

BEFORE THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

IN RE:

Endangerment and Cause or Contribute
Findings for Greenhouse Gases Under Section
202(a) of the Clean Air Act

EPA Docket Number

EPA-HQ-OAR-2009-0171

**THIRD AMENDMENT TO PETITION FOR
RECONSIDERATION**

FILED BY

United States Representative John Linder (GA-7th District), U.S. Representative Dana Rohrabacher (CA-46th District), U.S. Representative John Shimkus (IL-19th District), U.S. Representative Phil Gingrey (GA-11th District), U.S. Representative Lynn Westmoreland (GA-3rd District), U.S. Representative Tom Price (GA-6th District), U.S. Representative Paul Broun (GA-10th District), U.S. Representative Steve King (IA-5th District), U.S. Representative Nathan Deal (GA-9th District), Representative Jack Kingston (GA - 1st District), U.S. Representative Michele Bachmann (MN-6th District); U.S. Representative Kevin Brady (TX-8th District); U.S. Representative Joe Barton (TX-6th District); U.S. Representative John Shadegg (AZ-3rd District); U.S. Representative Marsha Blackburn (TN-7th District); The Langdale Company; Langdale Forest Products Company; Langdale Farms, LLC; Langdale Fuel Company; Langdale Chevrolet - Pontiac, Inc.; Langdale Ford Company; Langboard, Inc. - MDF; Langboard, Inc. - OSB; Georgia Motor Trucking Association, Inc.; Collins Industries, Inc.; Collins Trucking Company, Inc.; Kennesaw Transportation, Inc.; J&M Tank Lines, Inc.; Southeast Trailer Mart, Inc.; Horizon Freight System, Inc.; Georgia Agribusiness Council, Inc. and Southeastern Legal Foundation Inc.

Shannon L. Goessling
Executive Director and
Chief Legal Counsel
Southeastern Legal Foundation
6100 Lake Forrest Drive, Suite 520
Atlanta, Georgia 30328
(404) 257-9667

Edward A. Kazmarek
Counsel to Southeastern Legal
Foundation
Kazmarek Geiger & Laseter LLP
3490 Piedmont Road, Suite 201
Atlanta, GA 30305
404-812-0840
skazmarek@kglattorneys.com

Harry W. MacDougald
Counsel to Southeastern Legal
Foundation
Caldwell & Watson LLP
5825 Glenridge Dr., N.E.
Building Two, Suite 200
Atlanta, GA 30328-5579
(404) 843-1956
hmacdougald@cwlaw.org

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I. INTRODUCTION

The Climategate e-mails and documents on which Petitioners based their original Petition for Reconsideration have been followed by a series of revelations that have undermined the credibility of the Intergovernmental Panel on Climate Change (“IPCC”) and its conclusions. The purpose of this Third Amendment is to lay these developments before the Agency in support of the Petition for Reconsideration. The reliance by the Environmental Protection Agency (“EPA”) on the IPCC’s work is so extensive that revelations that undermine the credibility of the IPCC also inevitably impeach the credibility of the EPA’s Endangerment Finding.

As noted in our initial Petition for Reconsideration, under Section 307(d)(7)(B) of the Clean Air Act, EPA is required to convene a proceeding for reconsideration upon a showing of two conditions precedent: (1) the information arose after the period for public comment on the Endangerment Finding and (2) the objection is of “central relevance to the outcome of the rule. As shown below, the analyses presented below have all occurred after the close of the public comment period. In addition, the continuing litany of IPCC’s errors, and even fraud, as discussed in detail below, is “so serious” that there is a substantial likelihood that the Finding would have been significantly changed if such errors had not been made. See 42 U.S.C. 7607 (d)(8), (d)(9)(D)(iii). See e.g., *NRDC v. Herrington*, 768 F.2d 1355, 1421 (D.C.Cir. 1985) (holding that agencies are obliged to produce substantial evidence for major assumptions in rulemaking).

Accordingly, the pace and significance of the recent disclosures concerning IPCC’s reporting are such that the EPA should stay the effective date of its Finding to provide it time to reconsider its Finding and re-assess its reliance on the IPCC.

II. INVALIDITY AND UNRELIABILITY OF SURFACE TEMPERATURE RECORDS: D'ALEO & WATTS

On January 27, 2010, Joseph D'Aleo¹ and Anthony Watts² published, *Surface Temperature Records: Policy Driven Deception?*³ (hereinafter "D'Aleo & Watts"). A copy of this report is filed with this Third Amendment. The scientific validity and reliability of the surface temperature record datasets are essential elements of the validity and reliability of the conclusions drawn by the IPCC and the EPA.

The National Oceanic and Atmosphere Administration ("NOAA"), through the National Climate Data Center ("NCDC"), publishes the U.S. Historical Climate Network (USHCN) and Global Historical Climate Network ("GHCN") datasets. The National Aeronautics and Space Administration ("NASA"), through the Goddard Institute for Space Studies ("GISS") publishes the GIST dataset. The University of East Anglia's ("UEA") Climatic Research Unit ("CRU") publishes the HADCRUT datasets, now in version 3.

These datasets are not independent. To the contrary, the GISS dataset published by NASA and the HADCRUT dataset published by CRU use data supplied by NOAA through the GHCN. They differ in the adjustments and analysis applied to the underlying data.

D'Aleo & Watts identify at least three factors that significantly degrade the validity and reliability of these surface temperature records, all of which introduce a

¹ Joseph D'Aleo is a meteorologist of 35 years experience. He co-founded the Weather Channel and is currently the Executive Director of the International Climate and Environmental Change Assessment Project.

² Anthony Watts has 25 years experience in broadcast meteorology. He founded SurfaceStations.org, a web site devoted to assessing the quality of weather stations across the U.S. He is also the founder of <http://wattsupwiththat.com/>, a top-rated science blog.

³ Available at http://scienceandpublicpolicy.org/originals/policy_driven_deception.html (last visited Feb. 10, 2010).

warm bias:

1. Station drop out, which introduces a significant sampling bias toward warmer temperatures, and invalid use of interpolation from warmer grid cells to fill thusly vacant grid cells without actual data;
2. Improper adjustments to data; and
3. Improper siting of temperature stations.

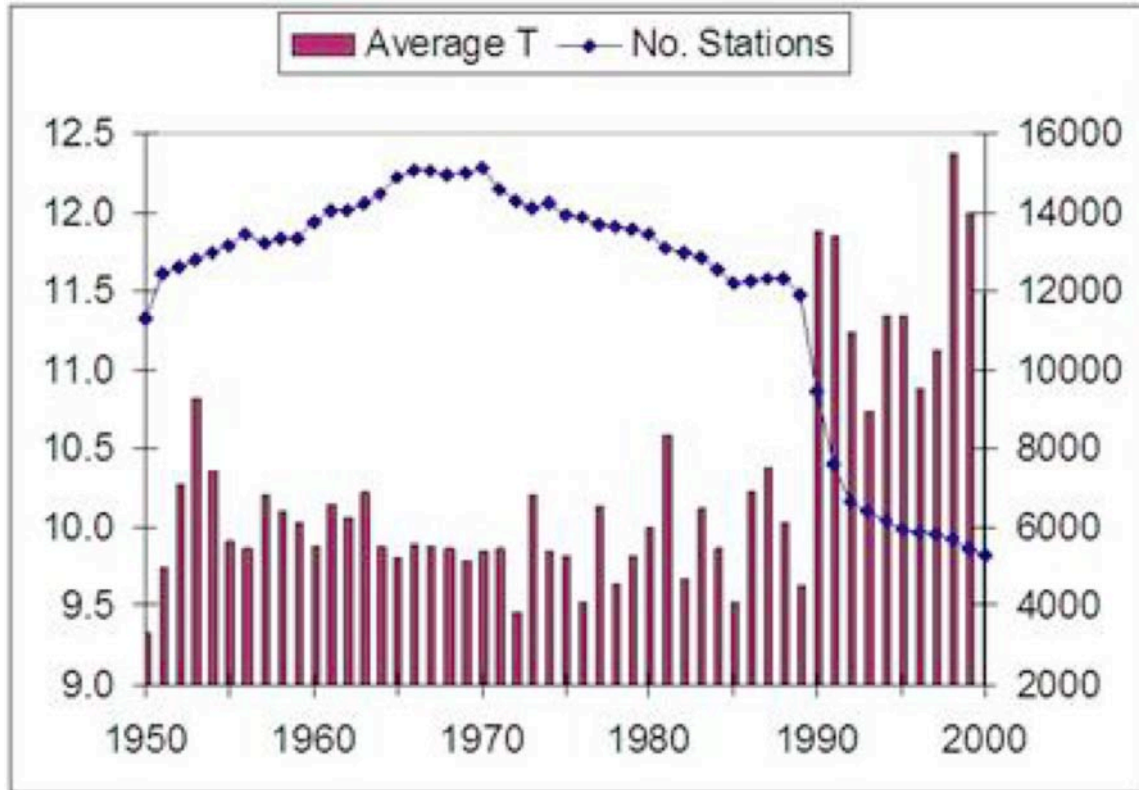
D'Aleo & Watts offer many examples in support of each of these assertions.

A. STATION DROP OUT

“Station drop-out” refers here to the precipitous decline in the number of temperature records included in the GHCN dataset. In the 1970’s more than 6000 stations were active. Today the figure is 1500 or less. D’Aleo & Watts, p. 10, n. 9.⁴ The following graph, prepared by Ross McKittrick⁵ shows the relationship between station drop-out and average temperature, where “Average T” is a mean of raw unprocessed temperature data, and No. of Stations :

⁴ Citing Peterson & Vose, *An Overview of the Global Historical Climatology Network Temperature Database*, Bulletin of the American Meteorological Society, Vol. 78, No. 12, p. 2837-2849 (1997); available at http://www.ncdc.noaa.gov/oa/climate/ghcn-monthly/images/ghcn_temp_overview.pdf (last visited Feb. 10, 2010)

⁵ Ross McKittrick is a Professor of Economics at The University of Guelph in Ontario, Canada. His website has a complete list of publications, which includes 14 peer-reviewed papers in the field of economics, and 12 in climate science and statistics. Along with Steve McIntyre, he is primarily responsible for demonstrating errors in the “Hockey Stick” by Mann, Briffa and Hughes (1998).



D'Aleo & Watts, p. 11. See <http://www.uoguelph.ca/~rmckitri/research/nvst.html> (last visited Feb. 10, 2010) for a full explanation of this chart, and access to data it represents. This chart shows that the station drop out coincides with a sharp and significant increase in average raw temperature, and thus suggests that the change in temperature is the result of sampling bias and not climate change.

The stations that were dropped were disproportionately rural. D'Aleo & Watts, p. 11-12. Further, the remaining stations were biased towards lower latitudes, lower elevations, and urban locations. *Id.*, citing E.M. Smith⁶, <http://chiefio.wordpress.com/2009/11/03/ghcn-the-global-analysis/> (last visited Feb. 10, 2010). All of these tendencies away from random sampling impart a warm bias to the

⁶ E. M. Smith is a computer programmer who has made intensive study of statistical and programming methods used in climatology which are posted for discussion at his website, <http://chiefio.wordpress.com>. A Google search on "chiefio.wordpress.com" yields "about 82,000 hits" on February 5, 2010.

record. D'Aleo & Watts show that station drop out has occurred all over the world, but the greatest station drop-out has occurred in Siberia and Canada, where these global temperature datasets purport to show the greatest warming has occurred.

The Institute for Economic Analysis in Moscow prepared a report showing that selective use of only 25% of the available Russian stations in the HadCRUT dataset imparted a warming bias of .64 C ° greater than the trend calculated using all available data. D'Aleo & Watts at p. 16. This results from the disproportionate use of more southern and urban stations, and from interpolating or “infilling” data from these warmer stations to colder areas for which actually available data was eschewed. *Id.* at 16-17. Russia represents 11.5% of the Earth's land mass, so this is a significant issue.

In Canada, the number of reporting stations dropped from 600 to less than 50, the percentage below 300 feet in elevation tripled, while those above 3000 feet were reduced by half. *Id.* at 18. GHCN data, corrupted by this sampling bias and by inappropriately warm-biased infilling, shows warming in Canada, but unadjusted data shows cooling. *Id.* at 17-18.

Among other examples described in D'Aleo & Watts is that of Bolivia. GHCN has not collected any actual temperature data for Bolivia since 1990. Monthly anomaly charts show substantial warming over Bolivia, but is purely an artifact of interpolation from distant warmer and lower altitude stations. *Id.* at 21.

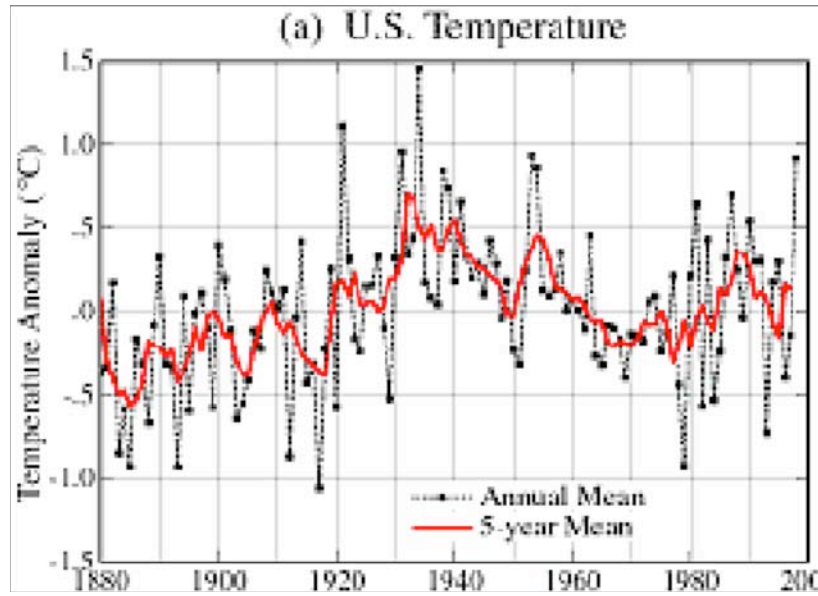
The USHCN has dropped 90% of its climate stations. Most of the remaining stations are at airports, and in the west most of the higher elevation stations are gone. In California, the only remaining stations are in San Francisco, Santa Maria, Los Angeles and San Diego. *Id.* at 23.

The station drop-out results in sampling errors that introduce a warming bias in to the surface temperature record. Infilling from warmer temperature stations to colder grid cells for which no actual data is collected also imparts a spurious warming signal. D'Aleo & Watts conclude that the warming bias thusly introduced makes “any accurate assessment of warming impossible.” *Id.* at 10.

B. IMPROPER ADJUSTMENT OF DATA

Prior naturally occurring episodes of warming and cooling present a problem of proof for the promoters of catastrophic anthropogenic global warming (“AGW”), namely how to explain that modern warming is caused by man when prior episodes of equal or greater warming self-evidently were not. Part of their solution has been to airbrush out of climate history cyclical climate changes that impeach their claims. Thus, in Mann, Briffa and Huges (1998) strenuous efforts were undertaken to erase the medieval warm period and the little ice age by means of proxy reconstructions that were later proven to be invalid in the infamous “hockey stick” affair.⁷ In the 20th century there was warming from the 1910s to 1940, followed by cooling from 1940 to 1970, followed by warming from 1970 to 1998.

⁷ See McKittrick & Michaels, *Corrections To The Mann Et. Al. (1998) Proxy Data Base And Northern Hemispheric Average Temperature Series*, Energy & Environment Vol. 14, No. 6, p. 751 (2003); McKittrick & Michaels, *Hockey Sticks, principal components, and spurious significance*, Geophysical Research Letters, Vol. 32 L03710 (2005); McKittrick & Michaels, *The M&M Critique Of The Mbh98 Northern Hemisphere Climate Index: Update And Implications*, Energy & Environment Vol. 16 No. 1, p. 69 (2005); McKittrick & Michaels, *Reply to comment by von Storch and Zorita on “Hockey sticks, principal components, and spurious significance,”* Geophysical Research Letters, Vol. 32, L20714 (2005); McKittrick & Michaels, *Reply to comment by Huybers on “Hockey sticks, principal components, and spurious significance,”* Geophysical Research Letters, Vol 32 L20713 (2005); Ad Hoc Committee Report on the “hockey Stick” Global Climate Reconstruction” a/k/a the “Wegman Report” available at http://republicans.energycommerce.house.gov/108/home/07142006_Wegman_Report.pdf. (last visited Feb. 10, 2010)

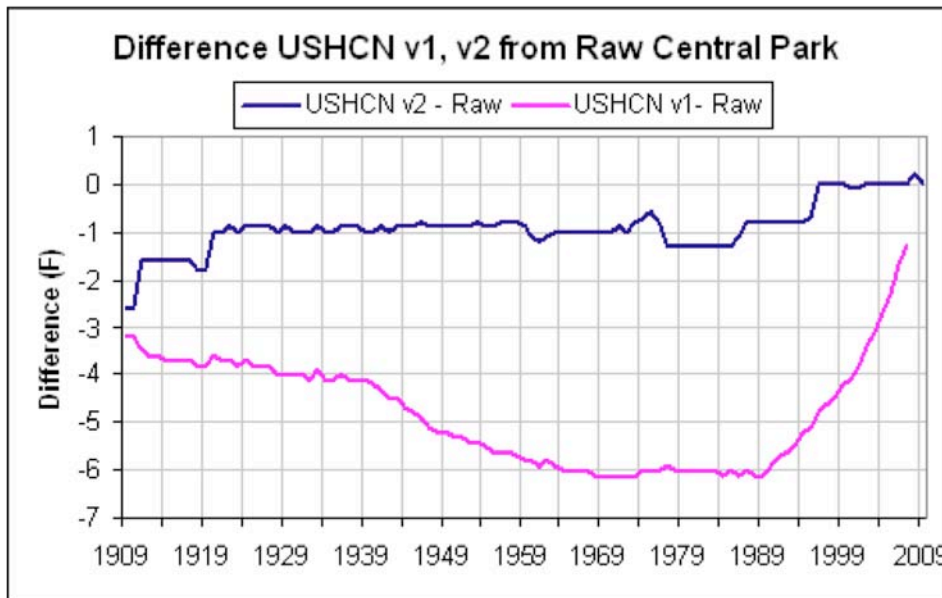


D'Aleo & Watts, p. 36. D'Aleo & Watts show that these 20th century cycles were misrepresented in the temperature records in order to exaggerate a 20th century warming trend and claim it was caused by AGW.

USHCN version 1 showed that the 1930s were the warmest decade, and that the warming trend over the 20th century “hardly exceeds year-to-year variability.” *Id.* Then USHCN version 2 was released in 2007. Version 1 used an urban heat island adjustment, but that was dropped in version 2 in favor of a “change point algorithm.” *Id.* at 37-38. The differences between version 1 and version 2 are shown in the following chart, in which a zero value indicates no change from version 1 to version 2, a negative value indicates version 2 is lower than version 1, and a positive value indicates version 2 is higher than version 1:



D'Aleo & Watts, p. 38. The warming of the 1930's has been minimized by negative adjustments, and the recent warming has been exaggerated by positive adjustments (or by failure to properly adjust for urban heat islands), thereby imparting to the 20th century a warming trend that the raw data and rural stations do not show. *Id.* at 38-41. For example, for Central Park in New York City, USHCN version 1 gradually reduced the UHI adjustment and version 2 eliminated it entirely. The notion that there is zero urban heat island effect in Manhattan is not valid.



Id. at 86. The change point algorithm used in GHCN V2 was designed to detect “inhomogeneities,” or abrupt changes in a temperature data series, as abrupt changes likely reflect something other than climate change, like an equipment change, a siting change, or an abrupt change in the local environment. *Id.* at 37. Once such inhomogeneities are detected, they can be adjusted for and the data “homogenized.” *Id.* at 37-38; *See also* Petersen and Vose (2007). By its design, the change point algorithm does not detect gradual changes such as actual climate change, and so cannot distinguish climate change from the gradual increase in the urban heat island effect resulting from the gradual transition of an area from rural to suburban over a period of decades, a phenomenon that has occurred at many temperature stations with growing population. D’Aleo & Watts, pp. 37-41. Therefore, the design of the change point algorithm “cannot account for long term changes to the temperature record, such as UHI, making such signals indistinguishable from the climate change signal that is sought.” *Id.* at 41.

The GISS temperature dataset maintained by NASA retains an urban heat island

adjustment for the US, and for this reason diverges from USHCN. Between 1950-2008, the trend difference between GISS and USHCN is approximately 0.7 F°/century. *See id.* at 42-43. The asserted warming trend over the 20th century is $0.74 \pm 0.18^{\circ}\text{C}$ (TSD p. 27). However, for the rest of the world, the GISS UHI adjustments *have the wrong sign.* *Id.* at 47-50.

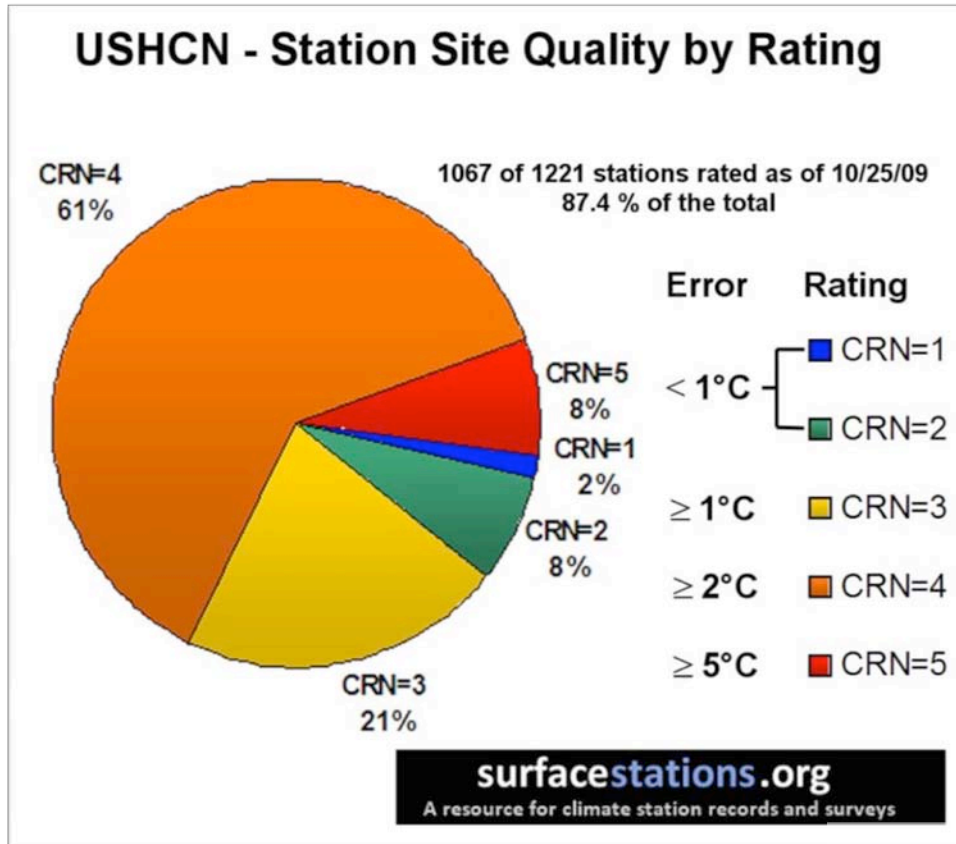
As summarized by D'Aleo & Watts, there is compelling evidence that the 20th century surface temperature record has been improperly adjusted downward during the warming of the 1930's, and improperly adjusted upward (or not adjusted for UHI) in the late 20th century warming. These improper adjustments and failures to adjust impart a spurious warming signal to the 20th century temperature record and render it scientifically invalid and unreliable for use in the EPA's Endangerment Finding.

C. STATION SITE QUALITY

Anthony Watts' project, surfacestations.org, has surveyed 1067 of 1221 (87.4%) surface stations in the USHCN network. Stations are evaluated for the quality of their location according to criteria developed by the Climate Reference Network ("CRN") Site Information Handbook, which specifies the requirements for establishing and maintaining a weather instrument site. *Id.* at 32.⁸ Deviations from the siting standards introduce a range of error in the measurements according to a scale set forth in the handbook. The error scale runs from less than 1° C for stations classified as CRN class 1 or 2, up to greater than 5° C for stations rated CRN class 5. *Id.* 28-33. For the stations surveyed the SurfaceStations.org volunteers determined that 90% were sited in ways that result in errors exceeding 1° C according to the handbook's error scale. In the following chart,

⁸ *See also* Climate Reference Network Site Information Handbook (Dec. 2002) *available at* [Climate Reference Network Site Information Handbook](#) (last visited Feb. 10, 2010).

these stations are categorized by where they fall in the CRN handbook’s error scale:



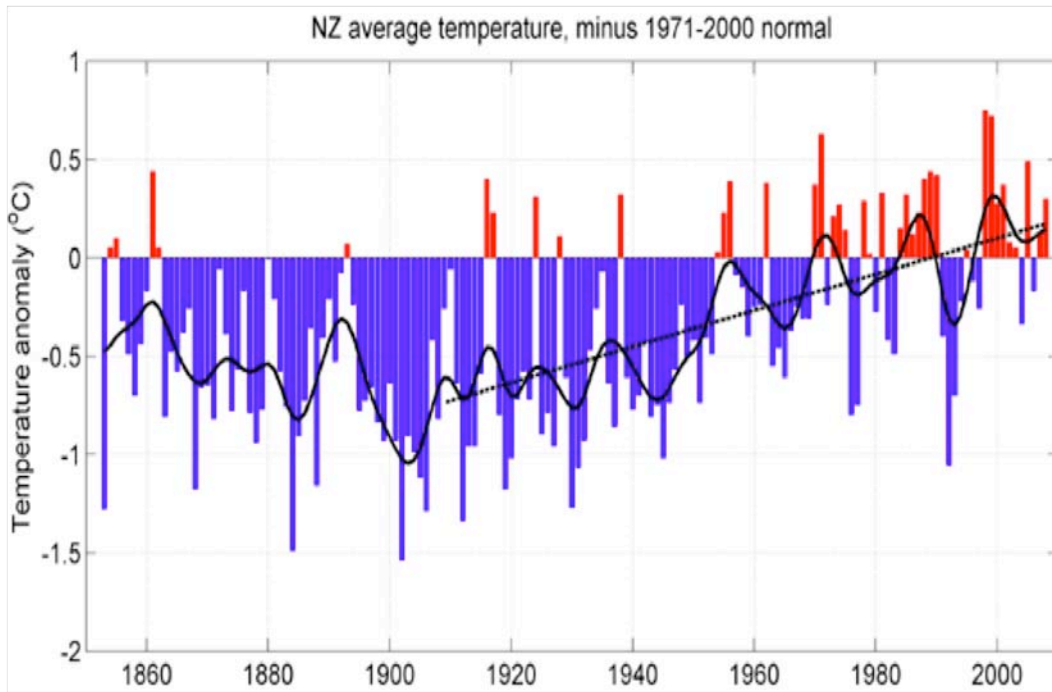
Since the asserted warming trend over the 20th century is $0.74 \pm 0.18^{\circ}\text{C}$ (TSD p. 27), the error swamps the signal. The data are invalid and unreliable and cannot be relied upon for the Endangerment Finding.

D. CASE STUDIES IN DATA MANIPULATION

At pp. 59-101 D’Aleo & Watts present 12 case studies of data manipulation in global surface temperature datasets. The first is the “Smoking Gun at Darwin Zero,” which Petitioners referred to in their original petition. The second⁹ concerns assertions by New Zealand’s National Institute of Water and Atmospheric Research (“NIWA”) that the linear trend of warming from 1909 to 2008 was $0.92^{\circ}\text{C}/\text{century}$, depicted in this chart of

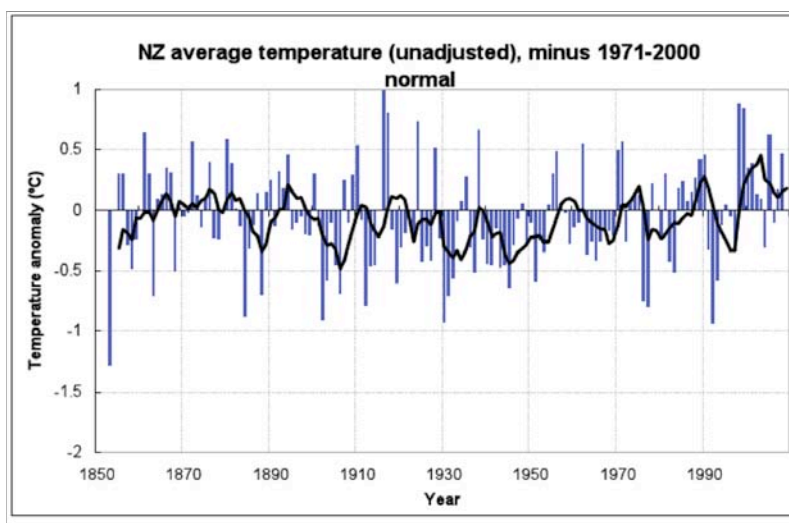
⁹ D’Aleo & Watts cite and rely on the New Zealand Climate Science Coalition for this analysis. Their report is available at http://icecap.us/images/uploads/global_warming_nz_pdf.pdf (last visited Feb. 10, 2010)

the temperature anomaly from the baseline between 1971-2000:



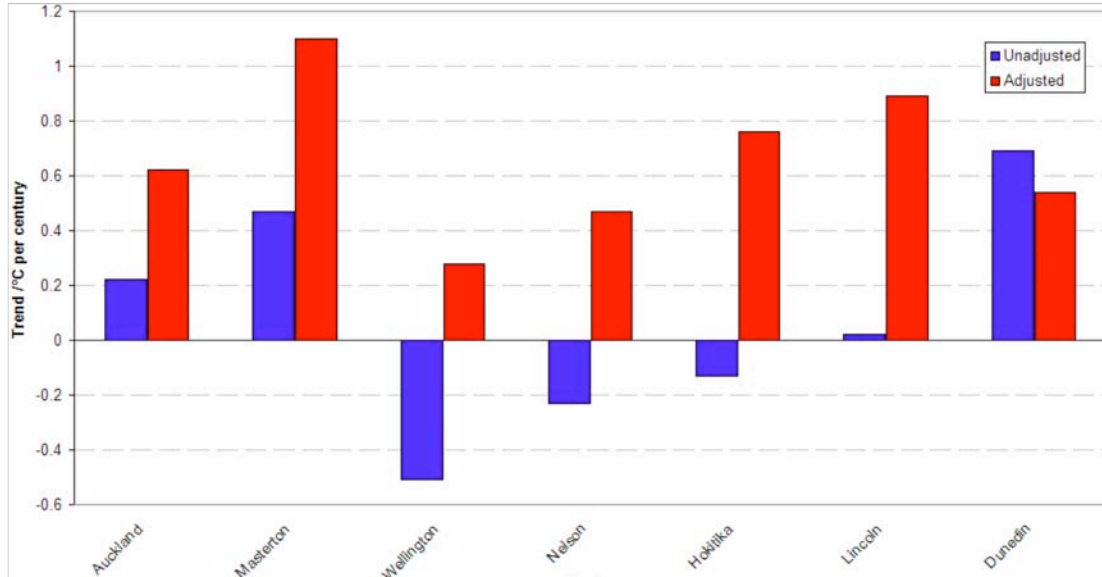
From NIWA’s web site — Figure 7: Mean annual temperature over New Zealand, from 1853 to 2008 inclusive, based on between 2 (from 1853) and 7 (from 1908) long-term station records. The blue and red bars show annual differences from the 1971 – 2000 average, the solid black line is a smoothed time series, and the dotted [straight] line is the linear trend over 1909 to 2008 ($0.92^{\circ}\text{C}/100$ years).

D’Aleo & Watts, p. 67. In fact, the raw data show no trend whatsoever:



Id. at 68. As with the USHCN version 2 and Darwin Zero, “The shocking truth is that the oldest readings have been cranked way down and later readings artificially lifted to give a

false impression of warming.” *Id.* at 69. This pattern is clearly demonstrated by the charts at pp. 70-73 of D’Aleo & Watts.



Id. at 69.

Their fifth case study is by Willis Eschenbach¹⁰ recounting the attempts by Professor Wibjorn Karlen to replicate the IPCC’s temperature analysis for the Nordic region. *See Id.* at 79; available at <http://wattsupwiththat.com/2009/11/29/when-results-go-bad/> (last visited Feb. 10, 2010). Eschenbach was drawn to the subject by the inclusion in the Climategate e-mails of correspondence between Professor Karlen and Phil Jones, former Director of the CRU, which follows the now familiar pattern of Jones willfully obstructing legitimate scientific inquiry. The IPCC shows substantial increases in temperature in the late 20th century, to 0.5 C above the levels of the 1930s in the Nordic region. Karlen could not replicate the assertion by the IPCC that the recent warming exceeded that of the 1930s, either in the Nordic regions or in many other

¹⁰ Mr. Eschenbach is an engineer, and the author of Tuvalu Not Experiencing Increased Sea Level Rise , Willis Eschenbach , Energy & Environment , Volume 15 , Number 3 , 1 July 2004 , pp . 527-543

regions of the world, and sought clarification from Jones and Trenberth. They did little more than refer him back to the IPCC reports from which the question arose in the first place. Karlen's analysis, replicated by Eschenbach, shows the same pattern of suppressing the warming of the 1930's and inflating the warming of the late 20th century that is seen in surface temperature record discussed above. Eschenbach's analysis of the Climategate e-mails concludes that Karlen made legitimate inquiries and "got incomplete, incorrect and very misleading answers." *Id.*

E. SUMMARY

D'Aleo & Watts render a caustic conclusion on the validity and reliability of the global temperature datasets:

Recent revelations from the Climategate emails, originating from the Climatic Research Unit at the University of East Anglia showed how all the data centers, most notably NOAA and NASA, conspired in the manipulation of global temperature records to suggest that temperatures in the 20th century rose faster than, in reality, they actually did.

...

These factors all lead to significant uncertainty and a tendency for overestimation of century-scale temperature trends. A conclusion from all findings suggest that global data bases are seriously flawed and can no longer be trusted to assess climate trends or rankings or validate model forecasts. And, consequently, such surface data should be ignored for decision making.

D'Aleo & Watts, p. 5. The EPA should reconsider the Endangerment Finding to address the whether surface temperature records have sufficient validity and reliability to support the conclusions the Agency has reached.

III. UNSUPPORTED OR FRAUDULENT CLAIMS REGARDING ADVERSE EFFECTS OF GREENHOUSE GASES.

Since the comment period closed, and particularly since the Climategate e-mails

were released, a series of press reports have shown that the IPCC's claims of impending climate catastrophe, which are also in the EPA's Finding, are at best insufficiently supported and at worst knowingly false. The assertions that have been proven false or unsupported include the following:

1. That extreme weather events have increased in frequency and severity;
2. That Himalayan Glaciers would be melted by 2035;
3. That African crop yields would collapse by 50%;
4. That large swaths of the Amazon rain forest would become much drier savanna grassland.

A. EXTREME EVENTS FRAUD

The IPCC reported that global warming was causing an increase in losses from weather disasters of 2% per year, even after controlling for economic growth, citing a non-peer reviewed study by Robert Muir-Wood.¹¹ Yet the IPCC mischaracterized the study, which actually found no trend and expressly eschewed the proposition for which it was cited.¹² Muir-Wood *et al.* expressly caveated that the exceptionally strong hurricane seasons in 2004 and 2005 accounted for almost all of the 2% increase from 1970-2005.

Id. The IPCC knew from the comments of reviewers that their use of the study was wrong before the report was published.¹³ The IPCC reviewer had asked "What does Pielke think about this?" The answer given was a fabrication, according to Pielke, Jr. As

¹¹ IPCC Fourth Assessment Report, WG II, Chapter 1, pp. 50-51, citing Muir-Wood, et al. *The Search for Trends in a Global Catalogue of Normalized Weather-Related Catastrophe Losses*, presented at Workshop on Climate Change and Disaster Losses: Understanding and Attributing Trends and Projections Final Workshop Report, available at (http://sciencepolicy.colorado.edu/sparc/research/projects/extreme_events/munich_workshop/muirwood.pdf) (last visited Feb. 10, 2010)

¹² *Id.* at p. 1; See also "UN wrongly linked global warming to natural disaster," TimesOnline, January 24, 2010 available at <http://www.timesonline.co.uk/tol/news/environment/article7000063.ece?token=null&offset=0&page=1> (last visited Feb. 10, 2010).

¹³ See IPCC WGII Fourth Assessment Report, Expert Review Comments, p. 121 available at (http://ipcc-wg2.gov/AR4/SOD_COMMS/Ch01_SOD_Expert.pdf) (last visited Feb. 10, 2010)

he commented on his blog, “[N]ot only did the IPCC AR4 WGII egregiously misrepresent the science of disasters and climate change, but when questions were raised about that section by at least one expert reviewer, it simply made up a misleading and false response about my views.”¹⁴

Pielke, Jr. summarized the treatment of the science of disasters and climate change by the IPCC, the Stern Report, and the US Climate Change Science Program (“CCSP”) as follows:

The information above documents a pattern of misrepresentation of the science of disasters and climate change in the Stern Review report, the reports of the IPCC, and the US CCSP. The pattern of misrepresentation has three common characteristics:

1. Reliance on non-peer reviewed, unsupportable studies rather than the relevant peer reviewed literature.
2. Reliance on and featuring non-peer reviewed work conducted by the authors of the assessment reports.
3. Repeated reliance on a small number of secondary or tertiary sources, repeatedly cited such that intellectual provenance is lost.¹⁵

According to Pielke, Jr. “The IPCC treatment of the science of disasters and climate change is an even worse breach of scientific standards than the errors associated with Himalayan glaciers.”¹⁶

The EPA Endangerment Finding relies heavily on the assertion that AGW will cause extreme weather events to become more frequent and more severe and thus

¹⁴ Roger Pielke, Jr., “What Does Pielke Think About This?” *available at* <http://rogerpielkejr.blogspot.com/2010/01/what-does-pielke-think-about-this.html> (last visited Feb. 10, 2010)

¹⁵ Roger Pielke, Jr., “Systematic Misrepresentation of the Science of Disasters and Climate Change,” *available at* <http://rogerpielkejr.blogspot.com/2009/06/systematic-misrepresentation-of-science.html>, (last visited Feb. 10, 2010)

¹⁶ Roger Pielke, Jr., “A Primer on Egregious Errors in IPCC WG2 on Disasters,” *available at* <http://rogerpielkejr.blogspot.com/2010/01/primer-on-egregious-errors-in-ipcc-wg2.html> (last visited Feb. 10, 2010)

constitute a danger to human health and welfare – an essential element of the Finding. To support this assertion the Finding in turn relies heavily on the IPCC’s reports on weather disasters.

The errors and misrepresentations in the IPCC and CCSP reports on weather disasters issues were presented in detail to the Agency in comment 3303. *See* RTC 1-15.

This comment showed that both the IPCC and especially the CCSP had fraudulently asserted that AGW was causing increased frequency and severity of extreme weather events. The comment stated:

In 2007 the IPCC released its Fourth Assessment Report and it relied on the single non-peer reviewed Muir-Wood (2006) [9] study cherrypicked from the Hohenkammer workshop as the single study to highlight in its review of this topic. [12] The same critique of the Stern report’s reliance on this Muir-Wood study above applies to the IPCC’s reliance on it as well. Further, the IPCC included a graph [13] attempting to show how closely temperature anomalies match up with disaster losses, using a scaling of the axes to suggest a relationship where none has been shown in the peer-reviewed literature. Again it relies on Muir-Wood (2005). Coincidentally, Robert Muir-Wood, of Risk Management Solutions, Inc., was an author of the chapter of the IPCC report that selectively highlighted his own non-peer reviewed work.

The US Climate Change Science Program systematically and repeatedly misrepresented the science of disasters and climate change. First, the CCSP US extremes report [14] miscited several of Roger Peilke’s papers in support of claims that they did not make and relied on Mills 2005 as the definitive source on this topic. [16] The disasters and climate change section of this CCSP report is also a fact checker’s nightmare. Second the CCSP draft Synthesis report and final Synthesis report [15] relied on non-peer reviewed work by Evan Mills and ignored relevant peer reviewed research showing different results (in fact all peer reviewed research points in the same direction on this subject). Coincidentally, Evan Mills was an author of the CCSP Synthesis Report that highlights his own non-peer reviewed work. Mills also apparently consults for companies with an interest in climate policies, and yet this was not disclosed by the CCSP.

Comment 3303 (notes omitted).¹⁷

In response to this contention that IPCC relied on previously refuted non-peer-reviewed literature and that the CCSP had misrepresented the literature, the EPA began in RTC 1-15 by reviewing the IPCC's guidelines for citing non-peer reviewed literature, and concluded that "These procedures establish that the IPCC rely [sic] almost exclusively on peer-reviewed literature. The procedures also provide a comprehensive, transparent and robust process in the rare circumstances where unpublished or non-peer reviewed material is used."

The EPA then had this to say regarding the Munich Re and Muir Woods papers:

The commenter describes two pieces of literature that were referenced by IPCC but not published in peer reviewed journals: 1) a natural catastrophes report by Munich Re (2000) that was cited in IPCC Third Assessment Report (IPCC, 2001), and 2) a paper on trends in weather-related catastrophes by Muir-Wood et al. (2006). **The identification of only two examples out of the thousands of references cited in the IPCC (2000) and (2007) reports provides more support for the rigor of the IPCC process.** Further, these specific studies were neither the central nor sole evidence used in forming the broader conclusions of the IPCC; such broader conclusions are based on multiple lines of evidence and peer-reviewed literature.

RTC Response 1-15, p. 16. (Emphasis added). It is a very peculiar logic that treats proof of what appears to be scientific fraud as demonstrating "the rigor of the IPCC's process." No response whatsoever is made to the substance of the comment concerning the CCSP's misrepresentation of the literature and the central underlying point that there was no legitimate evidence that manmade climate change was causing an increase in weather disasters. The question naturally arises as to why the EPA avoided these points. One of

¹⁷ <http://www.regulations.gov/search/Regs/home.html#documentDetail?R=09000064809d682a> (last visited Feb. 11, 2010). The comment is far more legible if the html file is downloaded and viewed in a web browser.

the lead authors of the CCSP report so vigorously attacked in Comment 3303 is Thomas Wilbanks, of the DOE Oak Ridge National Laboratory. The same Thomas Wilbanks was a Federal expert reviewer for the TSD. TSD p. 2. Thus, the EPA ignored and avoided the substance of a comment that pointed out that a report of which one of its expert reviewers was a lead author had “systematically and repeatedly misrepresented the science of disasters and climate change.”

The IPCC is now reconsidering its position on extreme weather events,¹⁸ which leaves the EPA in the position of reposing more confidence in the IPCC than the IPCC does in itself. The EPA should follow the lead of the IPCC and reconsider its position on extreme weather events, and give due consideration the actual scientific consensus on this issue.

B. HIMALAYAN GLACIER FRAUD

The IPCC reported that Himalayan glaciers would melt by 2035.¹⁹ The EPA adopted this claim. Table 16.1, at p. 162 of the TSD states:

Glacier melt in the Himalayas is projected to increase flooding and rock avalanches from destabilized slopes and to affect water resources within the next two to three decades. This will be followed by decreased river flows as the glaciers recede.

In late 2009, the Indian Government Ministry for Environment and Forests released a comprehensive analysis of Himalayan glaciers by V.L. Raina, which showed that the

¹⁸ See “UN wrongly linked global warming to natural disaster,” TimesOnline, January 24, 2010 available at

<http://www.timesonline.co.uk/tol/news/environment/article7000063.ece?token=null&offset=0&page=1> (last visited Feb. 10, 2010) (quoting Professor Jean-Pascal van Ypersele, the vice-chair of the IPCC, as saying “We are reassessing the evidence and will publish a report on natural disasters and extreme weather with the latest findings. Despite recent events the IPCC process is still very rigorous and scientific.”)

¹⁹ See AR4 WG2 Chap 10.6.2, pp 469-506, available at http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch10s10-6-2.html (last visited Feb. 10, 2010)

IPCC claim was incorrect.²⁰ IPCC Chairman Pachauri ridiculed the study as “extremely arrogant,” “schoolboy science,” “totally unsubstantiated,” and “voodoo science.”²¹ Yet Raina was right, and Pachauri and the IPCC were wrong.

Press reports indicate that the authors of this section of the IPCC report knew the claim was false, but included it anyway in order to provoke policy makers to action. The U.K. Daily Mail reported that:

The scientist behind the bogus claim in a Nobel Prize-winning UN report that Himalayan glaciers will have melted by 2035 last night admitted it was included purely to put political pressure on world leaders.

Dr Murari Lal also said he was well aware the statement, in the 2007 report by the Intergovernmental Panel on Climate Change (IPCC), did not rest on peer-reviewed scientific research.

In an interview with The Mail on Sunday, Dr Lal, the co-ordinating lead author of the report’s chapter on Asia, said: “It related to several countries in this region and their water sources. **We thought that if we can highlight it, it will impact policy-makers and politicians and encourage them to take some concrete action.**

“It had importance for the region, so we thought we should put it in.”²²

(Emphasis added). The original source for the claim was not peer-reviewed scientific literature – it was an interview in New Scientist Magazine with Syed Hasnain that was later cited in a World Wildlife Fund report that was in turn cited by the IPCC. *Id.* Mr. Hasnain is now employed at TERI, the company Mr. Pachauri founded. TERI, sought

²⁰ Reprint available at <http://scienceandpublicpolicy.org/images/stories/papers/reprint/Raina-Himalayan%20Glaciers%20Reprint.pdf> (last visited Feb. 10, 2010)

²¹ Guardian.co.uk, “India ‘arrogant’ to deny global warming link to melting glaciers,” available at <http://www.guardian.co.uk/environment/2009/nov/09/india-pachauri-climate-glaciers> (last visited Feb. 10, 2010)

²² UK Daily Mail, “Glacier scientist: I knew data hadn’t been verified” January 24, 2010, available at <http://www.dailymail.co.uk/news/article-1245636/Glacier-scientists-says-knew-data-verified.html> (last visited Feb. 10, 2010).

research contracts based on the claim of Himalayan glacier melt - \$500,000 from the Carnegie Corporation and a large portion of \$4 million in EU funding.²³

The Himalayan glacier melt claim was shown to be false by the foremost living scientific expert on mountains and the Himalayas, Professor Jack. D. Ives in 2005 in the *Himalayan Journal of Science*, a peer-reviewed scientific journal. In the article Ives states that for the glaciers to melt as claimed the mean temperature would have to increase by “about 12-18° C.”²⁴ As the Sunday Times put it, “glaciologists find such figures inherently ludicrous.” Yet the IPCC asserted the likelihood of the melting was “very high,” or more than 90%. The IPCC thus included a knowingly false and inherently implausible claim that had previously been demolished in peer-reviewed literature in order to stimulate a response from policy-makers.

The scheme was successful with the EPA, which adopted the false claim and relied upon it in the Endangerment Finding.

The IPCC has now grudgingly retracted the claim of imminent Himalayan glacier melt, though it claims the overall conclusions regarding glacial melt are “robust.”²⁵ How their conclusions can be fake but accurate is not evident. The EPA should follow the

²³ TERI, “TERI Collaborates with Iceland in the fields of glaciology and soil science,” Jan. 15, 2010 http://www.teriin.org/index.php?option=com_pressrelease&task=details&sid=171 (last visited Feb. 10, 2010); TimesOnline, “UN climate chief Rajendra Pachauri ‘got grants through bogus claims,’ January 24, 2010 available at <http://www.timesonline.co.uk/tol/news/environment/article6999975.ece> (last visited Feb. 10, 2010). The grant referred to in this TimesOnline article was suspended by the Carnegie Corporation prior to funding, at the request of the direct recipient, Iceland’s Global Centre. See DNA, “Carnegie Corporation of New York denies funding TERI,” available at http://www.dnaindia.com/world/report_carnegie-corporation-of-new-york-denies-funding-teri_1343008 (last visited Feb. 10, 2010).

²⁴ Ives, J., *Himalayan misconceptions and distortions: What are the facts?* Himalayan Journal of Sciences, North America, Vol 3, No. 5, p. 15-25, at p. 21 (2005), available at <http://www.nepjol.info/index.php/HJS/article/view/457/447> (last visited Feb. 10, 2010).

²⁵ IPCC Statement on the melting of Himalayan glaciers. Available at <http://www.ipcc.ch/pdf/presentations/himalaya-statement-20january2010.pdf> (last visited Feb. 10, 2010)

IPCC's lead and reconsider this issue by granting this Petition for Reconsideration.

C. DISAPPEARING MOUNTAIN ICE CLAIM

The Sunday Telegraph reported on January 30, 2010 that

In its most recent report, [the IPCC] stated that observed reductions in mountain ice in the Andes, Alps and Africa was being caused by global warming, citing two papers as the source of the information.

However, it can be revealed that one of the sources quoted was a feature article published in a popular magazine for climbers which was based on anecdotal evidence from mountaineers about the changes they were witnessing on the mountainsides around them.

The other was a dissertation written by a geography student, studying for the equivalent of a master's degree, at the University of Berne in Switzerland that quoted interviews with mountain guides in the Alps.²⁶

The article from the climbing magazine was based on anecdotal reports from climbers.

The master's degree dissertation was written by a geography student and was based on interviews with approximately 80 mountain guides in the Bernina region of the Swiss Alps and appears to have actually concluded that "In how far the changes observed indicate a global change of climate can only be guessed and will show in the future."²⁷

In this episode the IPCC relied on non-peer-reviewed literature and in fact misrepresented that literature. The EPA should reconsider its reliance on the IPCC's reporting now that the IPCC's conclusion has been shown to be so poorly supported.

D. AFRICAN CROP YIELDS CLAIM

The TSD at Table 16.1, p. 162 states the following regarding an expected collapse

²⁶ Telegraph.co.uk, "UN climate change panel based claims on student dissertation and magazine article," January 30, 2010, *available at* <http://www.telegraph.co.uk/earth/environment/climatechange/7111525/UN-climate-change-panel-based-claims-on-student-dissertation-and-magazine-article.html> (last visited Feb. 10, 2010).

²⁷ Climatequotes.com, "The story of the Geography Major" Dissertation," *available at* <http://climatequotes.com/2010/01/31/the-story-of-the-geography-major-dissertation/> (last visited Feb. 10, 2010).

in African crop yields:

Agricultural production, including access to food, in many countries and regions is projected to be severely compromised by climate variability and change. The area suitable for agriculture, the length of growing seasons, and yield potential, particularly along the margins of semi-arid and arid areas, are expected to decrease. This would further adversely affect food security and exacerbate malnutrition in the continent. In some countries, yields from rain-fed agriculture could be reduced by up to 50% by 2020.

The EPA's source is the IPCC, which said in its Synthesis Report that:

By 2020, in some countries, yields from rain-fed agriculture could be reduced by up to 50%. Agricultural production, including access to food, in many African countries is projected to be severely compromised. This would further adversely affect food security and exacerbate malnutrition.

AR4 Synthesis Report, § 3.2.2, p. 50. The Synthesis Report is the pinnacle of IPCC

reporting.²⁸ This reference was based on the following statement from the report of

Working Group II:

In other [African] countries, additional risks that could be exacerbated by climate change include greater erosion, deficiencies in yields from rain-fed agriculture of up to 50% during the 2000-2020 period, and reductions in crop growth period (Agoumi, 2003).

IPCC WGII, Page 448. 9.4.4. The Agoumi study²⁹ cited here by the IPCC very briefly

stated that in three African countries there was a risk of erosion, soil degradation and a

²⁸ The Foreword to the Synthesis Report describes it thusly:

[The Synthesis Report] summarises the findings of the three Working Group reports and provides a synthesis that specifically addresses the issues of concern to policymakers in the domain of climate change: it confirms that climate change is occurring now, mostly as a result of human activities; it illustrates the impacts of global warming already under way and to be expected in future, and describes the potential for adaptation of society to reduce its vulnerability; finally it presents an analysis of costs, policies and technologies intended to limit the extent of future changes in the climate system.

http://www.ipcc.ch/publications_and_data/ar4/syr/en/frontmattersforeword.html (last visited Feb. 10, 2010).

²⁹ Agoumi, A., 2003: Vulnerability of North African countries to climatic changes: adaptation and implementation strategies for climatic change. Developing Perspectives on Climate Change: Issues and Analysis from Developing Countries and Countries with Economies in Transition.

decline in yields from rain-based agriculture of up to 50% by 2020. Agoumi's paper was not peer-reviewed, but was instead a review paper prepared by an advocacy group, The International Institute for Sustainable Development (IISD).³⁰ Agoumi's paper in turn cited to two sources. Dr. Richard North³¹ reports that upon examination, one of these two sources is not available on line, and the other, consisting of "initial national communications" by Algeria, Tunisia and Morocco to COP-7 in October 2001, do not support the proposition for which they are cited. The Moroccan report lends some support, saying that by 2020 during drought conditions cereal yields would decline up to 50%.³² However, Algeria's report said their yields would double, and be trimmed only slightly by "climate change."³³ Tunisia's submission concluded the picture was mixed, but they could have an increase in rain and agricultural production.³⁴ North summarizes the level of support for the statement in the Synthesis report thusly:

the only support he has, on the basis of the primary references, is data from **one** country – singular, rather than plural, unsupported by peer reviewed research. And that is set against increased production

IISD/Climate Change Knowledge Network, 14 pp.; *available at* http://www.cckn.net/pdf/north_africa.pdf (last visited Feb. 10, 2010).

³⁰ See Ben Pile., "More Laundered Literature: A Guest Post by Ben Pile," available at <http://rogerpielkejr.blogspot.com/2010/01/more-laundered-literature-guest-post-by.html> (last visited Feb. 10, 2010).

³¹ Dr. Richard North is a British author and commentator who was among the first to point out Rajendra Pachauri's potential conflicts of interest. He blogs at eureferendum.blogspot.com

³² Richard North, "And Now for Africagate," February 7, 2010, *available at* <http://eureferendum.blogspot.com/2010/02/and-now-for-africagate.html> (last visited Feb. 10, 2010) (hereinafter "North, Africagate") *citing* Kingdom of Morocco, Executive Summary, First National Communication, United Nations Framework Convention on Climate Change, October 2001, *available at* <http://unfccc.int/resource/docs/natc/morncl1e.pdf>, p. 11 (last visited Feb. 10, 2010).

³³ North, Africagate, *citing* Republic of Algeria, Elaboration de la stratégie et du plan d'action national des changements climatiques, Mars 2001, Communication Nationale Initiale *available at* <http://unfccc.int/resource/docs/natc/algnc1.pdf>, p. 85 (last visited Feb. 10, 2010) (translation by Richard North).

³⁴ North, Africagate, *citing* "Initial Communication of Tunisia under the United Nations Framework Convention on Climate Change, <http://unfccc.int/resource/docs/natc/tunnc1esum.pdf>, p. 11. (last visited Feb. 10, 2010).

in a neighbouring country – albeit slightly trimmed - while another could actually see rain-fed yields increase overall. Then, the data apply to cereal yields only, not crops in general as is implied by the IPCC.³⁵

Ultimately there is no support for the IPCC’s dramatic pronouncement on African crop yields, a view shared by the former chairman of the IPCC, Robert Watson.³⁶ In contrast to the IPCC’s unsupported African horror stories, satellite photographs show the greening of the Sahel as reported by National Geographic News³⁷ and several papers.³⁸

Yet the story does not end here.³⁹ The co-chair of Working Group II (WGII), in which the African crop yields claim appeared, Martin Parry, had himself written a paper in October 2005 on the subject of the effect of climate change on crop yields.⁴⁰ He concluded from model runs that “By the 2020s, small changes in cereal yield are evident

³⁵ North, Africagate.

³⁶ The Sunday Times, “Africagate: top British scientist says UN panel is losing credibility,” February 7, 2010 *available at* <http://www.timesonline.co.uk/tol/news/environment/article7017907.ece> (last visited Feb. 10, 2010) quoting Robert Watson as saying “Any such projection should be based on peer-reviewed literature from computer modelling of how agricultural yields would respond to climate change. I can see no such data supporting the IPCC report.”)

³⁷ National Geographic, Sahara Desert Greening Due to Climate Change? July 31, 2009, *available at* <http://news.nationalgeographic.com/news/2009/07/090731-green-sahara.html> (last visited Feb. 10, 2010).

³⁸ Seaquist1, et al., Disentangling the effects of climate and people on Sahel vegetation dynamics, *Biogeosciences*, 6, 469–477, 2009, *available at* <http://www.biogeosciences.net/6/469/2009/bg-6-469-2009.pdf> (last visited Feb. 10, 2010); Anyamba, A. and Tucker, C.J. 2005. Analysis of Sahelian vegetation dynamics using NOAA-AVHRR NDVI data from 1981-2003. *Journal of Arid Environments* 63: 596-614; Hutchinson, C.F., Herrmann, S.M., Maukonen, T. and Weber, J. 2005. Introduction: The “Greening” of the Sahel. *Journal of Arid Environments* 63: 535-537; Nicholson, S. 2005. On the question of the ‘recovery’ of the rains in the West African Sahel. *Journal of Arid Environments* 63: 615-641; Olsson, L., Eklundh, L. and Ardo, J. 2005. A recent greening of the Sahel - trends, patterns and potential causes. *Journal of Arid Environments* 63: 556-566.

³⁹ See Richard North, “A wolf in sheep’s clothing,” Feb. 10, 2010, *available at* <http://eureferendum.blogspot.com/2010/02/wolf-in-sheeps-clothing.html> last visited Feb. 14, 2010.

⁴⁰ M. Parry, et al., “Climate change, global food supply and risk of hunger,” *Phil. Trans. R. Soc. B* (2005) 360, 2125–2138, *available at* http://ncsp.va-network.org/UserFiles/File/PDFs/Resource%20Center/Agriculture/Food_supply_hunger.pdf, last visited Feb. 14, 2010.

in all scenarios, but these fluctuations are within historical variations.”⁴¹ In the worst case scenario, Parry reported that by 2080 there would be losses in yield of “up to 30%” in Africa and parts of Asia. Parry’s 2005 paper was not mentioned anywhere in the Synthesis Report or the WGII report. Professor Mike Hulme, a coordinating lead chapter author in the IPCC Third Assessment Review on “Climate Scenario Development,” had also written a 2001 paper on African Climate Change.⁴² Hulme was careful to note uncertainties: “the ultimate causes of the lower frequency decadal and multi-decadal rainfall variability that affects some African climate regimes, especially in the Sahel region, remain uncertain.”⁴³ He further observed “the extent to which these rainfall variations are related to greenhouse gas induced global warming, however, remains undetermined.”⁴⁴

Both Parry’s own paper and Hulme’s paper were known to and available to Professor Parry in composing the WGII Report and the Synthesis Report. Yet, Parry’s WGII report ignored his own paper and that of Hulme, which did not predict disaster, and instead relied on one that did, the Agoumi paper, even though it did so incorrectly and improperly and was not peer-reviewed. And it was Agoumi’s false report that was adopted in the Synthesis Report. Whether this was a deliberate misrepresentation in order to stimulate a policy response as in the case of the Himalayan glaciers has yet to be established, but the question reasonably arises from the circumstances.

Mr. Pachauri has repeatedly raised the alarm of an imminent collapse in African

⁴¹ *Id.* at 2134.

⁴² Hulme, et al., “African Climate Change: 1900-2100,” *Climate Research* Vol. 17: 145–168, 2001 available at <http://www.int-res.com/articles/cr/17/c017p145.pdf>, last visited Feb. 14, 2010.

⁴³ *Id.* at 145.

⁴⁴ *Id.* at 165.

crop yields in his public speeches and presentations as head of the IPCC.⁴⁵

The African Crop Yields claim stands as another example of the IPCC making a claim of imminent disaster that inappropriately relied on non-peer-reviewed literature, and ignored contrary peer-reviewed literature, and of the EPA uncritically adopting the faulty conclusion. EPA should reconsider its position.

E. AMAZONGATE

Table 16.1 at p. 162 of the TSD makes another claim that has been exposed as unsupported, that part of the rain forests of the Amazon will turn in to savanna:

By mid-century, increases in temperature and associated decreases in soil water are projected to lead to gradual replacement of tropical forest by savanna in eastern Amazonia. Semi-arid vegetation will tend to be replaced by arid-land vegetation. There is a risk of significant biodiversity loss through species extinction in many areas of tropical Latin America.

This is adopted from Section 13.4.1, p. 596 of WGII of the IPCC 4th AR, which asserts that up to 40% of the Amazon rain forest “could react drastically to even a slight reduction in precipitation.”⁴⁶ The IPCC discussion of this issue cites to Rowell and Moore, 2000. This paper was published by the World Wildlife Federation and the International Union for the Conservation of Nature. Thus, the report is not peer-reviewed and was prepared by two advocacy groups. The authors are a free-lance journalist and a forest fire specialist. Upon examination, their report states that “Up to 40% of the Brazilian forest is extremely sensitive to small reductions in the amount of rainfall,”⁴⁷

⁴⁵ *Id.*

⁴⁶ IPCC Working Group 2 Assessment Report 4, Chapter 13, *available at* <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter13.pdf> (last visited Feb. 10, 2010).

⁴⁷ *See* Richard North, “The corruption of science,” January 26, 2010, *available at* <http://eureferendum.blogspot.com/2010/01/corruption-of-science.html>, (last visited Feb. 2010),

which is somewhat supportive of the IPCC's statement. However, Rowell and Moore in turn rely to a peer-reviewed letter in *Nature* which says only that "Although logging and forest surface fires usually do not kill all trees, they severely damage forests. Logging companies in Amazonia kill or damage 10-40% of the living biomass of forests through the harvest process," and that forests damaged by logging and fires are more susceptible to damage by drought.⁴⁸ The letter in *Nature* did not address climate change and thus the ultimate source does not support the IPCC's assertion. It is a simple statement of fact that a blogger, Dr. Richard North, has been more diligent in verifying the accuracy of the IPCC's conclusions on this issue than either the IPCC itself or the EPA.

IV. THE EPA'S FAITH IN THE IPCC IS MISPLACED

The five incidents discussed above are a sample of the IPCC's frequent and inappropriate reliance on lurid claims of catastrophe in non-peer reviewed literature. Another diligent blogger⁴⁹ has shown that the IPCC relied 16 times on reports published by the World Wildlife Fund, a claim that is readily verified.⁵⁰ The same blogger identified eight papers published by Greenpeace that were relied on by the IPCC, and found that a host environmental activists from Greenpeace, the World Wildlife Fund, Friends of the Earth and the like served as expert reviewers for IPCC Working Group

citing Rowell & Moore, Global Review of Forest Fires, WWF/IUCN (2000), available at <http://data.iucn.org/dbtw-wpd/edocs/2000-047.pdf> (last visited Feb. 10, 2010).

⁴⁸ D. C. Nepstad, A. Verissimo, A. Alencar, C. Nobre, E. Lima, P. Lefebvre, P. Schlesinger, C. Potter, P. Moutinho, E. Mendoza, M. Cochrane, V. Brooks, Large-scale Impoverishment of Amazonian Forests by Logging and Fire, *Nature*, 1999, Vol 398, 8 April, pp505, available at http://www.ic.ucsc.edu/~wxcheng/envs23/lecture12/Fire_nature.pdf (last visited Feb. 10, 2010).

⁴⁹ The blogger is Donna Laframboise, founder of NoConsensus.org, <http://noconsensus.org/>

⁵⁰ Donna Laframboise, "More Dodgy Citations in the Nobel-Winning Climate Report, available at <http://nofrackingconsensus.blogspot.com/2010/01/more-dodgy-citations-in-nobel-winning.html> (last visited Feb. 10, 2010). She reports that typing "WWF" into the search box at the IPCC's AR4 website, http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html (last visited Feb. 10, 2010) yields many references to WWF papers and publications)

III.⁵¹

The recent revelations described above make the EPA's faith in the IPCC's supposedly "robust" procedures unfounded and misplaced. EPA should reconsider, as even the IPCC itself has done in the case of the glacier melting fraud and is currently doing in the case of African crop yields. If the EPA refuses it will find itself to be in the untenable position of refusing to reconsider its reliance on IPCC findings that the IPCC itself has withdrawn.

V. **PHIL JONES' BBC INTERVIEW**

On February 13, 2010, the BBC reported an interview with former Climate Research Unit director Phil Jones.⁵² Jones made headlines with several candid admissions that run against the grain of AGW orthodoxy. First, he stated that the rates of warming in the periods from 1860-1880, 1910-1940 and 1975-1998 were "similar and not statistically different from each other," with the caveat that the 1860 period was less certain because of its shorter length and sparser data. Second, he agreed that there has been no statistically significant warming since 1995. These points indicate that the 1975 to 1998 warming was not exceptional but is instead within natural climate variability, and weaken the claim that it was caused by human emissions of GHG, though Dr. Jones does not acknowledge either of these implications. Third, Dr. Jones acknowledged that the medieval warm period is "under debate," and that if it is shown to be global in extent, "then obviously the late 20th century warmth would not be unprecedented." Fourth, he said it "is not my view" that the debate on climate change is over and that "there is still

⁵¹ Donna Laframboise, "Greenpeace and the Nobel-Prize Winning Climate Report, *available at* http://nofrackingconsensus.blogspot.com/2010/01/greenpeace-and-nobel-winning-climate_28.html (last visited Feb. 10, 2010).

⁵² BBC News – Q&AQ: Professor Phil Jones, Feb. 13, 2010, *available at* <http://news.bbc.co.uk/2/hi/science/nature/8511670.stm> last visited Feb. 14, 2010.

much that needs to be undertaken to reduce uncertainties, not just for the future, but for the instrumental (and especially the paleoclimatic) past as well.”

VI. POTENTIAL CONFLICTS OF INTEREST OF IPCC CHAIR

Since the comment period closed, it has been revealed in the press that the chairman of the IPCC, Rajendra K. Pachauri, has multiple potential conflicts of interest.

As reported by the Telegraph:

What has also almost entirely escaped attention, however, is how Dr Pachauri has established an astonishing worldwide portfolio of business interests with bodies which have been investing billions of dollars in organisations dependent on the IPCC’s policy recommendations.

These outfits include banks, oil and energy companies and investment funds heavily involved in ‘carbon trading’ and ‘sustainable technologies’, which together make up the fastest-growing commodity market in the world, estimated soon to be worth trillions of dollars a year.

Today, in addition to his role as chairman of the IPCC, Dr Pachauri occupies more than a score of such posts, acting as director or adviser to many of the bodies which play a leading role in what has become known as the international ‘climate industry’.

It is remarkable how only very recently has the staggering scale of Dr Pachauri’s links to so many of these concerns come to light, inevitably raising questions as to how the world’s leading ‘climate official’ can also be personally involved in so many organisations which stand to benefit from the IPCC’s recommendations.⁵³

Pachauri vehemently denies any wrongdoing and makes counter-accusations.⁵⁴ As noted above in the specific case of the melting glaciers fraud, Pachauri’s company TERI stood

⁵³ Telegraph.co.uk, “Questions over business deals of UN climate change guru Dr Rajendra Pachauri,” December 20, 2009, *available at* <http://www.telegraph.co.uk/news/6847227/Questions-over-business-deals-of-UN-climate-change-guru-Dr-Rajendra-Pachauri.html> (last visited Feb. 10, 2010)

⁵⁴ The Times of India, “Pachauri slams charges about conflict of interest,” December 21, 2009, *available at* <http://timesofindia.indiatimes.com/india/Pachauri-slams-charges-about-conflict-of-interest/articleshow/5360077.cms> (last visited Feb. 10, 2010). In this article, Pachauri is quoted as saying “The people who have flung these charges are part of the same vested interest group which

to benefit from millions of dollars of contracts or grants to research the very problems the IPCC had exaggerated.⁵⁵ These potential conflicts of interest and the cascade of IPCC blunders have led to a loss of confidence in Pachauri and to demands for his resignation⁵⁶ by senior Canadian climate researcher Andrew Weaver,⁵⁷ the Times of London, and the director of Greenpeace in the UK.⁵⁸ India has launched its own climate change assessment in order to not be entirely dependent on an organization as beset with difficulties as the IPCC.⁵⁹

VII. THE IPCC'S CO₂ CYCLE MODELING SHOULD BE RECONSIDERED IN LIGHT OF RECENT EMPIRICAL OBSERVATIONS

EPA repeatedly asserts that CO₂ is well-mixed, taking its cues from the IPCC, which also makes this assertion. *See*, e.g. TSD p. 16. In response to comment 4-20, EPA rejected a commenter's contention that GHG's are not well mixed in the atmosphere as assumed in models, in part because no literature was cited by the commenter.

hacked the server of UK's East Anglia University.' In an interview with the New York Times, Pachauri contended that all fees for his consulting work go to TERI, the non-profit that he founded in 1982, and from which he apparently draws a modest salary. *See* The New York Times, "Skeptics Find Fault With U.N. Climate Panel," February 8, 2010, *available at* <http://www.nytimes.com/2010/02/09/science/earth/09climate.html> (last visited Feb. 10, 2010).

⁵⁵ *See* note 23, *supra*.

⁵⁶ Guardian.co.uk, "Indian glaciologist criticised by IPCC chief joins calls for resignation," January 29, 2010, *available at* <http://www.guardian.co.uk/environment/2010/jan/29/ipcc-rajendra-pachauri-glaciers>; Andrew Bolt, "Pachauri lied about Himalayan warning," *available at* http://blogs.news.com.au/heraldsun/andrewbolt/index.php/heraldsun/comments/pachauri_lied_about_himalayan_warning#66326 (last visited Feb. 10, 2010).

⁵⁷ The Windsor Star, "Canadian scientist says UN's global warming panel 'crossing the line'," January 26, 2010, *available at* <http://www.windsorstar.com/technology/Canadian+scientist+says+global+warming+panel+crossing+line/2487264/story.html> (last visited Feb. 10, 2010).

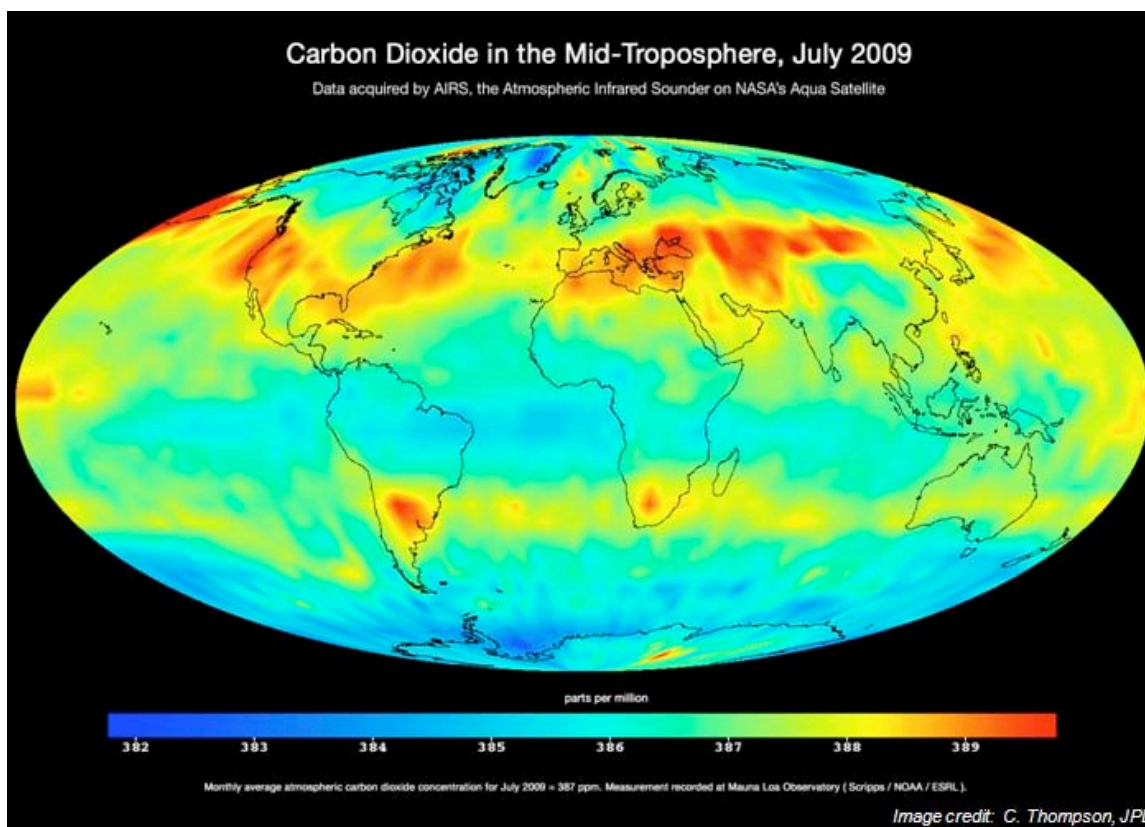
⁵⁸ The Sunday Times, "Bad science needs good scrutiny," January 31, 2010, *available at* http://www.timesonline.co.uk/tol/comment/leading_article/article7009653.ece; (last visited Feb. 10, 2010).

⁵⁹ Telegraph.co.uk, "India forms new climate change body," February 4, 2010, *available at* <http://www.telegraph.co.uk/earth/environment/climatechange/7157590/India-forms-new-climate-change-body.html> (last visited Feb. 10, 2010).

NASA has cured this deficiency. The AIRS satellite has collected data refuting the well-mixed assumption:

AIRS research data have led to some key findings about mid-tropospheric carbon dioxide. For example, the data have shown that, contrary to prior assumptions, carbon dioxide is not well mixed in the troposphere, but is rather “lumpy.” Until now, **models** of carbon dioxide transport have assumed its distribution was uniform.⁶⁰

(Emphasis added). The following image⁶¹ shows that CO₂ is not well-mixed in the troposphere:



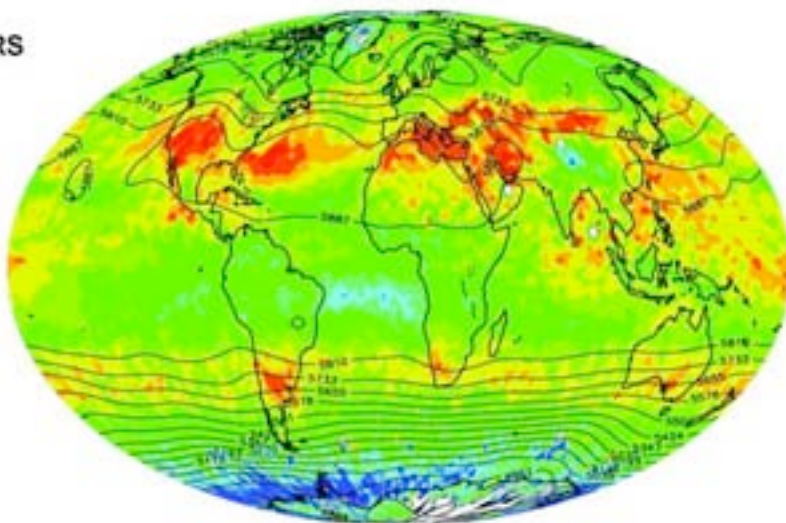
The same point is clear from the following image⁶² as well:

⁶⁰ Jet Propulsion Lab, “NASA Outlines Recent Breakthroughs in Greenhouse Gas Research,” December 15, 2010 available at <http://www.jpl.nasa.gov/news/news.cfm?release=2009-196> (last visited Feb. 10, 2010)

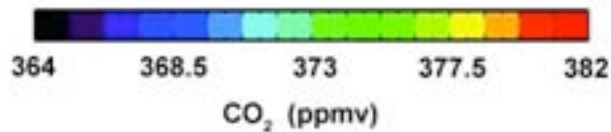
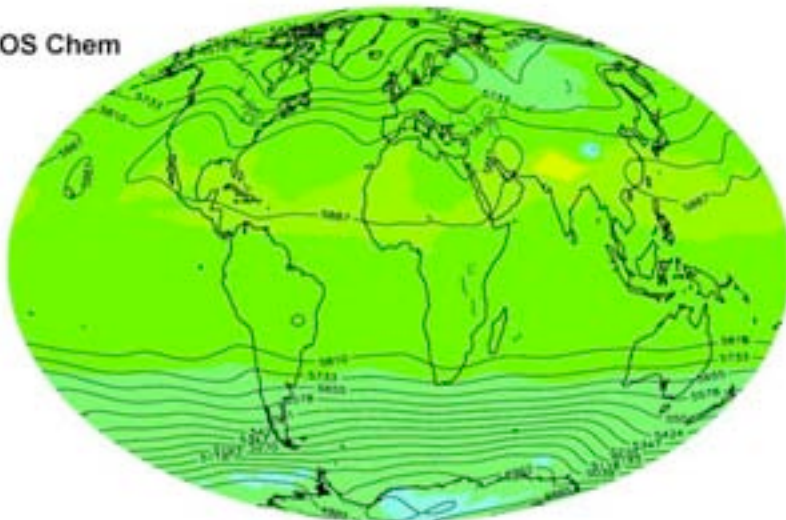
⁶¹ http://www.nasa.gov/images/content/411791main_slide5-AIRS-full.jpg (last visited Feb. 10, 2010).

⁶² http://www.nasa.gov/images/content/411773main_slide11-AIRS-full.jpg (last visited Feb. 10, 2010).

AIRS



GEOS Chem



NASA’s caption for this image states “AIRS data show that carbon dioxide is not well mixed in Earth’s atmosphere, results that have been validated by direct measurements.”⁶³

These satellite measurements are from the mid-troposphere. CO₂ gradients at that

⁶³ NASA, Recent breakthroughs in Greenhouse Gas Research: Multimedia, December 15, 2009, available at <http://www.nasa.gov/topics/earth/agu/airs-images20091214.html> (last visited Feb. 10, 2010).

altitude necessarily reflect some degree of mixing from the gradients at the surface, and yet are clearly not “well-mixed” as stated by NASA.

The well-mixed assumption is indispensable to AGW model of the CO₂ cycle. By assuming a uniform or well-mixed distribution of CO₂, it paves the way for tacking modern measurements of CO₂ taken at Mauna Loa onto those taken from ice core samples collected at Vostok and elsewhere. These observations, which show a meaningful difference in CO₂ concentrations between these two locations, show that technique is flawed, and that the analysis should be revisited.

The well-mixed assumption flows from the assertion that CO₂ is long-lived in the atmosphere, as the long residence time allows sufficient time for the mixing to occur. The long residence time is based on the assertion that there is a bottleneck in uptake of anthropogenic CO₂ emissions. This assertion is contradicted by a recently reported finding based on actual observational data that that the airborne fraction of CO₂ has not changed since 1850. Dr. Wolfgang Knorr at the University of Bristol found that in fact the trend in the airborne fraction since 1850 has only been $0.7 \pm 1.4\%$ per decade, which is essentially zero.⁶⁴ The EPA assumes from models that the airborne fraction will increase based on the belief that the CO₂ sinks will become saturated, based on the IPCC’s carbon cycle model. See TSD p. 61. Yet Knorr’s study showed no change in the airborne fraction, and therefore no change in the capacity of CO₂ sinks, since 1850 despite the fact that human CO₂ emissions have gone from about 2 billion tons a year in 1850 to 35 billion tons a year now. These observations show that there is no bottleneck in

⁶⁴ W. Knorr (2009), *Is the airborne fraction of anthropogenic CO emissions increasing?*, *Geophys. Res. Lett.*, 36, L21710, doi:10.1029/2009GL040613; University of Bristol press release, “Controversial new climate change results,” November 9, 2009 *available at* <http://bristol.ac.uk/news/2009/6649.html> (last visited Feb. 10, 2010).

the uptake of anthropogenic CO₂ emissions. This gravely undermines the assumption that CO₂ is long-lived and well-mixed and by the same token dovetails with NASA's observations that CO₂ is in fact *not* well-mixed, and with the many experimental proofs that CO₂ has a short residence time.⁶⁵

These results contradict the IPCC's version of the carbon cycle, upon which the climate models and claims of catastrophic AGW are based. The EPA should reconsider its responses to comments 2-2 and 2-3, its reliance on the IPCC's version of the carbon cycle, and its reliance on climate models that incorporate the IPCC's version of the carbon cycle. Agreement between and among computer models is not empirical data and is not sufficient in science, logic or law to overcome contrary empirical observations. In other words, the data invalidate the models, not the other way around. The EPA should grant this petition and reconsider its position in light of these empirical observations.

VIII. EPA SHOULD WITHDRAW THE ENDANGERMENT FINDING AND LET THE ONGOING IPCC SCANDALS RUN THEIR COURSE BEFORE REEVALUATING THE SCIENCE.

Events have overtaken the EPA's GHG Endangerment Finding. The ongoing and astonishing cascade of revelations concerning the IPCC is not yet complete. The cumulative effect is such that even its former chairman, Robert Watson, has warned that it is on the verge of losing all credibility.⁶⁶ The EPA has relied upon the IPCC to such an extent and has adopted so many of the IPCC's errors that it can be readily foreseen that

⁶⁵ See Segalstad, T.V. (1997) "Carbon Cycle Modeling and the Residence Time of Natural and Anthropogenic Atmospheric CO₂: On the Construction of the 'Greenhouse Effect Global Warming' Dogma," "Global Warming: The Continuing Debate," European Science and Environment Forum (ESEF) (Cambridge, England: 1998), <http://folk.uio.no/tomvs/esef/ESEF3VO2.htm> (last visited Feb. 11, 2010).

⁶⁶ The Sunday Times, "Africagate: top British scientist says UN panel is losing credibility," February 7, 2010 available at <http://www.timesonline.co.uk/tol/news/environment/article7017907.ece> (last visited Feb. 10, 2010).

the firestorm now surrounding the IPCC will also engulf the EPA. By itself, Table 16.1 at p. 162 of the TSD incorporates three improperly drawn conclusions of the IPCC – the Himalayan glacier claim, the African crop yield claim and the Amazonian drying claim.

In each of the instances discussed above the IPCC made lurid claims of disaster that turned out to be unsupported at best or fraudulent at worst. The IPCC “supported” these claims with non-peer-reviewed nightmare scenarios and ignored several peer-reviewed analyses that gave no cause for alarm. And in some instances, if even the non-peer reviewed literature was not sufficiently frightening, then the IPCC embellished its claims by outright misrepresentation. This is not science; it is ideology unconstrained by the facts. It is not a proper foundation for rulemaking.

The Agency should grant this petition and convene a proceeding to reconsider its GHG Endangerment Finding.

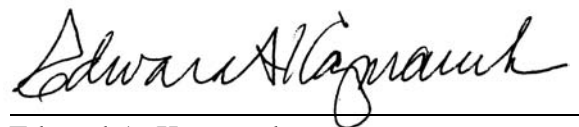
Respectfully submitted this 16th day of February 2010.

Attorneys for Petitioners



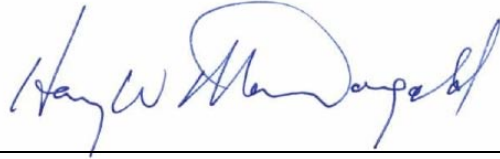
Shannon L. Goessling
Executive Director and Chief Legal Counsel
Southeastern Legal Foundation

Southeastern Legal Foundation
6100 Lake Forrest Drive, Suite 520
Atlanta, Georgia 30328
(404) 257-9667
Fax:(404) 257-0049



Edward A. Kazmarek

Kazmarek Geiger & Laseter LLP
3490 Piedmont Road NE, Suite 201
Atlanta, GA 30305
404-812-0840
Fax: 404-812-0845
E-mail: skazmarek@kglattorneys.com

A handwritten signature in blue ink, reading "Harry W. MacDougald". The signature is written in a cursive style with a large, prominent loop for the letter 'D'.

Harry W. MacDougald

Caldwell & Watson LLP
5825 Glenridge Dr., N.E.
Building Two, Suite 200
Atlanta, GA 30328-5579
(404) 843-1956
Fax: (404) 843-2737
E-mail: hmacdougald@cwlaw.org