United States
Environmental Protection Agency
Before the Administrator
EPA Docket ID Number EPA-HQ-OAR-2009-0171

IN RE:
PROPOSED ENDANGERMENT AND
CAUSE OR CONTRIBUTE FINDINGS FOR
GREENHOUSE GASES UNDER SECTION 202(a)
OF THE CLEAN AIR ACT; PROPOSED RULE,
74 FED. REG. 18,886 (APR. 24, 2009)

Supplemental Statement in Support of Petition for EPA to Conduct Its Endangerment Finding Proceeding on the Record

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August 25, 2009

TABLE OF CONTENTS

Introduction

On June 23, 2009, the Chamber of Commerce of the United States of America (the "Chamber") petitioned the United States Environmental Protection Agency ("EPA") to conduct a proceeding on the record under the Clean Air Act using procedures based on 5 U.S.C. §§ 556-557 to resolve important scientific issues created by the Administrator's proposed endangerment finding. *See* Petition of the Chamber of Comm. of the U.S.A. for EPA to Conduct Its Endangerment Finding Proceeding On The Record Using APA §§ 556 and 557, docket no. EPA-HQ-OAR-2009-0171-3411.1 (June 23, 2009) ("Petition"). The submissions to EPA's docket for the proposed endangerment finding, which EPA closed after only sixty days on June 23, 2009, reinforce the Chamber's original grounds for its Petition, and demonstrate two important points.[1]

First and foremost, the materials now in the EPA docket demonstrate the urgent need for the endangerment issue to be resolved on the record of the scientific evidence, with evidentiary

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[1] The Petition is a stand-alone request for affirmative relief. Hence, there is no time limit applicable to the initial filing of the Petition or to its supplementation. The Chamber submitted it into this docket because it relates to the proposed endangerment finding, and because EPA cannot take action on the proposed endangerment finding without first resolving this Petition.

Moreover, even were EPA to take the erroneous position that this Petition is subject to the same deadline as ordinary comments filed into this docket, EPA should still accept for formal inclusion in this docket any supplementation of the Petition, based on the Agency's statement posted to its endangerment finding website:

> UPDATE -- The public comment period ended June 23, 2009. The comment period was open for 60 days, following publication of the proposed rule in the Federal Register, April 24, 2009. Late comments may still be submitted on the proposed rule; however, the Clean Air Act does not require that the Environmental Protection Agency consider comments submitted past the end of the official comment period June 23, 2009, when developing the final rule. Nonetheless, we will continue to consider comments received after the close of the comment period, to the extent practicable.

http://www.epa.gov/climatechange/endangerment.html (last visited August 12, 2009). There would be no basis for EPA to refuse to consider this Supplemental Statement in support of the Chamber's Petition, as it is practicable for EPA to do so. Nevertheless, EPA cannot cure the problems created by setting too short a comment period simply by indicating that it will choose, in its discretion, which comments received outside that arbitrary deadline to consider. Such an approach risks allowing EPA to misshape the record by selectively choosing what supplemental filings to accept or reject.

procedures to ensure scientific integrity, rather than an informal process that permits *ex parte* communications and non-transparent policy and political inputs. *See* Part I below.

Secondly, the submissions to the EPA docket demonstrate that an on-the-record hearing would be manageable and focused, so that it could be concluded in a reasonable timeframe, with enormous benefits in terms of both transparency and scientific integrity. If EPA truly aims to fulfill the Administrator's promises of "overwhelming transparency," this proceeding needs to be conducted on-the-record. *See* Part II below.

The docket as it now stands also reveals a further reason to conduct a proceeding on-the-record. EPA has received numerous comments that make largely undocumented and, in the Chamber's view, insupportable claims about the impacts of climate change on public health and welfare. Those claims range from assertions that climate change may cause mental illness to claims that "150,000 people die every year from the effects of global warming."[2] The Administrator cannot credit those spurious claims without giving the interested public a fair opportunity to respond. This can most appropriately be accomplished through a hearing on the record, at which EPA can receive evidence refuting those alarming but scientifically baseless claims. Such a proceeding would also give the proponents of an endangerment finding an opportunity to support their claims. Only after having received evidence from all parties who choose to participate can the Administrator then make a fully informed, transparent decision with scientific integrity based on the actual record of the science.[3]

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[2] *See* Comments of Phys. for Soc. Responsibility, docket no. EPA-HQ-OAR-2009-0171-4023, at 1 (May 18, 2009); *see also* Comments of Envtl. Def. Fund, docket no. EPA-HQ-OAR-2009-0171-4036.5, at 6 (June 23, 2009) ("Comments of EDF") (possible impact of climate change includes "increases in mental illness").

[3] In response to a recent Congressional inquiry, the Administrator indicated that she was not inclined to conduct a proceeding on the record on the ground that such a proceeding was precluded by section 307 of the Clean Air Act. *See* Letter from Lisa Jackson, Admin., EPA, to Sen. James Inhofe, Ranking Member, Sen. Comm. on Env't & Pub. Works 2 (July 6, 2009). The Clean Air Act contains no such limitation. As the Chamber's June 23 petition made

(Continued…)

Background: The EPA Docket

After EPA announced its proposed endangerment finding on April 23, 2009, the public was allowed to submit comments and supporting materials to the docket for only sixty days.

As of mid-July 2009, there were approximately 5600 comments posted in the EPA docket. Of those, fewer than 3% included scientific data or a significant discussion of scientific data.

However, while the number of parties who submitted substantive scientific data is fewer than 100, those who did so have provided very extensive scientific information on numerous important scientific questions.

The parties who submitted scientific data and information include a range of people and entities, such as business and professional trade organizations, university professors, think tanks, independent research scientists, governmental bodies, and certain advocacy groups.

A small number of the submissions of scientific data are extensive and detailed. Numerous significant studies from the scientific literature have been submitted. And the scientific issues addressed in the various submissions relate to the topics presented by EPA itself in its proposal and its Technical Support Document ("TSD").

However, to date, EPA has not permitted any of the submitters of this extensive data to comment on the data submitted by others, nor to point out where the data conflicts with or corroborates other data submitted to the docket. The public has been left with thousands of

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clear, (i) EPA has discretion under the Clean Air Act to conduct such a proceeding, and (ii) the endangerment issue placed before the Administrator by the Supreme Court's remand from *Massachusetts v. EPA* presents the type of "extremely compelling circumstances" that should require EPA to conduct a proceeding on the record, to permit cross-examination with respect to the claimed new grounds in support of a positive endangerment finding. *See* Petition, *supra* p. 1, at 77 (quoting *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 524, 543 (1978)). Moreover, any argument that section 307 precludes EPA from using on-the-record procedures is inconsistent with the Agency's prior position that using section 307 in the first place was a voluntary choice. *See* 74 Fed. Reg. at 18,889 n.4 (emphasizing discretionary language in section 307(d)(1)(V)).

docket entries to peruse, but no opportunity to assist the Administrator in resolving inconsistencies and uncertainties, and no transparency whatsoever as to how EPA has reviewed or will use any of the extensive data submitted.

The subjects that are addressed in these docket submissions themselves demonstrate the need for an on-the-record proceeding, as the Chamber addresses in the next section.

I. THE EXISTING EPA DOCKET DEMONSTRATES THAT A PROCEEDING ON THE RECORD IS NECESSARY TO NARROW THE AREAS OF SCIENTIFIC UNCERTAINTY, TO PERMIT A CREDIBLE WEIGHING OF THE SCIENTIFIC EVIDENCE, AND TO ENABLE SUBMITTERS OF PROOF TO DEMONSTRATE THE FALSITY OF SOME KEY ERRONEOUS CLAIMS IN THE EPA DOCKET.

A review of the EPA docket shows that parties have submitted materials that cry out for a fair-minded resolution on the record. As President Obama has said about scientific integrity in the administrative process, "It's about listening to what our scientists have to say, even when it's inconvenient -- especially when it's inconvenient." (Dec. 17, 2008). In this context, an accurate and honest resolution depends not just on EPA's own staff, but on listening to what scientists have said in the entire docket, and deciding the issues on-the-record.

A. A Proceeding On The Record Will Narrow Any Uncertainty On The Question Whether, On Balance, Higher Temperatures Will Not Lead To Net Increases In Human Mortality.

No issue should be more important in deciding whether to make an endangerment finding than the question of whether higher temperatures will lead to higher death rates in the United States. The TSD correctly notes that deaths from exposure to excessive cold far exceed deaths from exposure to excessive heat in the United States. *See* TSD at 69-71. Nevertheless, the Administrator's *Federal Register* notice states:

> [I]t is currently difficult to ascertain the balance between increased heat-related mortality and decreased cold-related mortality. With respect to health, different regions will be affected in different ways. The Administrator does not believe

> that it is now possible to quantify the various effects. Because the risks from unusually hot days and nights, and from heat waves, are very serious, it is reasonable to find on balance that these risks support a finding that public health is endangered even if it is also possible that modest temperature increases will have some beneficial health effects.

74 Fed. Reg. 18,886, 18,901 (Apr. 24, 2009). The *Federal Register* notice cites no source permitting the public to understand what is meant by "unusually hot" days and nights, how a "heat wave" is defined, or what the Administrator considers a "modest" temperature increase. Despite its acknowledgement that deaths from cold exceed deaths from heat, the TSD states that "it is not clear" whether the net impact of the higher temperatures it forecasts will be reduced or increased mortality. *See* TSD at 70.

The Chamber has already presented substantial evidence establishing, with clarity that the Administrator should acknowledge, that the net impact of the UN/IPCC's forecasted temperature increases will result in *lower* net mortality rates in the United States.[4] Other parties have now also placed detailed analyses in the record establishing the same point.[5] As one commenter points out, EPA inexplicably removed from the version of the TSD released with the proposed

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[4] *See* Attachment 1 to Petition, docket no. EPA-HQ-OAR-2009-0171-3347.3, at 5-14 (June 23, 2009). NB: A recent report revised on July 14, 2009 and submitted for publication in *Geophysical Research Letters* appears to raise serious questions about the UN/IPCC forecasted temperature increases, which are based on climate models and estimates of climate sensitivity—the equilibrium change in global mean near-surface air temperature that would result from a sustained doubling of the atmospheric CO_{2e} concentration. The new report, "On the Determination of Climate Feedbacks from ERBE Data" which was written by Massachusetts Institute of Technology scientists, Richard Lindzen and Yong-Sang Choi invalidates the climate models by showing that they over-estimate climate sensitivity *compared to what is actually observed*; in other words the models do not agree with observations, i.e., they fail a critical test of model validity. The research paper concludes that climate sensitivity is about 0.5 degrees Centigrade and not the roughly 2 to 5 degrees Centigrade rise predicted by the models upon which the UN/IPCC relies. There is no compelling evidence that heat effects would be a problem at a climate sensitivity of 0.5 degrees Centigrade. The Lindzen/Choi report is available at: http://www.leif.org/EOS/2009GL039628-pip.pdf.

[5] *See, e.g.*, Comments of Am. Energy Alliance and Inst. of Energy Research, docket no. EPA-HQ-OAR-2009-0171-3217.1, at 23-25 (June 23, 2009) ("Comments of AEA *et al.*); Comments of Am. Farm Bureau *et al.*, docket no. EPA-HQ-OAR-2009-0171-3596.1, at 84-87 (June 23, 2009) ("Comments of AFB"); Comments of Am. Rental Ass'n, docket no. EPA-HQ-OAR-2009-0171-3283.1, at 10 (June 2009) Comments of N. Am. Coal Corp., docket no. EPA-HQ-OAR-2009-0171-3474.1, at 14-15 (June 23, 2009); Comments of Am. Petr. Inst., docket no. EPA-HQ-OAR-2009-0171-3747.1, at 7, 30-31 (June 22, 2009) ("Comments of API").

endangerment finding a statement in an earlier version confirming that the weight of scientific analysis establishes a larger decrease in cold-related deaths than an increase in heat-related deaths.[6]

The proponents of a positive endangerment finding try to create confusion on this point, but cite no evidence that overcomes the overwhelming proof that higher temperatures will not lead to a net increase in U.S. mortality rates.[7] Those favoring a positive finding either ignore the data cited by the Chamber and other parties who have actually examined the scientific literature in detail, or they try to divert attention from the question of whether higher temperatures will lead to increased mortality in the United States.[8] To the extent that some proponents of an endangerment finding try to point to specific populations that might be particularly affected by

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[6] Comments of API, *supra* note 4, at 30.

[7] Typical of the claims that higher temperatures will lead to higher mortality are: Comments of Phys. for Soc. Responsibility, docket no. EPA-HQ-OAR-2009-0171-3461.1, at 1-2 (June 23, 2009) ("June Comments of PSR"); Comments of EDF, *supra* note 1, at 6; [Audubon 6-13]; Comments of Ctr. for Bio. Diversity *et al.*, docket no. EPA-HQ-OAR-2009-0171-3453.1, at 9 (June 23, 2009); [SC 1-13]; Comments of Utah Phys. for a Healthy Env't, docket no. EPA-HQ-OAR-2009-0171-3501, at 2 (June 23, 2009) ("Comments of UPHE").

[8] The Administrator attempts to sidestep the issue whether she can consider health and welfare effects outside the United States, and her proposed endangerment finding is supposedly valid based solely on U.S. health and welfare effects. *See* 74 Fed. Reg. at 18,903. Consideration of international effects is not consistent with the requirements of the Clean Air Act, as the Chamber explained in its June 23 comments. *See* Comments of the Chamber of Comm. of the U.S.A., docket no. EPA-HQ-OAR-2009-0171-3347.1, at 59-60 (June 23, 2009). In any event, the Chamber is prepared to demonstrate at a proceeding on the record that EPA would lack a scientific basis for a positive endangerment finding with respect to the emissions subject to regulation under Clean Air Act section 202(a)(1) even if international effects could be considered

higher temperatures,[9] their claims have been fully addressed by an analysis filed for the American Farm Bureau, the National Mining Association, and other parties.[10]

EPA cannot properly conclude on the record now before it, using the Administrator's "total weight of the evidence" approach,[11] that the higher temperatures forecast by those who predict temperature increases will increase U.S. mortality rates. Certainly, it would be arbitrary to make such a determination, based on "uncertainties" in the record, without trying to resolve the purported uncertainty on the issue of net mortality impacts through an evidentiary proceeding on the record. "Uncertainties" are a pervasive problem running through EPA's entire proposal. The Agency should therefore take evidence at a proceeding on the record, and not allow its judgment to be hobbled by unnecessary or avoidable "uncertainties" about the net impact of higher temperatures on human mortality.

B. A Proceeding On The Record Will Enable EPA To Resolve Any Uncertainties About The Impacts Of Higher Temperatures On The Conventional Pollutants Entitled To The Greatest Weight In Considering The Issue of Endangerment.

As the Chamber explained in its June 23 comments, the primary pollutant of concern in considering the impact of higher temperatures on air quality should be fine particulate matter.[12]

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[9] *See, e.g.*, Comments of Children's Envtl. Health Network, docket no. EPA-HQ-OAR-2009-0171-3280.1, at 3 (June 22, 2009); Comments of N.Y. State Dep't of Envtl. Conserv., docket no. EPA-HQ-OAR-2009-0171-3455.1, at 4 (June 23, 2009). With regard to the supplemental report submitted by Massachusetts and thirteen other states, titled "Extreme High Temperatures and Hospital Admissions of Respiratory and Cardiovascular Diseases," EPA-HQ-OAR-2009-0171-3502.1, the study fails to consider non-temperature confounding effects and does not establish *causation* by temperatures, nor does it address adaptive effects. This study itself demonstrates the need for an on-the-record hearing to allow scrutiny of its mistaken inferences.

[10] *See, e.g.*, Comments of Patrick Michaels, Ph.D., and Paul Knappenberger, New Hope Envtl. Servs., docket no. EPA-HQ-OAR-2009-0171-3596.2, at 50 (June 23, 2009) ("Comments of Michaels *et al.*"); Comments of Nat'l Mining Ass'n, docket no. EPA-HQ-OAR-2009-0171-3764.1, at 16 (June 23, 2009).

[11] 47 Fed. Reg. 18,886, 18,898 (April 21, 2009).

[12] *See* Attachment 1 to Petition, *supra* note 3, at 20-21.

Fine particulates have been found by EPA to have a number of adverse health effects, including chronic mortality. The TSD concluded that fine particulate pollution "generally decreases as a result of simulated climate change, due to increased atmospheric humidity and increased precipitation." *See* TSD at 79. Nevertheless, the Executive Summary of the TSD states that the impact of climate change on fine particulate levels "remains uncertain." *Id.* at ES-4. The critical issue of temperature change on particulate pollution levels received inadequate treatment in the discussion of endangerment in the April 23 *Federal Register* notice, as the Chamber has already noted.[13] The comments submitted to the docket that favor a positive endangerment finding do not fully address the evidence that higher temperatures will have a beneficial impact on efforts to reduce fine particulate matter if those higher temperatures lead to increases in precipitation, as the TSD postulates they will. Instead, those comments concentrate on the question whether higher temperatures will increase exposure to photochemical oxidants (*i.e.*, ground-level "smog").[14]

Presumably EPA does not intend to shirk its responsibility to "follow the science" wherever the science leads. As with the issue of net impacts of higher temperatures on mortality rates, EPA cannot abdicate that responsibility by leaving the issue of particulate air quality "uncertain," without permitting the Chamber and other interested parties to appear at a proceeding on the record to demonstrate two points. The first point that would be established at

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[13] *See id.* at 20-21, 23-24.

[14] *See* Comments of the Envtl. Law & Justice Clinic, Golden Gate Univ. Sch. of Law, docket no. EPA-HQ-OAR-2009-0171-3338.1, at 5 (June 23, 2009) ("Comments of Golden Gate Clinic"); Comments of EDF, *supra* note 1, at 6. The main position on the particulate matter issue in the comments favoring a positive endangerment finding seems to be that higher temperatures will lead to increases in forest fires that would increase particulate pollution. *See* June Comments of PSR, *supra* note 6, at 2. Those comments do not provide a basis for predicting the level of increase in forest fires, however, nor do they attempt to balance the supposed increases in fire-induced particulate pollution against the reductions in such pollution that would result from higher precipitation levels and increased humidity.

such a proceeding is that the impact of higher temperatures will be to reduce particulates if precipitation and humidity increase. The second point that would be established is that, when proper risk assessment techniques are applied to the evidence, the net impact of higher temperatures undercuts any air-quality-based rationale for a positive endangerment finding. On that second point, one key issue that should be considered is whether the evidence in the record supports the claims of proponents of the positive endangerment finding that the higher temperatures forecast by the models may lead to significant increases in ground-level ozone.

In reality, the record contains no evidence or analysis that removes the need for a proceeding on the record to resolve serious deficiencies in the Agency's treatment of a number of important studies identified in the Chamber's June 23 comments.[15] At a proceeding on the record, the Chamber is prepared to explain the significance of the EPA-sponsored modeling efforts that the TSD and the April 24 *Federal Register* notice ignore.

Some commenters favoring a positive endangerment finding have claimed that there is a causal link between carbon dioxide emissions and what they call "air pollution mortality."[16] The Chamber has previously explained why that erroneous assertion should be given no weight in its June 23 comments.[17] Moreover, were an on-the-record hearing held, the Chamber would

[15] *See* Attachment 1 to Petition, *supra* note 3, at 18-24; Attachment 2 to Petition, docket no. EPA-HQ-OAR-2009-0171-3347.4 (June 23, 2009) (entire document is relevant). Were it otherwise, then EPA could consider at the proceeding on the record how to balance such possible increases in smog against possible reductions in fine particulate matter.

[16] *See, e.g.*, Comments of Golden Gate Clinic, *supra* note 13, at 5.

[17] Those reasons are presented in Attachment 1 to Petition, *supra* note 3, at 23-24.

demonstrate that the assertions made by such proponents rely on unrealistic assumptions and models that do not comply with EPA's own modeling guidelines.[18]

Absent some other opportunity for the Chamber and other parties to respond to spurious claims in this proceeding, it would be improper for the Agency to rely upon the submissions that cite such flawed work. *Cf. People v. United States*, 666 F.2d 1066, 1083 (7th Cir. 1981) ("[T]he parties should have been afforded the right of cross-examination with regard to the supplementary evidence."); *see also* Petition, *supra* p. 1, at 77.

C. A Proceeding On The Record Would Permit The Parties To Provide Any Necessary Confirmation That Temperature Increases Would Overall Benefit Human Welfare And The Environment, And Allow EPA To Receive Evidence Rebutting Unsubstantiated Claims To The Contrary.

The Chamber's June 23 comments explained in detail why the impact of the higher temperatures forecasted in the studies on which EPA proposes to rely would be net-beneficial for agriculture and forest growth.[19] Other parties have offered detailed analyses to the same effect.[20] The "total weight of the evidence" thus establishes significant increases in crop yield in the

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[18] For example, a recent paper by Keatinge and Donaldson provides some new insights into the issue of modeling weather effects in ozone studies. W. R. Keatinge and G. C. Donaldson, "Heat acclimatization and sunshine cause false indications of mortality due to ozone, *Environmental Research*, 2006, *100*, 387-393. They evaluated whether mortality that is often attributed to ozone and other pollutants in hot weather results from confounding by neglected weather factors. Their analysis was restricted to days when the mean daily air temperatures exceeded 18 degrees C in Greater London from 1991 to 2002, and evaluated mortality counts at age greater or equal to 65. The adjustment for acclimatization was based on the characteristic pattern that has been reported by various investigators that the rise in mortality on hot days is followed by a prolonged reduction in mortality lasting at least 14 days. When only current temperature (average of days 0 to –2) was considered in the model, mortality was associated with ozone in a similar degree as in other studies. However, when Keatinge and Donaldson allowed for cumulative exposure to heat throughout the summer and for sunshine (which contributes to heat stress at any given temperature), the ozone association was reduced by a factor of ten and was no longer statistically significant. This study indicates that previously neglected weather factors may be confounding the mortality analyses relied on by proponents of an endangerment finding. The Keatinge and Donaldson analysis suggests that previously overlooked weather factors can reduce the association by a factor of 10.

[19] *See* Attachment 1 to Petition, *supra* note 3, at 51-55.

[20] *See, e.g.*, David Archibald, Presentation at The Lavoisier Group 2007 Workshop: Rehabilitating Carbon Dioxide, at 20 (June 29-30, 2007), *posted as comment*, docket no. EPA-HQ-OAR-2009-0171-0714.3 (accessed July 30, 2009); Comments of API, *supra* note 4, at 34; Comments of AFB, *supra* note 4, at 82-83.

United States and modest increases in forest growth throughout North America.[21] Consequently EPA would lack sufficient evidence to conclude that elevated levels of greenhouse gases endanger the terrestrial environment. This is, however, apparently not a point that proponents of a positive endangerment finding are prepared to concede.[22] The most efficient way for EPA to resolve any dispute concerning the impact of elevated greenhouse gases on crop yields and forest growth is to permit the Chamber and other parties to present evidence supporting their conclusions, and to permit cross-examination of the competing experts offering that evidence. Absent such an approach, EPA cannot properly give credence to the vague claims of those who support a positive endangerment finding concerning crop yields and forest growth.

Turning to the marine biosphere, the most detailed analyses now in the docket include the study by Michaels and Knappenberger, who demonstrate that the UN/IPCC and the CCSP have ignored important empirical work demonstrating that there has been no long-term acceleration in sea-level rise.[23] The only submissions to the contrary are vague and non-specific, and do not refute the analyses of Michaels and Knappenberger and of other experts, including the Declaration filed by Dr. Wolff in support of this petition.[24] EPA must either give full credence to the conclusions of Michaels and Knappenberger, as well as other researchers like Dr. Wolff, or permit those researchers and other parties to appear at the proceeding on the record sought by this petition to offer testimony subject to cross-examination by those who would disagree.

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[21] *See* Attachment 1 to Petition, *supra* note 3, at 51-55.

[22] *See* Comments of EDF, *supra* note 1, at 6; Comments of Or. Wild, docket no. EPA-HQ-OAR-2009-0171-3396, at 8 (June 19, 2009); June Comments of PSR, *supra* note 6, at 2.

[23] *See* Comments of Michaels *et al.*, at 6-7, 43-45.; *see also* Comments of Nat'l Petrochem. Refiners Ass'n, docket no. EPA-HQ-OAR-2009-0171-3702.1, at 7 (June 23, 2009).

[24] *See* Declaration of George T. Wolff, Ph.D., docket no. EPA-HQ-OAR-2009-0171-3411.2, at ¶¶ 7-9 (June 23, 2009) ("Wolff Decl.").

On the issue of ocean acidification, the proponents of a positive endangerment finding have tried to offer support for the TSD's observations concerning decreases in the pH of the oceans.[25] But, as Dr. Wolff has already established in his Declaration, the TSD's conclusions and the implications of those conclusions do not give proper weight to the work of Pelejero *et al.* (2005), Yates *et al*. (2006), Ohde *et al*. (1999), Suzuki *et al.* (1995), and Schmalz *et al.* (1969).[26] At this juncture, the only efficient and accurate way for the Agency to resolve this apparent disagreement in the docket is to conduct a proceeding on the record, so that Dr. Wolff and others can present their rebuttals to the claims of ocean acidification, and so that the competing views can be tested by cross-examination.

D. A Proceeding On The Record Is The Most Efficient And Only Complete Method For Testing The Competing Claims In The Record Concerning Extreme Weather Events And Disease.

The current state of the docket represented by the comments of various parties on other health- and welfare-related issues shows sharp disagreement. But, there is one important difference in the types of arguments and analyses offered by those who support a positive endangerment finding and those who oppose such a finding: those who support a positive endangerment finding offer unsupported and speculative, if alarming, predictions of adverse impacts from climate change, while many of those who oppose such a finding cite the relevant peer-reviewed literature to refute such speculation.

For example, an organization called Oregon Wild suggests, without any citations, that higher temperatures will cause "[i]nsect populations [to] become decoupled from predator populations," that climate change will "alter the synchrony between plants and pollinators," and

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[25] *See* Comments of Oceana, docket no. EPA-HQ-OAR-2009-0171-3344.1, at 3 (June 23, 2009).

[26] Wolff Decl., *supra* note 25, at ¶ 9.

that there will be "potentially troubling human reactions" that would include increased reliance on biomass fuel.[27] The State of Washington claims that flooding caused by climate change will become "a real and direct threat" to all who live near the shore line, without citing any peer-reviewed literature to support its claim.[28] Without citing a single source, a group of Utah physicians appear to attribute El Nino Seasonal Oscillation events to elevations in greenhouse gas emissions, and approximately 70,000 deaths in Europe during the summer of 2003, to the heat wave experienced during that period (apparently ignoring all other factors).[29] The group Physicians for Social Responsibility warn darkly that "[o]ne concern particular to the United States is that some diseases not now endemic here might become so in the future," if EPA does not make a positive endangerment finding with respect to greenhouse gas emissions from automobiles and trucks.[30] The record is also replete with warnings concerning increased hurricanes, wild fires, and other extreme weather events, diseases, as well as increases in illness from contaminated food, if no such endangerment finding is made.[31]

As it stated in its June 23 comments, the Chamber believes that the "total weight of the evidence" requires EPA to discount the claims that climate change will have the effects on extreme weather events and disease in the United States that the supporters of a positive endangerment finding now attempt to attribute to climate change.[32] The causation theories on

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[27] Comments of Or. Wild, *supra* note 23, at 8.

[28] Comments of State of Wash. Dep't of Ecology, docket no. EPA-HQ-OAR-2009-0171-3400.1, at 4 (June 17, 2009).

[29] Comments of UPHE, *supra* note 6, at 2.

[30] June Comments of PSR, *supra* note 6, at 3.

[31] Comments of EDF, *supra* note 1, at 6; June Comments of PSR, *supra* note 6, at 2-3,; Comments of Ctr. for Bio. Diversity *et al.*, *supra* note 6, at 9]; Comments of UPHE, *supra* note 6, at 2.

[32] *See* Attachment 1 to Petition, *supra* note 3, at 29-50.

which the disease-related claims are based were deemed too attenuated to be given any credence by CCSP SAP 4.6. They rest in large part on assumptions that other regulatory programs will fail, and assume the efforts of science and medicine to combat disease will falter.[33] Indeed, some research indicates that climate change is expected to *decrease* the range of tick-borne encephalitis.[34] There is no scientific basis to link allergic disorders in any significant way to climate change.[35] Similarly, the most that the UN/IPCC could say with respect to extreme weather events was that linking climate change to those events would be "difficult," and CCSP 3.3. stated conclusively that there was "no evidence" of any long-term increase in North American mainland hurricane landfalls during a period of rising temperatures.[36]

The TSD itself does not deal forthrightly with the evidence. The TSD actually misrepresents at least one paper on the issue of fire events in the United States, and is forced to concede that "many" of the extreme weather events of concern "are likely to be experienced in developing countries and not directly in the U.S."[37] In fact, none of the claims that climate change will cause extreme weather events that could injure the population of the United States appear to have *any* support in peer-reviewed studies that examine issues of causation. As other commenters have established, the TSD's claims with respect to hurricanes are flatly contradicted by the data, and there is in fact some reason to believe that climate change may inhibit the formation of hurricanes that could reach the United States.[38]

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[33] *See id.* at 37-40.

[34] *See id.* at 40-41.

[35] *See id.* at 44.

[36] *See id.* at 31.

[37] *See id.* at 33.

[38] *See* Comments of AEA *et al.*, *supra* note 4, at 25.

Another recent development concerning the scientific understanding of extreme weather events and their causes that EPA must take account of is the new study by four National Oceanic and Atmospheric Administration scientists forthcoming in the *Journal of Climate*. This study analyzes data regarding Atlantic tropical cyclone ("TC") counts.[39] This research demonstrates that the frequency of moderate to long-lived hurricanes and tropical storms has not significantly increased , if at all, since the late nineteenth century. Moreover, with regard to short-lived storms (two days or less), the authors disparage the hypothesis that the increase in short-lived storms was caused by anthropogenic climate change. Instead, the authors "consider it is more plausible that the increase arises primarily from improvements in the quantity and quality of observations, along with enhanced interpretation techniques, which have allowed National Hurricane Center forecasters to better monitor and detect initial TC formation, and thus incorporate increasing numbers of very short-lived systems into the TC database."

Given the record on extreme weather events and disease, the Administrator has two choices. One is to accept the evidence that there is no causal link, or even a currently plausible theory to link, climate change with extreme weather events and disease in the United States. The other is to conduct a proceeding on-the-record to permit those who oppose a positive endangerment finding to present their evidence and to submit the competing analyses to cross-examination. The one course of action that she cannot take is to sweep aside the data and analysis demonstrating the absence of a scientific basis for causation, in favor of alarming claims that would serve a non-scientific agenda. Documents like the TSD must not be permitted to engage in selective quotations from sources or to mis-cite sources. As the President has stated,

[39] *See* Abstract, Christopher W. Landsea, Gabriel A. Vecchi, Lennart Bengtsson, Thomas R. Knutson, *Impact of Duration Thresholds on Atlantic Tropical Cyclone Counts*, JOURNAL OF CLIMATE (May 16, 2009).

"The public must be able to trust the science and the scientific process informing public policy decisions. Political officials should not suppress or alter scientific findings and conclusions." *Memorandum for the Heads of Executive Departments and Agency*, 74 Fed. Reg. 10,671 (Mar. 9, 2009). Particularly when the issues involve natural disasters, epidemics and pandemics, and other topics that can too easily become sensationalized, it is important for EPA to view the evidence dispassionately and to give those who have scientific evidence to offer a full opportunity to present the evidence. That has not occurred to date, but it should be permitted.

E. The Docket Also Includes the Carlin-Davidson Report, EPA-OMB Communications, and Other Materials that Raise Concerns about the Lack of Transparency to Date.

At the time the Chamber filed its petition, the Chamber noted a number of reasons that the public and objective observers should be concerned about flaws and a lack of transparency in EPA's process in this proceeding. Petition, *supra* p. 1, at 55-63. As one example, the Chamber pointed to some of OMB's significant criticisms of the proposed endangerment finding, including EPA's failure to account for the fact that "the impact of climate-sensitive diseases may be minimal in a rich country like the U.S."

After the Chamber's petition was filed, new evidence came to light about the suppression of a detailed study by EPA's own staff, at odds with the proposed endangerment finding. An EPA study by Dr. Alan Carlin, with assistance from Dr. John Davidson, asserted that the agency had relied on outdated studies, and that the current state of climate science refutes the proposed endangerment finding. *See* Proposed NCEE Comments on Draft Technical Support Document, Attachment B to EPA-HQ-OAR-2009-0171-4035.1. That Carlin-Davidson study has since been added to the EPA docket, but with no chance for others to address it, even though EPA spokesmen have been publicly criticizing its authors.

With regard to transparency, the public has reason to be equally concerned about what is not in the docket at all, *i.e.*, whether there have been *ex parte* communications, whether there have been non-scientific or political criteria from the White House or elsewhere, and whether EPA's own staff have relied on information or views that are not on the record.

F. Because EPA Has Generated Legitimate Concern That It Has Prejudged The Outcome Of The Proposed Endangerment Finding, Only An On-The-Record Process Can Produce A Reliable And Legally Durable Outcome.

In its Petition, the Chamber noted that four Cabinet Secretaries had raised concerns that EPA had prejudged the outcome of the proposed endangerment finding proceeding, s*ee* Petition at 12, and the Administration has taken steps that further suggested a predetermined result here. Id.at63. More recently, the Department of Justice issued a press release that quotes EPA suggesting that the Agency and the Department are already enforcing the Clean Air Act *as if the proposed endangerment finding had already been finalized*. *See* Department of Justice, Press Release, *Ohio Edison Agrees to Repower Power Plant with Renewable Biomass Fuel: Agreement Will Reduce Net Greenhouse Gas Emissions by 1.3 Million Tons a Year* (Aug. 11, 2009) ["DOJ Press Release"].[40]

According to the Press Release:

> The adverse effects on the environment of CO2 emissions, particularly from coal-fired power plants, are well-documented. Last April, EPA issued the "Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Clean Air Act," which identified the dangers of the current and projected concentrations of the six key greenhouse gases, the most significant being carbon dioxide. In addition, sulfur dioxides, nitrogen oxides and particulate matter cause severe respiratory problems and contribute to childhood asthma. They are also significant contributors to acid rain, smog and haze, which impair visibility in national parks.

Pure and simple, this is prejudgment of some of the very issues pending in the proposed endangerment finding proceeding. Indeed, EPA indicated that action based on this prejudgment would continue: "EPA will seek similar commitments from companies to replace coal-fired electric generation with cleaner, renewable energy in future Clean Air Act settlements." *Id.*

To restore integrity to the process of the proposed endangerment finding, EPA (and the Department of Justice) should specifically defer such conclusions until this proceeding is resolved, and instead refer the issues in the proposed endangerment finding to a neutral decision maker to resolve on the record of the actual science the extraordinarily consequential issues involved. Only such a neutral, record-based and science-based process can hope to eliminate the taint that has now infected the proposed endangerment finding process. Failure to do so will leave any form of endangerment finding justifiably subject to a severe risk of legal reversal or remand.

In short, the best and only way to resolve the scientific issues here, provide true transparency, and assure the public of EPA's promised scientific integrity is to convert the current proceeding from an informal rulemaking to one that is on-the-record under the Clean Air Act (using procedures equivalent to those in 5 U.S.C. §§ 556-557).

II. A TRANSPARENT, ON-THE-RECORD PROCESS WITH NO *EX PARTE* COMMUNICATIONS OR POLITICAL INTERFERENCE IS REQUIRED, WOULD BE MANAGEABLE HERE, AND INDEED WOULD BE THE BEST WAY TO ENSURE THAT SCIENTIFIC INTEGRITY PREVAILS.

Because of the relatively modest number of parties who have submitted scientific data and scientific commentary, and because of the nature of the issues those frame, it is apparent that an on-the-record proceeding in this matter would be manageable and worthwhile.

Not only are the number of data submitters modest, but they fall into several natural alignments, which would make it easy for an Administrative Law Judge or other agency official

to organize the submitters by a small number of classifications and alignments. Moreover, as illustrated in the discussion above in sections I.A.-D., the issues to be resolved are also manageable for an efficient and valuable proceeding on-the-record.

Indeed, the scientific issues framed by the Administrator's proposed finding in the April 24, 2009 *Federal Register* notice and the comments submitted in response are important and complex, but readily manageable in a proceeding on the record. They can be grouped into the following four main subjects: (i) direct impacts of climate change on human mortality; (ii) impacts of climate change on air quality having an affect on human health and the environment; (iii) other impacts of climate change on the physical environment of the United States, in particular on crops, forests and the oceans; (iv) the claimed effects of climate change on extreme weather events and on disease. Other submitters for and against the endangerment proposal might wish to add topics to this list, but there is no reason to expect the number of issues to grow unmanageable.

Moreover, by converting the process to one on-the-record under the Clean Air Act, the Agency, the participants, and the public would all have a fully transparent process, and one free from inappropriate interferences. Using such a process to test the truth of the proponents of an endangerment finding in a public crucible would also bring the EPA and the Administration's rhetoric into alignment with its actions.

An endangerment finding would give rise to the most far-reaching rulemaking in American history. Before embarking on that long, costly process, EPA ought to do everything possible to assure the American people of the ultimate scientific accuracy of its decision. In short, an on-the-record proceeding is not only desirable, but in this instance it is necessary if

EPA is serious about its proclaimed commitment to "overwhelming transparency," scientific integrity, and a resolution based solely on the record of the scientific evidence.

CONCLUSION

The current state of the EPA docket presents the Agency with only two choices. One is to grant the Chamber's petition, and convert this proceeding to one based solely on the record, so that questions of scientific uncertainty can be narrowed, questions of conflicting scientific views can be resolved, and certain scientifically-indefensible assertions can be put to rest, all with transparency and scientific integrity. The other option is for EPA to withdraw the endangerment proposal entirely. Applying the Administrator's stated criterion for determining whether to make an endangerment finding -- which is to consider the "total weight of the evidence" -- the evidence presently in the docket would not allow EPA lawfully to make a positive endangerment finding.

For the foregoing reasons and those stated in the petition and supporting materials filed on June 23, 2009, EPA should convert its proceeding to one based entirely on-the-record, with an evidentiary hearing to resolve what action to take on the proposed endangerment finding under section 202(a)(1) of the Clean Air Act.

Date: August 25, 2009

Respectfully submitted,

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