

Coping with Fraud: The Darsee Case

New evidence suggests that papers published in refereed journals contain fabricated data from Emory as well as Harvard

It has been nearly 2 years since John R. Darsee was caught fabricating data in an experiment at the Harvard Medical School, where he was a fellow in the Cardiac Research Laboratory headed by Eugene Braunwald. The Darsee case is one of a handful of well-publicized incidents of fraud that have occurred within the past few years at some of the country's most prominent academic institutions. In their wake, unprecedented attention is being focused on the causes of research fraud and the way institutions respond to evidence that someone has fabricated results.

Darsee was caught in the act of falsifying data on 21 May 1981 during an experiment on dogs in Braunwald's laboratory at the Brigham and Women's Hospital, a Harvard affiliate. The incident precipitated a complex and costly series of responses, first at Harvard and subsequently elsewhere. After privately notifying Harvard officials, Braunwald and his principal research deputy, Robert Kloner, began an internal review of Darsee's research that would go on for more than 1½ years. In late November 1981, after it appeared that Darsee's fraud extended to a major collaborative study sponsored by the National Institutes of Health (NIH)—on which Darsee continued to work even after he was caught fabricating data—the dean of Harvard, Daniel C. Tosteson, asked the dean of Johns Hopkins, Richard S. Ross, to head a committee to investigate the affair. In December, the director of the National Heart, Blood, and Lung Institute which was funding most of Darsee's research, appointed four university-based cardiologists to conduct an independent audit for the government. That panel, chaired by Howard E. Morgan of the Pennsylvania State University College of Medicine at Hershey, spent 6 months on the case.* Then, NIH director James B. Wyngaarden instructed one of his deputies, William Raub, to convene a group of senior NIH staff to review the Morgan panel's report.

Wyngaarden accepted their recom-

mendation that Darsee be debarred from receiving NIH funds or sitting on advisory bodies for 10 years (*Science*, 25 Feb., p. 937). Formal debarment proceedings are now under way in what may be the harshest sanction NIH has ever levied against a scientist. The case has been referred to the Justice Department.

Meanwhile, back at Harvard, medical school faculty, working with the university's general counsel, were drafting guidelines about what to do if a Darsee-like incident were to happen again. A policy statement was released in Febru-

Harvard record and are standing by him.

Darsee's first known act of fraud—the 21 May incident—involved the labeling of data that had been obtained on dogs over a period of a few hours to make it look as if the data had been recorded over 2 weeks. It came to light only because he virtually allowed himself to be caught by fabricating tracings in plain sight of co-workers (*Science*, 29 Jan. 1982, p. 478). When confronted by Braunwald and Kloner, Darsee admitted the fabrication and said he was sorry, all the while insisting that his was a single,

Eugene Braunwald

"I got a bum rap."



ary when the Morgan and Raub reports became public.

One might reasonably conclude from all this that the matter is finally settled. Not so. Still to be resolved is whether, and to what extent, Darsee committed fraud during his years of training at Emory University in Atlanta and as an undergraduate at Notre Dame. The answer to that affects the validity of several published papers coauthored with senior members of Emory's faculty, and it also has a bearing on a question that has dominated the case, namely, whether the pressures to produce that exist in Braunwald's lab were a major element in the data fabrication. It also raises difficult questions about Darsee's fitness to practice medicine. Darsee is currently a fellow in critical care medicine at Ellis Hospital in Schenectady, New York, where administrators are aware of his

foolish act of misconduct. Braunwald believed him.

Of some 130 fellows who had passed through his laboratory over the years, Braunwald judged Darsee the most remarkable. He was a tremendously hard worker, but, says Braunwald, "He was not a drone." Rather, he thought of him as "brilliant" and "creative," a young man with whom he could discuss research projects as a scientific equal. Darsee was well-liked at Harvard, as he had been at Emory. In fact, on the very days Darsee was facing charges of fraud, his former teachers at Emory were writing Braunwald glowing letters of recommendation in support of Darsee's pending appointment to the Harvard Medical School faculty. Cardiologist Nanette K. Wegner, who coauthored papers with Darsee, wrote that, in addition to having superb research skills, "he enjoys an

*Other panel members were cardiologists Francis J. Klocke, State University of New York at Buffalo; John T. Shepherd, Mayo Medical School; and C. Kern Wildenthal, Southwestern Medical School, University of Texas Health Science Center at Dallas.

enviable relationship with his patients and with his peers . . . and in general is an extremely well-rounded human being." Another coauthor, associate dean Donald O. Nutter, spoke of Darsee's "intelligence" and "moral character."

By the time these letters were in Braunwald's hands, Darsee's offer of a faculty position at Harvard had been withdrawn and his NIH fellowship was being terminated. But Braunwald decided to keep him on in the laboratory to complete his part in the NIH collaborative study. This decision was subsequently criticized by NIH officials and Morgan panel members, who believe that Darsee's collaborators at other institutions had a right to know what was going on. But at the time, Braunwald was simply not prepared to believe that his star fellow had done anything more than crack—once—under pressure. As a friend of Braunwald's told *Science*, "Braunwald thought that maybe he'd ruined Darsee."

Harvard's initial institutional response was to handle the matter in confidence. No effort was made to identify and notify all of Darsee's co-workers at Harvard. NIH was not notified of the one admitted act of fraud. Letters from Darsee and the Brigham and Women's Hospital to NIH, terminating Darsee's fellowship did not tell NIH why.

Braunwald and Kloner spent months reviewing Darsee's notebooks but found nothing. For a while, it looked as if he was, in fact, guilty of only a single act. But in the fall, when NIH broke the code on data from the multi-institutional study Darsee was part of, it became clear the damage might be more widespread. Data from Braunwald's lab were inexplicably at variance with those from the collaborating groups. It was at this point that Tosteson asked Ross of Hopkins to head a committee of five Harvard faculty and three outsiders to review both Darsee's work and Harvard's handling of the matter. The Ross committee was appointed the day before Thanksgiving and reported 2 months later (*Science*, 12 Feb. 1982, p. 874). It was generally sympathetic to Braunwald and Tosteson, taking the view that they acted reasonably, given their information at the time. The committee, without conducting a serious investigation of its own, took the position that "Drs. Braunwald and Kloner have documented the extent of the irregularities in Darsee's data. . . ." In fact, it would be months before the full extent of the fraud became clear. In retrospect, Ross realizes it was unwise to succumb to Tosteson's urging that his committee conclude its business quickly. In the

end, the Ross report contributed little to a resolution of the matter but did make clear the mistake of trying to conduct a serious investigation on the run.

The Morgan panel did conduct a rigorous statistical analysis of data in Darsee's Harvard publications and uncovered "extensive irregularities" in five papers on which he was first author, with Braunwald and Kloner as coauthors. "The primary responsibility for this situation rests with Dr. Darsee, but must be shared by his coauthors," the panel said. Braunwald and Kloner retracted findings



Howard E. Morgan

Headed inquiry for NIH that criticized most of those involved with the Darsee case.

in those papers that were based on Darsee's work.

It was while the Morgan panel inquiry was going on that hard, physical evidence of Darsee's data fabrication in the NIH study was discovered—ironically enough by Braunwald and Kloner. Analysis of heart tissue from experimental dogs which should have been injected with radioactive microspheres revealed no residual radioactivity in animals studied prior to 21 May. However, there was radioactivity in heart tissue from dog experiments Darsee conducted during the time he was in the lab after the 21 May incident. The "smoking gun" was thus in hand.

The Morgan panel's review of the Darsee case took it beyond the specific facts of data fabrication into the more tenuous realm of an assessment of the way Braunwald runs his laboratory. Where there is general agreement that Harvard's institutional response was flawed, there is disagreement over the question of Braunwald's supervision of his young researcher and the pressures in his lab to produce. The Morgan panel does not go so far as to blame Braunwald for Darsee's fraud, but it does fault his supervi-

sory style for letting it go undetected. According to its report, "The Panel is of the opinion that the circumstances prevailing throughout Dr. Darsee's period in the laboratory, while not responsible for or in any way condoning his misdeeds, helped to create an environment that may have inhibited their being uncovered."

Says Braunwald, "I got a bum rap."

Eugene Braunwald is a renowned and powerful cardiologist who is widely credited with major discoveries in his field. In addition to directing a laboratory where he has four research fellows, Braunwald is in the unusual position of being chairman of medicine and physician-in-chief at two Harvard hospitals—the Brigham and Women's and the Beth Israel. He is not in the lab every day. Although he met with Kloner twice weekly, his meetings with the fellows were often scheduled 6 to 8 weeks or more apart.

According to Morgan, the panel felt that "there just wasn't enough direct contact with Braunwald." Their opinion, he says, is based not only on the Darsee case but also on interviews with fellows in the Harvard lab and on panelists' own supervisory practices. Morgan, for instance, says, "I see my people every day and have formal presentations of work every Monday. But then, I'm not running two departments of medicine."

Braunwald, who feels deeply stung and angry about these criticisms, believes that he is being unfairly scrutinized in that any number of other labs are run like his. In an interview with *Science* and in letters to NIH, Braunwald observed that it has been his practice for years to delegate authority in the research laboratory to a bright younger scientist and that it has never been an issue before. "One of the key roles of a Principal Investigator is to provide scientific leadership, ideas and, when possible, even inspiration," Braunwald said in a long memorandum to NIH officials. "Since 1960 I have maintained my direct participation in the laboratory by trying to offer these while at the same time providing an extremely capable colleague, such as Dr. Kloner, for day-to-day, on site, full-time participation in the actual experiments."

Although Raub's review committee of senior NIH staff took clear positions on most of the comments and recommendations of the Morgan panel, it ducked on this question of the way a laboratory should be supervised. In his official memorandum to NIH director Wyngaarden, Raub said, "The staff committee recognized that the Panel's findings in

this regard are matters of professional judgment and that equally qualified observers might form different impressions from the same information." The decision, therefore, was to make the panel's observations and the rebuttals from Braunwald and Kloner part of the public record.

One of the principal defenses Braunwald makes of his laboratory rests on his belief that Darsee has a long record of scientific deception which he managed to conceal from his superiors at Emory well before he arrived at Harvard. In March 1982, while the Morgan panel was conducting its investigation of Harvard, Braunwald started to review several of Darsee's papers from Emory. Almost immediately, he developed "concerns" about the integrity of three of them. He reported this to NIH and to Neil Moran at Emory, who had been named chairman of an internal review of Darsee's work there. Subsequently, Braunwald has detected possibly fraudulent data in more than a dozen of Darsee's papers from Emory. Several involve studies of human subjects, including patients in coronary distress.

It is Braunwald's contention that the Morgan panel should have expanded its investigation to include possible fraud at Emory before making judgments about the laboratory environment at Harvard. However, the panel declined to do so and made no mention of the allegations.

The decision to ignore that issue was made jointly by the Morgan panel and NIH staff for a number of reasons. First, technically, the Morgan panel was sponsored by the heart institute, and no heart institute funds were used to support Darsee at Emory. Second, Morgan notes that the panel was not prepared to make the necessary commitment of time to "become full-time investigators." Third, as Raub told *Science*, there was a feeling that the Morgan committee should "wrap things up" on the Harvard inquiry. Furthermore, as he said in his report to Braunwald, "We . . . believe that there is ample basis to initiate debarment proceedings [against Darsee] now."

Nonetheless, NIH officials are now persuaded that the situation at Emory is sufficiently serious to warrant an NIH investigation "as soon as resources permit." Meanwhile, Raub says, NIH is standing by while the Moran committee completes its internal inquiry at Emory.

The Moran report is expected "within four weeks," according to Michael Aycock, assistant to the dean at Emory. When complete, the report will be reviewed by a panel of outside scientists appointed by Emory and by NIH.

Harvard Acknowledges It Could Have Done Better

Harvard has been severely criticized for its handling of the Darsee case by the Ross committee, the press, NIH officials, and, most recently, the Morgan panel. Each acknowledges that Harvard officials acted from honorable motives, but each concludes that the decision not to notify NIH promptly of Darsee's admitted act of fraud on 21 May 1981 and not to call immediately for an audit by persons outside Braunwald's lab was a mistake.

In a memo to the Harvard Medical School faculty timed to coincide with release of the NIH reports, Tosteson acknowledged his error. "A committee of persons not associated with the Cardiac Research Laboratory should have been appointed to investigate the matter and audit Dr. Darsee's research when his misconduct was first discovered in May, 1981," he said. "Also, a prompt and thorough effort should have been made to identify and notify other investigators. . . . I wish, in retrospect, those actions had been taken."

Braunwald, too, would do it differently another time. "I no longer think you can give someone the benefit of the doubt in any case where fraud has been admitted," Braunwald said in a lengthy interview with *Science*. "The cost to the institution and to science is too high. I have changed my opinion on this." One reason Braunwald chose not to notify NIH 2 years ago was fear that a government agency, bound by the Freedom of Information Act, could not keep the case private. Now, he says, "We can't afford confidentiality as far as NIH goes." Rather, "You have to have some way of issuing a clarion call of innocence if someone is the victim of crank allegations."

Harvard's new policy on "principles and procedures for dealing with allegations of faculty misconduct" constitutes recognition of the fact that its response to the Darsee case leaves something to be desired. And yet it would be wrong to say that its take-home lesson is that these things can be handled only one way. The policy, which vests authority for fraud investigations in the office of the dean, is designed to "permit flexibility" by giving him maximum discretion to "attempt to resolve the matter through informal processes and discussions" at one end of the spectrum to full notification of NIH and other interested parties at the other. It also leaves to the dean's judgment the decision on appointing a committee from outside the affected department. This stands in contrast to the Morgan panel's recommendation that such a committee be named "immediately."

The Association of American Medical Colleges made a similar recommendation last summer when it issued general guidelines on coping with fraud (*Science*, 16 July 1982, p. 226). Just how many research institutions have adopted guidelines of any sort is not known.

Although there are guidelines to advise institutions on procedures to follow when fraud is alleged, there are as yet none that spell out just how the investigation itself should be conducted. Braunwald's attorney, Bancroft Littlefield, thinks that "doctors aren't equipped by training" to conduct these kinds of investigations themselves. Although innumerable people were reviewing Darsee's data, it was almost a full year after the inquiry began before Kloner found the "smoking gun" when he analyzed heart tissue from a dog in which Darsee had allegedly implanted radioactive microspheres. No radioactivity was present in the heart.

Says Littlefield of the investigations, "Obviously at first Braunwald and Kloner didn't do it well. The Ross committee didn't do well. And Morgan and company didn't find the smoking gun even with the help of NIH staff and access to all the material." The reviews tended to focus on the contents of laboratory notebooks, for instance, rather than an analysis of physical evidence. "What doctors need," says Littlefield, "is a manual." The first thing it should say, he argues, is that the laboratory should be isolated and the data locked up. NIH officials and others who have been involved in investigating allegations of fraud agree that there is a problem here—that review committees need what one of them has called "professional sleuthing help" in addition to scientific expertise.—**B.J.C.**

Wastes Seep Round the Law

While Congress continues to pound the Environmental Protection Agency (EPA) for its mismanagement of toxic waste programs, the Office of Technology Assessment (OTA) has raised an issue that has more fundamental and long-lasting implications. The nation's laws and regulations for dealing with toxic wastes are full of loopholes and will ultimately prove inadequate for protecting public health and the environment, OTA says in one of its more outspoken reports.*

In particular, OTA argues that the volume of hazardous waste produced each year is far greater than EPA has estimated, that the cost to the public of cleaning up old dump sites greatly exceeds the resources available under the so-called Superfund program, and that current regulations tend to favor the least environmentally acceptable means of waste disposal. The burden of OTA's message is that, in addition to ensuring that EPA properly enforces the hazardous waste laws, Congress needs to take a hard look at the laws themselves.

According to OTA's estimates, some 250 million metric tons (tonnes) of hazardous wastes are generated each year in the United States, yet EPA regulates the disposal of only about 40 million tonnes. The bulk of the federally unregulated waste is material of relatively low hazard, such as fly ash from power plants. But a substantial quantity of highly toxic waste also escapes regulation because small producers—those that generate less than 1 tonne of hazardous waste per month—are exempted from the federal law. As a result, says OTA, “millions of tons of federally exempted hazardous waste [ends up in] sanitary landfills,” where it poses “substantial risks.” Some toxic wastes also slip through EPA's regulatory net because they contain chemicals that, although clearly hazardous, are not on EPA's list of materials requiring regulation. Dioxin is a case in point.

Partly because of such loopholes, more and more dump sites are likely to require cleanup in the future, adding to the immense cost of dealing with those that already require action. According to OTA's estimates, it will require between \$10 billion and \$40 billion to clean up a substantial fraction of the 15,000 sites so far identified as being in need of remedial action. The Superfund program is supposed to deal with those sites for which a culprit cannot be identified. But its resources—which are generated by a tax on chemical and petrochemical producers—will total only about \$1.6 billion by 1985, an amount that looks woefully inadequate.

The OTA study points out that 80 percent of federally regulated wastes are now disposed of on land. The reason is that less hazardous alternatives such as chemical or thermal treatment are more expensive and federal regulations provide little incentive for their use.

The report suggests that one way to encourage more desirable disposal techniques would be to establish a fee system under which companies would be charged according to the amount of toxic waste they generate, with higher fees imposed for wastes disposed of on land than by alternative means. Unlike Superfund fees, which are determined by the volume of materials used rather than the volume of waste produced, such a system would encourage more recycling of hazardous materials, the report claims. Like Superfund fees, charges based on waste production would be used for cleaning up abandoned dump sites.

The OTA study is likely to prove influential in congressional debates over the next few months. Representative James Florio (D-N.J.) has already introduced new legislation incorporating many of the report's recommendations, and its chances of passage by the House are considered good. Prospects in the Senate are more uncertain, however. Senator Robert Stafford (R-Vt.) chairman of the Senate environment committee last year kept legislation bottled up in his committee. But, given the public attention devoted to the matter this year, the pressures for action will be intense.

—COLIN NORMAN

**Technologies and Management Strategies for Hazardous Waste Control* (Government Printing Office, Washington D.C., 1983). \$8.50.

Although Emory is remaining silent, some indication of where the Moran committee stands is evident from correspondence released by NIH. Clearly, Moran is finding problems. According to a 13 December memorandum from Braunwald to Raub, in October Moran informed Braunwald that “his committee had discovered serious problems regarding Dr. Darsee's work at Emory.” Raub also got similar word from Moran and told Braunwald that “the NIH staff's preliminary review confirmed the existence of such problems.”

Recently, evidence has come to light that suggests the trail of Darsee's misconduct goes back to his undergraduate days at Notre Dame, where microbiologist Julian Pleasants heard him give a student seminar in 1969. Prompted by news accounts of the Darsee case, Pleasants looked up two papers Darsee published in the student-run *Notre Dame Science Quarterly*. One paper, on hormones and aging, describes an experiment in which blood was drawn from the tails of 200 rats weekly for the animals' lifetime of 90 weeks or more. In a letter to Braunwald, Pleasants said “By internal evidence these articles are fabrications.” Pleasants told *Science* he decided to write because “I felt Braunwald was being blamed unfairly for having changed a person's character when it was already set. It was unfair to Dr. Braunwald and to the general practice of research.”

Darsee's response to these various allegations is ambiguous. Although he clearly admits fabricating data in the 21 May incident, he seems to have denied responsibility for other misconduct. According to the Morgan panel report, Darsee responded to written questions about his data and also brought his attorney, Robert Gerard of Boston, to Bethesda for a 3½-hour interview. This, the report says, “provided Dr. Darsee with a full opportunity to present his own account of events and circumstances.” In particular, the panel sought explanations for its discovery of statistical aberrations in tabular data from five papers on which he was first author. No primary data were available for review but Darsee did offer “suggested explanations for the surprising statistical characteristics of his data.” The Morgan panel found his explanations “unconvincing.”

Darsee also wrote a letter to NIH that Raub found so “highly personal” in its references to the death of his father and his admiration for Braunwald that he has acceded to Darsee's request that it not be released. However, in his memorandum to Wyngaarden, Raub wrote about

"a letter from Dr. Darsee stating that, although he had no recollection of falsifying any research data, he acknowledged that the Panel's inquiry had established both the fact of falsification and his personal role. . . . It should be noted that Dr. Darsee's letter was a significant departure from his earlier assertions to the Panel that he had not engaged in any deceptive or irregular practices other than the single incident in May 1981."

Darsee is not speaking to the press, and attorney Gerard told *Science* that he cannot elaborate on Darsee's letter because "I don't know [what incidents] Darsee's statement about fraud referred to. He drafted the statement himself." Says Gerard, he does not "admit" to fraud "but says he doesn't recall."

Darsee has made one public comment on the case, which was released by a spokesman for Ellis Hospital after the Morgan and Raub reports were published in February. "I am asking forgive-

ness for whatever I have done wrong, and want to contribute to the medical system," Darsee said. "I must take responsibility for my actions and realize that it is my fault and no one else's."

According to hospital spokesman Andrew Foster, Darsee told hospital administrators about the situation at Harvard when he sought a fellowship in critical care medicine. His work there is "carefully supervised," Foster said, adding that Ellis Hospital believes his potential contributions to medicine and the Sclerectady area are "great."

Harvard officials also notified Ellis Hospital about the Darsee case, by letter when they first learned he was working there and a second time by telephone prior to the release of the Morgan and Raub reports. NIH has made no formal notification to Ellis, Raub says, but is aware that Harvard officials notified the hospital of the debarment proceedings. "Knowing what he knows now, hospital

administrator William Schirmer would hire him again," Foster told *Science*.

Until the 21 May incident at Harvard, Darsee was considered one of the brightest young cardiovascular researchers in the country. His papers, coauthored by major figures in the field, were published in important, refereed journals. And now, as those papers are reread with what Braunwald calls the "Sherlock Holmes perspective," it seems that they are full of errors. What is now apparent is that the data, in general, are too good, too neat, too perfect to be believed.

Why did no one catch it before? Braunwald, for his part, admits that even in the areas he knows best he failed to see what now seems obvious. "It takes a different mind set," he says, "to look at a paper and think total fraud." Says Morgan, "Maybe cases such as this will increase referees awareness when they're reviewing a paper." Maybe so.

—BARBARA J. CULLITON

White House Names New EPA Chief

William Ruckelshaus is appointed after John Hernandez becomes embroiled in charges of unethical conduct

The hopes of John Hernandez, Jr., for a permanent appointment to the top job at the Environmental Protection Agency (EPA) were crushed during the week of 14 March, as three congressional subcommittees opened investigations of his involvement in an effort by the Dow Chemical Company to undermine an agency report on dioxin contamination in Michigan. At week's end, Hernandez, who was named acting administrator only 10 days earlier, stood accused of "unethical, unusual, [and] unprofessional" conduct in sworn testimony by EPA's regional administrator in Chicago, Valdas Adamkus. And the White House quickly concluded that Hernandez, like Anne Burford before him, would have to go.

His replacement will be William D. Ruckelshaus, 50, who formerly served as EPA administrator under President Nixon. Ruckelshaus is returning to the agency from the Weyerhaeuser Company, a timber and paper conglomerate, where he has been a senior vice president of law and corporate affairs. In announcing the appointment on 21 March, President Reagan said that "no one could bring more impressive credentials." Ruckelshaus told reporters that he was con-

cerned with "the future, not the past," and that his "immediate task is to stabilize the EPA and reestablish the dedication of the people there."

This may require considerable effort. News of potential wrongdoing will probably continue to unfurl in the coming months. Congressional investigators are already homing in on the latest disclosure, involving a series of memos by which White House officials were kept abreast of politically sensitive EPA decisions on hazardous waste dumps. Several former agency officials have alleged that the decisions were timed to harm or favor various political candidates in the autumn of 1982.

The undoing of John Hernandez was caused by a series of events in June and July 1981. Earlier that year, Adamkus had requested his staff to prepare a public report on the contamination of the Great Lakes region by polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans, toxic by-products of certain herbicides and pesticides. Interest in the topic was piqued by the discovery of dioxin contamination in gull eggs and fish taken from the Great Lakes in 1980 and 1981, and in fish taken from several Michigan rivers in 1978 and 1979. The

highest contamination was encountered in samples from the Saginaw Bay area, on Lake Huron.

This was a matter of great importance to Dow, because the company's plant at Midland, Michigan, discharges effluent that passes into Saginaw Bay after flowing down the Tittabawassee and Saginaw rivers. When a draft of the report was leaked to a newspaper in Canada in June, one of the company's representatives contacted Hernandez in Washington and sought to obtain a copy. Hernandez had then been on the job as deputy administrator for a month. Hernandez telephoned Adamkus, attacked him for the leak, and asked where a copy might be obtained. As the document was then under review in Washington by the agency's experts on dioxin, a copy was readily available. Hernandez obtained it and passed it along to Dow on the following day.

Adamkus says that he shortly received two more calls from Hernandez. In the last, Hernandez was angry and worried, Adamkus says. "He angrily denounced the report, and called the work of our people trash." He mentioned the release of the draft to Dow, and said "that I should expect a call from company offi-