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**U.S. House of Representatives**  
**Committee on Resources**  
**Washington, DC 20515**

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December 15, 2003

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Dr. Margo Schwab  
Office of Information and Regulatory Affairs  
Office of Management & Budget  
775 17<sup>th</sup> Street, N.W.  
New Executive Office Building  
Room 10201  
Washington, DC 20503

Dear Dr. Schwab:

We appreciate the opportunity to offer comments on the September 15, 2003 Federal Register Notice of OMB's proposed bulletin issued under the authority of the Information Quality Act (Section 515 of Public Law 106-554) and Executive Order 12866. The purpose of the proposed bulletin is to require peer review of scientific or technical studies that contain influential information with a clear and substantial impact on regulatory policies. We regard your use of the peer review process to be a good start at bringing sound and sensible science to the regulatory process. We stress however, it is not the complete answer to the lack of sound and sensible science in regulatory policy.

Peer review like all science is subject to peer pressure — a fact noted by the historian and philosopher of science Thomas Kuhn in his 1963 book "The Structure of Scientific Revolutions." Since 1963, the role of peer pressure in the practice of modern science has been documented by many other workers. One of the places in which peer pressure comes into play is in the peer review process where other workers in a field are asked to review a colleague's work.

The role of peer review in obstructing the publication of ideas is documented in Chapter 13 of the 1976 book "The Way the Earth Works" by Cal Tech's Emeritus Professor of Geology, Peter J. Wyllie. In his book, Professor Wyllie relates the story of a Canadian continental drift researcher who was advised that his twice rejected, early 1963 paper on sea floor spreading was only fit for interesting talk at cocktail parties. Later that year, similar work by other researchers was published by a major scientific publication and accorded priority status by subsequent workers.

Most recently, British paleontologist Richard Fortey in Chapter 10 his 1997 book "Life" has detailed the

rise of the Alvarez Theory in which an asteroid impact killed off the dinosaurs at the end of the Cretaceous. The book notes that the impact crater buried under the Yucatan Peninsula was accorded the status of the "smoking gun" in the early 1990's. Fortey notes that by 1994 few seemed willing to challenge the new orthodoxy. Yet today, there is an ongoing debate on the Geological Society of London's website between contrarian researchers and proponents of the orthodox view of the end of the dinosaurs. The core of the argument against the impact crater being the dinosaur killer is that it predated the end-Cretaceous mass extinction by about 300,000 years, and did not cause the demise of either marine or terrestrial organisms. The debate is not over yet.

The willingness of the skeptics to place their views into the public record is remarkable. They have challenged the accepted orthodoxy and must persuade the greater mass of uninvolved scientists to abandon the consensus that now exists. By challenging the orthodoxy with their data and arguments, they are doing what responsible scientists must do to ensure that bad science does not continue to hold center stage. They are also placing their careers and perhaps their future funding at risk by arguing against scientific consensus.

Mr. Michael Crichton, a best selling author, television producer, physical anthropologist, and medical school graduate addresses the question of scientific consensus in his January 17, 2003, Caltech Michelin Lecture. It is found on his website with the amusing title of "Aliens Cause Global Warming" and it is worth quoting Mr. Crichton on the subject,

*"I want to pause here and talk about this notion of consensus, and the rise of what has been called consensus science. I regard consensus science as an extremely pernicious development that ought to be stopped cold in its tracks. Historically, the claim of consensus has been the first refuge of scoundrels; it is a way to avoid debate by claiming that the matter is already settled. Whenever you hear the consensus of scientists agrees on something or other, reach for your wallet, because you're being had."*

*Let's be clear: the work of science has nothing whatever to do with consensus. Consensus is the business of politics. Science, on the contrary, requires only one investigator who happens to be right, which means that he or she has results that are verifiable by reference to the real world. In science consensus is irrelevant. What is relevant is reproducible results. The greatest scientists in history are great precisely because they broke with the consensus."*

What is more disturbing is Mr. Crichton's description of what happens to individual researchers who do not conform to the passions of the moment or the most fashionable theories, in this case for "Global Warming." To again quote Mr. Crichton,

*"And so in this elastic anything-goes world where science-or non-science-is the hand maiden of questionable public policy, we arrive at last at global warming. It is not my purpose here to rehash the details of this most magnificent of the demons haunting the world. I would just remind you of the now-familiar pattern by which these things are established. Evidentiary uncertainties are glossed over in the unseemly rush for an overarching policy, and for grants to support the policy by delivering findings that are desired by the patron. Next, the isolation of those scientists who won't get with the program, and the characterization of those scientists as outsiders and "skeptics" in quotation marks-suspect individuals with suspect motives, industry flunkies, reactionaries, or simply anti-environmental nutcases. In short order, debate ends, even though prominent scientists are uncomfortable about how things are being done."*

Your proposed guidance on the use of peer review is a useful first step, but it is one that must be watched closely as peer review is subject to the passions of the moment and fashionable theories. To guard against

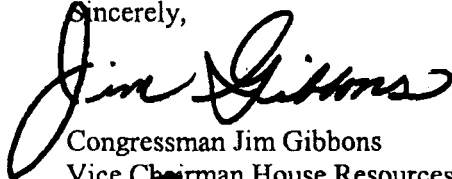
what Mr. Crichton terms the elastic connection between science and public policy, you must take additional steps.

You must ensure that use of scientific or technical studies that contain influential information are published or are otherwise confirmed by double-blinded research. Independent confirmation of the study results must be obtained prior to making regulatory policy. When it works, the current practice of publication allows for other workers to review and attempt to replicate the reported results. In cases where studies cannot be published because of fashionable objections, then the agencies must obtain independent confirmation of the results before setting regulatory policy.

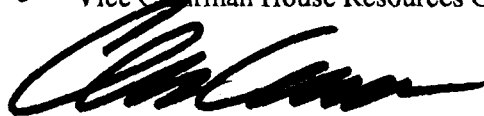
Although the end results of research are very important, particularly if the results support a policy goal, the public must be sure that neither the policy maker nor the researcher "cooked the books." The government has the obligation to demonstrate that the data supporting regulatory policy has been subjected to something much closer to the business community's practice of "due diligence." "Trust but verify" is the catch-phrase of a popular crime scene television show and should serve to guide your future use of scientific and technical research data to set regulatory policy.

As Members of Congress with a background in science or a strong interest in using sound science as a guide to developing responsible public policy we applaud the steps taken by OMB to require scientific and technical studies used in developing regulatory policy to be peer reviewed. However we strongly encourage you to go beyond peer review and require that the data be verifiable and the results of the studies reproducible.

Sincerely,



Congressman Jim Gibbons  
Vice Chairman House Resources Committee



Congressman Chris Cannon  
Co-Chairman Sound Science Caucus