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cc:

Subject: Comment on the "Revised Information Quality Bulletin for Peer Review"

This is a comment on the April 15, 2004 draft "Revised Information Quality Bulletin for Peer Review". I have prepared the comment as a private citizen. My qualifications for doing so include having managed peer review processes in a U.S. Government agency for some twenty years, having observed and participated in peer review activities in other U.S. Government Agencies, having advised other governments on scientific peer review, and having managed peer review in an independent international agency.

The Bulletin focuses on "information quality", which must be judged not only in terms of accuracy, but also of relevance and timeliness. As noted on page 10: "agencies need to consider tradeoffs between depth of peer review and timeliness." Peer review should also seek to assure that irrelevant scientific information is excluded from agency products, and that relevant scientific information is broadly represented.

The following seems to be the definition of peer review in the Bulletin: "Peer review occurs when a draft product is reviewed for quality by specialists who were not involved in producing the draft." I would suggest that the "peers" of the scientists who have prepared a draft product are not merely "specialists", but are scientists who themselves work in fields relevant to the material of the draft product and who are professionally qualified to critique such work. Moreover, as the discussion of scientific integrity on page 11 suggests, "peer review" requires relevant peer expertise be brought to bear on all critical elements of a draft product.

Perhaps a more fundamental problem with the Bulletin is its failure to call for appropriate scientific review of agency knowledge or knowledge-based products produced by non-scientists. If "peer review of economic and social science information should have as high a priority as peer review of health, ecological, and engineering information," then scientific review of all these kinds of information produced by non-scientists often may merit even greater priority.

The Bulletin goes on to state: "The selection of participants in a peer review is based on expertise, independence, and the absence of conflict of interest." While in some cases potential "conflict of interest" may be clear and easily avoided, this is not always the case. Disclosure of interests of the reviewers is also required, allowing members of the

public to assess the relevance of interests to the content of the review.

In addition to the functions of peer review provided in the last paragraph of page 3 of the bulletin, peer review may also provide agencies with information on the importance of the draft product. The tone of the paragraph suggests that peer review serves only to improve quality of the draft product; it may also serve to warrant high quality, relevance, and urgency of a draft product to those who consider its content.

On pages 4 and 5, the Bulletin states: "Agencies are not expected to cede their discretion with regard to dissemination or use of information to peer reviewers; accountable agency officials must make the final decisions." OMB's expectations are of course for OMB to determine. I would suggest however agencies be enjoined to prudently utilize peer reviews, and indeed to carefully explain to the public the agency's reasons if and when it chooses to disregard the advice of peer reviewers. This concern is partially covered in the paragraph on "disposition of reviewer comments" (page 19), but I suggest the injunction be strengthened.

On pages 8 and 9, the Bulletin states: "Agencies also should discourage state, local, international and private organizations from using information in draft reports that are undergoing peer review." I would point out that much of the information in a draft report may well have been peer reviewed prior to its inclusion in that report. Thus many reports quote important findings published in peer-reviewed scientific journals. Agencies might appropriately encourage other organizations to use due diligence and caution in utilizing information in reports undergoing peer review, or disclaim responsibility for the quality of information in such reports. However, it is hard to see on what basis an agency would discourage other organizations from using information it had included in a report that was currently undergoing peer review.

Similarly, on page nine the Bulletin states: "Draft influential scientific information being presented at scientific meetings prior to peer review must include the disclaimer: "THE VIEWS IN THIS REPORT (PRESENTATION) ARE THOSE OF THE AUTHOR(S) AND DO NOT NECESSARILY REPRESENT THE VIEWS OF THE FUNDING AGENCY." Given that the purpose of this bulletin is to improve the quality of government disseminated information, perhaps the accuracy of the disclaimer might be considered. In some cases views expressed in such a paper do represent those of the funding agency or of the agency employing the presenter. I would suggest that in such cases, the relevant policy documents should be cited, and the disclaimer modified or not used. Similarly, in some cases the views expressed are not those of the author, but rather the presentation has been developed or modified to achieve approval of an agency review body; this too should be acknowledged in a presentation and the disclaimer modified accordingly.

Pages 10 and 11 seem to suggest that the intensity of peer review be determined on a case by case basis. To some degree this is true. However, cost-benefit analysis can not help the agency in the decision

of how intensely to review a specific draft product since the benefits of the review can not be determined a priori. Moreover, I strongly doubt that there are quantitative data on the average benefits and average costs of different levels of reviews for products of different levels of complexity and different levels of influence to provide a basis for cost-benefit analysis. The call for cost-benefit thinking in decision making on the appropriate level of peer review for draft products may do little good, and may have risks.

It should be recognized that peer review is not always beneficial, and that peers can be wrong. Getting a high quality peer review is no easy task! Page 11 discusses "scientific" and "process" integrity. Unfortunately it seems to fail to recognize the most fundamental concern. The process of peer review should be such as to bring the most pertinent expertise of peer scientists to bear on each and every critical element of the draft product, to ensure the full exercise of that expertise, and to incorporate the results appropriately in the findings of the peer review. Process and scientific integrity are intimately connected.

Page 13 states: "Peer review is most powerful when the charge is specific and steers the reviewers to specific technical questions while also directing reviewers to offer a broad evaluation of the overall product." This is a statement purporting to convey scientific fact. Has it been subjected to peer review?

The paragraph beginning on page 13 with the phrase "Uncertainty is inherent in science" should be revised. OMB should not issue a general prescription against agencies asking scientific advice on their policies. This would preclude agencies such as NIH and NSF from doing so, and who better to advise a research funding agency on its policy that researchers. Some scientists study risk analysis and decision making, and their advice might be quite useful to policy makers.

The discussion of "Conflict of Interest" beginning on page 15 is useful. However, potential conflicts are many and varied. They may be personal, as when scientists are related, friends, or dislike each other. They may be collegial, as when reviewed and reviewing scientists are in the same university, or officers in the same professional organization. They may be scientific as where the reviewed and reviewing scientists are competitors for the same scientific prizes. It is quite possible for one person to conclude that there is no conflict of interest in a specific case, while another finds conflict. The National Academy of Sciences seeks disclosure of interests as well as avoidance of conflict of interest and I think this a very good principle.

Page 19 contains the sentence: "A peer review is considered completed once the Agency considers and addresses the reviewers' comments." I have found it useful always to assess the review, and only consider one to be complete when the process has provided a review that appears adequately informed, complete, fair, and useful. It is sometimes important to add complementary reviews to those provided by a panel of scientists. The National Academy of Sciences reviews the quality of all of its reports prior to their publication. Thus the agency responsibility is not merely

to get a review and read it, but to get an adequate review and respond to it. The peer review is not complete until the agency has done so.

Page 27 cites exclusions from coverage by this Bulletin: "The Bulletin does not cover time-sensitive medical, health, and safety disseminations (for this purpose, 'health' includes public health, or plant or animal infectious diseases), or disseminations based primarily on data from a recent clinical trial that was adequately peer reviewed before the trial began." What about meteorological disseminations, such as hurricane and tornado warnings? What about seismological disseminations, such as volcano eruption or volcano eruptions? What about astronomical disseminations, such as warnings of approaching meteors? What about oceanographic disseminations, such as warnings of tsunamis? What about economic disseminations, such as warnings of impending economic crises? What about political science disseminations, such as warnings about impending revolutions? What about sociological and anthropological disseminations, such as warnings of impending terrorist attacks? Perhaps this text could be made more inclusive.

Page 30: suppose that information is distributed as "correspondence with individuals or persons, press releases, archival records, public filings, subpoenas and adjudicative processes," and "for peer review in compliance with this Bulletin". Since it is not being distributed "solely for the purpose of pre-dissemination peer review" the agency is faced by invidious alternatives: attaching a false disclaimer, or of not qualifying for the exemption. One expects a government bulletin on the quality of information dissemination to be more carefully worded.

Page 33: "The agency - or entity managing the peer review-- shall instruct peer reviewers to prepare a report that describes the nature of their review and their findings and conclusions." The Bulletin has recognized that in some cases an agency will phase a review, using different reviewers at different times to review different portions of a draft product. In such a case, it may be necessary for the agency itself (or some agent it employs) to "prepare a report" for the review, not have the reviewers do so themselves. The wording is too restrictive to represent the intent the Bulletin has correctly described.

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