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John D. Graham
Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget
by email: fyokota@omb.eop.gov

Dear Dr. Graham:

This letter responds to your request for a peer review of *Draft 2005 Report to Congress on the Costs and Benefits of Federal Regulations*.

As you are doubtless aware, OMB's Annual Report has become an important resource not only for Congress, but for scholars, journalists, advocacy groups of all stripes and the public at large. Overall, this year's report (like previous reports) makes an important contribution to public understanding of federal regulation and the process by which it is made. The comments below focus on key areas where I believe improvement is needed, largely ignoring the many parts of the report which I consider sound as written, or with respect to which I have no particular expertise.

Chapter I

Misreporting of data. Table 1-1 reports annual benefits worth "12,596-108,483" million dollars for major rules enacted during the previous fiscal year. This is but one of many examples in this draft and in previous reports where costs and benefits are reported using 3, 4, 5 or 6 significant digits. As a matter of basic statistics: reporting the number 12,596 (using five significant digits) indicates precision to within approximately 8/1,000th of one percent. But reporting a range that extends from 12,596-108,483 reveals that, in fact, the benefits are not certain even to within an order of magnitude!

The consequence of error in this case is simply the revelation of extreme carelessness or lack of understanding in the use of significant digits by OMB staff. In other cases, where single figures are used instead of ranges, the result can be a specious sense of precision which misleads the public. It is incumbent upon OMB and agencies to be candid, and careful, about the actual level of precision implicitly claimed in the numbers they report. In the vast majority of cases, that will mean the use of *one* significant digit, to indicate that the reported number is essentially an order of magnitude estimate, with ranges reported in situations where even the order of magnitude is uncertain.

Transparency Enhancement. As mentioned above, the OMB Annual Report has become an important resource for journalists and outside scholars who are, in turn, a valuable asset in the enterprise of regulatory improvement. Their efforts, and their contribution, would be greatly enhanced by the simple expedient of adding to Table 1-4 and all similar tables a hyperlink which takes the reader to (a) the final FR notice and (b) the underlying RIA (latest version). Given the inherent limitation on the level of methodological detail that can be provided in the "Other Information" column of Table 1-4, this would greatly enhance the ability of journalists, scholars,

Hill staff and the public to understand and evaluate the assumptions built into the numbers reported in that table.

Of course, the value of the hyperlink (though substantial) will be limited if it leads to a 200+ page RIA which is in no consistent format and contains no clear, coherent and easily findable discussion of the methodology used in that assessment. Unfortunately, that is too often the case unde current arrangements. To correct this problem, OMB should consider asking agencies to require their consultants, in preparing future RIAs, to include an Executive Summary that discloses, in a consistent format, all key methodological choices and assumptions made in the course of analyzing costs and benefits: e.g. discount rate, assumed lag period, value of life, value of illness, variables quantified but not monetized, variables not quantified, etc. These small changes could greatly enhance the transparency and rigor of federal regulatory assessment.

Enhancement of the "Other Information" Column in Table 1-4 (and other similar tables). The numbers alone do not always tell the whole story of a rule; in many cases, they may not tell even the most important story of that rule.[1] That is another reason why hyperlinks (discussed above) are particularly important for scholars, and why the "Other Information" column is important for everyone who may not have time or inclination to follow the hyperlinks and read the RIAs.

Yet, in this Draft and in all previous reports I have read, the information supplied in the "Other Information" column appears to be more or less randomly chosen. For some rules, that column reports a few key methodological assumptions (though it doesn't do so consistently); in other cases none are reported. For some rules, the fifth column describes un-quantified benefits, while in other cases it simply mentions that such benefits may exist. I believe OMB can do better much than this with relatively little additional effort by simply developing a standardized approach to reporting information is this important column. Here's how:

(1) For each entry that involves monetized benefits, indicate exactly which benefits were monetized, and supply the key assumptions used by the agency: discount rate, latency/cessation lag period, and VSL/VSLY/QUALY used; year-date of dollars reported.[2] This can be done in two or three lines of text (using suitable abbreviations). Where ranges of variables are used, indicate the range.

(2) Briefly identify and describe each non-quantified and/or non-monetized costs and benefits and ask the agency to indicate whether it considers each such cost or benefit (or all such costs or benefits cumulatively) to be (a) insignificant; (b) significant; or (c) a primary purpose of the rulemaking.

Discussion of Impact of Regulation on Wages (p. 28-29). As written, the first paragraph under the heading "1. Social Regulation" is incoherent and illogical in the following respect: while the second sentence of the paragraph accurately points out the costs of regulation may be

[1] I have identified a number of past rules for which monetization extended only to what agency staff considered peripheral and ancillary benefits, while the principal benefits of the rule, in the view of agency staff, were left unquantified or un-monetized due to lack of reliable data. See Richard W. Parker, Grading the Government, 70 U. Chi. L. Rev. 1345, 1382-1400 (2003).

[2] While I generally agree with the wisdom of OMB's current practice of reporting agency numbers as such, I believe this pass-through policy need not, and should not, extend to adjusting for inflation over time. No harm would be done (indeed, it would be helpful) if OMB were to translate all dollar figures in this report into 2004 dollars, using a standard inflation index.

borne by workers, business owners and/or consumers, the third sentence – a quote from a "leading textbook in labor economics" – directly contradicts this by asserting that, ultimately, all regulatory costs necessarily fall on workers.

The two sentences are logically inconsistent with each other and cannot both be correct. In this case, the latter sentence is incorrect and I recommend deleting it. Depending on conditions in labor and/or product markets, regulatory costs may be passed on to workers, or to consumers, or to shareholders, or they may be distributed among some or all of these categories – precisely as the immediately preceding sentence in the Draft indicates.

Discussion of Economic Growth and Related Macroeconomic Indicators. This section reviews a range of studies which document the positive welfare effects of economic de-regulation – in areas such as privatization, promoting competition, and easing barriers to starting a business, enforcing a contract, or registering property, etc. – and then draws the quite un-founded conclusion that "these findings may hold for social as well as economic regulation." (Draft at 34).

In fact, none of the studies cited in this section focus on health, safety and environmental (a.k.a. social) regulation at all. The Heritage Foundation and Fraser Institute studies, as the OMD Draft points out, are at once subjective and riddled with non-regulatory indicators as well as "non-social" regulatory variables. The World Bank studies mentioned in the draft examine the impact of *economic regulation* which takes the form of barriers to starting a business, enforcing a contract, registering property, etc. They do not examine the impact of health, safety and environmental regulation on economic productivity and growth.[3]

By contrast, studies that *have* looked specifically at the impact of social regulation have shown that, in general, the stringency of social regulation historically has had little or no adverse effect on productivity and economic competitiveness of firms at the national level and that, in many cases, the impact has been positive.[4] When one factors in the health, safety and environmental benefits the net gain for society from social regulation becomes even more pronounced – as your own Report regularly points out.

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[3]The OMBDraft (p. 33 n. 22) finds significance in one World Bank study which reports that 3 different national rankings of overall regulatory stringency –two of which omitted a measure of environmental regulatory stringency, while one included it – yield similar results. But this could easily be explained by the probability that environmental regulation carried little weight in the one index which included it along with a host of other variables. Moreover, the mere fact that including environmental regulation within a smorgasboard of disparate regulations does not change the ranking of regulatory stringency says nothing about causation. It proves nothing about the relative impacts of health, safety and environmental regulation on national productivity, economic growth or social welfare. The study in question establishes the inference that the authors of that report actually drew from it: "overall perceptions of government regulations by business leaders and experts and the objective assessment of formal regulations appear to be relatively well aligned in the areas of labour and product markets." See Giuseppe Nicoletti and Frederic Pryor, "Subjective and Objective Measures of the Extent of Government Regulation," *Journal of Economic Behavior and Organization* (forthcoming).

[4] See, e.g., Jan Adams, "Environmental Policy and Competitiveness in a Globalized Economy: Conceptual Issues and a Review of the Empirical Evidence, Ch. 4 in OECD Proceedings: Globalization and the Environment (OECD: 1997). For an anecdotal and conceptual analysis documenting the potential for productivity *gains* from enlightened social regulation, see Porter, ME & C. Van der Linde, Toward a New Conception of the Environment-Competitiveness Relationship, J. Econ. Perspectives, vol. 9, no. 4, pp. 97-118 (1995).

In fact, there is no logical incongruity in finding that economic growth and social welfare are jointly enhanced by (a) enhancing competition through *economic de-regulation* while (b) internalizing externalities through *social regulation.* Indeed, this is exactly what economic theory would predict.

Of course, no one favors "dumb regulation" based on poor economic analysis or bad science. One doesn't need a World Bank study to agree that we should regulate wisely. But I am not aware of any credible theory which supports, or any credible empirical study which establishes, the proposition that societies with weak social regulation are generally more prosperous or happy than those which have chosen more stringent social (i.e., health, safety and environmental) protections. Yet that is the clear implication of the last paragraph of this section.

Similarly, though there is some overlap, the "regulatory reform" which these foreign authors endorese (in the World Bank reports quoted in this section) generally bears little resemblance, conceptually, to "regulatory reform" as that term is commonly used in this country. Yet the OMB Draft cites these foreign authors' calls for "regulatory reform" without the necessary clarification of what it is that they mean, precisely, when they use that phrase.

Chapter II

Trends in Federal Regulatory Activity. The Draft reports that average annual costs of regulations issued during the Bush Administration were 68% lower than regulations issued during the past 20 years, and 76% lower than those issued during the 8 years of the previous Administration, while benefits were 20% greater than benefits of rules issued during the previous Administration. Elsewhere in this section you point out that the aggregate cost and benefit numbers are dominated by a few major rules (ergonomics, acid rain, and nonroad diesel engine) and you report that you accounted for the ergonomic rule's enactment and rejection by adding its $4.9 billion in costs to the previous Administration's tally, subtracting that amount from this Administration's total costs, and not counting the benefits of the rule at all.

Unfortunately, the Draft does not offer a sensitivity analysis that reveals the result of eliminating these huge and atypical rules from the tally. Given the value of ascertaining general trends in regulatory policy without the distortion of outliers, it would be helpful if you would offer such a sensitivity analysis in the final Report.

It also would be extremely helpful if you would distinguish rules mandated by Congress from rules proposed and adopted *sua sponte* by agencies acting under broad delegated authority, and offer a sensitivity analysis that explores the impact of removing Congressionally mandated rules from the tally. This is important because one of the key issues of regulatory policy today is the rationality of agency action when viewed from a cost-benefit perspective – but it is fundamentally *irrational* to try to judge that rationality on the basis of a sample tainted by rules mandated by Congress with little room for agency choice. Yet that is the sample we now have, and the result is an analytical muddle which yields no basis for determining whether it is Congress, or the agency, that tends to be irrational. This muddle will persist until the underlying problem is corrected.

You have asked for comment on the usefulness of extending net benefits measures back to 1981, the beginning of the regulatory review program at OMB. The problem with doing so is that the focus of RIAs in the Eighties seems to have been the careful estimation of regulatory costs. While some RIAs issued in the Eighties contain monetary benefits estimates, I have come across many RIAs from that period which contain either no monetization of benefits or only a

perfunctory effort at monetizing benefits. As a result, it is impossible to generate a time series that includes the Eighties and yet is meaningful in the sense that it actually measures net benefits, as opposed to measuring the effort expended in monetizing benefits.

Validation of Estimates.

You have posed a series of questions soliciting public comment on how OMB and agencies might validate *ex ante* estimates of regulatory costs and benefits through *ex post* studies of actual regulatory impacts.

Let me begin by applauding the initiative. It is tremendously valuable (indeed, vital) in my view, and long overdue. As I have said elsewhere, reporting *ex ante* estimates of regulatory costs and benefits as actual costs and benefits is like reporting pre-game wagers about the likely outcome of the Super Bowl as the actual score of the game.

Unfortunately, OMB inadvertently commits this basic fallacy, year after year, in its reports to Congress. Table 1-4 in this year's Draft, for example, is headed "Summary of Agency Estimates for Final Rules." That should read, "Summary of Agency *Ex Ante* Estimates for Final Rules" to make clear that the estimates reported are not *ex post* assessments as the average reader would tend to assume.

Likewise, the individual entries in that table and throughout the report should *not* refer to "the costs" or "the benefits" (as they almost invariably now do) but to "the predicted costs" or "the predicted benefits." This clarification need not be supplied with every mention of costs and benefits, as that would get rather tedious. But it should done often enough that there can be no doubt to anyone reading – or skimming – the report that the costs and benefits contained therein are strictly predictions, except as otherwise indicated.

I believe the simple exercise of clarifying consistently that the numbers we now have, for the most part, are *ex ante* estimates is both analytically essential and politically necessary. It is analytically essential to avoid confusion. It is politically essential as an all-important first step in developing public and congressional support for funding *ex post* validation studies.

The issue then becomes how to validate predictions with follow-on studies. Unfortunately, this exercise is harder, less fun and less remunerative than playing the Super Bowl. It is also more important to society as a whole.

Your first question is whether to focus on studies of individual rules or of programs. I believe your decision to focus on individual rules is sound. One problem with EPA's retrospective study of the costs and benefits of the Clean Air Act is that it was insufficiently disaggregated to permit the validation of *ex ante* estimates, thereby rendering it useless as a calibration tool. Because the RIAs that inform regulatory policy focus on individual rules, it is vital that the validating studies also focus on individual rules.

I would go further. I would suggest limiting your scope to rules that directly impose costs and directly constrain behavior. EPA's NAAQS standards, for example, are more in the nature of long-term goals than immediately binding constraints. Given that many cities had not yet achieved the old NAAQS standards when new standards were enacted, it would be difficult in the extreme to determine which emissions decisions were made to meet the old NAAQS, and which were required by the new. Moreover, while EPA did estimate costs of achieving the revised NAAQS standards, the huge number of disparate decisions involved in achieving the new goals

render any such estimate extremely tenuous and speculative. In general, I believe you will be on firmer footing if you focus on emissions standards rather than ambient standards.

Your second question is which additional studies, beyond those mentioned in your report, provide useful information on the validity of pre-regulation estimates of benefits and costs. For an excellent review of the conceptual difficulties of *ex post* validation of costs I commend to your attention three studies, which were written by two academics, the (former) OTA, and the GAO, respectively.[5] Among the difficulties identified in these analyses are:

(1) the complexity and costliness of *ex post* validation studies, which means that additional resources will need to be supplied for the purpose;

(2) the lack of agency incentive or resources to perform such studies (as one analyst candidly put it, "How is my career advanced by doing a study which shows that three years ago I got it wrong?"), which means that OMB will have to require and arrange for funding such studies if you wish them to happen;

(3) the unavoidable difficulty of distinguishing between costs and benefits that accrue as a result of the target regulation and those that would have occurred in any case in response to ordinary technological advance or other regulatory initiatives (the baseline definition problem);

(4) the fact that businesses don't normally allocate costs to particular regulations in their own books and thus often have no clear idea how much a particular regulation is costing them;

(5) the fact that many businesses are reluctant to share cost data on grounds that it is business confidential.

To these complexities I would a sixth: most regulations have waiver and variance provisions which may substantially affect both costs and benefits of the rule as applied. They also contain abundant opportunities for states to exercise discretion in applying the rule. *Ex ante* estimates generally ignore these flexibility provisions. *Ex post* analyses, to be useful, cannot ignore them, but measuring the impact of a particular waiver or variance on benefits can be quite labor-intensive, particularly when variances are numerous. Applying a "rule of thumb" for estimation purposes will simplify calculations but at the expense of reducing the empirical value of the *ex post* study: by definition, a rule of thumb substitutes model for measurement.

I have further thoughts and ideas on how one might deal with these (and other) challenges of ex post validation, but I omit them here in the interest of brevity.

Your third question solicits examples of rules where it would be feasible and useful for analysts to undertake validation studies. The easiest cases to start with are rules that promulgate efficiency or safety-oriented product standards, such as NHTSA safety rules and DOE's air conditioner energy efficiency standards. Although even these simple cases can shelter surprising

[5] McGarity, Thomas O. & Ruth Ruttenberg, Counting The Cost Of Health, Safety, And Environmental Regulation, 80 Tex. L. Rev. 1997 (2002); U.S. Congress, Office of Technology Assessment--An Appraisal of OSHA's Analytical Approach, Gauging Control Technology and Regulatory Impacts in Occupational Safety and Health (1995). U.S. General Accounting Office, Regulatory Burden: Measurement Challenges and Concerns Raised by Selected Companies (1996).

sources of complexity, market prices generally provide considerable assistance in estimating cost impacts for such rules, while data on accident rates and energy bills provide relatively precise information on the benefit side.

Rules that impact production processes will be harder to evaluate, particularly if compliance has been achieved through process changes rather than end-of-pipe technology add-ons. Rules primarily aimed at reducing cancer risk will be difficult to validate because of the multiplicity of causes of cancer (though impacts on exposures to carcinogens may be measurable).

Hardest of all to validate will be rules that effect changes in regulatory procedure: reporting requirements, permit requirements, etc. Procedural rules are virtually impossible to analyze within the traditional cost-benefit framework, either *ex ante* or *ex post,* because the line of causation between the cost and benefit of regulatory procedures is so utterly speculative and attenuated. Such rules probably should be exempt from quantitative cost-benefit analysis altogether. In any case, there is nothing to be gained in squandering dollars trying, in vain, to validate cost-benefit analyses of procedural rules.

Your fourth question solicits comment on sources of data that are available but have not yet been adequately tapped to undertake useful validation studies. One particularly promising source of data – mentioned in McGarity/Ruttenberg – are the PACE surveys which once were conducted by the Census Bureau but which, alas, are no longer done.

This raises a larger issue. Retrospective studies of regulatory impacts inherently require going back to industry for data. If you're unwilling to bother businesses with questions, you can forget about doing retrospective surveys. At the same time, businesses should understand that such surveys are vital tools in evaluating regulations on the books and making regulation smarter. If they can be persuaded to look beyond the short-term inconvenience of filling out a questionnaire, I think they will see that smarter regulation will likely save them more money than the questionnaire (assuming it is well-designed) costs. It is therefore in their collective interest to cooperate though, of course, individual businesses may be tempted to free-ride.

That said, there is little that businesses can do if they simply don't have the data that the questionnaire seeks, because they haven't collected or retained it. This leads to a refinement of my answer to your third question: *validation studies will be particularly useful for* future *rules which have been promulgated with (a) the prior understanding, built into the rule, that regulated entities will collect and retain specified data needed to validate ex ante estimates of compliance costs and benefits, and (b) a clear delineation of what those data are, a consistent format for reporting them, and ironclad guarantees of confidentiality where appropriate.* This practice, applied in the future, will substantially reduce the cost of regulatory validation and (I expect) political opposition to it, while greatly enhancing the usefulness of the exercise.

Your fifth and sixth questions solicit comment on the technical quality of existing validation studies and on the general inferences, if any, that can be drawn from them. In general, I think the quality of the few studies that exist is quite good. However, their scope is far too limited and anecdotal to permit the drawing of valid general inferences. Moreover, most of the existing studies of which I am aware do not generate or test hypotheses about circumstances under which regulatory costs or benefits are more (or less) likely to be over- or under-estimated. For example, it seems likely that estimates supplied by vendors of pollution-reduction or remediation goods and services will tend to be under-estimated, while cost estimates supplied by targets of regulation will tend to be over-estimated. But no *ex post* study of which I am aware distinguishes among cost estimates according to their ultimate point of origin or tests this hypothesis.

Likewise, there are theories floating around that agencies like OSHA and EPA tend to under-state compliance costs because they have a strong pro-regulatory culture. Others, however, speculate that these same agencies are prone to over-state expected costs because they are fearful of reversal on judicial review, or because even these agencies are subject to capture by regulated interests. Yet a third point of view is that the predilection of agencies in such matters varies according to the ideological leaning of the Administration in power. Yet I am aware of no *ex post* study which systematically tests any of these hypotheses. In short, the existing studies are of generally high quality, given their limited ambitions. But they barely scratch the surface of this issue. We have a long way to go.

Your final question in this section solicits comment on which institutions, inside and outside of government, are best equipped to undertake objective, high-quality validation studies. Remembering the comment of the agency analyst cited above, I think it is unrealistic to expect agencies to supply objective analyses of their own past regulations. It is certainly unrealistic to expect that they will be widely accepted as credible. Advocacy groups (including think tanks with a clear ideological slant) can be counted on to skew the data and analysis – consciously or unconsciously – in the service of their own interest or ideological agenda.

University research centers, along with a handful of highly reputable and ideologically centrist think tanks (such as Resources for the Future), are more promising candidates. But most regulatory assessments call upon a remarkably wide range of knowledge and skill sets – including toxicology, meteorology, geology, geo-chemistry, engineering, chemistry, economics, public policy and law. It is the rare research center that has, in-house, people with all these skills who are also ready and willing to work on regulatory analysis. My impression is that for-profit consulting firms (I'm sure with some exceptions) generally lack both the breadth of expertise and the ethic of independent analysis that one often finds, or reasonably expects to find, in a first-rate university or think tank.

Who, then? I recommend that you consider establishing technical advisory committees drawn from relevant experts nation-wide to advise in the drafting and assessment of each major future rule and to supervise periodic retrospective analysis of the rule as applied. These committees might be convened under the auspices of, say, the National Research Council. They should be FACA committees, in order to ensure that they are structured to include a range of technical and policy expertise and a diverse and balanced ideological predilection.[6] This may seem like a lot of bother, but I believe it is essential to restoring and maintaining public confidence given the ideologically charged and polarized political climate in which regulatory assessment now occurs.

I hope these comments are helpful.

Best wishes,
Richard W. Parker

[6]I recognize that this part of the recommendation will be unpopular with agency staff, who, in my experience, groan every time FACA is mentioned and seem willing to go to some lengths to avoid it. But FACA provides a valuable tool (and institutional tradition) for achieving balance, expertise and legitimacy in the rendering of technical and policy advice. If agencies find certain FACA procedures too onerous, the answer, in my view, is to streamline FACA, not to throw out the baby with the bath water.