

ORAL ARGUMENT SCHEDULED FOR APRIL 8, 2005

United States Court of Appeals for the District of Columbia Circuit

NOS. 03-1361, 03-1365
(CONSOLIDATED WITH 03-1362, 1363, 1364, 1366, 1367, 1368)

COMMONWEALTH OF MASSACHUSETTS, ET AL.,
Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
Respondent.

ON PETITION FOR REVIEW OF FINAL ACTION OF THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JOINT BRIEF OF AMICI CURIAE INDIGENOUS ENVIRONMENTAL NETWORK, REDOIL AND PHYSICIANS FOR SOCIAL RESPONSIBILITY

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Dated: July 13, 2004

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

COMMONWEALTH OF MASSACHUSETTS,)	
et al.,)	
)	
)	
)	
v.)	No. 03-1361
)	Consolidated with Nos. 03-
UNITED STATES ENVIRONMENTAL)	1362-1368
PROTECTION AGENCY,)	
)	
Respondent.)	
_____)	

RULE 26.1 DISCLOSURE STATEMENT

Pursuant to Local Rule 26.1, amicus Physicians for Social Responsibility states as follows:

Physicians for Social Responsibility is a national nonprofit organization representing approximately 30,000 physicians, nurses, scientists, health care professionals and concerned citizens devoted to the elimination of nuclear and other weapons of mass destruction, the achievement of a healthy, sustainable environment and the reduction of violence and its causes. PSR has no parent corporation and no publicly held company has a 10% or greater ownership interest in PSR.

/s/
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Dated: July 13, 2004

CERTIFICATE AS TO PARTIES, RULINGS AND RELATED CASES

A. Parties and Amici

Petitioners

The following parties appear as petitioners in these consolidated cases (all of which were filed on October 23, 2003):

In cases no. 03-1361 and 1365, the Commonwealth of Massachusetts; the States of Connecticut, Illinois, Maine, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, and Washington; American Samoa Government; District of Columbia; and the Commonwealth of the Northern Mariana Islands.

In cases no. 03-1362 and 03-1366, the State of California, by and through Arnold Schwarzenegger, Governor of the State of California, the California Air Resources Board, and Bill Lockyer, Attorney General of the State of California.

In cases no. 03-1363 and 03-1367, the International Center for Technology Assessment, Bluewater Network, Center for Biological Diversity, Center for Food Safety, Conservation Law Foundation, Environmental Advocates, Environmental Defense, Friends of the Earth, Greenpeace, National Environmental Trust, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and US Public Interest Research Group.

In cases no. 03-1364 and 03-1368, City of New York and Mayor and City Council of Baltimore.

Respondent

The United States Environmental Protection Agency is the respondent in these consolidated cases.

Intervenors

The following parties have intervened in support of the Respondent: the States of Michigan, Texas, Idaho, North Dakota, Utah, South Dakota, Alaska, Kansas, Nebraska, and Ohio; the Alliance of Automobile Manufacturers; National Automobile Dealers Association; Engine Manufacturers Association; Truck Manufacturers Association; CO₂ Litigation Group; and Utility Air Regulatory Group.

Amici

The following entities appear as amici in support of Petitioners: Indigenous Environmental Network, REDOIL, and Physicians for Social Responsibility.

The following entities appear as amici in support of Respondent: State of Indiana and Washington Legal Foundation.

B. Rulings Under Review

Petitioners seek review of two final actions by EPA:

1. A decision by EPA, published at 68 Fed. Reg. 52922 (September 8, 2003), denying a petition for rulemaking filed by Petitioner International Center for Technology Assessment and others.
2. A formal legal opinion set forth in a memorandum from Robert Fabricant, EPA General Counsel, to Marianne Horinko, EPA Acting Administrator, entitled *EPA's Authority to Impose Mandatory Controls to Address Global Climate Change Under the Clean Air Act* (August 28, 2003). Notice of EPA's adopting this legal opinion was published at 68 Fed. Reg. 52922 (September 8, 2003), although the memorandum was not reprinted there.

C. Related Cases

The matter on review has not been previously heard in this or any other court. There are no related cases currently pending.

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GLOSSARY

IPCC Intergovernmental Panel on Climate Change

WHO World Health Organization

INTEREST OF AMICI CURIAE

The Indigenous Environmental Network (IEN) was established in 1990 by Indigenous peoples to address environmental and economic justice issues; the REDOIL Network is a group of individual Alaska Natives of the Inupiat, Yupik Tlingit, Gwich'in, Eyak and Denaiana tribes. Both IEN and the REDOIL Network are greatly concerned about the health and environmental impacts of global warming on their members and other Indigenous peoples. Living in the Arctic, members of the IEN and the REDOIL Network suffer disproportionately from the effects of global warming. These effects include thinning sea ice, melting glaciers, increased coastal erosion from increasingly severe storms, and melting permafrost. As a result, they have an interest in ensuring that EPA takes all steps necessary to regulate greenhouse gas emissions.

Physicians for Social Responsibility (PSR) is a national nonprofit organization representing approximately 30,000 physicians, nurses, scientists, health care professionals and concerned citizens devoted, among other things, to achieving a healthy, sustainable environment. PSR is particularly concerned about the current and future effects of global climate change on human health. Because climate change represents an unprecedented threat to public health, PSR has an interest in ensuring that EPA takes all steps necessary to regulate greenhouse gas emissions.

Amici are filing this brief pursuant to the Court's January 20, 2004 Order granting leave to participate as amici curiae.

SUMMARY OF ARGUMENT

The Clean Air Act unequivocally gives the U.S. Environmental Protection Agency ("EPA") the authority to regulate any pollutant that "may be reasonably anticipated to endanger public health or welfare." See, e.g., 42 U.S.C. §§7411(b)(1)(A), 7521(a)(1). When, in Section 302(h) of the Act, Congress defined "effects on welfare" to include effects on "weather" and "climate", it unambiguously conferred authority on EPA to regulate greenhouse gasses, pollutants that are dramatically affecting weather and climate in both the United States and around the world.

There is no longer any scientific dispute that global warming is today causing significant and widespread impacts on both "public health" and "welfare." Public health impacts include the rapid spread of tropical diseases, disruption of food and water supplies from drought, and exacerbating the health effects of other forms of air pollution. Indeed, these impacts cannot be underestimated; for example, the World Health Organization estimates that in 2000, approximately 150,000 people died from the health-related impacts of climate change.

Few examples more vividly illustrate the impacts on "welfare" than the ongoing destruction of the Arctic environment that Native Alaska people rely on for their very sustenance. The plants and animals that feed and clothe them are disappearing along with the ice upon which their communities are built. Quite literally, their world is dissolving around them.

Given these critical impacts, the Clean Air Act requires EPA to use its regulatory authority to address the emission of greenhouse gasses.

I. GLOBAL WARMING AND CLIMATE CHANGE

Overwhelming scientific consensus supports the conclusion that the Earth is getting warmer. In January 2001, the Intergovernmental Panel on Climate Change (IPCC), completed a comprehensive analysis of existing research data on changes in climate and global mean temperatures. Their emphatic conclusion was that “global average surface temperature has increased over the 20th century by about 0.6° C [and] the increase in temperature in the 20th century is likely to have been the largest of any century during the past 1,000 years.”¹

President Bush asked the National Academy of Sciences to review the IPCC’s conclusions in June 2001. According to the National Research Council, “temperatures, are, in fact, rising ... despite the uncertainties, there is general agreement that the observed warming is real and particularly strong within the past 20 years.”² Most recently, two premier government scientists, publishing recently in the journal *Science*, left no doubt that the worst of global warming is still to come: “the 90% probability interval for warming from 1990 to 2100 is 1.7° to 4.9° C [and] the likely outcome is more frequent heat waves, droughts, extreme precipitation events, and related impacts ...”³

II. GLOBAL WARMING THREATENS THE PHYSICAL AND CULTURAL SURVIVAL OF ALASKA NATIVES.

¹ Working Group I, Intergovernmental Panel on Climate Change, J.T. Houghton et al., editors, *Climate Change 2001: The Scientific Basis*, Summary for Policymakers 2 (2001) [“IPCC I”].

² National Academies of Sciences (NAS), *Climate Change Science: An Analysis of Some Key Questions*, 1-3 (2001).

³ Karl, Thomas R. and Kevin E. Trenberth, *Modern Global Climate Change*, 302 *Science* 1721 (2003).

“Time is running out for the Arctic. We need far-reaching, long-term global commitments to reduce emissions of greenhouse gases if the Arctic is to be protected and if our human rights, particularly our human rights to subsistence, are to be respected.”⁴

“If you tell the Eskimo he can’t hunt the whale, you might as well tell him he can’t be an Eskimo....”⁵

Global warming is affecting the lives, cultures, and survival of Alaska’s Native peoples. For millennia, Alaska Natives have used their sophisticated knowledge of the sea, ice, land, and animals to thrive in a harsh environment. Now, global warming is rearranging that environment and Alaska Natives are feeling the effects.⁶ As temperatures rise, melting ice and shifting weather patterns threaten the subsistence traditions of Alaska Native cultures and pose increased dangers to human life.

The ancestors of the Alaska Eskimo people (Inupiat and Yupik) arrived in North America about 7,000 years ago and settled in the remote Arctic regions of northern and western Alaska. The ancestors of today’s Athabascan people arrived about 10,000 years ago and settled in interior Alaska and Canada. Today, the Gwich’in Athabascans live in fifteen remote villages in the Arctic regions of northeast Alaska and northwest Canada.⁷

These Alaska Native cultures rely deeply upon, and have a sophisticated knowledge of, the natural environment -- a physical and spiritual relationship known as “subsistence.” Subsistence is “the customary and traditional uses ... of wild, renewable

⁴ “Threat to North’s Cultural Survival,” *ECO 2* (Dec. 2003).

⁵ Wohlforth, Charles. *The Inupiaq Supercomputer: What the Whale Hunters Know and Some Scientists Want to Discover* ¶ 32.

⁶ Alaska Regional Assessment Group, *Preparing for a Changing Climate: The Potential Consequences of Climate Variability and Change* 7 (Dec. 1999).

⁷ Statement of Gwich’in Steering Committee, at <http://www.alaska.net/~gwichin/culture1.html>.

resources” for food, clothing, sharing, or other customary uses.⁸ More than that, subsistence is a set of traditions binding people to an interdependent community and to their environment—a culture, way of life, and “basic human right.”

The Inupiat are predominantly whaling people, relying on other resources of the sea and land as well: “Every culture needs a material foundation for its continuity. For the Inupiat, it is the tundra and sea of Arctic Alaska.”⁹ For the Gwich’in, it is caribou: “The Gwich’in are caribou people. Today, as in the days of their ancestors, the caribou is still vital for food, clothing, tools, and are a source of respect and spiritual guidance for the Gwich’in.”¹⁰ Congress has recognized the importance of Alaska Native subsistence by exempting subsistence activities from federal environmental statutes.¹¹

A. Global Warming Threatens the Subsistence of Alaska Natives.

As a result of global warming, the Arctic ice pack is thinning and receding, the permafrost is melting, and weather and vegetation patterns are shifting. These changes threaten the environment on which Alaska Natives rely for subsistence.

The Arctic sea ice supports an “important food web” of fish, seabirds, and marine mammals.¹² Phytoplankton blooms at the ice edge feed prolific arctic cod, which in turn

⁸ 16 U.S.C. § 3113.

⁹ *Id.* at 6.

¹⁰ Gwich’in Steering Committee, at <http://www.alaska.net/~gwichin/culture1.html>.

¹¹ E.g., 16 U.S.C. § 1539(e) (exempting Alaska Natives from take provisions of Endangered Species Act “if such taking is primarily for subsistence purposes”); 16 U.S.C. § 1371(b) (exempting Alaska Natives from take provisions of Marine Mammal Protection Act if take “is for subsistence purposes”); 16 U.S.C. § 712(1) (enabling Secretary of Interior to permit Alaska Natives to take migratory birds and collect their eggs for seasonal subsistence use); 16 U.S.C. § 3114 (establishing subsistence preference for fish and wildlife uses on public lands).

¹² United States Dep’t of the Interior, Outer Continental Shelf Oil & Gas Leasing Program: 2002–2007, Final EIS, VOL. I at 4-7 (April 2002) (“OCS FEIS”).

feed beluga whales, narwhal whales, and harp seals.¹³ Polar bears, walrus, and ringed seals use the ice for transportation and as a “floating platform for resting, feeding, and producing their young.”¹⁴ The Inupiat and Yupik people know and rely on this sea ice environment, traveling on the ice extensively in search of walrus, bowhead whales, and seals.¹⁵

Global warming is devastating this ecosystem.¹⁶ The average thickness of the ice edge has shrunk by nearly half in 50 years and continues to decrease by 15% per decade.¹⁷ If this trend continues, the summer ice in Alaska’s Arctic Ocean could disappear within 50 years.¹⁸ The thinning and receding of the sea ice is decimating subsistence resources:

Gathering food directly from the land and the sea makes the Yupiks very careful observers of their surroundings. In recent years, they have noticed that the walrus are thinner, their blubber less nutritious and oil from walrus fat does not burn as bright in their lamps as in times of old. At the same time, they have noticed that there are fewer and weaker seals. The Yupik hunters have had to go farther and farther from shore to reach the ice pack to find the newborn seals that are being fed fish from nearby waters by their parents. Concurrently, scientists have observed that the sea ice over much of the Arctic is thinner and melting back, with the changes encompassing a broader area than that observed by the Yupiks earlier.

13 Natural Resource Council of the National Academics, *Cumulative Environmental Effects of Oil & Gas Activities on Alaska’s North Slope* 92 (The National Academics Press, Washington D.C., March 2003) (“NRC”).

14 Gibson, Margie Ann & Sallie B. Schullinger. “Answers from the Ice Edge: The Consequences of Climate Change on Life in the Bering and Chukchi”, *Seas* 5 at 8.

15 NRC at 219; Callaway, Don, “Effects of Climate Change on Subsistence Communities in Alaska”. *Assessing the Consequences of Climate Change for Alaska and the Bering Sea Region* 66 (Gunter Weller & Patricia A. Anderson ed., Nov. 1999).

16 Parson, Edward A. et al., “Potential Consequences of Climate Variability and Change for Alaska”. *Climate Change Impacts on the United States: The Potential Consequences of Climate Variability and Change* 292–94 (National Assessment Synthesis Team, 2001).

17 NRC at 91.

18 *Id.*

Both the Yupiks and the scientists have come to understand the intertwined chain of events that is occurring. The retreat of the sea ice due to large-scale warming has reduced the platform that seals and walrus have used to rest between searches for fish and mussels; weakened and less productive, they provide less sustenance for both the Yupiks and the whales. . . .¹⁹

Melting permafrost threatens subsistence resources too. Permafrost – permanently frozen ground – exists throughout most of Alaska to varying depths.²⁰ In much of the Arctic, the permafrost is overlain by a thin mat of lush tundra vegetation.²¹ Warming temperatures soften the surface, allowing for greater drainage and drying the spongy surface.²² Hannah Mendenhall of Kotzebue recounts:

There used to be thousands of plants in this one area. I went there to gather greens. Not one sourdock. It's just dry. My girlfriend and I stood there and we were going to cry...Last year we had to really search for the salmonberries. They weren't out on the tundra ...We didn't get blueberries this year, last year, and the year before. . . . I used to be able to find blackberries in abundance, and now I have to really search.²³

Permafrost thawing also affects the caribou. As temperatures rise, woody plants move north and shade out the ground willow, cotton grass, and lichens that caribou eat.²⁴ To find their preferred foods, caribou are forced to move north too,²⁵ away from villages that rely on them.²⁶ Thus, the plants and animals that people rely on for subsistence are becoming scarcer and harder to secure due to global warming.

¹⁹ Native Peoples-Native Homelands Climate Change Workshop, Final Report 62 (Nancy G. Maynard ed., 1998) (internal citations omitted).

²⁰ NRC at 41; Smith, Orson P. & George Levasseur, "Impacts of Climate Change on Transportation Infrastructure in Alaska". *The Potential Impacts of Climate Change on Transportation, Part II, Regional Case Studies* 3 (U.S. Dep't of Transportation, 2001).

²¹ Bogo, Jennifer. "Global Warming/Arctic Tundra: The Hottest Spot", *Audubon Magazine* 50 (Dec. 2003).

²² Gibson & Schullinger at 24.

²³ *Id.* at 26.

²⁴ Bogo at 54.

²⁵ Bogo at 54; Gibson & Schullinger at 27.

²⁶ Gibson & Schullinger at 27.

B. Global Warming Endangers the Health and Safety of Alaska Natives.

Global warming poses other dangers for Alaska Natives. Thinning sea ice makes hunting more dangerous:

[In 2002,] hunters complain[ed] of having to travel 30 miles to find prey. The longer trips burn more fuel and expose them to more danger as the ice melts and drifts offshore. Rescue aircraft ... plucked 100 stranded hunters [that] year. The spring whale hunt yielded just three bowhead, and one of those kills was catapulted into the sea when the ice snapped.²⁷

During a recent winter, the sea ice broke three months early and a dozen seal hunters floated out to sea until rescued. As the ice pack retreats, hunters must travel farther in rough open ocean to reach the ice. Melting permafrost endangers Native coastal communities. Permafrost stabilizes the ground, buttressing shorelines against fierce Arctic storms.²⁸ As the permafrost warms and thaws, that buffer dissolves, and shorelines are retreating by several feet each year.²⁹ The effect is compounded by the retreat of the sea ice and its calming influence.³⁰

The Inupiat community of Shishmaref, located on a narrow barrier island on the Chukchi Sea, illustrates the dangers. Retreating sea ice and thawing permafrost have exposed the village to erosion from fiercer and more frequent Arctic storms.³¹ Several homes have collapsed over the bluff and others teeter on the edge. Residents want to

²⁷ Verrengia, Joseph B.. "In Alaska, an Ancestral Island Home Falls Victim to Global Warming", Associated Press, (Sept. 10, 2002).

²⁸ Smith & Levasseur at 6.

²⁹ *Id.* at 5-6.

³⁰ Smith & Levasseur at 7; Parson at 293.

³¹ Callaway at 67.

relocate five miles inland but lack the \$100 million it would cost.³² For now, Shishmaref remains where it is, exposed and vulnerable to the consequences of global warming.

III. GLOBAL WARMING IS CAUSING ENORMOUS PUBLIC HEALTH IMPACTS WITHIN THE UNITED STATES AND AROUND THE WORLD

Public health is at the very core of purposes of the Clean Air Act, yet in the decisions at issue in this case EPA first denies that Congress granted EPA authority to deal with this enormous public health threat, and then says that, in any event, addressing this threat would be bad policy. In doing so, EPA appears to be blind to the enormous public health impacts being caused by climate change.

Temperature-related illnesses and death. The effects of rising temperatures and heat-related illness and mortality on public health are profound; the elderly, children, and individuals with cardiovascular, respiratory, or other illnesses are especially vulnerable. Heat is the “primary weather-related cause of death in the United States.”³³ Heat waves across continental Europe in 2003 are estimated to have caused the deaths of as many as 30,000 mostly elderly individuals.³⁴ A Chicago heat wave in 1995 killed as many as 700, increasing mortality levels citywide by 85% and hospital admissions by 11%.³⁵ Further increases in global temperatures are expected to exact significant mortality and morbidity impacts, both internationally and here in the U.S.³⁶

³² Verrengia at 5.

³³ Davis, Robert E., et al., “Changing Heat-Related Mortality in the United States”, 111 *EHP* 1712 (2003).

³⁴ UNEP, *Impacts of Summer 2003 Heat Wave in Europe* (2003).

³⁵ McGeehin, Michael A. & Maria Mirabelli, “The Potential Impacts of Climate Variability and Change on Temperature-Related Morbidity and Mortality in the United States,” 109 *EHP* 185 (2001).

³⁶ See e.g., Epstein, Paul R. *Indicators: Monitoring the Human Health Impacts of Climate Change and Shifting Weather Patterns, Focus on Urban Areas 2* (2003): “the

Health effects related to extreme weather events. According to the World Health Organization, the adverse effects of natural disasters are increasing.³⁷ In the 1980s, for example, 1,848 extreme climactic/weather events resulted in 692,000 deaths and 1.3 billion individuals affected. By the 1990s, the number of extreme climactic/weather events had increased to 2,078, with 601,000 deaths and 1.9 billion individuals affected.³⁸ In the U.S., the National Weather Service reports an average annual estimate of 84 deaths attributed to flooding, 58 deaths to tornados, 53 deaths to lightning, and 18 deaths to hurricanes.³⁹ The U.S. Climate Action Report notes that “[p]rojections of climate change for the 21st century suggest a continuation of the 20th-century trend toward increasing intensity of heavy precipitation events, including precipitation during hurricanes. Such events... pose an increased risk of floods and associated health impacts.”⁴⁰

Air-pollution related health effects. The medical and epidemiological connections between air pollution and human health are well established and include cardiovascular and respiratory diseases, premature mortality, low birth weight and sudden infant death.⁴¹ Investigators at the Centers for Disease Control and Prevention have estimated that air pollution in the U.S. kills 24,000 individuals every year (the estimate is

incidence of heat waves in most U.S. cities is expected to approximately double by the year 2050 by current climate change estimates.”

³⁷ See e.g., McMichael, AJ et al. “Climate Change and Human Health,” *Risks and Responses* 90 (2003) [“WHO I”] at 91.

³⁸ WHO I, *supra* note 37, at 92.

³⁹ National Weather Service, *64-Year List of Severe Weather Fatalities* (2004).

⁴⁰ See generally U.S. Department of State, *U.S. Climate Action Report 2002, Third National Communication of the United States of America Under the United Nations Framework Convention on Climate Change* 106 (2002) [“Climate Action”] at 107.”

⁴¹ See e.g. Holgate, Stephen T. et al. *Air Pollution and Health* (1999).

conservative; the authors' range is 22,000-52,000 deaths annually).⁴² Worldwide mortality estimates associated with air pollution are staggering (mortality, 799,000; burden, 6.4 million DALYs).⁴³

As urbanization trends continue, the prospects for adverse climate-related air pollution health impacts will increase. Here in the U.S., researchers have concluded that "if the climate becomes warmer and more variable, air quality is likely to be affected ... In addition to affecting exposure to air pollutants (whether man-made or naturally emitted), climate change may also play a role in human exposure to airborne allergens ... adversely impact[ing] the occurrence and severity of asthma ... and affect[ing] the timing or duration of seasonal allergies ..."⁴⁴ Efforts to model the beneficial effects of greenhouse gas mitigation in four large urban areas have produced estimates of approximately 64,000 premature deaths avoided; 65,000 chronic bronchitis cases avoided; and 37 million person-days of work-loss or other restricted activity avoided.⁴⁵

Vector-borne diseases. Because vector-borne infectious agents spend part of their lifecycle in cold-blooded arthropods, they may be influenced by environmental change.⁴⁶ By itself, malaria – a parasitic disease transmitted by mosquitoes – infects

⁴² Mokdad, Ali H., et al., "Actual Causes of Death in the United States", 2000, 291 *JAMA* 1238 (2004).

⁴³ Ezzati, Majid, et al., "Selected Major Risk Factors and Global and Regional Burden of Disease", 360 *Lancet* 1353 (2002).

⁴⁴ Patz, Jonathan A. et al., "The Potential Health Impacts of Climate Variability and Change for the United States: Executive Summary of the Report of the Health Sector of the U.S. National Assessment", 108 *EHP* [367-376] (2000).

⁴⁵ Cifuentes, Luis. "Assessing the Health Benefits of Urban Air Pollution Reductions Associated with Climate Change Mitigation (2000-2020): Santiago, São Paulo, México City, and New York City," 109 *EHP* Supp. 3 419 (2001)

⁴⁶ Gubler, Duane J., et al. "Climate Variability and Change in the United States: Potential Impacts on Vector- and Rodent-borne Diseases," 109 *EHP* Supp. 2 223 (2001).

300-500 million worldwide every year, killing up to 2.5 million, mostly young children.⁴⁷

Estimates of mortality and disease burden for other major vector-borne diseases are comparably disturbing.⁴⁸

Looking ahead, the outlook for climate-related changes in vector-borne disease incidence patterns and impacts is not encouraging.⁴⁹ WHO estimates that 6% of malaria cases in some countries were already attributable to climate change, and determines that “changes in infectious disease transmission patterns are a likely major consequence of climate change.”⁵⁰ The IPCC concludes that areas with limited or deteriorating public health infrastructure with permissive temperature ranges may experience spreading to higher altitudes and latitudes and prolonged transmission seasons in areas with conducive patterns of rainfall and surface water.⁵¹ Climate change may also have an unexpected or adverse effect on the evolution and emergence of infectious diseases.⁵²

Specific to the U.S., the 2002 climate report cautions that “our nation cannot be isolated from diseases occurring elsewhere in the world. Of significant importance, the potential for disease vectors to spread into the United States via travel and trade is

⁴⁷ USAID, *Health: Malaria, Reducing the Burden* (2004).

⁴⁸ WHO, *Communicable Diseases: 2002 Progress Report* 11 (2002).

⁴⁹ See generally Epstein, Paul R. *Climate Change and Infectious Disease: Stormy Weather Ahead?* 13 *Epidemiology* 374 (2002): “volatility of infectious diseases may be one of the earliest biological expressions of climate instability.”

⁵⁰ See WHO *World Health Report* 63 (2002); at 63; WHO I, *supra* note 37, at 17.

⁵¹ See Working Group II, at 453.

⁵² See generally Committee on Climate, Ecosystems, Infectious Disease, and Human Health, National Research Council, *Under the Weather: Climate, Ecosystems, and Infectious Disease 2* (2001); and Bunyavanich, Supinda, et al., *The Impact of Climate Change on Child Health* 3 *Ambulatory Pediatrics* 48 (2003): “thirty new diseases have emerged since the mid 1970s. Old infectious diseases are resurging and appearing in new areas. It is probable that new diseases will emerge in response to climate change.”

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Dated: July 13, 2004

CERTIFICATE OF COMPLIANCE

Pursuant to Circuit Rule 28(d)(1), I certify that the foregoing brief contains 3750 words as computed in accordance with the Rule by Microsoft Word.

/s/
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Dated: July 13, 2004

STATUTORY APPENDIX

Clean Air Act Sections 202(a)(1) and (2)	ii
Clean Air Act Sections 302(g) and (h)iii

CLEAN AIR ACT: Sections 202(a)(1) and (2)

42 U.S.C. § 7521. Emission standards for new motor vehicles or new motor vehicle engines

(a) Authority of Administrator to prescribe by regulation

Except as otherwise provided in subsection (b) of this section -

(1) The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. Such standards shall be applicable to such vehicles and engines for their useful life (as determined under subsection (d) of this section, relating to useful life of vehicles for purposes of certification), whether such vehicles and engines are designed as complete systems or incorporate devices to prevent or control such pollution.

(2) Any regulation prescribed under paragraph (1) of this subsection (and any revision thereof) shall take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period.

CLEAN AIR ACT: Sections 302(g) and (h)

42 U.S.C. 7602. Definitions

When used in this chapter -

(g) The term "air pollutant" means any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term "air pollutant" is used.

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

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

COMMONWEALTH OF MASSACHUSETTS,)
et al.,)
)
)
)
)
v.) No. 03-1361
) Consolidated with Nos. 03-
UNITED STATES ENVIRONMENTAL) 1362-1368
PROTECTION AGENCY,)
)
Respondent.)
_____)

CERTIFICATE OF SERVICE

I certify that on July 13, 2004 I served 2 copies of the forgoing "Brief for Amici Curiae Indigenous Environmental Network, REDOIL and Physicians for Social Responsibility" on each of the parties on the attached service list via first class mail, postage prepaid.

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