

Law Office of Robert Ukeiley

435R Chestnut Street, Suite 1 • Berea, Kentucky 40403 • tel.859-986-5402 • fax.866-618-1017

Robert Ukeiley
rukeiley@igc.org

**BY CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

April 26, 2007

Stephen L. Johnson
Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N. W.
Washington, DC 20460

Re: Clean Air Act Notice of Intent to Sue for Failure to Complete a Thorough Review of the Air Quality Criteria and National Ambient Air Quality Standards for Carbon Monoxide, to Make Such Revisions to the Carbon Monoxide Air Quality Criteria and National Ambient Air Quality Standards as May Be Appropriate, and to Publish Notice of Such Actions in the Federal Register.

Dear Administrator Johnson:

On behalf of Rocky Mountain Clean Air Action, Communities for a Better Environment, the Coalition for A Safe Environment, and Physicians for Social Responsibility-Los Angeles (“Public Health Groups”) I am writing to provide you with notice that we intend to sue you and the United States Environmental Protection Agency (“EPA”) for your failure to perform duties mandated by the Clean Air Act, 42 U.S.C. §§ 7401-7671q. Specifically, the Clean Air Act establishes a deadline for EPA to complete a thorough review of the air quality criteria and National Ambient Air Quality Standards (NAAQS) for Carbon Monoxide (CO), make such revisions to these air quality criteria and NAAQS as may be appropriate, promulgate such new NAAQS as may be appropriate, and publish notice of these actions in the Federal Register. 42 U.S.C. §§ 7409(d); 7408(d), 7607(d). You have failed to meet this deadline. Public Health Groups plan to bring suit sixty days from the date of this letter, or shortly thereafter, under section 304 of the federal Clean Air Act, 42 U.S.C. § 7604, for your failure to perform the non-discretionary duties outlined in 42 U.S.C. §§ 7408(d), 7409(d)(1), & 7607(d). The suit will seek injunctive and declaratory relief, the cost of litigation, and may seek other relief.

Rocky Mountain Clean Air Action is a non-profit corporation with its headquarters in Denver, Colorado. Rocky Mountain Clean Air Action is actively involved in environmental

advocacy as part of its mission to protect clean air in Colorado and the surrounding Rocky Mountain region for the health and sustainability of local communities. Rocky Mountain Clean Air Action members and volunteers live, work, recreate and engage in other economic activities throughout the Rocky Mountain region, and are concerned about air quality in the Rocky Mountain Region of the western United States and its effects on the health and welfare of people, plants, and animals. Rocky Mountain Clean Air Action members and volunteers are adversely affected by CO emissions. Emissions of CO increase the risk that Rocky Mountain Clean Air Action members and their families will suffer respiratory ailments, chest pains and other cardiovascular problems, and give birth to underweight or otherwise developmentally affected babies. Emissions of CO also lead to the formation of ground level ozone in the Denver metropolitan area, which takes the form of an ugly, ominous, brown cloud that covers the metro area. The above described interests are adversely affected by EPA's failure to take action to complete a thorough review of the air quality criteria and NAAQS for CO, make such revisions to these air quality criteria and NAAQS as may be appropriate, promulgate such new NAAQS as may be appropriate, and publish notice of those actions in the Federal Register.

Communities for a Better Environment ("CBE") is a non-profit environmental health and justice advocacy organization with offices in Oakland and Huntington Park, California. CBE's mission is to achieve environmental health and justice by building grassroots power in and with communities of color and working-class communities. In pursuit of its mission, CBE works to secure clean air and reduce pollutant emissions in its members' communities. CBE members live, work, recreate and breathe the air in parts of the Los Angeles metropolitan area and San Francisco Bay area that host disproportionate numbers of CO sources. Because CO may impact the cardiovascular and central nervous systems, as well as human development, CBE members and their families are at increased risk of heart disease, low birth weight, and frequent respiratory illness. CBE is further concerned that the cumulative impacts of CO pollution will cause or add to existing environmental injustice in the Los Angeles and Bay areas. These interests have been, and continue to be, threatened by EPA's failure to take action to complete a thorough review of the air quality criteria and NAAQS for CO, make such revisions to these air quality criteria and NAAQS as may be appropriate, promulgate such new NAAQS as may be appropriate, and publish notice of those actions in the Federal Register.

The Coalition For A Safe Environmental ("CFASE" or "Coalition") is a community based non-profit environmental justice, public health and public safety advocacy organization established in April 2001 in Wilmington, California. CFASE is involved in reducing, eliminating and mitigating air, land, water pollution and global warming caused by international trade, ports, international cargo, cruise ships, intermodal facilities, goods movement, transportation corridors and distribution centers as well as reducing, eliminating and mitigating environmental pollution, global warming, public health and public safety impacts caused by petroleum industry oil & gas refineries, crude oil, fuel & gas storage tank facilities, port bulk loading terminals, crude oil & gas fields, oil, gas & water wells and pipelines. CFASE's goals are to reduce, eliminate and mitigate public exposure to carcinogens, respiratory, reproductive and developmental toxicants and diseases caused by air, land and water pollution from all types of business industry. The Coalition's goals also include to protect, promote, preserve and restore our Mother Earth's delicate ecology, environment, natural resources, wildlife, habitats, organic

& non-organic indigenous traditional medicinal resources, agricultural, domestic animal and seafood resources. The Coalition recognizes that people of color, indigenous people, the poor, politically underrepresented and the economically disadvantaged have been the most negatively and significantly impacted by business industries. The Coalition believes that every community should equitably benefit from the business trade industries in their communities.

The Coalition's members and volunteers are adversely affected by CO emissions. Emissions of CO increase the risk that the Coalition's members and their families will suffer respiratory ailments, chest pains and other cardiovascular problems, and give birth to underweight or otherwise developmentally affected babies. Emissions of CO also lead to the formation of ground level ozone in the Los Angeles metropolitan area. The above described interests are adversely affected by EPA's failure to take action to complete a thorough review of the air quality criteria and NAAQS for CO, make such revisions to these air quality criteria and NAAQS as may be appropriate, promulgate such new NAAQS as may be appropriate, and publish notice of those actions in the Federal Register.

Physicians for Social Responsibility-Los Angeles (PSR-LA) works to bring together health professionals and the diverse communities of Southern California to reduce threats to public health related to environmental toxins, war and gun violence. PSR-LA was founded in 1980 as a local affiliate of the Nobel prize winning national organization, Physicians for Social Responsibility. Coupling medical concerns with activist resolve, PSR-LA wields a unique influence on public policy and stands as a respected and powerful voice for change. PSR-LA is the nation's largest PSR chapter, representing the voice of over 4,000 physicians, medical professionals and concerned citizens throughout Southern California.

The goals of PSR-LA's Environmental Health programs are:

- To improve the health of the public by reducing environmental threats to health.
- To reduce health disparities resulting both from disproportionate exposure to environmental contamination and from disproportionate access to quality health care.
- To help build a strong environmental health and justice movement led by communities most impacted by environmental contamination, and strengthened by strategic relationships between health, environmental, environmental justice advocates, and the medical community.

PSR-LA's members and members' patients are adversely affected by CO emissions. Emissions of CO increase the risk that PSR-LA's members and members' patients will suffer respiratory ailments, chest pains and other cardiovascular problems, and give birth to underweight or otherwise developmentally affected babies. Emissions of CO also lead to the formation of ground level ozone in the Los Angeles metropolitan area. The above described interests are adversely affected by EPA's failure to take action to complete a thorough review of the air quality criteria and NAAQS for CO, make such revisions to these air quality criteria and NAAQS as may be appropriate, promulgate such new NAAQS as may be appropriate, and publish notice of those actions in the Federal Register.

Mr. Stephen L. Johnson

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Two sections of the Clean Air Act govern the establishment and revision of air quality criteria and NAAQS. Section 108 (42 U.S.C. § 7408) requires EPA to identify pollutants that “may reasonably be anticipated to endanger public health and welfare” and to issue air quality criteria for those pollutants. Section 109 (42 U.S.C. § 7409) requires EPA to promulgate primary and secondary NAAQS for pollutants identified under section 108. Primary standards must be sufficient to protect the public health, while secondary standards must safeguard the public welfare. 42 U.S.C. § 7409(b).

EPA first set primary and secondary CO NAAQS in 1971 at 9 parts per million (ppm) over an 8 hour averaging time and 35 ppm over a 1 hour averaging time. 36 Fed. Reg. 8186 (April 30, 1971). The primary NAAQS itself has never been revised from the initial level. EPA revoked the secondary NAAQS in 1985. 50 Fed. Reg. 37,484 (Sept. 13, 1985).

Clean Air Act Section 109 further requires that “at five year intervals” EPA “shall complete a thorough review of the criteria published under [section 108] 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.” 42 U.S.C. § 7409(d)(1). Despite the clear requirement to complete a thorough review of the air quality criteria every five years, it has been nearly seven years since EPA last completed a review to update the air quality criteria. 65 Fed. Reg. 50,202 (August 17, 2000). Moreover, EPA's publication of a notice that the agency reviewed the air quality criteria is not sufficient to satisfy its duty to review the NAAQS, determine whether the NAAQS should be revised and publish those decisions in the Federal Register. The last time EPA published a review of the CO NAAQS and a decision on whether to revise the NAAQS in the Federal Register was 1994. 59 Fed. Reg. 38906 (August 1, 1994). Thus, the required actions are nearly 13 years overdue. This 13 year delay is particularly egregious considering the wide spread public health and public welfare interests involved, including wholly innocent infants, and the evidence that the current CO standards are not sufficiently protective of human health and welfare and should be revised.

CO is a colorless, odorless gas emitted primarily through the incomplete combustion of fossil fuels in mobile and stationary sources. USEPA, Air Quality Criteria for Carbon Monoxide, EPA 600/P-99/001F, p. 3-1 - 3-6 (2000) [hereinafter CO 2000 AQCD]. Over 70% of ambient CO emissions are attributable to anthropogenic sources. Id. at 3-53. CO is deadly to humans and other animals at high levels. At lower levels, CO has serious adverse effects on human health and welfare.

Exposure to CO results in adverse impacts on human health, including cardiovascular system problems, central nervous system problems and developmental toxicity effects. CO 2000 AQCD, Chapter 6. These effects are generally related to reduced levels of oxygen in the blood caused by CO's reaction with hemoglobin. These reduced oxygen levels result in tissue hypoxia. Id. at 5-22. According to EPA, CO may affect human health in other ways as well. Id.

Exposure to CO has been linked to adverse effects on the cardiovascular and nervous systems of both adults and developing children, including exacerbation of heart disease, contributing to low birth weight, and increasing the daily frequency of respiratory illness. Id. at

6-1. Effects are most prevalent in the elderly, small children, fetuses, pregnant women, and people with anemia or pulmonary and heart disease. Id. at 4-3. Considering that about 20% of the United States' population has some type of cardiovascular disease, and that heart disease is the leading cause of death in this country, the impacts on this subset of the population are particularly important. Id. at 6-2 & 6-6.

The years since the alarming information EPA disclosed in the CO 2000 AQCD have seen publication of significant new information about CO's impact on fetuses. For example, in 2000 EPA claimed a non-conclusive "suggestion" that exposure to ambient CO may be associated with low birth weight. CO 2000 AQCD at E-6 & 6-7. Since then, at least three studies have confirmed that suggestion. One study of children in the urban northeastern United States indicated a correlation between low birth weight and elevated ambient CO during each trimester. Mildred Maisonet, *et al.*, "Relation Between Ambient Air Pollution and Low Birth Weight in the Northeastern United States," Environmental Health Perspectives Vol. 109, Supp. 3, pp. 351-356, 353 (June 2001). This study identified an increased risk of low birth weight at ambient CO levels greater than 1.46 ppm, a threshold level significantly lower than studies identified by EPA in the 2000 CO air quality criteria review and significantly lower than the current CO NAAQS. Id. at 355.

Another study of children born in California during 1975-1987 noted a correlation between decreased birth weight and CO exposure in the first trimester. Muhammad T. Salam, *et al.*, "Birth Outcomes and Prenatal Exposure to Ozone, Carbon Monoxide and Particulate Matter: Results from the Children's Health Study," 113 Environmental Health Perspectives 1638, 1641 (Nov. 2005). That study noted that a correlation between low birth weight and exposure to CO is plausible because of the effect of CO on maternal hemoglobin (reducing oxygen available to fetal circulation) and direct effects on fetal hemoglobin - which has a greater affinity for binding CO than adult hemoglobin. Id. at 1642. The study also described a correlation between low birth weight and CO exposure at ambient levels greater than 1.4 ppm. Id. at 1643.

A study of air pollution impacts on fetuses in Seoul, South Korea, found an increase of carbon monoxide concentrations during the first trimester was a risk factor for low birth weight in full term infants. Eun-Hee Ha, *et al.*, "Is Air Pollution a Risk Factor for Low Birth Weight in Seoul?" Epidemiology at 643-48 (Nov. 2001). These studies indicate the current NAAQS of 9 ppm over 8 hours and 35 ppm over 1 hour does not protect pregnant mothers and fetuses from these adverse effects.

Low birth weight in children has a number of serious effects over the lifetime of the individual. Low birth weight has been associated with disruptive behavioral problems, reduced IQ and an increased susceptibility to depression. Frances Rice, *et al.*, "The Effect of Birth-Weight with Genetic Susceptibility on Depressive Symptoms in Childhood and Adolescence," European Child & Adolescent Psychiatry at 383 (Oct. 2006). Several epidemiologic studies have shown associations between low birth weight and a number of other problems as adults, including obesity, insulin resistance, type 2 diabetes mellitus, and cardiovascular disease. See Matthew W. Gillman, M.D., "Developmental Origins of Health and Disease," New England Journal of Medicine at 1849 (Oct. 2005). Obesity and diabetes are major public health problems

facing the nation. One study concluded that the risk of death from coronary heart disease increased by 14% for each unit (kg/m^3) of decrease in ponderal index at birth (birth weight in kilograms/ length in cubic meters). J.G. Eriksson, *et al.* "Catch-up Growth in Childhood and Death from Coronary Heart Disease: Longitudinal Study," British Medical Journal at 427 (Feb. 13 1999).

CO also has indirect effects on the atmosphere even EPA admits may contribute to or exacerbate global warming. USEPA, Greenhouse Gases and Global Warming Potential Values: Excerpt from the Inventory of U.S. Greenhouse Emissions and Sinks: 1990-2000, EPA 430-R-02-003, p.4 (April 2002). This effect is because CO reacts with hydroxyl (OH) radicals, which serve a mitigation role by decreasing the lifetimes of strong greenhouse gases like methane and assisting in destroying ground level ozone. *Id.* at p. 7. CO's reactions with hydroxyl radicals decrease their availability to mitigate the effects of strong greenhouse gases and decrease ground level ozone. Moreover, CO in the atmosphere is eventually oxidized to Carbon Dioxide (CO_2), which directly contributes to climate change. *Id.* at p. 6 (quoting the Intergovernmental Panel on Climate Change, Climate Change 1995: The Science of Climate Change (J.T. Houghton *et al.* eds., Cambridge U. Press 1996)).

In addition to new information about the health effects of CO, the fact that other regulatory agencies have chosen more protective standards than the current NAAQS indicates that EPA's standard is not adequately protective of the public health and welfare, including an adequate margin of safety, and should thus be reexamined. For example, World Health Organization (WHO) standards include a lower 1 hour standard, $30 \text{ mg}/\text{m}^3$ (26.1 ppm), and additional short term exposure protections including a 30 minute limit of $60 \text{ mg}/\text{m}^3$ (52.3 ppm) and a 15 minute limit of $100 \text{ mg}/\text{m}^3$ (87.1 ppm).¹ World Health Organization, Air Quality Guidelines for Europe, 2d ed. (WHO regional publications, European series, No. 91, 2000) at Ch. 3, p. 2.

EPA has not fulfilled its mandatory duty to review thoroughly and update as necessary the air quality criteria and NAAQS for CO. Thus, EPA's ongoing failure to complete this review and to make the necessary revisions to the CO NAAQS is contrary to Section 109(d)(1) of the Clean Air Act. See 42 U.S.C. § 7409(d)(1). Moreover, EPA's refusal to act is contrary to the agency's own interpretation of this provision. EPA long ago recognized that section 109(d)(1) of the Clean Air Act "requires EPA to review the scientific basis of existing National Ambient Air Quality Standards (NAAQS) every 5 years." 45 Fed. Reg. 77,768 (Nov. 24, 1980). EPA has reaffirmed this straightforward reading with respect to the NAAQS for ozone: "Under section 109(d)(1) of the Act, EPA is required to perform a review of the ozone NAAQS every five years." 61 Fed. Reg. 19,193, 19,195 (May 1, 1996). Thus, EPA has interpreted 42 U.S.C. § 7409(d)(1) to impose a mandatory duty. We intend to bring suit to require EPA to fulfill its

¹ The formula to convert a mg/m^3 standard to a ppm standard is: 24.45 (volume (liters) of a mole (gram molecular weight) of a gas or vapor when the pressure is at 1 atmosphere (760 torr or 760 mm Hg) and at 25°C) x (limit in mg/m^3) / 28.011 (gram molecular weight of carbon monoxide).

mandatory duty to complete this review, revise the air quality criteria and NAAQS as may be necessary, and publish notice of these actions in the Federal Register.²

In keeping with the requirements of federal regulations, you are hereby notified that the full names and addresses of the persons giving the notice are:

Rocky Mountain Clean Air Action, 1536 Wynkoop, Suite 302, Denver, CO 80202.
Communities for a Better Environment, 1440 Broadway, Suite 701, Oakland, CA 94612.
Coalition for A Safe Environment, 140 W. Lomita Blvd, Wilmington, CA 90744
Physicians for Social Responsibility-Los Angeles, 617 South Olive Street, Suite 810,
Los Angeles, CA 90014-1629

However, if you wish to discuss this matter, please contact the undersigned counsel at the address or telephone number indicated above.

Public Health Groups and their counsel would prefer to resolve this matter without the need for litigation. Therefore, we look forward to you contacting undersigned counsel to resolve this matter. If we do not hear from you in 60 days, however, we will be forced to assume that you are not interested in settling this matter and will file a complaint.

Sincerely,

Robert Ukeiley
Counsel for Rocky Mountain Clean Air Action,
Communities for a Better Environment,
Coalition for A Safe Environment, and
Physicians for Social Responsibility-Los Angeles,

² In the alternative, even if EPA is not in violation of its mandatory duty to complete a thorough review of the air quality criteria and NAAQS for CO and to make such revisions to the air quality criteria and NAAQS as are necessary, EPA has been and continues to be unreasonable in its delay in taking agency action to complete such a review and to make such revisions. As noted above, new information about the links between CO emissions and harm to public health has emerged since the last time EPA completed a review of the NAAQS for CO. Yet EPA has now gone nearly thirteen years without undertaking a review to determine whether this heightened understanding indicates that existing air quality standards are insufficient to protect the public health and public welfare. Therefore, we are also providing notice that we may sue you for an unreasonable delay in taking final agency action to complete a thorough review of the air quality criteria and NAAQS for CO, to make such revisions to the CO air quality criteria and NAAQS as are appropriate, and to publish notice of such actions in the Federal Register.