour standard identical to the primary standard, even though neither EPA staff nor CASAC supported this alternative.

The Final Rule

Administrator Johnson signed the final rule on March 12, 2008, the deadline under a consent decree for EPA to issue the ozone NAAQS. The Administrator concluded that the evidence did not support retaining the current primary standard or setting the standard at a level "just below 0.080 ppm" because such a standard would not provide a significant increase in protection. 73 Fed. Reg. at 16,482/3. He rejected CASAC's recommendation, however, that he set the primary standard in the range of 0.060-0.070 ppm, instead selecting a standard of 0.075 ppm. *Id.* at 16,482-3.

The Administrator also rejected the advice of EPA staff and CASAC that a cumulative, seasonal secondary standard was necessary to protect public welfare, citing "uncertain benefits" from adopting such a standard. 73 Fed. Reg. at 16,500/1. In explaining this decision, the Rule's preamble recounted a last-minute push by OMB to reject the cumulative, seasonal standard:

> EPA received a Memorandum on March 6, 2008 from Susan Dudley, Administrator, Office of Regulatory Affairs, Office of Management and Budget, indicating various concerns over adopting a cumulative, seasonal secondary standard. Deputy Administrator Marcus Peacock responded with a Memorandum dated March 7, 2008 stating EPA's views supporting adoption of a cumulative, seasonal secondary standard. On March 11, 2008, the President concluded that, consistent with Administration policy, added protection should be afforded to public welfare by strengthening the secondary ozone standard and setting it to be identical to the new primary standard, the approach adopted when ozone standards were last promulgated.

Id. at 16,497/2 (internal quotations omitted). The day after the President expressed his view, the Administrator signed the Rule, adopting the 8-hour secondary standard.

EPA voluntarily proposed to reconsider the Rule in January 2010 because the new Administrator, Lisa Jackson, had "serious cause for concern regarding whether the revisions to the primary and secondary ozone standards adopted in the 2008 final rule satisfy the requirements of the [Act], in light of the body of scientific evidence before the Agency." 75 Fed. Reg. at 2,943/3. Based on her conclusion that "important and significant risks to public health are likely to occur at a standard level of 0.075 ppm," *id.* at 2,996/2, EPA proposed to revise the primary standard in the range of 0.060-0.070 ppm, as recommended by CASAC. *Id.* at 2,998. EPA also proposed to adopt the cumulative, seasonal secondary standard recommended by EPA staff and CASAC, and to establish the level in the range of 7-15 ppm-hours. *Id.* at

3,027/1. However, on September 2, 2011, EPA announced that it would not be issuing revised standards as previously represented. Dkt. 1327617.

STANDARD OF REVIEW

An EPA action may be reversed if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 42 U.S.C. § 7607(d)(9)(A). In evaluating the Administrator's decision on the NAAQS, the Court defers to EPA's scientific judgment "while examining the record to ensure the agency has considered the relevant factors and reasonably explained how it reached its conclusions." *Am. Farm Bureau v. EPA*, 559 F.3d 512, 519-20 (D.C. Cir. 2009) (citations omitted); *see Lead Indus. Ass'n v. EPA*, 647 F.2d 1130, 1146 (D.C. Cir. 1980) (court must "undertake a substantial inquiry into the facts" that is "searching and careful") (citation omitted). The Administrator must "take into account all the relevant studies revealed in the record" and "make an informed judgment based on available evidence." *Natural Res. Def. Council v. EPA*, 902 F.2d 962, 971 (D.C. Cir. 1990) (citation omitted).

SUMMARY OF ARGUMENT

The Administrator's decision to set the primary NAAQS at 0.075 ppm was arbitrary and capricious. As CASAC unanimously found, the evidence establishes that a standard of 0.070 ppm or lower is necessary to protect public health with an

adequate margin of safety. Although the Administrator concurred with the findings of his staff and CASAC that at-risk groups, including children and asthmatics, experience more serious adverse effects when exposed to ozone and experience harm at lower levels than healthy adults, he ignored those findings when he decided to set the standard at 0.075 ppm. Therefore, the Court should order EPA to issue a revised standard that adequately protects public health.

At a minimum, the standard must be remanded for further explanation because the Administrator made the same error as in the *American Farm Bureau* case, failing to reasonably explain how the primary NAAQS he selected adequately protects at-risk groups. Specifically, he did not explain how a standard set at a level so close to that at which he found demonstrated harm to healthy adults includes an adequate margin of safety for children and asthmatics. This Court's precedent compels a remand to EPA at least to provide a reasoned explanation.

The Administrator's adoption of a secondary standard equal to the 8-hour primary standard of 0.075 ppm was also arbitrary and capricious. Both CASAC and EPA staff found a cumulative, seasonal standard necessary to protect public welfare because of the different way that plants and trees react to ozone pollution compared to people. The Administrator's rejection of his staff's and CASAC's conclusions on grounds of uncertainty is plainly refuted by the record, and his contention that an 8-

hour standard will provide equivalent protection fails on its own terms, as did a similar argument EPA made in *American Farm Bureau*. In addition, the Court owes no deference to EPA's decision to the extent it relied on OMB's views. Moreover, OMB's interpretation of the Act conflicts with the Supreme Court's interpretation that EPA cannot consider the costs of implementation in setting the NAAQS.

Despite the legal flaws in primary and secondary NAAQS, this Court should remand without vacatur because vacating the Rule would leave in effect the less protective 1997 standards, potentially exacerbating harm to public health and welfare. However, given the three-year delay in consideration of the merits caused by EPA's representations it would voluntarily revise the Rule, and the adverse impacts of further delays on public health and welfare, the Court should impose a deadline requiring EPA to issue revised NAAQS expeditiously in accordance with this Court's decision.

STANDING

State Petitioners' standing to sue is self-evident.[2] The Administrator's decision to set the primary and secondary standards at less protective levels than recommended by CASAC will likely result in harm to the health of citizens in our States and to our natural resources. *See, e.g.*, NYSDEC Comments (Oct. 10, 2007) (EPA-HQ-OAR-

[2] Although State Petitioners believe that their standing is apparent based on the record, attached is the Declaration of Linda Wilson as further support.

2005-0172-4789) at 2-5 (J.A._____-_____) (primary standard of 0.075 ppm "will not provide an adequate margin of safety for both healthy and sensitive populations, including asthmatic children" and "establishing the ozone secondary NAAQS equal to the primary NAAQS . . . would not be effective for protecting vegetation or evaluating ozone-related injury" in New York). A decision from the Court remanding the standards likely would compel EPA to strengthen them, benefitting public health and the environment in our States. These injuries establish standing. *See*, *e.g.*, *Massachusetts v. EPA*, 549 U.S. 497, 516-25 (2007) (States had standing under the Act to challenge EPA's refusal to regulate greenhouse gases from automobiles).

ARGUMENT

I. The Administrator Failed to Promulgate a Primary Standard that Protects Public Health with an Adequate Margin of Safety.

The Administrator must set the primary NAAQS at a level necessary to protect public health with an adequate margin of safety. 42 U.S.C. § 7409(b)(1). The primary standard must protect 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." *Am. Lung Ass'n*, 134 F.3d at 389 (citations omitted).

A primary standard of 0.075 ppm cannot be sustained on the record because it does not adequately protect public health. The Court should remand for EPA to issue a standard that complies with the Act. At a minimum, the standard should be

remanded for further explanation because the Administrator failed reasonably to explain how the 0.075 ppm standard protects at-risk groups with "an adequate margin of safety."

A. A primary standard of 0.075 ppm does not adequately protect public health, including at-risk groups.

The NAAQS "must protect not only average, healthy individuals, but also 'sensitive citizens' – children, for example, or people with asthma, emphysema, or other conditions rendering them particularly vulnerable to air pollution." *Am. Lung Ass'n*, 134 F.3d at 390 (citations omitted). Thus, "[i]f a pollutant adversely affects the health of these sensitive individuals, EPA must strengthen the entire national standard." *Id.* at 389 (citation omitted); *see* S. Rep. No. 91-1196, 91st Cong., 2d Sess. 410 (1970). Here, the Administrator violated this statutory command by choosing a primary standard of 0.075 ppm based on documented harm to healthy individuals despite compelling evidence showing that such a standard does not sufficiently protect at-risk groups.

In setting the standard at 0.075 ppm, the Administrator cited "a high degree of certainty about the adverse effects of ozone exposure even in healthy people" exposed to concentrations at 0.080 ppm. 73 Fed. Reg. at 16,476/3. He further explained that "a revised standard must be set at a level appreciably below 0.080 ppm" because that is "the level at which there is considerable evidence of effects in healthy people." *Id.*

at 16,480/3. The Administrator considered a standard of 0.070 ppm, because he agreed that "effects observed at 0.080 ppm were in healthy adult subjects but sensitive population groups such as asthmatics are likely to respond to lower O_3 levels than healthy individuals." *Id.* at 16,466/1. Nevertheless, he ultimately adopted a standard of 0.075 ppm, citing "uncertainties" regarding demonstrated harm to exposures below that level. *Id.* at 16,483/1.

This decision was erroneous for at least two reasons. First, the Administrator cannot ignore uncertain effects. Section 109(b)(1) requires primary NAAQS that protect public health from adverse effects even where there may be "scientific uncertainty." *Am. Lung Ass'n*, 134 F.3d at 389; *see Am. Trucking Ass'ns v. Whitman*, 283 F.3d at 369 (EPA must promulgate protective primary NAAQS even where the pollutant's risks "cannot be quantified or precisely identified as to nature or degree.") (citation omitted); *see also Coalition for Battery Recyclers Ass'n v. EPA*, 604 F.3d 613, 621 (D.C. Cir. 2010) (EPA must "err on the side of caution" in setting primary NAAQS) (citation omitted).

Second, the Administrator's apparent conclusion that a standard set just below the level at which he concluded harm occurs to healthy individuals will protect at-risk groups is refuted by the record and contradicted by his own statements. For example, the Administrator agreed "that important new evidence shows that asthmatics have

more serious responses, and are more likely to respond to lower O_3 levels than healthy individuals." 73 Fed. Reg. at 16,480/1.

Moreover, CASAC unanimously concluded that "overwhelming scientific evidence" requires that the primary standard be set at "no greater than 0.070 ppm" to protect public health, including at-risk groups. CASAC 3/26/07 letter at 2 (J.A. ___); CASAC 10/24/06 letter at 3-5 (J.A. ___). CASAC and EPA staff cited numerous epidemiological studies showing adverse respiratory effects associated with exposures to ozone concentrations "well below the current standard." 73 Fed. Reg. at 16,444/2. They also cited the Adams clinical studies showing statistically-significant decreased lung function in healthy adults exposed to ozone concentrations of 0.080 ppm, and decreased lung function in some healthy adults exposed to much lower levels of 0.060 ppm. *Id.* at 16,449/2. This latter finding has important implications because "people with asthma, and particularly children, have been found to be more sensitive and to experience larger decrements in lung function in response to ozone exposures than would healthy volunteers." *Id.* (citation omitted); CASAC 3/26/07 letter at 2 (J.A. _____). Here again, the Administrator agreed with CASAC's conclusion, stating that the decreased lung function experienced by healthy individuals exposed to ozone concentrations of 0.060 ppm "*should be considered adverse for asthmatic individuals*." *Id.* at 16,455/1 (emphasis added).

Given CASAC's unanimous scientific opinion that a standard of at most 0.070 ppm is necessary to adequately protect at-risk groups and the Administrator's agreement that (i) at-risk groups suffer more serious harm from ozone exposure and are susceptible at lower levels, and (ii) responses demonstrated by healthy adults to exposures at ozone levels of 0.060 ppm "should be considered adverse for asthmatic individuals," the Administrator's decision to set the standard at 0.075 ppm was arbitrary and capricious. *Cf. City of Naples Airpt. Auth. v. FAA*, 409 F.3d 431, 435-36 (D.C. Cir. 2005) (vacating agency order not supported by substantial evidence). Therefore, the Rule should be remanded to EPA to issue a primary standard that reflects the "predominant value of protection of public health." *Lead Indus. Ass'n*, 647 F.2d at 1152 (citation omitted).[3]

B. The Administrator failed reasonably to explain how a standard based on harm to healthy adults protects at-risk groups with an adequate margin of safety.

At a minimum, the Administrator committed the same error he committed in *American Farm Bureau*: he failed reasonably to explain how the primary standard protects at-risk groups with an adequate margin of safety. EPA must explain how the NAAQS "would protect 'not only average healthy individuals, but also sensitive

[3] State Petitioners further join the arguments for invalidating the 0.075 ppm primary standard discussed in the brief of American Lung Association, et. al.

citizens,'" with an adequate margin of safety. *Am. Farm Bureau*, 559 F.3d at 524 (quoting *Am. Lung Ass'n*, 134 F.3d at 389). Determining an adequate margin of safety requires consideration of "such factors as the nature and severity of the health effects involved, the size of the population(s) at risk, and the kind and degree of the uncertainties that must be addressed." 73 Fed. Reg. at 16,437/2.

Here, the Administrator failed to explain how a 0.075 ppm standard provides an adequate margin of safety to protect at risk-groups from ozone pollution. CASAC noted the absence of any discussion about adequate margin of safety in the rulemaking process. *See* CASAC 3/26/07 Letter at 2 (J.A._____) (Staff Paper lacked discussion on "margin of safety," which should be "taken into consideration in setting the primary ozone standard."). Given that the Administrator set the primary standard barely below the level at which he found "a high degree of certainty about the adverse effects of ozone exposure even in healthy people," 73 Fed. Reg. at 16,476, and his conclusion that children and asthmatics exposed to the same level of ozone experience more serious harm than healthy adults and also experience adverse effects at lower levels, *id.* at 16,480/1, the need for a cogent explanation regarding an adequate margin of safety for at-risk groups was heightened. *Am. Lung Ass'n*, 134 F.3d at 392-93. Yet, the preamble merely states that it is "the Administrator's judgment" that a 0.075 ppm standard "would be requisite to protect public health with an adequate margin of

safety, including the health of sensitive subpopulations," *id.* at 16,483/1-2.

In addressing why he did not accept CASAC's recommended standard, which did incorporate a margin of safety for at-risk groups, the Administrator likewise offered only a conclusory explanation: he disagreed with CASAC on the weight it placed on the risk assessment and Adams studies. *Id.* at 16,483/1. His decision to discount the risk assessment on grounds of "uncertainty" and choose a less protective standard is inconsistent, however, with the concept of a margin of safety. *See Natural Res. Def. Council v. EPA*, 824 F.2d 1146, 1152 (D.C. Cir. 1987) (margin of safety is used as a safety factor meant to compensate for uncertainties). The decision to disregard the Adams studies was also arbitrary because it was neither explained in the record nor consistent with the Administrator's conclusion that, based on those studies, decreased lung function in healthy individuals "should be considered adverse for asthmatic individuals," 73 Fed. Reg. at 16,455/1. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 51-52 (1983) (agency must offer a rational connection between the facts found and the choice made).

But even assuming *arguendo* that the Administrator could reasonably have discounted this evidence, he failed to explain how a 0.075 ppm standard protects, with an adequate margin of safety, at-risk groups that experience harms at lower levels than healthy individuals and suffer more serious harms when exposed to the same

concentrations. *American Farm Bureau* held a similar lack of explanation required remand to EPA. In holding that EPA failed to explain how the primary standard for $PM_{2.5}$ provided an adequate margin of safety against respiratory illnesses in at-risk groups, the Court found "[n]otably absent from the final rule . . . any indication of how the standard will adequately reduce risks in the elderly or those with certain heart or lung diseases despite (a) the EPA's determination in its proposed rule that those subpopulations are at greater risk from exposure to fine particles and (b) the evidence in the record supporting that determination." 559 F.3d at 525-26 (citing evidence showing greater risks to those groups from exposure to $PM_{2.5}$). As discussed above, both circumstances are also present here: (a) EPA determined certain groups (*e.g.*, children with asthma) are at greater risk from exposure to ozone pollution and (b) evidence in the record shows that at-risk groups experience adverse effects at ozone concentrations at or below 0.075 ppm.

Similarly, in *American Lung Ass'n*, this Court held that EPA erred in promulgating the sulfur dioxide NAAQS by failing reasonably to explain its decision not to limit short-term bursts of the pollutant where the record included thousands of documented cases of adverse effects from these bursts. 134 F.3d at 391-92. Likewise here, despite acknowledging the importance of considering the "size of the population at risk," 73 Fed. Reg. at 16,437/2, the Administrator failed to explain why it is

acceptable to subject thousands of children with asthma to significant decreased lung function at least once per year rather than choosing a more protective standard that would avoid that harm. *See* 72 Fed. Reg. at 37,860, Table 2 (40,000-90,000 asthmatic children expected to experience 10 percent or greater decrements in lung function); *cf. Am. Petroleum Inst. v. Costle*, 665 F.2d 1176, 1186-87 (D.C. Cir. 1981) (primary ozone NAAQS of 0.12 ppm provided adequate margin of safety given EPA's conclusion that the "probable level for adverse effects in sensitive persons is in the range of 0.15-0.25 ppm"). At a minimum, remand for a reasoned explanation is warranted. *Am. Lung Ass'n*, 134 F.3d at 392 (Because "Congress has delegated to [EPA] the critical task of assessing the public health and the power to make decisions of national import in which individual lives and welfare hang in the balance, [EPA] has the heaviest of obligations to explain and expose every step of its reasoning.").

II. The Administrator Erred by Adopting a Secondary Standard that Does Not Protect Public Welfare.

EPA must promulgate a secondary standard that "in the judgment of the Administrator, based on [the ozone] criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of [ozone] in the ambient air." 42 U.S.C. § 7409(b)(2). Here, the Administrator's adoption of an 8-hour secondary standard was arbitrary and capricious. Although initially agreeing with the scientific conclusions reached by CASAC and EPA staff that a cumulative,

seasonal standard is necessary to protect public welfare, the Administrator abruptly changed his mind after receiving comments from OMB and the President in support of a single 8-hour standard. His cited reasons for abandoning the cumulative, seasonal standard – that there was too much uncertainty in the evidence to adopt the cumulative, seasonal standard and that the 8-hour standard is equivalent – are refuted by the record.

A. The 8-hour secondary standard does not adequately protect plants and trees from harms caused by ozone pollution.

In adopting a secondary standard identical to the primary 8-hour standard, the Administrator cited two reasons for rejecting CACAC's and EPA staff's recommendation that he adopt a cumulative, seasonal standard: (1) there are "significant uncertainties" concerning a cumulative, seasonal standard, and (2) a cumulative, seasonal standard would not provide additional protection beyond that by the revised primary standard. 73 Fed. Reg. at 16,500. Neither has merit. Indeed, as explained in Section II.B, *infra*, just five days before signing the Rule, the Administrator himself rejected the very same interpretations of the scientific evidence.

1. The Administrator's contention that "significant uncertainties" warrant rejection of the cumulative, seasonal standard is refuted by the record.

In rejecting the cumulative, seasonal standard, the Administrator cited "significant uncertainties" regarding the degree of risk attributable to varying levels of

ozone exposure, the extent to which a cumulative, seasonal standard would address those risks, and whether adopting such a standard could result in a standard that is more stringent than necessary. 73 Fed. Reg. at 16,500. But this rationale is contrary to the statute, which requires a secondary standard that is requisite to protect public welfare from "any known or anticipated adverse effects" from ozone, 42 U.S.C. § 7409(b)(2). *See Am. Trucking Ass'ns v. Whitman*, 283 F.3d at 380 ("[N]othing in the [] Act requires EPA to wait until it has perfect information before adopting a protective secondary NAAQS."); *Am. Farm Bureau*, 559 F.3d at 529 (rejecting EPA's characterization of evidence as "uncertain" because "the precise level" of a visibility standard for $PM_{2.5}$ could not be determined); *see also New York v. EPA*, 443 F.3d 880, 885 (D.C. Cir. 2006) ("any" has an "expansive reach" in the Act).

Moreover, the Administrator's contention that "significant uncertainties" in the evidence prevent establishing a cumulative, seasonal standard is plainly refuted by the record. EPA staff and CASAC both found the evidence sufficiently certain to warrant a separate secondary standard. 73 Fed. Reg. at 16,498. The evidence established that to afford the requisite protection to plants and trees – including preventing biomass loss, damage to forest tree species during the seedling growth stage, and yield loss in important commercial crops – the secondary standard must account for the accumulation of ozone exposures over a growing season. *Id.* at 16,490-92. These

adverse effects are the result of ozone's accumulated exposure over time and at key moments in the vegetative growth cycle, including warmer months when plants are most active, rather than from levels of ozone exposure like those addressed by an 8-hour average concentration standard, which focuses on whether areas exceed the maximum 8-hour concentrations four times annually. *See* 73 Fed. Reg. at 16,486-87; 16,493-94; 16,497-99. Therefore, EPA staff concluded that "it is not appropriate to continue to use an 8-hour averaging time for the secondary standard" and that it should be replaced with a cumulative, seasonal standard. Staff Paper at 8-25 (J.A.____). CASAC unanimously agreed in strong, unequivocal terms, stating that "*there is a clear need for a secondary standard which is distinctly different from the primary standard in averaging time, level and form*." CASAC 10/24/06 Letter at 5-6 (J.A.____) (emphasis original). Indeed, the Administrator largely concurred with these findings, recognizing that the scientific evidence "demonstrate[s] the cumulative nature of ozone-induced plant effects and the need to give greater weight to higher concentrations" of ozone. 73 Fed. Reg. at 16,498/2; *see also id.* at 16,500 ("a cumulative, seasonal standard is the most biologically relevant way to relate exposure to plant growth response").

Although EPA's decision in the last NAAQS review in 1997 not to adopt a cumulative, seasonal standard was driven in part by uncertainties concerning the

levels of ozone concentrations that cause adverse welfare effects, CASAC and EPA staff concluded that rationale no longer applied. EPA staff cited newly available studies that "reduced key uncertainties present in the last review" that Administrator Browner had cited when she decided not to adopt a cumulative, seasonal standard. 73 Fed. Reg. at 16,494. These new studies expand the field-based evidence of harm to plants and trees, including quantifying impaired tree growth, addressing a key data gap cited in the 1997 NAAQS review. *Id.* at 16,486/1 & 16,494. EPA further cited improvements in analytical methods to characterize exposure and resulting effects, including improved modeling, which have increased the ability to quantify harm to vegetation since the last review. *See id.* at 16,495-96. Therefore, the Administrator's expressed reliance on uncertainties, which may have justified the decision not to adopt a cumulative, seasonal standard back in 1997, is now arbitrary and capricious. *See NRDC v. EPA*, 902 F.2d at 971 (failure to take into account all relevant studies in the record a basis for finding EPA action arbitrary and capricious).

2. The Administrator acted arbitrarily in rejecting a cumulative, seasonal standard on grounds that it is unlikely to provide more protection than an 8-hour standard.

The Administrator also arbitrarily relied on an analysis of the projected degree of overlap between counties with air quality expected to meet the revised 8-hour primary standard of 0.075 ppm and those that would meet a cumulative, seasonal

secondary standard. 73 Fed. Reg. at 16,499-500. His reliance on this analysis is erroneous on two grounds.

First, although EPA concluded that a 0.075 ppm 8-hour secondary standard will provide air quality benefits in some areas, the Administrator must adopt a standard that is "requisite" to protect public welfare. 42 U.S.C. § 7409(b)(2). EPA staff found that there are known ozone air quality patterns that can lead to harmful levels of cumulative, seasonal ozone exposures without violating daily 8-hour peak ozone concentrations. For example, even with an 8-hour standard of 0.070 ppm, a standard more protective than the Administrator adopted, EPA staff found that "areas could continue to have elevated seasonal exposures, including forested park land and other natural areas, and Class I areas which are federally mandated to preserve certain air quality related values." 73 Fed. Reg. at 16,488/1; *see also id.* ("O_3 air quality distributions at high elevation sites often do not reflect the typical urban and near-urban pattern of low morning and evening O_3 concentrations with a high mid-day peak, but instead maintain relatively flat patterns with many concentrations in the mid-range (e.g., 0.05-0.09 ppm) for extended periods."). Furthermore, EPA staff noted a "lack of consistent degree of overlap between the two forms [8-hour and seasonal, cumulative] in different air quality years," meaning that "annual vegetation would be expected to receive widely differing degrees of protection from cumulative seasonal

exposures in some areas from year to year, even when the [8-hour standard] was consistently met." 72 Fed. Reg. at 37,893/1.

The Administrator recognized that, as a result, if he were to adopt an 8-hour secondary standard, the "potential for under-protection is clear." 73 Fed. Reg. at 16,500/1. Nevertheless, he discounted this risk because "the number and size of areas at issue and the degree of risk is hard to determine," and deemed the 8-hour secondary standard sufficient. *Id.* As discussed above, however, the Act requires a secondary standard that protects public welfare from "any . . . anticipated adverse effects," not just known effects. 42 U.S.C. § 7409(b)(2). The Administrator's failure to make independent findings with respect to how an 8-hour standard addresses the adverse effects of long-term cumulative exposure levels of ozone on plants and trees was unlawful. *See Am. Farm Bureau*, 559 F.3d at 529-30 (EPA's "failure to set any target level" for requisite protection "deprived the EPA's decisionmaking of a reasoned basis," requiring remand of secondary standard for particulate matter).

Even if the data had shown that compliance with an 8-hour standard could reliably determine compliance with a cumulative, seasonal standard, the Administrator's comparison approach would fail on its own terms, as did a similar analysis in *American Farm Bureau*. Here, the Administrator arbitrarily chose the very highest end of the range of levels staff recommended for the cumulative, seasonal

standard (21 ppm-hours) to compare to the 8-hour standard of 0.075 ppm. 73 Fed. Reg. at 16,499-500. In doing so, he failed to explain his decision to reject CASAC's recommendation that a standard set at no higher than 15 ppm-hours was necessary to protect public welfare, contrary to the statutory provision requiring such an explanation for a difference "in any important respect" from CASAC's recommendations. 42 U.S.C. § 7607(d)(3). Using this 21 ppm-hours level for the cumulative, seasonal standard, the Administrator then found that there would be "no counties with air quality that would be expected both to exceed" a cumulative, seasonal standard and the 8-hour standard. 73 Fed. Reg. at 16,500/1. Thus, it was only by skewing the analysis that the Administrator reached the conclusion that a cumulative, seasonal standard would be "unlikely to provide additional protection" than adopting an 8-hour standard set at 0.075 ppm. If, on the other hand, the Administrator had used a cumulative, seasonal standard at the level of 13 ppm-hours (a level even at the high end of CASAC's recommended range), many more of the counties projected to meet the 0.075 ppm 8-hour standard would no longer meet a cumulative, seasonal standard. *See* 72 Fed. Reg. at 37,893/1 and Staff Paper at 7B-3-5 (J.A.____-___); *see also* 72 Fed. Reg. at 37,893-94 (concluding that even in counties that would have met a more protective 0.070 ppm 8-hour standard, "11 to 30 percent still had incidence of visible foliar injury" due to ozone pollution).

This Court held that EPA erred in relying on similar reasoning in *American Farm Bureau*. There, as here, EPA justified adopting a secondary standard identical to the primary standard by claiming that it would lead to nearly the same number of counties in nonattainment as if the alternate secondary standard had been adopted. *Am. Farm Bureau*, 559 F.3d at 529. In ruling that EPA's analysis "fail[ed] on its own terms," this Court reasoned that EPA had arbitrarily chosen to compare its adopted standard to only one of several alternative standards, others of which would have provided additional protection to public welfare. *Id.* at 530. Similarly, here, the Administrator arbitrarily chose to examine only the very highest level of the cumulative, seasonal standard and further failed to explain his deviation from CASAC's advice.

B. An 8-hour secondary standard cannot be upheld based on OMB's view of the evidence or the statute.

To the extent the Administrator relied on OMB's view of the evidence and concerns about implementation costs,[4] his decision to adopt an 8-hour secondary standard is not entitled to deference and, in any event, is contrary to the Act. Indeed, EPA itself argued to OMB that the Act bars EPA from considering costs when setting

[4] Although the Administrator stated in the preamble that he himself made the decision on the secondary standard, 73 Fed. Reg. at 16,497, the Response to Comments repeatedly states that the reasons for choosing an 8-hour secondary standard are set forth "in the preamble," which includes a discussion of OMB's

NAAQS. Nevertheless, in the span of less than one week, with no new evidence presented, the Administrator changed his position to be consistent with the views of OMB and the President and abandoned his prior judgment that a cumulative, seasonal standard is required to protect public welfare.

The preamble to the Rule includes a description of OMB's efforts to change EPA's position on adopting a cumulative, seasonal standard, during which the President himself weighed in on the form of the secondary standard. *See* 73 Fed. Reg. at 16,497/2. Less than a week before EPA's March 12 deadline to issue the ozone NAAQS, OMB sent a memorandum to the Administrator arguing against a cumulative, seasonal standard. *Id.; see* Memorandum from Susan Dudley, OMB to EPA Administrator Johnson (Mar. 6, 2008) ("OMB March 6 Memo") at 1 (J.A.____). OMB made the same record-based arguments addressed above in Section II.A, *supra*. *See* OMB March 6 Memo at 1-2 (J.A.____) (asserting the evidence did not show that a cumulative, seasonal standard would be more protective than an 8-hour standard and that there was "substantial uncertainty" associated with a cumulative, seasonal standard). *Id.* More broadly, OMB contended that the Act's definition of "public welfare," 42 U.S.C. § 7602(h), required EPA to evaluate the effects of adopting a cumulative, seasonal standard on "economic values, personal comfort and well-

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reasoning. *See*, *e.g.*, RTC at 109-11 (J.A._____- ___).

being," and that EPA had not done so. *Id.* at 1 (J.A.____).

The next day, the Administrator's deputy responded, defending the cumulative, seasonal standard as "necessary" to protect the public welfare. Memorandum from Marcus Peacock, EPA to Susan Dudley, OMB (Mar. 7, 2008) ("Peacock Memo") at 1 (J.A.____). EPA rejected OMB's arguments that "substantial uncertainty" precluded adoption of the cumulative, seasonal standard and that this standard would not offer more protection than an 8-hour standard. *Id.* at 2-4 (J.A.____-____) (stating, *inter alia*, "ozone effects on vegetation are clearly linked to cumulative, seasonal exposures and are not appropriately characterized by the use of a short-term (8-hour) daily measure of ozone exposure"). EPA also rejected OMB's statutory argument, emphasizing that "EPA cannot consider costs in setting the secondary standard." *Id.* at 1 (J.A.____). The agency further responded that "[EPA] is not aware of any information that ozone has beneficial effects on economic values or on personal comfort and well-being." *Id.* at 2 (J.A._____).

EPA and OMB continued to discuss the secondary standard until the day before the March 12 deadline, when the President offered his view that "consistent with Administration policy, added protection should be afforded to public welfare by strengthening the secondary ozone standard and setting it to be identical to the new primary standard." 73 Fed. Reg. at 16,497/2; Letter from Susan Dudley, OMB to EPA

Administrator Johnson (Mar. 13, 2008) at 1 (J.A.____). Administrator Johnson changed his position to be consistent with OMB's and the President's views and signed the Rule the following day adopting the 8-hour secondary standard.

As an initial matter, deference to an EPA decision based on OMB's concern would be improper if it were not the product of EPA's technical expertise in addressing air pollution under the Act. *See, e.g.*, *Am. Farm Bureau*, 559 F.3d at 527 (in reviewing EPA's decision on the NAAQS, the Court defers to EPA's assessment of scientific data within its technical expertise provided that it examined relevant data and adequately explained itself). Furthermore, the statute explicitly gives the EPA Administrator authority to select the secondary standard that "in his judgment" adequately protects public welfare. 42 U.S.C. § 7409(b)(2). The interagency communications above demonstrate that the Administrator had decided to adopt a cumulative, seasonal standard before OMB and presidential intervention.

Regardless, the rationale advanced by OMB in its communications with EPA is inconsistent with the statute in two respects. First, that an 8-hour standard of 0.075 ppm offers "added protection" compared to the 1997 standard, 73 Fed. Reg. at 16,497/2, would not satisfy EPA's obligation to "specify a level of air quality . . . requisite to protect public welfare." 42 U.S.C. § 7409(b)(2); *Am. Farm Bureau*, 559 F.3d at 530. Furthermore, OMB's view that the "economic values, personal comfort,

and well-being" language can be read to encompass implementation costs must be rejected. "EPA may not consider implementation costs in setting primary and secondary NAAQS." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. at 486. EPA itself recognized in its March 7 memorandum defending its decision to adopt a cumulative, seasonal standard that OMB improperly sought to inject considerations of implementation costs into the NAAQS determination by citing statutory language taken out of context. Peacock Memo at 1-2 (J.A.___-____).

III. The Court Should Remand the Rule to EPA without Vacatur and Order It to Promulgate Revised Standards on an Expedited Basis.

Because vacating the Rule setting the ozone NAAQS at 0.075 ppm would leave in effect the less protective 1997 standards of 0.08 ppm, potentially further harming public health and welfare, the Court should allow the Rule to remain in effect until EPA issues final revised standards on remand. However, given the more than three-year delay in this litigation caused by EPA's repeated representations that it would revise the Rule, and the attendant adverse impacts of additional delays on public health and welfare, the Court should impose a stringent deadline requiring EPA to issue revised standards expeditiously in accordance with this Court's decision.

Although the Court should remand the Rule to EPA for further proceedings, it should not vacate it. Where vacatur "would at least temporarily defeat" the public health benefits of the EPA rule at issue, remand without vacatur may be appropriate.

North Carolina v. EPA, 550 F.3d 1176, 1178 (D.C. Cir. 2008) (remanding Clean Air Interstate Rule without vacatur). Here, vacating the Rule would have the unacceptable result of leaving in place the 1997 standards, which the Administrator, EPA staff, and CASAC all agree are inadequate to protect public health and welfare. *See Am. Farm Bureau*, 559 F.3d at 528 (declining to vacate insufficiently protective NAAQS for particulate matter because that "would sacrifice such protection as it now provides, making the best an enemy of the good") (citation omitted). Furthermore, EPA and the States have taken steps to implement the 2008 standards. *See Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm'n*, 988 F.2d 146, 150-51 (D.C. Cir. 1993) (disruptive consequences of vacatur are a factor in whether to remand without vacatur). Thus, "notwithstanding the relative flaws" of the Rule, allowing it to remain in effect until EPA issues standards that comply with the statute is appropriate. *See North Carolina v. EPA*, 550 F.3d at 1178.

Nevertheless, in light of the circumstances, the remand should not be open-ended. Instead, this Court should order EPA to issue revised primary and secondary NAAQS on an expedited basis, and it should retain jurisdiction to ensure that the agency adheres to the Court's deadline. Such an order is necessary to prevent EPA's delays from frustrating the ability of State Petitioners to obtain a meaningful remedy addressing the inadequate standards. EPA's repeated representations regarding its

commitment to reconsider the Rule, which it failed to keep, have already resulted in a three-year delay in litigating the merits of the case. This delay has prolonged the exposure of millions of Americans to unsafe ozone levels. *See* 75 Fed. Reg. at 2,996 ("important and significant risks to public health are likely to occur at the standard level of 0.075 ppm."). Additional delays in promulgating adequately-protective ozone standards – which would occur under EPA's current plan not to issue ozone NAAQS until July 2014 – will only exacerbate this harm.

Further, EPA has had three years to analyze and take the steps necessary to reconsider the Rule and issue revised standards that adequately protect public health and welfare. Indeed, EPA represented to this Court that it was ready to take final action to issue such revised standards shortly before it was directed by the White House to abandon the reconsideration process. Dkt. 1324030.[5] Thus, to mitigate the harm to public health and welfare from EPA's delay and to ensure that State Petitioners are not left without a remedy for EPA's failure in 2008 to promulgate ozone standards that adequately protect public health and welfare, the Court should require EPA to issue revised standards as expeditiously as possible. *See*

[5] State Petitioners do not seek an order requiring EPA to issue the reconsideration rule the President advised it to abandon. However, the fact that EPA has already undertaken significant analysis in determining the primary and secondary standards that would comply with the Act based on the record provides an important reason why EPA can meet an expedited schedule on remand.

Environmental Defense Fund v. EPA, 852 F.2d 1316, 1331 (D.C. Cir. 1988) (setting deadline for action on remand because of "EPA's history of delay and missed deadlines").

At a minimum, EPA should be ordered to adhere to the deadlines it represented to this Court that the agency would meet in completing its statutorily-mandated five-year NAAQS review. *See* 42 U.S.C. § 7409(d)(1). In *American Lung Ass'n v. EPA* (D.C. Cir. No. 11-1396), where petitioners challenged EPA's decision not to complete reconsideration of the Rule, EPA submitted an affidavit stating that that it intended to respond to the public health and welfare concerns raised in its proposed reconsideration of the Rule, *see* 75 Fed. Reg. 2,938, as part of its statutorily-mandated NAAQS review and to propose and promulgate ozone NAAQS by October 2013 and July 2014, respectively. *See* McCarthy Decl., ¶ 5 (J.A.____). However, EPA often delays its five-year reviews, requiring court-ordered deadlines. *See, e.g., Am. Lung Ass'n v. Browner*, 884 F. Supp. 345 (D. Ariz. 1994) (imposing timetable for EPA's overdue review and revision of NAAQS for particulate matter). Indeed, EPA promulgated the Rule challenged here only after being sued and entering into a consent decree to conduct its statutorily-mandated review. 73 Fed. Reg. at 16,438/2. In light of EPA's previous delays and the harm to the public health and welfare caused by having inadequate

standards in place, the Court should, at minimum, require EPA to strictly adhere to the schedule it put forth in *American Lung Ass'n v. EPA* to issue proposed ozone NAAQS by October 2013 and to promulgate NAAQS by July 2014.

CONCLUSION

For the reasons set forth above, the Court should grant State Petitioners' petition for review and require EPA to promulgate standards that adequately protect public health and welfare from exposure to ozone. In light of EPA's delays in this case and the harm to public health and welfare from additional delays, State Petitioners request that the Court's remand order require EPA to issue revised primary and secondary NAAQS on an expedited basis, and that the Court retain jurisdiction to ensure that the agency adheres to the Court's deadline.

Dated: April 17, 2012

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH WORD-VOLUME LIMITATIONS

I hereby certify that the foregoing brief of State Petitioners complies with Fed. R. App. P. 32(a)(7), as modified by the Court's Orders of December 23, 2008 and February 16, 2012 (which permit State Petitioners to file an opening brief of up to 9,000 words). The word count function of the word processing system used to prepare this brief indicates that it contains 8,935 words (inclusive of footnotes and citations but exclusive of certificate as to parties, rulings and related cases, tables of contents and authorities, glossary, attorney's certificates, and addendum).

/s/ Michael J. Myers

MICHAEL J. MYERS

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing State Petitioners' Opening Brief (including Standing Declaration and Addendum) was filed on April 17, 2012 using the Court's CM/ECF system and that, therefore, service was accomplished upon counsel of record by the Court's system.

/s/ Michael J. Myers

MICHAEL J. MYERS

STANDING DECLARATION

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF MISSISSIPPI, et al.,	)	
	)	
Petitioners,	)	
v.	)	Docket No. 08-1200 (and consolidated cases)
	)	
ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Respondent.	)	
	)	

DECLARATION OF LINDA M. WILSON
CONCERNING PETITIONER STATE OF NEW YORK'S STANDING

Pursuant to 28 U.S.C. § 1746, Linda M. Wilson declares as follows:

Overview

1. I am an environmental scientist employed by the New York State Office of the Attorney General.

2. I submit this declaration in support of the petition for review filed in these consolidated actions by the States of New York, California, Connecticut, Delaware, Illinois, Maine, Massachusetts, New Hampshire, New Jersey, New Mexico, Oregon, Rhode Island, the District of Columbia, and the City of New York (collectively, "State Petitioners") challenging EPA's decision on the National Ambient Air Quality Standards ("NAAQS") for ground-level ozone ("ozone").

3. Unless otherwise noted, the statements made in this declaration are based on my review of various publicly available records, reports, statements, and data compilations prepared by the federal government (principally, the Environmental Protection Agency), the State of New York, or the City of New York. I have also reviewed the petition for review filed in this matter by State Petitioners. In addition, I have reviewed several documents in the rulemaking record in this case, including the regulation at issue, which was published at 73 Fed. Reg. 16,436 (March 27, 2008) (the "Rule").

4. Based on my analysis of the Ozone proposed and final rules and on the scientific evidence relevant to the Administrator's decision I conclude that EPA's decision not to strengthen the primary Ozone NAAQS within the range of 0.060-0.070 ppm will result in New Yorkers suffering more premature deaths, increased emergency department visits and hospitalizations, and increasing asthma occurrences. Thus, the State of New York is harmed by EPA's Rule.

Background and Qualifications

5. I am currently employed as an Environmental Scientist 3 and I have worked in the Attorney General's Environmental Protection Bureau as an environmental scientist since 2005. My responsibilities include, among others, performing research to provide scientific analysis for legal actions, legislative initiatives, and formulation of policy positions, reviewing and analyzing legal and scientific documents prepared by others, and preparing scientific reports. Prior to joining the Attorney General's office in 2005, I worked for 20 years for environmental consulting firms and in industry. This work included, but was not limited to, preparing human health and ecological risk assessments, air permitting, environmental compliance audits, and creating Material Safety Data Sheets.

6. I received a B.S. in Plant Pathology/Environmental Science in 1978 from Cornell University and a M.S. Degree from St. John's University in 1984 in Pharmacology/Toxicology. A copy of my resume is attached hereto as ***Exhibit A***.

Ozone Pollution in New York State

7. EPA has found that short-term and long-term exposure to ozone can cause a range of harmful health effects, including premature death (cardiopulmonary-related and non-accidental), decreased lung function, increased emergency department visits and hospital admissions, asthma, and other respiratory diseases, and cardiovascular-related morbidity (See 75 Fed. Reg. 2946-2960).

EPA has also found that certain subgroups in the population, including children and people with existing lung and heart diseases (including diabetes) are more susceptible to harm from ozone than the rest of the population. [73 FR 16,449]

8. Ozone pollution is a significant public health problem in New York State, especially in the New York City (NYC) metropolitan area. The New York State Department of Health issued the New York State Asthma Surveillance Summary Report in 2009 to summarize temporal trends in the number of unhealthy ozone days (levels exceeded the current eight-hour NAAQS of 0.075 parts per million [ppm]) among all 22 monitoring locations from 1997 to 2007. The data for New York State (excluding NYC) ranged from 3 to 17 unhealthy ozone days per year with more days in years with hotter summers. The NYC data ranged from 5 to 32 unhealthy ozone days per year.[1] Significant concentrations of ozone in the New York region occur in the warmer months [i.e., May through October], therefore, warmer years will generally have higher ozone levels.)

9. The New York State Department of Environmental Conservation reported 8-hour average concentrations for ozone for 2009 through 11/30/11

1. New York State Department of Health, Center for Environmental Health. New York State Asthma Surveillance Summary Report. NYSDOH . October 2009. http://www.health.ny.gov/statistics/ny_asthma/pdf/2009_asthma_surveillance_summary_report.pdf

comparable to the NAAQS of 0.075 ppm.[2] The data indicate that three monitors in New York State exceeded 0.075 ppm and these monitors were all located in the NYC metropolitan area. The data for 2011 alone, however, show that all eight of the monitoring locations in the NYC metropolitan area were above 0.075 ppm, ranging from 0.076 to 0.089 with an average of 0.082 ppm.

10. In 2011, the New York City Department of Health and Mental Hygiene (NYCDHMH) issued a report providing estimates of the impacts of ozone pollution on the health of New Yorkers. This report estimates that ozone causes 400 deaths, more than 800 hospital admissions and more than 4,000 emergency department visits for children and adults. Neighborhoods with high poverty rates account for 55% of the asthma hospital admissions and account for 56% of the emergency department visits among children. The results are similar for adults where there is a 4-fold increase for ozone attributable-hospital admissions and 4.5-fold higher for ozone-attributable emergency department visits in high poverty neighborhoods.[3] Given the high poverty rates in the most affected areas, I recognize that these emergency department visits and hospital admissions resulting

2. New York State Department of Environmental Conservation, 2012 Region 2 Air Quality Data. Ozone Exceedances in New York State 2011 (Three year averages 2009 through 11/30/11). http://www.dec.ny.gov/docs/air_pdf/2011o3exc.pdf

3. Kheirbek, Iyad et al. 2011. New York City Department of Health and Mental Hygiene, Air Pollution and the Health of New Yorkers: The Impact of Fine Particles and Ozone.

from ozone exposure will be paid for through the Medicaid program which would ultimately increase New York's Medicaid expenditures.

Adverse Effects from EPA's Decision Not to Strengthen the Ozone NAAQS

A. Findings in the Rulemaking Record Showing Harm

11. Short-term and long-term annual ozone exposure are associated with a wide range of serious health effects, including respiratory-related emergency department visits, hospital admissions, decreased lung function, cardiac morbidity and premature deaths.

12. The 2007 EPA Final Ozone Staff Paper reported that "Based on the above considerations and findings from the CD [Air Quality Criteria Document], while being mindful of important remaining uncertainties, staff concludes that the newly available information generally reinforces our judgments about causal relationships between ozone exposure and respiratory effects observed in the last review and broadens the evidence of ozone-related associations to include additional respiratory-related endpoints, newly identified cardiovascular-related health endpoints, and mortality. Newly available evidence also has identified increased susceptibility in people with asthma. While recognizing that important uncertainties and research questions remain, we also conclude that progress has

been made since the last review in advancing the understanding of potential mechanisms by which ambient ozone, alone and in combination with other pollutants, is causally linked to a range of respiratory- and cardiovascular-related health endpoints and mortality."[4]

13. The Clean Air Science Advisory Committee (CASAC), the EPA's statutorily established science advisors, found that in addition to these respiratory effects, multiple epidemiological studies, including large multi-city meta-analyses, have shown that ambient ozone levels at or below the current standard are associated with increased premature mortality. CASAC "were unanimous in recommending that the level of the current primary ozone standard should be lowered from 0.08 ppm to no greater than 0.070 ppm." [5]

14. In April 2008, CASAC expressed its concern with the 0.075 ppm primary standard as expressed in their letter to the EPA Administrator. "It is the Committee's consensus scientific opinion that your decision to set the primary ozone standard above this range [0.060 to 0.070 ppm] fails to satisfy the explicit

4. Environmental Protection Agency (2007b) Review of the national ambient air quality standards for ozone: assessment of scientific and technical information. OAQPS Staff Paper. (Updated Final) July 2007. Research Triangle Park, NC: Office of Air Quality Planning and Standards; EPA report no. EPA–452/R–07–007. http://epa.gov/ttn/naaqs/standards/ozone/s_o3_cr_sp.html. p. 6-7

5. Henderson, R. (2006). Letter from CASAC chair Rogene Henderson to EPA Administrator Stephen Johnson. CASAC-07-001.

stipulations of the Clean Air Act that you ensure an adequate margin of safety for all individuals, including sensitive populations." [6]

B. Newly Available Studies Showing Harm

15. Several new studies were published too late to be formally considered in the Air Quality Criteria Document (AQCD) issued in 2006. These studies were published in the "Provisional Assessment of Recent Studies on Health and Ecological Effects of Ozone Exposure" in September 2009. EPA's assessment of these newer studies found they did not materially change the conclusions reached in the earlier science assessments. These studies supported CASAC's conclusion that the primary standard must be strengthened beyond 0.075 ppm to protect public health with an adequate margin of safety. Several of these studies were conducted in New York and are described below.[7]

i. Increased Illnesses

16. Lin et al. (2008) followed the health of children (1-6 yr) born in New York until their first asthma hospitalization. The study included 1,204,396 eligible

6. Henderson, R. (2008) Letter from CASAC chair Rogene Henderson to EPA Administrator Stephen Johnson. EPA-CASAC-08-009 April 7, 2008

7. U.S. Environmental Protection Agency. Office of Air Quality Planning and Standards. Review of the National Ambient Air Quality Standards for Ozone: Provisional Assessment of Recent Studies on Health and Ecological

births with 10,429 (0.87%) children admitted to the hospital for asthma by December 31, 2000. Low birth weight, preterm birth, and maternal smoking during pregnancy were all associated with increased asthma admissions. The geographic region, however, was the strongest risk factor associated with asthma hospital admissions in this study. Children living in New York City were 4.21 (95% CI, 3.77–4.70) times more likely to be admitted to a hospital than children living in other regions of New York State. The risk of all ozone-related hospital admissions increased 22% with a 0.001 ppm increase in mean ozone concentration (0.051 ppm) during the ozone season; however, this study determined that there was an increase of 1.75% in daily asthma hospital admissions with a 0.023 ppm increase in ozone.[8]

17. Silverman and Ito (2010) conducted a study in New York City from 1999 to 2006 to evaluate the relationship between age and severe asthma morbidity and ozone in the warm season. They found that asthma morbidity was highest among children 6 to 18 years old. For each 0.022 ppm increase in ozone (from the mean ozone level [approximately 0.048 ppm]) there was a 19% increase in asthma Intensive Care Unit admissions and a 20% increased risk for general asthma hospitalizations. On the basis of their findings, the authors concluded that ambient

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Effects of Ozone Exposure EPA/600/R-09/101. September 2009.
8. Lin L, Liu X, Le LH, Hwang SA. Chronic exposure to ambient ozone and asthma hospital admissions among children. Environ Health Perspect 2008b;116:1725-30.

pollution appears to be a potent trigger of asthma that can lead to life threatening illness at ozone concentrations below 0.075 ppm.[9]

18. The 2011 NYCDHMH study reported that on an annual basis more than 400 hospital admissions and 1,700 emergency department visits for asthma are likely attributable to exposure to ozone. Rates vary by neighborhood from approximately 4 to 43 ozone attributable hospital admissions per 100,000 children (most concentrated in northern Manhattan, the Bronx, central Brooklyn and parts of eastern central Queens and the Rockaways). Emergency department visits followed a similar pattern and range from 12 to approximately 300 emergency department visits per 100,000 children. In adults, there were approximately 450 annual hospital admissions and nearly 3000 emergency department visits. Rates of hospitalization ranged from 1 to 20 people per 100,000 adults older than 18 and emergency department visits ranged from 7 to 156 people per 100,000. These patterns are similar to those rates reported for children and in high poverty neighborhoods.[10]

19. The New York Climate and Health Project (NYCHP) funded public health impact assessments for the 31 county New York metropolitan east coast

9. Silverman, Robert A and Ito, Kazauhiko. Age-related association of fine particles and ozone with severe acute asthma in New York City. J. Allergy Clin Immunology 125 (2): 367-373.

region for both temperature and ozone to assess potential future health impacts of climate and land use change. Under a high growth assumption scenario climate change (without changes in pollution emissions, but weaker standards and large population increases), the modelers predicted a 5% increase in summertime ozone related mortality by the 2050s.[11]

ii. Cardiovascular Morbidity

20. Newly available studies have also strengthened the 2006 AQCD's conclusion that the "evidence is highly suggestive that ozone directly and/or indirectly contributes to cardiovascular-related morbidity," including physiologic effects (i.e., release of platelet activating factor), heart rate variability, arrhythmias, and myocardial infarctions (U.S. EPA, 2006).[12] A recent study published in Environmental Health Perspectives by Farraj, et. al. (2012) entitled "Overt and Latent Cardiac Effects of Ozone Inhalation in Rats: Evidence for Autonomic Modulation and Increased Myocardial Vulnerability" showed that ozone exposure causes several alterations in cardiac electrophysiology. Although preliminary, the

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10. Kheirbek,I., et al., op.cit.

11. P L Kinney, J E Rosenthal, C Rosenzweig, C Hogrefe, W Solecki, K Knowlton, C Small, B Lynn, K Civerolo, J Y Ku, R Goldberg, C Oliveri Assessing Potential Public Health Impacts of Changing Climate and Land Use: The New York Climate and Health Project Regional Climate Change and Variability . 2006:161-189

12 .U.S. Environmental Protection Agency. (1996) Air quality criteria for ozone and related photochemical oxidants. Research Triangle Park, NC: Office of Research and Development; report nos. EPA/600/AP-93/004aF-cF. p.7-97

available evidence from numerous studies, including Srebot et al., 2009, implicates the following mechanisms: vascular oxidative stress, endothelial/vascular dysfunction, inflammation, and altered autonomic tone. The authors stated that of greater significance and more concern is that ozone causes latent effects, suggesting that exposure would subject those acutely sensitive to the effects of a nonspecific cardiac trigger. This hypersensitivity is particularly relevant to those individuals with preexisting cardiovascular disease. This latent cardiac effect was present at concentrations that caused no overt toxicity [i.e., 0.2 ppm, approximately three times the current ozone NAAQS of 0.075 ppm (U.S. EPA 2006)] and suggests that controlled human and experimental exposure studies may underestimate the effects of exposure. [13]

iii. Increased Premature Mortality

21. The EPA's 2009 Provisional Assessment identified a number of recent short-term ozone exposure mortality studies. Overall the studies are consistent with the conclusions of the 2006 Ozone AQCD, supporting an association between ozone and mortality (Bell et al., 2008; Burnett et al., 2004; Franklin et al., 2008; Knowlton et al., 2004; Kolb et al., 2007; Ren et al., 2008a, 2008b; Zanobetti and

13.Farraj AK, Hazari MS, Winsett DW, Kulukulualani A, Carll AP, Haykal-Coates N, et al. 2012. Overt and Latent Cardiac Effects of Ozone Inhalation in Rats: Evidence for Autonomic Modulation and Increased Myocardial

Schwartz, 2008a 2008b).[14] Huang, 2005 showed a 2.3% increase in daily cardiovascular and respiratory deaths for every 10 ppb increase in average ozone concentrations (approximately 0.048 ppm in NYC) over the week for death.[15]

22. Zanobetti and Schwartz observed a reported a positive association between ozone (mean 8-hour concentration ranged by city from 15.1 to 62.8 ppb) and all-cause mortality during the summer months in their study of 48 cities in the United States. A positive association between ozone and cardiovascular disease mortality, respiratory mortality, and stroke mortality was also observed in this study.[16]

23. Bell et al. utilized data from the National Morbidity, Mortality, and Air Pollution Study (NMMAPS), which included 98 urban communities from around the U.S. and found the association between ozone (mean concentration: 26.8 ppb) and mortality was greater among areas of high unemployment, higher proportion of African-American residents, higher public transportation use, and a lower

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Vulnerability. Environ Health Perspect 120:348-354.
14 USEPA, 2009. op.cit., p.5
15. Huang, Y.; Dominici, F.; Bell, M. L. (2005) Bayesian hierarchical distributed lag models for summer ozone exposure and cardio-respiratory mortality. Environmetrics 16: 547-562..
16. Zanobetti, A. and Schwartz, J. 2008. Mortality Displacement in the Association of Ozone with Mortality : An Analysis of 48 Cities in the United States American Journal of Respiratory Care and Critical Care Medicine, 177 (2):184 –189

prevalence of central air conditioning.[17] This was further supported by the NYCDHMH report where premature mortality for all ages attributable to the current ozone standard versus background levels was calculated at 400 events (4.9 per 100,000 people). Rates of ozone mortality vary from 2.4 to 11.7 per 100,000 persons. The highest concentrations were located in southern Brooklyn and Staten Island, central Queens and northwestern Bronx. [18]

24. NYCDHMH reported that a 10% reduction in current ozone levels (approximately 0.040 ppm) would result in a 20 percent reduction in premature mortality and hospital admissions for ages 18 and above, and a 21 percent reduction in asthma-related hospital admissions and emergency department visits for all ages.[19]

Conclusion

25. Based on my review of the proposed and final Ozone NAAQS rule and the scientific evidence relevant to the Administrator's decision, I conclude that EPA's decision in the final rule not to strengthen the Ozone NAAQS within the range of 0.060 to 0.070 ppm recommended by CASAC is projected to result in New

17. Bell ML, Dominici F. Effect modification by community characteristics on the short-term effects of ozone exposure and mortality in 98 US communities. Am J Epidemiol 2008;167:986-97
18. Kheirbek, I., et al., op.cit.
19. Kheirbek, I., et al., op.cit.

Yorkers suffering more respiratory related emergency department visits, hospital admissions and premature mortality. Further, there are many individuals who have adverse health-related symptoms related to air pollution that limit their activities, cause school or work absences and reduce their quality of life which will continue or worsen without stronger ozone standards.

I declare under penalty of perjury that I believe the foregoing to be true and correct.

Executed on April 16, 2012.

Linda M. Wilson

Linda M. Wilson, M.S.

EXHIBIT A

DECLARATION OF LINDA M. WILSON

EDUCATION

Graduate: Master of Science degree in pharmacology/toxicology from St. John's University

Undergraduate: Bachelor of Science in Plant Pathology/Environmental Science from Cornell University

TECHNICAL EXPERIENCE

ENVIRONMENTAL PROTECTION BUREAU, NEW YORK STATE DEPARTMENT OF LAW (2005 to present)

Environmental Research Scientist. Perform litigation support/scientific research in the following areas:

- Evaluate the environmental and health impacts of various pollutants and chemicals on public health and environment in New York State.
- Evaluate Environmental Impact Statements particularly regarding mobile source emissions, solid and hazardous waste, and water quality issues.
- Interpret analytical data and data usability/validation.
- Provide testimony in support of order to show cause in solid/hazardous waste case.
- Environmental policy analysis
- Selec and supervise contractors/experts
- Evaluate appliance efficiency standards for energy efficiency and environmental impacts.

KeySpan (2002 to 2004)

Environmental Scientist

- Provided technical support and oversight on varying projects throughout KeySpan.
- Performed environmental audits of all KeySpan operations.
- Created, update and enhanced a new Environmental Management System.
- Provided technical support and oversight on varying projects throughout the different KeySpan operations.
- Tracked emerging regulations and the evaluated the potential impacts to KeySpan operations.
- Prepared all NYSDEC, USEPA, PSC and local agencies solid and hazardous waste/material reports.

Cody Ehlers Group (2000-2002)
Senior Scientist/Regulatory Specialist

- Expert witness for microbial contamination case.

- Litigation and environmental claim support.
- Assisted in hazardous waste site investigation and remediation.
- Performed exposure and risk assessments for environmental releases.
- Evaluated toxicity, fate and transport of toxic substances.
- Performed environmental compliance audits.
- Developed Environmental Safety and Health Standard Operating Procedures.
- Prepared Material Safety Data Sheets for chemical manufacturer.

Roux Associates Inc. (1989 to 2000)

Senior Environmental Scientist/Regulatory Specialist

- Prepared risk assessments to support Remedial Investigation and Feasiblity Studies.
- Litigation support in support of expert witnesses including preparation for depositions.
- Performed environmental compliance auditing.
- Prepared data usability and data validation reports.
- Performed quality assurance audits for compliance with quality assurance project plans and chemical data acquisition plans (for military facilities).
- Prepared environmental manuals integrating USEPA regulatory programs (i.e. RCRA, CERCLA, SARA, TSCA, CWA, FIFRA, etc) with HMTA, NRC and stewardship and best management practices. This manual along with the checklist I prepared for each section was used to educate and assist managers to realize high quality standards and recognize deficiencies.
- Provided air permitting support to several industrial facilities including completion of applications and status under Title V permitting.
- Developed hazardous waste compliance programs including the preparation of Waste Sampling and Disposal Plan, Health and Safety Plan, oversight of asbestos and lead paint abatement, and compliance with the PCB Spill Policy.
- Prepared Field Sampling Plans, Quality Assurance Project Plans, sediment sampling plans and Health and Safety Plans for numerous remedial investigations in multiple states.
- Developed hazardous chemical inventory and accidental release reporting notifications to NRC, LEPCs and SERCs.
- Provided regulatory assistance to clients for RCRA, SARA, FIFRA, TSCA, and CAA compliance issues.
- Developed risk based cleanup levels using site specific exposure assessments in conjunction with Region 9 Preliminary Remedial Goals and background concentrations.
- Developed closure goals for a military base in Nevada.
- Edited and wrote articles for bimonthly environmental newsletter prepared for clients and potential clients.
- Acted as both Corporate Health and Safety Manager and Corporate Quality Assurance Manager.
- Provided quality assurance of prospective and retrospective of pesticide studies under the EPA Good Laboratory Procedures.

TRC Environmental Consultants, Inc. (1988 to 1989)

Senior Environmental Scientist. Supervised six environmental engineering/scientists professionals.

- Managed asbestos abatement and industrial hygiene projects for private and public entities.
- Interpretation and evaluation of toxicological data including preparing MSDS.
- Responsible for contract administration and negotiations.
- Represented the company at meeting and hearings for the NYCTA.
- Project Manager responsible for quality assurance for asbestos investigations within 800 NYC Transit Authority facilities.
- Researched and prepared Material Safety Data Sheets for industrial clients.

Hygienetics, Inc. (1986 to 1988)

Operations Manager. Supervised over 30 environmental engineers/scientists

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- Reviewed asbestos abatement specifications for compliance with New York City Chapter 15, New York State Industrial Code 56, USEPA 40 CFR Part 61, and Department of Labor 29 CFR 1910.1001.
- Designed and prepared technical specifications for asbestos abatement projects.
- Prepared in house and in the field training for new employees.
- Developed and provided training, and implemented operations and maintenance programs for high rise buildings in NYC.
- Completed inspection reports as a Licensed Asbestos Inspector.
- Qualified analyst under NIOSH 582.

TEACHING EXPERIENCE

St. John's University (1982 to 1983) - Teaching Assistance.
Prepared lesson plans, gave lectures and graded lab reports for pharmacology labs for fourth year pharmacy students.