TO: REPRESENTATIVES EDDIE BERNICE JOHNSON & MARK UDALL
FROM: SCIENCE COMMITTEE DEMOCRATIC STAFF
SUBJECT: RESEARCH COLLABORATION BETWEEN REGULATED INDUSTRY AND FEDERAL SCIENCE AGENCIES
DATE: MARCH 28, 2005

In May of 2003, you jointly requested the General Accountability Office (GAO) review two research agreements that had been entered into between the National Institutes of Health (NIH) and the American Chemical Council (ACC) and the Environmental Protection Agency (EPA) and the ACC. Each case revealed a creative effort to pool industry-government research funds while cooperating on a common research agenda. However, because ACC is the major trade organization representing America's largest chemical manufacturers, and because the agencies collaborating with the ACC either regulate that industry directly or engage in research designed to better inform our understanding of the environmental and health effects of chemicals for regulatory purposes, it appeared that these agreements posed a significant conflict of interest. For this reason you asked GAO to review these cases.

GAO has completed its work and you asked the staff to provide a broader setting in which to understand GAO's findings. This memorandum attempts to do that. In general, we believe that GAO has done a superb job of working through the paper trail on these agreements and identifying key issues that relate to the cases. A second effort by the GAO's General Counsel is still underway to provide some guidance as to the legality of some of the steps taken by the National Institute of Environmental Health Sciences (NIEHS) - the arm of NIH that directly managed the research project with the ACC - to develop and implement the project. That report will be received in the next couple of months.

In the GAO report that has been completed it should be noted that GAO could only look at what the law seems to allow, not apply a harder standard of what is in the public interest given the permissive structure of the law. Based on the work of GAO, and our own review of the cases, we believe that we should continue to investigate cases of this nature with an eye to addressing the more fundamental issue of whether such cooperative research agreements further the public's interest. Below, we will very briefly review the two cases GAO investigated. Then we will highlight a few points of difference between GAO's perspective on the cases and our own. Finally, we will discuss some potential problems that arise in collaborative research from a broader public policy perspective.

Background

The agreements GAO examined permitted a non-governmental trade organization (ACC) to be involved in the process of distributing federal research dollars to grantees, the selection of research topics for funding by the federal agencies, and the evaluation and selection of grant recipients.

NIEHS and EPA are important sources of funds for extramural research in the area of environmental health science, and findings of this research often have implications for future policy and regulation. Because EPA is also responsible for regulating the products of the chemical industry, a relationship of this nature with the ACC creates a public perception of undue influence of the chemical industry over the agency that regulates it. Even though NIEHS is not directly involved in regulatory decisions, it has a unique role in supporting research that is designed to inform regulatory decisions. Again, a perception of a conflict of interest attaches to their collaboration with the ACC.

This study explores two cases in a larger trend of increased cooperation and collaboration between industry and the public sector. Over the years, federal agencies and universities - two public institutions conducting research - have been developing closer ties with industries and collaborating on research where public and private interests may not be aligned.

At the outset, we wish to clarify two points:

1) Not all cooperative research between federal agencies and industry involves a conflict-of-interest and we do not recommend a universal ban on cooperative agreements or collaboration between industry and government.

2) While some collaborations between federal agencies and industry involve real or apparent conflicts-of-interest, this does not mean industry's advocacy for their products and positions are contrary to the public interest or that industry is engaging in any unethical or illegal activity with respect to the defense of their products.

The task of evaluating the safety and efficacy of products in all likelihood will always involve controversy and balancing of adversarial positions. Federal agencies must remain mindful of this atmosphere and enforce policies and procedures to ensure their evaluation process is free from undue or unbalanced input from parties with competing viewpoints and interests. Products endure in the market because they fill a need or desire of consumers. However, no product is perfect and some products' use should be restricted or banned to protect human health or the environment. It is the function of regulatory agencies

to evaluate objectively the merits of products against their harmful impacts on human health and the environment.

Companies invest considerable financial and human resources over long periods of time to develop and market their products. Products are designed to meet customer needs or desires. Products are not designed to harm human health or the environment. However, by-products and waste associated with manufacturing processes and at times the products themselves are harmful. Companies are also invested in their products as a reflection of their reputation and sense of corporate responsibility. It is then no surprise they would act in defense of their products and their corporate reputation. It is natural to assume a company will only reluctantly accept or admit their product or manufacturing process is harmful.

Despite claims to the contrary, once a product has entered the marketplace a high degree of proof of harm is required before any regulatory action can be taken to restrict or ban its sale and use. This fact requires anyone who has evidence or believes a product is harmful to exhaustively demonstrate the harmful aspects of the product (or process) in question.

Regulatory agencies then must straddle these competing biases and develop a base of information to evaluate fairly the benefits and harm associated with the product or process under scrutiny. It is impossible to devise a system devoid of bias or subjectivity. However, procedures can be established and enforced to minimize them. Providing any stakeholder group privileged or exclusive access to the processes of developing or evaluating the information base for decision-making enhances bias and subjectivity instead of reducing it.

When EPA and NIEHS permitted one stakeholder - the ACC - to participate in the design of a research program and participate in distribution of federal funds, this research funding program was subject to the bias of this one stakeholder group. While the actions of the agencies were legal, we would argue that they were not in the public interest because the agencies failed to maintain even a perception of balance and fairness to all stakeholders.

There are few non-industry sources for the animal and ecological toxicology studies necessary for regulation of chemicals. Industry conducts most of this research in-house and through its own outside research institutes (Chemical Industry Institute of Technology) as well as through distribution of grants and contracts to university researchers (ACC's Long-range Research Initiative). This justifies having GAO look at this agreement because the extramural funds of NIEHS are probably the largest source of non-industry funding for this type of work. Having industry at the table setting the terms for extramurally funded research is a poor precedent.

Despite the claims of each agency and the ACC, we believe the research agreements NIEHS and EPA entered into with ACC were not in the public's interest. Since ACC distributes funds for research through its own programs and NIEHS distributes funds for research through its own programs it is not possible to argue that this agreement resulted in additional research being funded. The public offered three dollars to each one from industry. For its one dollar, ACC received the right to help direct three dollars of NIEHS research to areas that fit the priorities of mutual interest to ACC and NIEHS. In the case of EPA, ACC did not provide any of its funds to the Agency. They simply had an agreement about how ACC and EPA would direct their funding - again toward those of mutual interest.

The agreements also set a precedent for future agreements. The public interest is not served by Agency actions that create the perception or reality of preference for one stakeholder's viewpoint over others. The Agency personnel associated with these agreements, by their own admission, recognized the potential for a conflict of interest to exist as a result of this agreement. They should have rejected the agreements to maintain their Agencies' reputations' as honest brokers. Instead, it appears these issues were not considered or addressed in any meaningful way by these agencies.

Issues of Interpretation Regarding a Conflict-of-Interest

GAO rightly takes both agencies to task for failing to have a clear conflict-of-interest policy in place to guide decisions about accepting gifts or entering into a cooperative research agreement. Even if it turned out that no conflict-of-interest could be shown to exist, it is impossible for either agency to demonstrate that the appearance of a conflict did not exist. According to GAO, the director of NIEHS thought there may be an appearance issue himself. GAO's language is that "he was acutely aware that accepting the ACC money could pose the potential for real or apparent conflicts of interest (p. 15)." His staff reportedly had the same reaction when they saw the ACC gift agreement. The then-Director reports that he had informal discussions with other senior NIH officials and senior figures in two outside groups. These discussions were enough to assuage his conscience. The staff sent the agreement on to NIEHS lawyers for review because of their concerns, but the attorneys were not notified that conflict-of-interest concerns were at the root of this referral. Curiously, the attorney's reviewed the documentation and seemed to be blithely unaware of the potential of a conflict-of-interest.

GAO does not flesh out the concerns regarding a conflict-of-interest among the ORD officials, other than to say that they were sensitive to the possibility just as NIEHS staff had been. Despite having those concerns, nothing was ever formally done to address the potential for a conflict-of-interest at either agency. GAO is right to insist that both NIH and EPA adopt clear guidance that agreements of the kind entered into in these cases requires a careful conflict-of-

interest analysis. NIEHS is to be commended for agreeing to implement that guidance, but it seems odd that counsels at the agencies had not already addressed this issue and that says something about the growing culture of agency-industry cooperation that is worrisome.

EPA has not stated that they will comply with the GAO guidance. In fact, their written response to the GAO report is somewhat confusing in that it goes on at great length about how they did not have a cooperative research agreement but rather a memorandum of understanding with the ACC. Legally, this may be true. But we can see little practical reason to think that an MOU, as opposed to a formal cooperative research agreement, is different in kind when it comes to consideration of conflict on interest. EPA officials, when entering into the MOU with the ACC also seemed to think there was no difference as they sought public comment on their agreement and also took steps in the way they managed the MOU to try to minimize the chance of a conflict. We hope they will step up and embrace the GAO recommendation on this issue.

Agency Claims that Research Management Processes Could Mitigate Conflicts of Interest

GAO seems to accept each agency's claim that, appearances aside, no conflict of interest did in fact occur in the conduct of these agreements. GAO accepts representations that subsequent to entering into the agreements, each agency simply followed their normal grant-making process, complete with rigorous peer review (in ORD's case GAO notes that ORD even took a couple of extra steps in setting up the cooperative program to protect against a conflict of interest). As a consequence of this process, any chance for undue influence was at least indirectly minimized. However, there were two issues related to these research agreements that we believe suggest the substance of a conflict of interest may well exist.

GAO accepts that because the research was done in areas that the agencies had already developed in consultation with a wide range of stakeholders, the research, by definition was appropriate and aligned with the existing research agenda. That may have been the case. However, among the stakeholders for both agencies are the very parties who fund the ACC. The chemical industry, through company representatives and others whose research funding or lobbying status are tied to the industry, work in these "stakeholder" processes. So, pointing to the stakeholder process as a validation of a research agenda already concedes to industry a role in shaping the research agenda that precedes these agreements.

Further, there are many, many priority research areas in each agency's research agenda and they are largely listed in very general terms. The general language which marks these priorities makes it difficult to check the claim that the research represented by these cooperative programs was appropriate, high priority

research that the agency would do anyway. If almost any particular research area can be described as being an expression of a general research agenda, pointing to these jointly-funded projects as being consistent with the research priorities of the agencies is not a very high bar to get over.

Finally, and most importantly, the decision to enter into one area or another for specific funding, with "matching" money from industry, may have had the direct effect of moving some items further up the research agenda above others of equal or greater merit. Some science more directly supports regulation than other science, but all of it may be on an agenda for work and all of it may be worthwhile. However, it is easy to see that it would be in a regulated industry's interest to encourage agencies to take on some flavors of research, subtly reducing the agency's commitment and capacity to support other flavors of research.

Evidence that some priority questions were raised and others submerged lies in the NIEHS-ACC Request for Application (RFA) itself. The RFA[1] describes several types of research that would not be funded. The issues barred from funding do not seem to lie outside the agency's priority research list nor do they appear to be poor lines of inquiry from a public policy or regulatory perspective. There is no good scientific reason that we could discover to pull that research from competing. That leaves the strong impression that the research was not to be funded due to the private partner's preferences.

The MOU actually lays out many ways in which industry money could impact the research process. It specifies that NIEHS and ACC will collaborate in developing the aims and goals of any RFA that would be published and that it required the approval of both parties prior to publication. NIEHS ceded to ACC a right to review proposals for their "responsiveness" to the RFA. NIEHS also granted ACC the right to participate in the negotiation and award of grant applications and in monitoring the progress of grant projects. For reasons that remain unclear, ACC apparently did not exercise its rights to participate in a responsiveness review or in the negotiation of grants. Nevertheless, the then-Director and the Institute's attorneys saw no problem in all these privileges being extended to the ACC. These issues will be fleshed out in the GAO legal opinion we will receive in late spring.

An agency has to look long and hard at what advantages come to it from such collaboration given that the interests of the agency and the private party which is subject to regulation growing out of the proposed joint research are unlikely to be complementary. As we think through these agreements, it is difficult to see what the public got from either the ORD-ACC agreement or the NIEHS-ACC

[1] Developmental Toxicology Exploratory (R21) Research Grants, June 14, 2001, RFA-ES-01-006; "Proposals to screen chemicals without regard to related studies on specific mechanisms of actions of the chemicals studied are not responsive to this RFA and will not be accepted. Epidemiological and clinical studies are considered non-responsive to this specific RFA."

agreement. It is true that in both instances the agencies gained access to some of ACC's funds for research purposes, but the ACC had that money and was fully capable of competing it entirely independently of the federal agencies. In fact, the ACC had a dedicated pool of money that was earmarked just for this purpose. Absent these agreements, the ACC would have spent their money on research similar to that funded with the agencies in any case. And if the agency claims that the work they were doing was work they were going to do regardless of industry cooperation are true, then again we see no net gain in overall funding. One dollar plus one dollar is two dollars whether the dollars are pooled or spent separately.

While there may be some marginal gain in overall efficiency from coordinating between the ACC and a Federal agency, the likelihood that the small amounts involved in either program funded a comprehensive, all-encompassing, efficiently chosen set of projects is somewhat low. That chance is made even lower in the case of NIEHS where some researchers were probably driven away from even competing for the money - an issue we will flesh out below. And this small, theoretical efficiency gain hardly outweighs the costs to the reputation of either agency regarding the perceived or real conflicts-of-interests implicit in these agreements. All in all, there seems no net gain for the public.

It is easier to see that each agency might gain something for its own benefit: a reputation for reliability and cooperativeness among industry that could lead to an easier political environment with the Office of Management and Budget (OMB) and Congress and more funding from industry down the road. But that is a poor reason, some might say perverse, for a public agency to enter into a cooperative research agreement with a private party. It is also easy to see ACC's motive because moving their research money through a Federal agency would enhance the prestige and credibility of their research work. This is not meant to be a criticism of the ACC. As far as we can see, ACC did nothing more than what they should do given their mission and their orientation. They acted in ways that reflect their interests and may well be completely consistent with the public's interest in terms of the research supported. The responsibility for problems in this area reside solely with the agency officials.

Before we are accused of cynicism in pointing out that the agencies and industry may be pursuing their own interests independent of the public's, we would draw your attention to the assumptions regarding behavior that lie at the root of our Republic. This view of behavior, where actions are assumed to align with individual interests, is as old as the Constitution and not a sign of undue cynicism, unless one believes that Madison, Hamilton, Monroe and Jefferson were pure cynics. To these founding figures, behavior that does not follow interest is unusual and unexpected. For these reasons, the Constitution is designed to set up competition between three co-equal branches of government. Agencies are likely to begin to pursue an agenda that reflects the interests of the Executive (or of the agency more narrowly) and it is up to Congress and the

Judiciary to act as a check on such behavior. We would suggest that the overall lack of oversight by the Congress and Congressional enthusiasm for public-private partnerships in general have contributed to an environment where small distortions of the public interest have begun to occur. It appears that these two cases are manifestations of that trend.

Government-Industry Funded Research: Erecting Informal Barriers to Entry Among Researchers

In addition to the development of research topics, and the core decisions about what would be responsive to a call for applications and what would be outside the scope of that call, there is the call itself that seems to reflect a bias. On this issue, NIEHS did a weaker job than did ORD. ORD clearly indicated that a researcher could apply to ORD and the ACC or to ORD alone. In this fashion, a researcher with no interest in appearing to work for industry could still pursue Federal funding.

Contrast that approach with the NIEHS request for proposals. That RFA explicitly directs that an applicant will have their grant application shared with the ACC.

The GAO report states that the NIEHS viewed this as an optional step and that researchers may have misunderstood the intent. However, the language of the RFA reads:

> *"SPECIAL REQUIREMENTS*
> *"Letter of Authorization*
> *"Because the domestic applications will be co-funded by the National Institutes of Health (NIH) and the American Chemical Council (ACC), all applicants should submit a brief letter to the NIH indicating that the application and the summary statements for such applications can be shared with the ACC. Letters of authorization should be prepared by the Principal Investigator and co-signed by the official for the applicant organization. This letter should be submitted as a cover letter accompanying the application."*[2]

It is difficult for us to understand how this language would be viewed as a "suggestion" by any reasonable reader. It is true that the language uses the word "should" instead of "must"; but if it were truly permissive the word used should have been "may" or "can" or "could". The construction of the section indicates that the funding is joint and leaves the compelling sense that complying with this "special requirement" (not "special option") is necessary to pursue funding. This "special requirement" is so important that a researcher's authorization letter will function as the cover letter for their grant application.

[2] Developmental Toxicology Exploratory (R21) Research Grants, June 14, 2001, RFA-ES-01-006

The strong impression created by the RFA was reinforced by the press release that was put out by NIEHS when they launched this program. That July 26, 2001 release said (in relevant part),

> "Council scientists-representatives and the NIEHS scientist-managers worked on the development of the joint program to benefit the public and formulated the initial RFA. Scientists from NIEHS and the Council's LRI [Long-Range Research Institute] will be involved in screening applications for responsiveness to the RFA prior to an independent, NIH scientific peer-review process. Following that process, applications ranked of the highest scientific merit will be offered funding."

Finally, Dr. Kenneth Olden, then-director of NIEHS, was quoted in the January 2002 edition of ACC's LRI publication, "LRI Update," as saying:

> "'This spirit of collaboration extends beyond funding,' stated Dr. Kenneth Olden, director of NIEHS. 'LRI representatives and NIEHS scientist-managers worked on the development of the request for applications, and they will participate in the process of selecting grants for award.' Applications will be reviewed by an independent, external, peer-review process administered by the National Institutes of Health. Following that process, the NIEHS and ACC will award funds to those projects that are ranked of highest scientific merit."

Apparently at the time the MOU was signed, NIEHS believed that researchers would have to share their materials with the ACC, for none of the collaboration described in the LRI publication or the NIEHS press release would work without such intimate cooperation.

For many, many researchers, this NIEHS requirement was a poison pill. Many academic researchers hold a belief that their research should serve the public and the advance of knowledge, and they steer clear from taking funds that are tied to direct material interests. There is a feeling common in academia that one's reputation might be hurt if one accepted money for research from parties whose financial interests are tied to the outcome of the research. As a consequence, some researchers would not apply for the NIEHS-ACC funds simply because of the perception that industry had a hand in the research process. So right at the launching of this initiative, some potential researchers who could help push understanding of the research that NIEHS says the public needs were taken out of play. We cannot know whether these are the best and brightest, though it is likely that this pool contains many of those, but we can know that it can't possibly be in the public's interest to push away the very experts we most need to engage high priority questions.

We know some researchers were disturbed by this arrangement because the case came to the attention of staff through researchers complaining, back channel, to at least one independent watch-dog group. We know there is a class of researchers who did not want to participate in this enterprise.

Curiously, the Director of NIEHS claimed in a letter to the Natural Resources Defense Council (NRDC) in August of 2001 that no such requirement existed. He made a statement contrary to the RFA itself - a document he signed - and his own Institute's press release. He may have been right in his letter to NRDC, but to a researcher responding to an RFA, they do not have the personal assurance of the Director to guide them. Instead they see an explicit statement that seems to demand compliance.

Broader Implications of These Cases for Public Research

Perhaps the most disturbing aspect of these cases is the ease with which a regulated industry got into the Federal research process. The ever-growing number of research opportunities and needs, especially in science related to environmental and health regulation, matched with tight or dwindling research budgets provides an incentive in the agencies to look to industry to partner up on research.

This desire is reflected in statements by the former director of the NIEHS recorded in minutes from the May 21, 2001 National Advisory Environmental Health Sciences Council,

> "NIEHS has begun discussions with the American Chemical Council (ACC) and others concerning what to do with the volume of new information NIEHS will obtain from using toxicogenomic technologies in the next 5-10 years. We want to generate partnerships and friendships with industries. Having this new data will present more opportunities for successes. Unfortunately, this will also create more opportunities for conflict and opposition. We will have a large amount of data that will be complex and confusing for awhile. We don't want interest groups and the press using the data prematurely to frighten the American public or to misinterpret the data - we want the data used wisely. We want to be able to agree on what some of the scientific issues are and maybe organize an "environmental court" or blue ribbon panel of experts to look at the data as they are being developed and interpret the information for the public and for policy makers. Discussions about how to accomplish this are ongoing."

This is a fascinating representation about the way the landscape looks through the eyes of the director of an Institute whose primary mission is undertaking research designed to meet the needs of setting public environmental health

regulations. The Institute should work with industry to use new data "wisely", perhaps through some sort of expert process, to make sure that when information on results from these studies are made available, they can be cast in the proper light for the public and policy makers. Interest groups and the press are to be mistrusted for how they would use these data. Rather than being partners in the effort to interpret the data, these parties are assumed to be interested in frightening the public. There seems to be a desire to convince industry that NIEHS can be a reliable partner in the effort to assuage public fears regarding industry products.

This advisory panel entry also points to the problem with Federal authorities looking to industry for support and cooperation: even small amounts of money can lead an agency to begin to try to look responsible and friendly in the eyes of the very industry they are supposed to regulate (or support regulatory efforts as in the case of NIEHS). When you want to be "friends" with the moneyed parties you are supposed to be watching, it is likely that the public's interest will be sacrificed. At the heart of the American legal and regulatory systems is the assumption that there will be adversarial relationships - not hostile, but watchful and cautious - between and among interested parties and between those parties and the government. Only the government has the charge to weigh all claims and interests in the effort to reach an outcome that serves the broadest public purpose. Other parties are assumed to speak for their narrower interests (even "public interest" groups represent a particular aspect of the public's interest). What we see emerging in the NIEHS and ORD cases is a situation where one party - a regulated industry - is emerging as a privileged partner with regulatory-oriented science agencies.

Not all gifts to government are bad, even if they come from a regulated industry. Not all cooperative research agreements put the public's interest at risk. We certainly don't think that every instance of industry-government cooperation is to be avoided; quite the contrary, there are many, many instances where such cooperation, managed properly and in keeping with public law, is the most efficient and effective way to meet a pressing public need. For example, developing and producing influenza vaccines is an excellent example of public-private partnerships that meet a real public need in what has been, until the recent past, an efficient manner.

However, what we are witnessing is the emergence of a system in which moneyed interests who have the most concentrated benefits and risks from government action, are gaining privileged access to agencies in ways that may impact the outcome of the agencies' work. Stories about scientific integrity as collected by Representative Waxman of the Government Reform Committee and by the Union of Concerned Scientists represent all manner of interference, either by political appointees attempting to shape the outcome of scientific advice or scientific findings among government scientists. The cases documented by GAO are somewhat different in that they are about agency officials seeking ways to

bring industry into their own work effort. This is probably a more dangerous situation than a case where a political appointee directly intervenes to veto a particular scientist for service on an advisory panel - though that too is disturbing. This is more dangerous because it leads to a comprehensive distortion of an agency's behavior to stay on the good side of their new friends. And journalists, consumer groups, environmental groups, economic justice groups, citizens (and perhaps House Committee staff) all remain on the outside, viewed with some suspicion and dismissed as potential rabble rousers.

The GAO and staff report on these cases will not be the end of the minority's work in this area. First, we await a legal opinion from the GAO General Counsel regarding the legality of the gift and agreement that NIEHS entered into with ACC. That opinion should be available in the next month or two. We also have other instances of industry-government cooperation that will be pursued.

The result of all this work is a growing recognition that the cooperative agreement structures that are currently in place were not designed with the kind of collaboration seen in the NIEHS-ACC case or the ORD-ACC case. Congress never anticipated that a regulated industry would be in the room when grant decisions for public health research would be made. Even if this is nothing more than an appearance of a conflict-of-interest, as opposed to the substance of a conflict, the appearance is very, very bad. Perhaps it is time to reconsider whether the laws authorizing cooperative research arrangements contain sufficient safeguards to ensure the independence and integrity of public research.