Tucked away inside the U.S. EPA’s docket on PFOA, a chemical manufactured by DuPont, is a 5-page letter written in April 2003 by the Weinberg Group, an international scientific consulting firm based in Washington, D.C. The letter is addressed to DuPont’s vice president of special initiatives, Jane Brooks, and lays out a proposal for how the Weinberg Group can help the company deal with a growing regulatory and legal crisis over PFOA (perfluorooctanoic acid). PFOA is a common building block of the perfluorocarbon family of chemicals, which are renowned for their water and stain resistance. PFOA is the compound used to make Teflon and was once used in other products such as Stainmaster and Gore-Tex.

“The constant theme which permeates our recommendations on the issues faced by DuPont is that DUPONT MUST SHAPE THE DEBATE AT ALL LEVELS,” states the letter (emphasis in original). For 23 years, the letter continues, the Weinberg Group “has helped numerous companies manage issues allegedly related to environmental exposures. Beginning with Agent Orange in 1983, we have successfully guided clients through myriad regulatory, litigation and public relations challenges posed by those whose agenda is to grossly over regulate, extract settlements from, or otherwise damage the chemical manufacturing industry.”

Although a DuPont spokesperson confirmed that they had hired the Weinberg Group, no evidence exist that they followed through with all the items outlined in the plan. Nevertheless, experts contend that the document provides one of the clearest examples they have seen to illustrate how consulting firms help industries deal with scientific questions about the safety or health consequences of their products. These firms develop legal defense campaigns, ostensibly based on science, to sway juries during trials, to counteract critics say that these tactics are commonly used by chemical and pharmaceutical companies trying to combat lawsuits and regulations against their products. View the proposal [354KB PDF]
campaigns, ostensibly based on science, to sway juries during trials, to counteract potential regulatory oversight, and to influence the public’s view about the health effects of products. Critics such as David Michaels, chair of the Project on Scientific Knowledge and Public Policy at George Washington University, charge that these groups “manufacture uncertainty”—a term Michaels coined—in order to prevent or delay regulations and civil lawsuits.

The 2003 letter from the Weinberg Group arrived at DuPont as EPA was finishing up a draft risk assessment on the possible health effects of PFOA. The company was also facing a civil-action lawsuit in West Virginia with plaintiffs alleging that they suffered deleterious health effects from PFOA in their drinking water. In 2004 and 2005, JP Morgan Worldwide Securities Services released reports [1MB PDF] for DuPont investors predicting that the company faced potential EPA fines of more than $300 million and a total liability of $150–$800 million. DuPont also faced risks to its fluoropolymers and telomers business, which the report pegged at about $1.23 billion (4% of total sales), with $100 million in after-tax profits, in 2004. In fact, DuPont settled the class-action lawsuit with residents around a manufacturing plant in March 2005 for $107 million. And in December 2005, DuPont agreed to spend $16.5 million to settle allegations that it withheld from EPA the results of a 1981 study that showed PFOA can cross the placental barrier in humans.

ES&T confirmed the letter’s authenticity with Matthew Weinberg, CEO of the Weinberg Group, and a spokesperson for DuPont told ES&T that the Weinberg Group did work for the company several years ago: “They assisted us in identifying scientific third-party experts on an issue involving the company.” However, when asked to describe the work, the spokesperson would only say, “Probably PFOA. I think the letter was written three years ago.”

In an interview, Weinberg described the proposal as a “marketing document”. Later, he added, “My only suggestion would be that you stick to what the document says and not attempt to expand beyond [to] what it doesn’t say.”

The sales pitch

Passages from the letter describe how the firm will develop a defense strategy based on science. “[W]e will harness, focus and involve the scientific and intellectual capital of our company with one goal in mind—creating the outcome our client

ES&T later contacted DuPont and the company confirmed that the Weinberg Group had “assisted us in identifying scientific third party experts on an issue involving the company.” The DuPont spokesperson later stated that this issue was “probably PFOA.”

A: A paper ostensibly from the Weinberg group. Okay, I can see what it says.

Q: Terrence Gaffney is no longer working with you, is he?

A: That’s correct.

Q: Okay. Um, did you guys, uh, ever end up taking this account?

A: I’m not at liberty to discuss our clients.

Q: Um, okay. If I called DuPont, would they tell me that you had worked for them or that you had not worked for them?

A: I have no idea what DuPont would tell you.

Q: Okay.
Michaels agrees with Weinberg that the letter is a sales pitch, but he adds that it originates from a “product defense firm” and is not about science. “What is doesn’t say here is, ‘We’ll get the science right,’” he points out. “What it says is, ‘We’ll make sure the science comes out in a way you want it.’” Michaels calls the letter one of the best examples he has seen of what he calls a common business strategy: to create scientific doubt in order to stave off lawsuits and regulatory action.

“They have experts and put papers in the scientific literature because they know regulatory agencies like to see peer review,” he says. But these studies, he adds, are published in “vanity journals—journals that publish studies with minimal peer review.”

Most scientists are completely in the dark when it comes to understanding how corporations manipulate science, says David Ozonoff, chair of the department of environmental health at Boston University. Ozonoff, who spent years studying the asbestos industry, recalls, “I went into [studying the asbestos issue] really thinking that industry can have its own interpretation of the scientific findings. It was the sociology of science and the social construction of knowledge, and they would naturally tend to emphasize certain things while workers would look at the same things differently.” But as he sifted through letters and documents that came to light during court cases, Ozonoff found evidence that corporate
executives had not only known for decades that asbestos was dangerous but they had outlined and put into practice a defense strategy to protect their product and company profits. “It was planned out in the documents in black and white,” he says. “They thought nobody would ever see it.”

“I have somewhat the same reaction to this letter,” he said about the Weinberg memo to DuPont. “These are things that we know are going on.”

For example, the Weinberg letter lists a series of proposed tasks designed to limit liability, including the recruitment of scientific experts on PFOA “so as to develop a premium expert panel and concurrently conflict out experts from consulting with plaintiffs.” Experts who worked for DuPont through the Weinberg Group would have been unable to testify for plaintiffs.

“They’re offering to get rid of inconvenient witnesses for the other side,” says Ozonoff. He adds that he has received similar requests in the past from lawyers asking him to consult on cases. “I wouldn’t have to testify,” he says, “but I knew right away what they were doing was trying to conflict me out of a case.”

Ozonoff, who sat on EPA’s Science Advisory Board review panel for PFOA, points to a passage in the memo that details how to identify the likely health benefits of the chemical “by analyzing existing data, and/or constructing a study to establish” that PFOA is safe and “offers real health benefits.” The next sentence mentions the oxygen-carrying capacity of blood and the prevention of coronary artery disease.

Q: Your father, is he still an employee?
A: Well...
Q: Is he retired?
A: Which question do you want me to answer?
Q: Well, is he...?
A: He is no longer an employee of the Weinberg group.
Q: Okay. Do you know where Mr. Gaffney is?
A: I have no idea where Mr. Gaffney is.
Q: Okay.
A: I’m not being coy. Dr. Weinberg is still working.
Q: Oh, he is? Okay.
A: And still does work for the Weinberg group.
Q: Okay.
A: I answered your questions accurately.
Q: No. That’s fine. It doesn’t really matter.
A: But I realize you walked away with an...with the wrong impression.
Q: Okay.
A: He’s simply no longer an employee.
Q: Okay. Um, so anything else you’d like to say, after reading this? Do you have any comment on...
A: Do you have any questions?
Q: Well, one of the things I was interested in was, um...I don’t know. I just wanted to give you a chance to read it and see if you....
A: I’ve perused it.
Q: Okay. Um, I was wondering what specifically...there was one particular passage in here that I thought was kind of interesting. Um, “reshape the debate by identifying the likely known health benefits of PFOA exposure by analyzing existing data and/or constructing a study to establish not only that PFOA is safe over a range of serum concentrations levels but it offers real health benefits.” In parentheses it says “oxygen carrying capacity and prevention of CAD.” Which is cardiovascular...oh I’m sorry. Wait. cardiovascular disease. Um, but cardiovascular disease....
“That blew me away,” says Ozonoff, adding that data on PFOA seem to show an effect on lipid metabolism; this raises concerns that the chemical may actually increase the risk of cardiovascular disease. “This proposal is a ‘manufacturing doubt’ strategy. If you say, ‘Gee, this might cause heart disease,’ then they’ll come back with another story that says it’s good for your heart.” Constructing this sort of narrative, he says, sets a research agenda that any independent scientist wandering into the field must address.

However, Weinberg maintains that science is open to interpretation. “I grant you that people can interpret scientific data differently based on various rationales. But truth in science is what I believe all reputable scientists seek.”

**Actions from the Weinberg Group**

Weinberg says that he is not at liberty to discuss his clients, but *ES&T* discovered that his company did product defense work for NVE Pharmaceuticals in 2004, when the U.S. Food and Drug Administration (FDA) was seeking to ban the diet drug ephedra. “In our perspective, the government’s decision relied on unreliable data relating to misuse of the product, and that when used as directed, not only is ephedra safe, but it has an exemplary safety profile, over an extended period of time,” said Terrence Gaffney, a vice president with the Weinberg Group. “We believe we win on the science hands down,” he added.

The following month, FDA banned ephedra, citing numerous studies that found that the herbal supplement raised blood pressure and stressed the circulatory system. A review

Did you find any, has there been any, um, anything published in the peer-reviewed literature that would lead one to believe that?

A: I have no...I am not an expert on PFOA and I couldn’t tell you what’s been published or what hasn’t been.

Q: Okay. Alright. I just wanted to give you a chance....Do you have anything else to say?

A: I guess I have a question for you. I don’t understand what you see in that document that’s worthy of a conversation between us.

Q: Well, it was very interesting, is when I showed this passage, that passage, particularly to David Ozonoff. I don’t know if you know who he is.

A: I’ve heard the name, but I can’t place him.

Q: Um, he’s at BU. He was on the SAB panel for PFOA and he, uh, called that particular passage sort of, uh, “fantasy thinking.”

A: Okay. Uh, uh, I would...would suggest strongly that the letter you are looking at appears to have been a marketing document.

Q: Okay.

A: I do not think that it is a document that in any way, shape, or form, makes claims, nor is it intended to represent a specific point of view. It is a marketing document telling them things we maybe think...are possible. But I believe it clearly states...you just read me a part that says “study and analysis are needed.” I don’t believe the document purports to say that that’s been done.

Q: Okay.

A: It may have been done. It may have been done by others. I don’t believe this document makes this claim that we had done that work at this point or that we were ever going to do that work.

Q: Okay.

A: My only suggestion would be that you stick to what the document says and not attempt to expand beyond what it doesn’t say.

Q: Oh, I’m not expanding anything. I’m just passing it to other people and having them look at it and giving you what their opinion is.

A: Well, then their opinion of what we wrote, would be their opinion.

Q: Right.

A: It wouldn’t necessarily be fact. Because they didn’t write it.
circulatory system. A review sponsored by the National Institutes of Health concluded that ephedra use is associated with, among other things, increased risk of heart palpitations and psychiatric and upper gastrointestinal effects.

The Weinberg Group also wrote the American Chemistry Council’s (ACC) 2005 position paper on endocrine disrupters [448KB PDF]. ACC is the lobbying group for chemical manufacturers. One of the two coauthors of the report is James Lamb, who is an employee of the Weinberg Group and has also worked for industry on other chemicals such as perchlorate. In January, when the state of California held hearings to debate the health risks and possible use restrictions for six phthalates and bisphenol-A—suspected endocrine disrupters—in baby toys, Lamb testified that the chemicals were safe.

“This is something that’s been looked at for years . . . with the conclusion that the phthalates are safe,” he told a Sacramento, Calif., news station at the time. In 2005, Europeans permanently banned six phthalates from baby toys, and the California legislation was an attempt to replicate this ban.

“Wherever I am, [Lamb] is always there,” says Frederick vom Saal, a professor of biology at the University of Missouri and an expert on endocrine disrupters. “He’s probably heard so many of my lectures that it must make him sick.”

Vom Saal has been under attack for his work that finds that bisphenol-A poses endocrine-disrupting health risks to humans. In January 2006, the journal Environmental Health Perspectives published a letter criticizing vom Saal’s recent research on bisphenol-A (Environ. Health Perspect. 2006, 114 [1], A16–A17). The letter was signed by Joseph Politch, a research associate in the department of obstetrics and gynecology at Boston University. Because of the journal’s conflict-of-interest policy, Politch’s letter noted that he was a consultant for the Weinberg Group.

Politch told ES&T that he neither conducts research on bisphenol-A nor plans any future studies on the chemical, but he did admit that he has done consulting for the Weinberg Group. Politch refused to answer more questions about the exact nature of his consulting work, other than confirming that he had written the letter. “You should contact the Weinberg Group,” he told ES&T and then ended the conversation.

Vom Saal says that hiring scientists to send letters to scientific journals is just one tactic that industry uses to create the illusion of a scientific controversy. Many of these strategies were pioneered by the tobacco companies. “There’s not one strategy that is new or creative,” he says.

**Smoking gun?**
Stanton Glantz, a professor of medicine at the University of California, San Francisco, and a documenter of the scientific battles over tobacco smoking, backs up vom Saal's assertion that this is an old approach. Glantz is a coauthor of the book *The Cigarette Papers* and has written numerous peer-reviewed studies on the tobacco industry, which are based on documents contained in the *Legacy Tobacco Documents Library*. This library is an online database of internal company papers obtained as part of the final U.S. court settlement with Big Tobacco in the 1990s.

“Basically, the tobacco companies set up this huge sub rosa network of scientists and experts around the world who were paid through the tobacco lawyers to give lectures contesting the evidence on secondhand smoke—to show up at hearings; to, in some cases, lobby; to publish articles,” he says. Although the effort was meant to undermine the science labeling passive smoke a health risk, he says the tactics were very similar to what is contained in the Weinberg proposal.

“It was very effective for [tobacco companies] for years, and [the] Weinberg [Group] did a lot of the recruiting for them. They were the recruiting agency that helped to get the whole thing up and running,” he says. Glantz’s latest paper on this recruitment cites a Philip Morris action plan detailing what the company expected during 1989–1992 from scientists hired as consultants. “They should be appropriately encouraged to prepare papers, participate in scientific societies with relevant areas of interest, and take active roles in scientific conferences,” reads the document. “Where possible, without compromising a scientist’s effectiveness, they should be encouraged to provide statements or testimony for use before government commissions and information to the media” (*Eur. J. Public Health* 2006, 16, 69–77).

“People in the scientific community don’t want to hear about this,” says vom Saal. “When you point out corruption, it makes scientists uncomfortable.”

But Glantz has studied Big Tobacco’s impact on his profession for more than a decade, and he sees a much bigger problem looming for science. As the federal government cuts back on funding for research, scientists are now forced to rely more and more on financial assistance from corporations; this raises troubling questions about whether the results from these studies will be impartial and objective or favorable to the companies that paid for them.

“The whole scientific enterprise is being distorted by these corporate interests,” Glantz says. “That’s why it is so important that we have a healthy academic community, to be a voice that isn’t being controlled.” —PAUL D. THACKER