The unscientific hoaxes behind EPA's pesticide ban

Dr. J. Gordon Edward analyzes what it means to say that a chemical poses "the reasonable certainty of no harm"—and it's not what the Environmental Protection Agency says.

The following was prepared as an address to the Doctors for Disaster Preparedness, meeting in Seattle, Washington, on June 6, 1999. Its original title was "The EPA and the Reasonable Certainty of No Harm." Dr. Edwards is a professor emeritus of entomology at San Jose State University in California, who has contributed a number of articles to EIR *over the years—most recently, "Science, Pesticides, and Environmental Politics,"* EIR, *Dec. 10, 1999.*

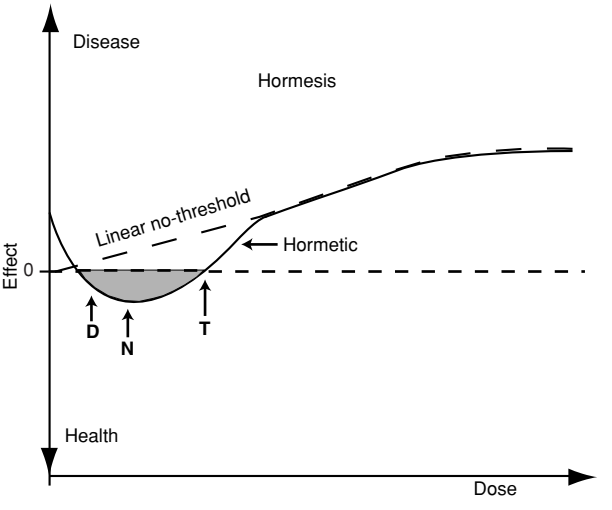
This topic is not as simple as it may seem. Before we had the EPA, pesticide regulation was relatively simple. The procedures were set forth in 1947 under the FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act), and were easy to understand and to implement.

There have always been people who fear chemicals, usually because they know very little about them. Other people have carefully studied chemicals and sought to determine how safe or how dangerous they may be. In 1567 a monograph by the Swiss physician, Paracelsus, observed that "all things are poison and none are without poison." This is more often stated as, "The dose makes the poison." In other words, a very small amount of even the most dangerous chemicals may be harmless, but a larger amount of almost any chemical may be harmful or even deadly. This interesting and important fact is the basis of what is now referred to as "hormesis" (**Figure 1**). Our concern should be over what high levels of any given chemical might be hazardous, and what small levels of that same chemical will be harmless to the environment.

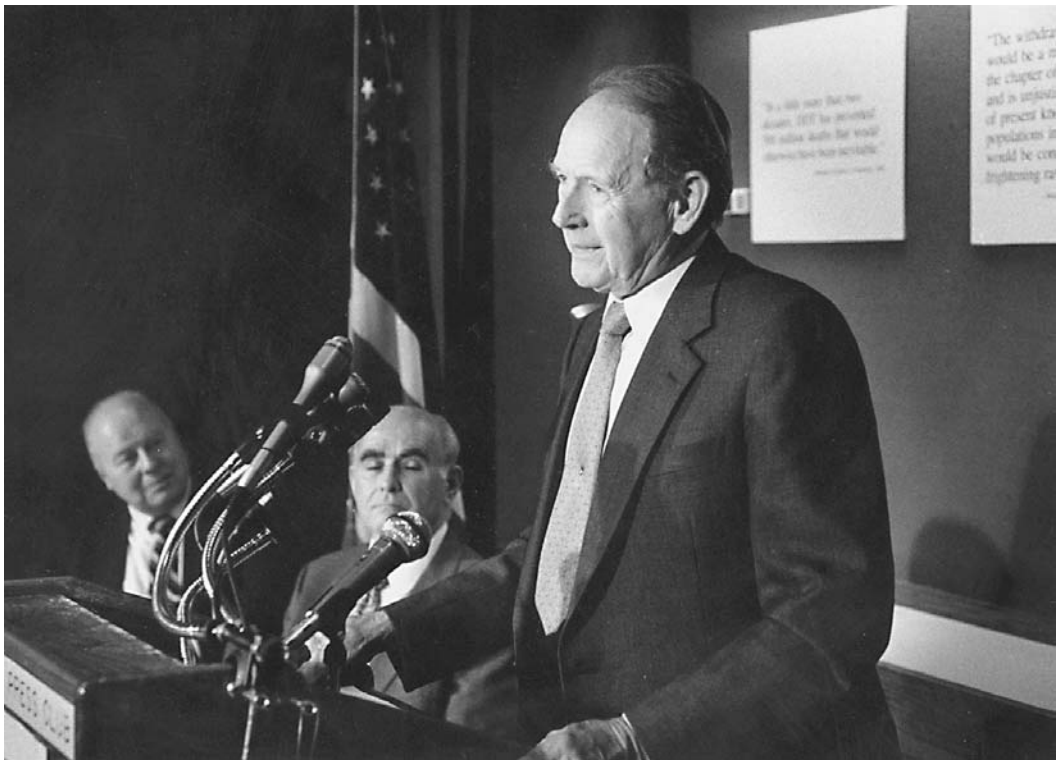
The Federal Insecticide, Fungicide, and Rodenticide Act

This Act (commonly called FIFRA) was passed by Congress and provided the Federal Food and Drug Administration with legal power to protect the public from being poisoned by chemicals that were prepared to control pests in our food. Many amendments were approved by the Congress in 1970, and there were no problems during the next ten years. Under

FIGURE 1
Generalized biological response to chemical and physical agents



This illustration shows the generalized biological response to chemical and physical agents. Deficiency symptoms are caused by the deficit of an agent (dose less than D). Small doses (between D and T) are vital for good health (shaded area). Doses higher than T cause toxic or other harmful effects. N is the average global natural radiation dose. The dashed line is the linear no-threshold dose-effect relationship in which there is no beneficial effect from the agent. The solid curve is the hormetic dose-effect relationship.



The author, Dr. J. Gordon Edward addresses a scientists' press conference against the banning of DDT in 1992.

FIFRA, if harm was feared and might be severe enough to cause a pesticide to be banned, authorities were required to consider a "Rebuttable Presumption Against Registration" (RPAR). The charges had to be rebutted with solid proof that no significant harm was likely. If the charges were not rebutted, the chemical would be banned, unless benefits could be proven to outweigh the risks. "Twelve large eco-organizations budgeted over $48 million for targeting pesticides via the RPAR route" (*Fruit Grower,* December 1977).

In 1978, Congress created a Scientific Advisory Panel (SAP) of seven members, nominated by the National Institutes of Health and the National Science Foundation, to make studies and review RPAR candidates. They required more evidence before EPA could take action against a pesticide, and formulated about 30 new FIFRA provisions that were helpful.

The Delaney Clause of the Federal Food, Drugs, and Cosmetics Act

In 1958, Rep. James Delaney entered a clause into the food additives provision of the Federal Food, Drugs, and Cosmetics Act. It was intended to reduce the threat of cancer that might result from exposure to significant levels of manmade food additives. A few details follow:

21 USC: 348, p. 280. Section 409 of the Delaney Clause specified: "No additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal, or if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animals." Ten years later I discussed this clause with Representative Delaney, in Washington. He was quite upset because nobody seemed to notice that he had specified that appropriate tests should be performed before any chemical could be deemed to be unsafe. He said his intent had been to permit only insignificant amounts of additives in our food. Both Congress and the Department of Health, Education, and Welfare (HEW) also construed the clause as permitting insignificant amounts of chemicals, including potential carcinogens. They did *not* expect the permissible amounts to approach zero, which even then was known to be an unattainable goal.

The first part of the clause could be determined only by feeding tests on caged men or other animals to determine if they caused cancer. All activities of a large series of nearly identical, same-sex humans, would have to be controlled, with half of them daily consuming huge doses of the test chemical and with none consumed by the other half. If, after months or years on such diets, the "test" humans developed cancer but the "controls" that were fed exactly the same diet and lived under identical conditions, did not develop that same type of cancer, it might be hypothesized that the tested chemical might have caused cancer in the "test" humans. Such tests have never been performed, and obviously never could be performed in a civilized, free society, therefore that part of the Delaney Clause was meaningless.

However, such tests would have been performed by the

EPA, if they could get away with it. In 1975, the EPA developed a $100,000 plan to feed known cancer-causing fungicides to Mexican citizens in Hospital de Gineco-Obstetricia. The proposal stated: "The recent HEW moratorium on human testing has put severe constraints on the ability to have studies involving human subjects performed in the United States." But Mexico had no such moratorium. The proposal called for huge doses of EBDC to be fed to humans, "If possible, 1,000 times higher than the average daily intake that Americans normally would be exposed to on vegetables and other crops." When fed to animals, the fungicide caused thyroid defects at low levels and thyroid cancer at higher levels (*Los Angeles Times,* May 11, 1977, front page). The proposal was blocked at the last moment when an EPA attorney, Jeffrey Howard, told *Newsday* that he thought the plan was inhumane, and "absolutely shocking." He later resigned from the EPA.

The rest of that sentence in the Delaney Clause specified applying "tests which are appropriate for the evaluation of the safety of food additives." Health authorities should have determined what tests *are* "appropriate for the evaluation of the safety of chemicals." Could dosages thousands of times greater than encountered in the environment be considered "appropriate"? Could "gavage," where toxins are pumped directly into the stomach of test animals, be considered "appropriate"? Should the massive doses be fed daily, or several times each day? The answer seems obvious, but all such tests were usually considered "appropriate" by the EPA. Most regulators simply ignored Delaney's requirement for "appropriate tests." They routinely fed their animals "maximum tolerated doses" (meaning that any further increase in dosage would quickly be fatal, but for reasons unassociated with the tested chemical). Such high doses cause the destruction of body tissues. As a result, there is a proliferation of new cell divisions, during which numerous natural mutations occur. The development of tumors or cancers is therefore increased, but those mutations were *not* directly caused by the tested chemicals. Obviously, such rodent tests were *not* "appropriate for the evaluation of the safety of food additives to induce cancers in man or animals," as specified in the Delaney Clause!

Instead of seeking to implement "appropriate tests," the EPA routinely concluded that if *any* amount of a chemical, no matter how large the dose or how it was applied, caused cancer in rodents, that chemical must be banned "because of the Delaney Clause," even though Delaney never envisioned such unreasonable criteria. Worse yet, they used laboratory test rodents that had been specifically bred to be highly sensitive to chemicals and quick to develop tumors or cancers!

The use of such tremendously inappropriate tests involving massive dosages and unnatural applications of the chemicals caused much opposition to reliance on rodent tests. The American Council for Science and Health wrote that "sound toxicological principles are routinely flouted in laboratory rodent tests and the results are frequently inappropriately extrapolated to humans." There have also been hundreds of complaints by toxicologists who are convinced that chemicals have very different effects on rodents than they would on humans. Rats produce a special protein (Alpha 2U Globulin) which makes them especially prone to develop tumors and cancers. In 1992, even some employees of the Environmental Protection Agency pointed out that humans lack that protein, which they said "could invalidate thousands of tests of pesticides, preservatives, additives, and other chemicals that have been banned on the basis of producing tumors in rats in laboratories." Those tumors, they said, "are a species-specific effect inapplicable to human risk assessments" and "are not relevant to human risks from those chemicals."

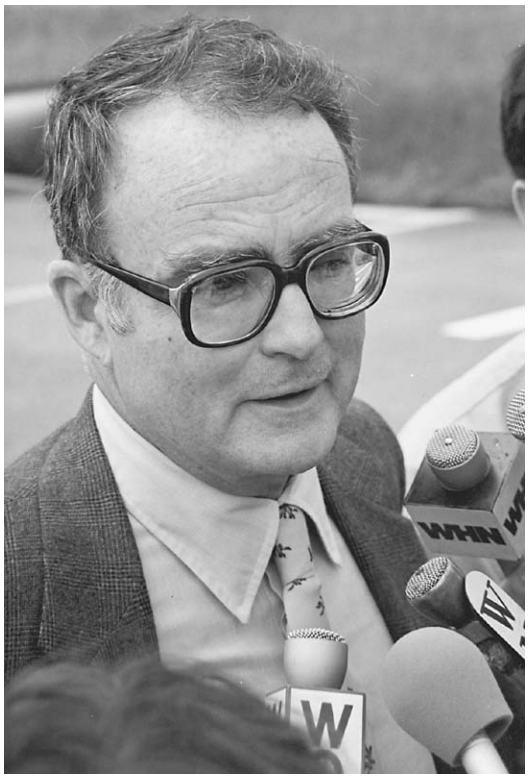
The Environmental Protection Agency

The first "Earth Day," on Stalin's birthday in 1970, helped bring about the establishment of the Environmental Protection Agency (EPA). Most scientists assumed that this would be an agency composed of truthful scientists who would establish legitimate scientific procedures having a sound scientific basis. As it turned out, *none* of the administrators in the following 29 years had any such background. Instead, almost every one of them has been an attorney!

Dr. Lee DuBridge, the President's science adviser, wrote in April 1972, that "responsible groups have not attempted to advocate impractical panaceas—such as prohibiting the use of automobiles, or of DDT, or of phosphates in detergents" (*Science,* 176: 230, 1972). That may have been true, but what *were* those "responsible groups"? Certainly not the Environmental Protection Agency, the Natural Resources Defense Council, the Sierra Club, the National Audubon Society, the National Wildlife Federation, or the Environmental Defense Fund!

The Environmental Defense Fund (EDF) was organized and financed by the National Audubon Society. They could legally lobby for Audubon propaganda issues without endangering the Society's tax-exempt status. They filed suits against the U.S. Department of Agriculture and the Environmental Protection Agency, resulting in the famous DDT hearings of 1971 that lasted for seven months and generated more than 9,000 pages of official transcripts.

During the EPA Hearings on DDT, Samuel Epstein testified (pp. 7306 and 7340 of the transcript) that he was a member of the HEW panel on carcinogens, but under cross-examination he admitted that he was *not* (p. 7374). In his testimony, Epstein also alleged that tests by Fitzhugh, Davis, and Gross indicated that mice with DDT in their diet developed cancer. Epstein failed to point out that the control mice developed 26% *more* cancers than did the DDT-fed mice. That omission was obviously intentional and many scientists considered it to be unethical! The actual data from the Fitzhugh Report are shown in **Table 1** below, indicating the



William Ruckelshaus (left) imposed the ban on DDT, despite overwhelming evidence and a judge's finding that the pesticide posed no threat to humans. Russell Train (right) continued Ruckelshaus's environmentalist lunacy as head of the Environmental Protection Agency.

numbers of cancers developed in the mice in each group. (The research team called them "tumors," but Epstein called them "cancer.")

TABLE 1

The Fitzhugh Report: Mice fed DDT had fewer tumors

	C3HeB/FeJ Mice		BalbIcJ Mice		Total
	(100) Males	(100) Females	(100) Males	(100) Females	
DDT-fed Mice (100 to 300 ppm in diet)	10	25	16	15	66
Control Mice (no DDT)	10	30	15	28	83
Totals	20	55	31	43	149

Epstein neglected to explain why the Fitzhugh Report was never published, but Dr. Adrian Gross had already pointed out that it was because by mistake the mice had been fed 300 mgs of DDT per kg of body weight rather than the intended 100 mgs/kg, for an unknown period of time. Dr. Kent Davis, Assistant Chief of Pathology for the Department of HEW, stated that "preliminary surveys showed that in this study neither of the pesticides tested was carcinogenic." EPA attorneys successfully blocked efforts by the U.S. Department of Agriculture (USDA) to have Dr. Davis testify at the hearings, even though he was at that time employed by the EPA. Dr. Epstein was also on the EPA payroll at the time of his testimony, but that was not mentioned.

During the EPA hearings, Dr. George Woodwell testified regarding an article written by him and Charles Wurster (*Science,* 156: 821-824, 1967). The abstract stated, "DDT residues in an extensive salt marsh on the south shore of Long Island average more than 13 pounds per acre." This was discussed on page 7232 of the hearing transcript, as follows:

Cross-examination of Dr. Woodwell by the USDA attorney

Q: "Isn't it a fact that after you initially studied this marsh you continued your samplings, and found as a result that you were getting an average of only one pound per acre of DDT?" [rather than 13 pounds]

A: "No, I wouldn't agree with that."

Q: "Dr. Wurster, perhaps?" [We had given the attorneys the details of Wurster's Seattle testimony, and Wurster was in the audience, that day.]

A: "I don't believe he knows that, either. I don't believe there's any evidence to that effect."

Q: "Dr. Wurster, your co-author, made the following statement at the Washington state hearings, and I'm quoting him verbatim: He testified: 'We have since sampled that marsh more extensively, and we found that the average in the marsh was closer to one pound per acre. The discrepancy was

because our initial sampling was in a convenient place, and this turned out to be a convenient place for the mosquito Commission's spray truck, too.' Did you learn that after the fact, Doctor?"

A: "That is a true statement in my experience. I did not know that Dr. Wurster had said that, but that is a true statement."

Q: "Doctor, have you ever published a retraction of this 13 pounds per acre, or a further article which discloses the results of your further sampling which brings the average down to around one pound per acre?"

A: "I never felt that this was necessary."

Woodwell also admitted they had only taken six samples to determine the "average concentration" of DDT in that "extensive marsh"!

Later, Dr. Woodwell was questioned about his article, titled "Persistence of DDT in Soils of Heavily-Sprayed Forest Stands" (*Science,* 145: 481-483, 1964). He had claimed that after spraying DDT on New Brunswick forests, the concentration in the soil built up to higher levels each year. Other scientists revealed that Woodwell's sampling site was beside the local forest airstrip and was heavily dosed with DDT by aircraft during the testing and calibration of spray equipment. When questioned about that during the EPA hearings, Woodwell admitted it, saying, "That is an accurate statement. . . . That's why it had such high levels of DDT. That's why we picked that site in New Brunswick" (*Bulletin of Environmental Contamination and Toxicology,* 1970).

Woodwell had also written about the rapid disappearance of DDT from the environment, stating that "6 billion pounds of DDT had been used, but only 12 million pounds could be accounted for in all of the earth's plants, animals, fish, and birds," and that was "less than a thirtieth of one year's production of DDT during the mid-1960s." He theorized that "most of the DDT has either been degraded to innocuousness or sequestered in places where it is not freely available" (*Science,* 174: 1101, 1971). Because that recent article had contrasted so sharply with his testimony at the EPA hearings, a reporter asked him why he had completely omitted all of those details from his testimony. Woodwell explained that "EPA lawyers told me not to mention it, lest my testimony be disallowed" (*Business Week,* July 8, 1972).

Dr. Philip Butler's testimony was also misleading. When asked about the persistence of DDT residues in the environment, Butler testified (p. 3726): "I am thinking of a study which has shown that DDT persists for as much as 40 years in terrestrial deposits." (Of course the truth was that there had been no such study, because DDT had only been around for 30 years at the time of his testimony!) Under cross-examination, Butler also had to admit that published reports from his own EPA laboratory at Gulf Breeze, Florida, confirmed that 92% of the DDT *and its metabolites* disappeared from the sea water in huge closed glass submerged containers in just 38 days! (Wilson, A.J., et al. *USDI Circular,* 335, 1969, p. 20).

It was after hearing this sort of untruthful testimony for seven months that EPA Judge Edmund Sweeney arived at the conclusion that DDT should *not* be banned. In his final official decision, issued on April 26, 1972, he stated: "DDT is not a carcinogenic, mutagenic, or teratogenic hazard to man. The uses of DDT under the regulations involved here do not have a deleterious effect on freshwater fish, estuarine organisms, wild birds, or other wildlife. . . . The evidence in this proceeding supports the conclusion that there is a present need for the essential uses of DDT.' "

Ruckelshaus overturned his own judge's decision

EPA Administrator William Ruckelshaus never attended a single day of those seven months of expensive hearings, and his Special Assistant (Marshall Miller) told reporters that Ruckelshaus had not even read the transcript (*Santa Ana Register,* July 23, 1972). Instead, he turned the transcript of the hearings over to a 29-year-old judicial officer, Charles Fabrikant, who also "had no special background in science." Two other non-scientists in Fabrikant's office prepared anti-DDT statements based on Environmental Defense Fund propaganda, rather than on the hearings transcript and data. (They included claims from Environmental Defense Fund propaganda that appeared nowhere in the entire 9,400 pages of the hearings transcript.) Ruckelshaus was himself a member of that Environmental Defense Fund, and solicited donations for that group on his personal stationery, stating: "EDF's scientists blew the whistle on DDT by showing it to be a cancer hazard, and three years later, when the dust had cleared, EDF had won."

Ignoring the seven months of testimony and evidence, and the hearing judge's deliberations and conclusions, Ruckelshaus personally reversed the court's decision and gave the victory to his friends in the Environmental Defense Fund! His decision to ban DDT appeared to be *political,* rather than reflecting scientific evaluations. On April 26, 1979, Ruckelshaus wrote to American Farm Bureau Federation president Allan Grant, stating: "Decisions by the government involving the use of toxic substances are political with a small 'p.' *The ultimate judgment remains political*." Further, he wrote, "In the case of pesticides in our country, the power to make this judgment has been delegated to the administrator of the Environmental Protection Agency" (emphasis added).

Then, Ruckelshaus ruled on the opponents' appeal himself.

John Quarles served as General Counsel for Mr. Ruckelshaus in 1972. On June 3, 1982, he testified in an affidavit to a U.S. Court in northern Alabama that: "After seven months of hearings, the EPA Hearing Examiner made findings generally supportive of the position that DDT did not cause undue harm

and that an adequate basis did not exist for cancelling the uses of DDT." Opponents had quickly filed an appeal for a judicial review of the Ruckelshaus decision, as provided by law, but, Quarles said: "Because of the importance of the question, rather than refer it to the judicial officer, Mr. Ruckelshaus decided to rule on the appeal himself." Ruckelshaus, of course, supported his own decision. As a result, his DDT ban still stands and millions of humans are still dying as a result.

Ruckelshaus refused to comply with the FOIA, and to file environmental impact statements

After reversing the decisions reached by the EPA hearings, Ruckelshaus defied efforts by the USDA, and others, to obtain information regarding his conclusions through the Freedom of Information Act (FOIA). Honest scientists were therefore prevented from exposing the untruths upon which the Ruckelshaus "Opinion and Order on DDT" was based.

Ruckelshaus spurned the National Environmental Policy Act by refusing to file any Environmental Impact Statements regarding the anticipated environmental effects of his DDT ban, including outbreaks of diseases in birds, mammals, and humans, the deaths of beneficial insects, birds, and mammals (caused by the deadly substitute, methyl parathion, that he had recommended to replace DDT), the destruction of millions of acres of oak and Douglas Fir forests, extensive agricultural losses in the United States, and widespread famine and death in Third World nations.

Later Mr. Ruckelshaus became senior vice-president of the Weyerhauser Lumber Company. (Evidently he was not opposed at that time to clear-cutting forests.) He kept that position until May 1983. When he returned to the Environmental Protection Agency, as administrator, his annual salary was $200,000 less than he had been paid by the lumber company.

Russell Train replaces Ruckelshaus at EPA

In 1973, Ruckelshaus was replaced as EPA Administrator by Russell Train, another attorney with a very limited scientific background. Train transferred from his position as head of President Nixon's Council on Environmental Quality (formerly headed by Shirley Temple Black). He promised that he would "not take any precipitous action against pesticides without giving Congress advance notification." He then surprised Congress and even his own staff with a Christmas Eve press conference to announce his intention to ban the best substitute for DDT: He would ban chlordane!

A suit by environmental groups later urged that dieldrin also be banned, but many scientific organizations opposed such action. On March 28, 1972, even the EPA Science Advisory Committee unanimously recommended that it not be banned. That echoed the recommendations of the following authorities: the U.S. Food and Drug Administration (1965), the National Academy of Sciences (1965), the USDA Agricultural Research Science committee (1969), the Mrak Commission of the Department of Health, Education, and Welfare (1969), and the World Health Organization Food and Agriculture Committee (1970). None of those science-oriented organizations influenced tax attorney Russell Train, and he took it upon himself to ban dieldrin. Because that was the only chemical that could effectively halt the huge locust invasions that repeatedly destroy African grain crops, the ban had drastic effects on millions of humans, causing widespread malnutrition, starvation, and thousands of deaths.

Train ignored the portion of the Delaney Clause that required tests which were "appropriate for the evaluation of the safety of food additives." As a result, EPA attorneys assumed that they could ban *any* substance which caused *any* tumor or cancer in test animals, at any dosage, when applied in *any inappropriate* manner (including gavage and injections). Even worse, Train's attorneys assumed that they could also ban any chemical found on field crops, at any level above zero. That illegal activity resulted in widespread efforts to remove the Delaney Clause. With modern methods of analysis, parts per billion, parts per trillion, or even parts per quadrillion could be detected, so "zero" had practically ceased to exist.

Attempting to defend its DDT ban, the EPA told Congress and the media that Americans were ingesting 13.8 milligrams of DDT daily before the ban, and implied that that was a serious health hazard. Scientists quickly pointed out that the EPA's figure was 1,000 times higher than reality. The EPA admitted its decimal point error, in a letter to the Montrose Chemical Company (Sept. 11, 1975), and changed its figure to 0.015 milligrams ingested daily in 1970. (The level dropped to 0.0018 milligrams per day, by 1973.) (See also *Chemical & Engineering News,* Sept. 29, 1975.)

In the late 1970s, the Civil Service Commission reported that 46% of the EPA employees polled thought the agency was not doing its job properly. The Commission also reported that because of low morale there, "nearly one-third of the positions at headquarters must be replaced every year."

In the 1970s and 1980s, the EPA, relying primarily on the Delaney Clause, had banned aldrin, dieldrin, endrin, BHC, Lindane, heptachlor, toxaphene, and many other pesticides. Even after ignoring Representative Delaney's intent that "*appropriate tests*" for carcinogenicity be required, the EPA still could not have banned many of those substances, *had not "carcinogenicity" been redefined by tax attorney Russell Train!*

In Delaney's day, *cancers* were considered as malignant growths that tended to spread to other parts of the body, frequently with fatal results. Tumors, on the other hand, were usually non-malignant lumps that did not spread (and in lab rodents they often disappeared after the massive chemical insults were halted). Train redefined those medical terms and specified that "for EPA's purposes of carcinogenicity testing,

An anti-malaria DDT spraying program in North Borneo in 1956. It was so successful that the World Health Organization converted it into a full-scale eradication program.

tumorogenic substances and carcinogenic substances are synonymous," and "for purposes of carcinogenicity testing no distinction will be made between the induction of tumors diagnosed as benign and the induction of tumors diagnosed as malignant" (*Chem. & Engineering News,* 52: 13, 1974). *All* would be considered as carcinogens. At the EPA, therefore, chemicals causing only benign tumors would be subject to banning under the Delaney Clause. The Council for Agricultural Science and Technology, a consortium of more than 30 scientific and professional organizations, observed that "classifying as 'carcinogens' all chemicals that cause tumors greatly overestimates the 'cancer' risk."

In a radio broadcast on May 15, 1975, Russell Train's EPA alleged that "hundreds of thousands of American farm workers are injured every year by pesticides, and hundreds of them die annually." That false statement had originated in 1970 Congressional testimony by a Cesar Chavez spokesman, and the EPA was forced to apologize (UPI press release, May 24, 1975), stating: "We used those statements in good faith, but they turned out not to be accurate . . . they cannot possibly be substantiated." Ignoring that apology, Train relied on the same false statement to support his inauguration of the famous "EPA Hot Line." Anyone could call the hot line, toll-free, and anonymously accuse anyone else of misusing a pesticide. The *New York Times,* through the Freedom of Information Act, learned that the hot line number did not reach any EPA office, but instead went directly to Chavez's National Farm Workers office in Texas. A UPI press release on June 3, 1975 revealed that the project was financed by the U.S. Labor Department, via Antioch College. Vehement Congressional criticism of that Gestapo-like operation caused it to be shut down later that month.

But what was the source of those untruthful 1970 figures? *USA Today* printed an editorial on April 14, 1992 repeating the same figures, but they falsely attributed them to "a Congressional study last month." I wrote to the editor, pointing out that it was actually from a World Resources Institute press release seven years earlier, which had deliberately falsified the report of the two researchers who made the study (Robert Wasserstrom and Richard Wiles). Those researchers quit the WRI because of that untruthful figure of 300,000, which they said "tells a story substantially different from what was in the epidemiologic record" (*Chem. & Engineering News,* September 1985). *USA Today* never answered my letter or corrected their serious error.

The overwhelming figure was derived from a report of 235 medical complaints by California farm workers in 1982 (roughly half of the injuries were skin irritations caused by exposure to sulfur). National Institute of Occupational Health and Safety employee Dr. Molly Coye extrapolated from that 235, to reach the 300,000 figure, as follows: Dr. Ephriam Kahn had estimated in 1976 that "California doctors report

only 1% of the complaints they hear." Coye therefore multiplied 235 by 100 and reported that 23,500 medical complaints must have really been made that year. She said that that number was roughly 7.8% of the farm workers in California, and since there were about 4 million farm workers in the entire nation, and assuming that 7.8% of them would have pesticide injuries, Dr. Coye extrapolated to 312,000 poisoned farm workers annually in the United States (7.8% of 4 million). She ignored Dr. Kahn's well-known year-long study, which had revealed that 80% of all California pesticide-related complaints *were* reported, rather than his earlier estimate that only 1% were reported. Based on the 80% level, the 235 California complaints would extrapolate to 300 California cases instead of Coye's propaganda figure of 23,500 (and to less than 4,000 cases nationwide, instead of 312,000).

Ruckelshaus profits from previous EPA position

In May 1974, Ruckelshaus developed an industrial defense firm in Washington, D.C. with nine other lawyers. Ruckelshaus said that "about 50% of the firm's business dealt with legal problems involving the EPA." Five of the lawyers were ex-employees of the EPA (Gary Baise, Carl Eardley, Richard Fairbanks, Leonard Garment, and Henry Diamond). The *New York Times,* through the Freedom of Information Act, forced exposure of some of the results. In the first 18 months, Ruckelshaus and his friends made "at least 178 identifiable contacts with EPA officials, for 20 different clients." Ruckelshaus himself made 27 of the contacts. Thirty-seven of those EPA contacts were made on behalf of the plastics industry, which was employing Ruckelshaus to influence the EPA (*New York Times* July 6, 1975). This involved "avoiding air pollution controls that the EPA might impose to protect the public from polyvinyl chloride, a potential cause of cancer."

The EPA had planned actions against plastics, but now they took no action against it. The FDA was not a part of the cozy relationship, so they announced on Aug. 27 that the agency would act against the plastic food containers they feared might be carcinogenic. A Ralph Nader associate, Mark Green, criticized those EPA actions, and Gus Speth (of the Natural Resources Defense Council) commented that "it's obscene." Nevertheless, the group persisted, and became known as "The Institute for Congress." According to the *San Jose Mercury News,* Feb. 8, 1976, "The Institute for Congress, estimated to cost $22.5 million over five years, with much of the money coming from Congress, was quietly established." They planned a professional staff of 80. Ruckelshaus used the skills he learned in the government to fight against some of the very regulations he had helped create. The Institute's Board of Directors included William Coleman (Secretary of Transportation), Clarence Mitchell (Director of the Washington Bureau of the National Association for the Advancement of Colored People), Cyrus Vance (former Secretary of the Army), Lucy Bensen (Secretary of Human Services), and Leon Jaworsky (a bank director, but more famous for his political activities). Meanwhile, contempt for the EPA continued to spread.

In 1975, while he was also Acting Attorney General of the United States, Ruckelshaus continued to make untruthful statements. At a news conference, he said that when he went to White House Chief of Staff Ehrlichman's office to get some records "we almost had to arm wrestle the Secret Service." The Secret Service heard about that statement and objected, saying, "We gave them the files they requested, without incident." Ruckelshaus then apologized, saying, "My allusion to arm wrestling was an effort at hyperbole at a time when reality could not absorb exaggeration. Furthermore, the gloves were never donned, and the bell never sounded . . . in short, the bout never occurred" (from EPA Radio Broadcast, May 15, 1975). Unfortunately, similarly, he never retracted his lies about DDT, which resulted in so much environmental destruction and were responsible for hundreds of thousands of human deaths.

Russell Train's EPA continued to perform poorly. In 1977, the Toxic Substances Control Act was widely criticized when it was introduced. British science attaché Alan Smith expressed his frustration to an audience of 600 applauding supporters. He urged the United States to "not presume to legislate for the Universe and the whole human race." Have a thought for your reputation, he suggested. "There is a limit to the number of times even the greatest country in the world can afford to appear ridiculous in international affairs, yet you are taking the unreasonable risk of doing just that. This EPA draft is like the Jabberwocky of Lewis Carroll, and I suspect that you use words as Humpty Dumpty did—to mean whatever you want them to mean. Do not expect the international community to compensate for the defects in your own approach to problems" (*Science,* June 1977, p. 1182).

Attempts to clean up the EPA fail

In 1980, the EPA had more than 10,000 employees, and its budget that year was $5 billion. Still, they revealed no comprehension of the importance of scientific data, of dose responses, of biological thresholds, or of ethics and moral responsibility. Russell Train left the EPA and joined the Board of Directors of Union Carbide Corp. (not notorious for environmental concerns). Later, he moved to the World Wildlife Fund.

Attorney Douglas Costle became the next non-scientist EPA Administrator. At his first interview with agricultural leaders, he said: "I'm going to endeavor to bring common sense to the administration of law and the writing of registrations. It may take three or four years, but we're starting right now." Obviously, he failed, and was soon driven from the EPA. He and several EPA colleagues then founded the "Environmental Testing and Certification Corp.," in New Jersey.

In 1981, the next EPA Administrator, Anne Gorsuch Burford, expressed her intent to ensure scientific objectivity in

statements made by EPA employees. Deputy Administrator John Hernandez said that the new strategy would be to "get away from the adversarial role and the litigious attitude this agency has had in the past." Dr. Andrew Jovanovich, EPA's new research director, said that he had designed procedures to assure that research is "of high quality and based on creditable scientific and technical knowledge."

What a marvelous change! Unfortunately, they were no match for the multimillion-dollar pseudo-environmentalists, and were forced out of the EPA. A memo from James Conn (an EPA inspector general) then urged employees to quickly "destroy and conceal information which could prove embarrassing. We have to think about what to get rid of before a Freedom of Information Act request catches us with our pants down" (*Washington Post,* Sept. 18, 1982).

Meanwhile, in October 1988, Ruckelshaus emerged from his relative obscurity following his departure from EPA, as chairman and CEO of Browning-Ferris Industries, a worldwide waste disposal company. According to the *San Jose Mercury* (March 14, 1990), the company's assets were $2.35 billion. They collected garbage from 5 million homes and half a million businesses, and operated more than 100 landfills. They developed the medical waste-disposal market, owned an asbestos company, and a plant that reclaimed fuel from solvents, and they even rented portable toilets. At that time, they were facing both criminal and civil charges. In a *Wall Street Journal* article titled "The Politics of Waste Disposal" (Sept. 5, 1989), Ruckelshaus wrote: "People are perfectly willing to endure something unpleasant if you pay them for it." (Nobody paid Americans for Ruckelshaus's actions in the EPA!)

'We've jailed more people'

In 1988, William Reilly, another non-scientist, moved from the World Wildlife Fund to take charge of the EPA. Reilly proposed "an ethic of environmental stewardship, to replace the traditional Judeo-Christian moral law which places man above the beasts" (*New Federalist,* March 2 1990).

Reilly commented that huge sums of money had been spent by previous administrations on hypothetical risks to a few individuals, while no attention was paid to the hardships caused to millions of other people, and that we should avoid basing programs on so few individuals, *"because the cost to society for protecting those few individuals soars to unlimited heights"* (*Science,* Feb. 4, 1994).

In a 1992 interview, Reilly boasted that "we've increased the EPA budget by 44% in the past three years and proposed over a billion dollars more for the land and water conservation fund," which was zero for the previous eight years. He also stated: "We increased geographic initiatives in the EPA from $40 million to $700 million, and wetlands money was raised from $200 million to $812 million. . . . We have assessed more fines and penalties in our three years than in the previous 18 years, and we have also jailed more people, and for longer sentences." He estimated that "the total EPA budget in the future will go up from the present $130 billion a year (2% of the Gross National Product) to 3% of the GNP, and that's more than most of our economic competitors" (*San Jose Mercury,* July 26, 1992).

Rep. John Dingell (D-Mich.) audited the EPA and charged that there was more than $8.6 billion of fraudulent government contracts, "most of which is lining the pockets of lawyers and consultants." He revealed that "environmental regulations have cost the U.S. economy over $1.2 trillion since 1972, according to official EPA figures."

Carol Browner was appointed EPA Administrator at the urgings of Vice President Al Gore in early 1993. (She was generally assumed to have been the ghost writer of portions of his book, *Earth in the Balance*.) Her husband, Michael Podhorzer, was still employed by Citizen Action, an extremist environmental organization, in which she was also active. Browner told a U.S. Congressional Committee, "I'm appalled by what I've learned about the EPA's total lack of management, accountability, and discipline. . . . I have reviewed audit reports that clearly describe serious violations of rules and intolerable waste of taxpayers' money" (*Audubon* magazine, September 1993). Browner also said that the EPA should "spend $15 to $20 billion for short-term economic programs to jolt the economy" (*San Francisco Chronicle,* Feb. 2, 1993). Apparently, the EPA is still intent on such goals.

Overview of the EPA

Rep. Philip Crane (R-Ill.) summed up the EPA's record in the July 29, 1977 *Congressional Record*. He stated: "EPA methods of operation are too often unreasonable, arbitrary, and unscientific. The Agency has tried to cover up its inefficiencies with lies and deceit. . . . EPA has misled Congress, the GAO [General Accounting Office], and the public, regarding pesticide programs. . . . It now has a vigorous and unrelenting campaign of enforcement." Crane noted that "EPA and OSHA [Occupational Safety and Health Administration] alone have forcibly closed 350 foundries and innumerable small businesses without either substantially improving air quality or reducing work-related injuries."

For example, the agency didn't realize that the energy required to remove 99.8% of the particulates from smokestacks costs four times as much as removing 98%, so they continued to demand the removal of that last 1.8% even if plants were forced out of business as a result. In Gary, Indiana, EPA ordered U.S. Steel to either pay $2,300 a day in penalties or shut down. The plant shut down, putting 500 employees out of work. *Fortune* magazine calculated, "The cumulative cost of pollution abatement could lie in the trillion-dollar range by 1985." (And it undoubtedly did!)

The EPA is now said to be considering the expenditure

of $2 billion or more annually on a health measure with no detectable benefits. This is the reduction of sulfur and nitrogen dioxide from automobile emissions. They ignored scientific studies which reveal that more than 75% of smog precursors are from non-automobile causes.

Let's hope that they do not hear about the potential threats by dihydrogen monoxide, the abundant colorless, odorless, tasteless fluid that is a major ingredient of acid rain, is prominent in El Niño and in the ozone layer, and invades most of our body cells, including cancerous tissues. Hopefully, they will not spend billions of dollars studying it, before learning that it is just plain water!

The *San Francisco Chronicle* (June 3, 1999) reported that the European Union ordered that "a vast array of potentially tainted Belgian food products made with suspect eggs be destroyed, after the Belgian government decided to ban the sale of all chicken- and egg-based foods." Why? Because "*massive traces* of dioxin," a carcinogenic chemical, were found in animal feed sold to poultry farms by a Belgian processor" (emphasis added).

At least our EPA has not referred to our "traces" of dioxin as being "*massive*"! They have not even referred to "massive parts per million or billion." (However, it is still difficult to believe that they can be "reasonable," as required for Food Quality Protection Act decisions.)

The Food Quality Protection Act

In 1996, the Food Quality Protection Act (FQPA) was enacted, giving the EPA even greater power to harm American citizens, businesses, and our environment.

This remarkable mandate states that the EPA may ban any chemical, unless they believe "there is a reasonable certainty of no harm from the total amount of that chemical in the aggregate of food, water, or residential use." The long history of unreasonable behavior by the EPA permits very little assurance of "reasonable" considerations.

Tolerances for each of the thousands of chemicals in food and liquids available to humans or other life forms are required to be reassessed between 1996 and 2006. This is to be done by a Tolerance Review Assessment Committee that will assess potential limits for human exposure to pesticides. The committee contains non-scientists, from environmental organizations, which makes "reasonable" decisions more difficult.

By August 1999 the EPA must complete their analyses of 3,000 pesticides, and establish tolerance levels. At the top of their list are the organophosphate and carbamate insecticides. Those categories include about three-fourths of the insecticides needed to protect American crops, upon which our balance of trade is dependent. Perhaps it is not surprising that the Director of EPA's Pesticide Programs said that one way to implement the Food Quality Protection Act would be to just revoke all insecticide tolerances and simply start over. Hopefully she was being facetious!

The EPA intends to estimate a dietary risk for each pesticide, and also estimate non-dietary exposures. After all of their *estimates,* from all sources, are combined, the EPA will subjectively decide upon a total level of risk that they consider acceptable. They refer to that level as the "risk cup," which cannot be legally exceeded. When the "risk cup" for any pesticide is full, they say, no additional uses of that chemical can be approved unless others are removed from the "cup." To further complicate the process, the EPA will assign every pesticide to one of three poorly differentiated "groups," each containing various poorly differentiated "classes" of chemicals.

Might we assume that the EPA chose their words deliberately, anticipating that FQPA activists could then employ "reasonable," "harm," and "no harm" in ways that could permit the banning of *every* pesticide? If their intentions were not malicious, wouldn't they have worded their proposals very differently? For example, they could have required that there be "no significant danger of serious harm to non-target organisms." That would have protected the environment, but would have permitted the use of chemicals that are vital for human survival. If their intentions were legitimate, why wouldn't they seek to ban chemicals that have been proved to cause significant harm, rather than seeking proof that harm is not caused? Isn't it more difficult to "prove a negative"? Shouldn't the *reasonable* purpose of public agencies be to determine if legitimate uses of a chemical pose significant harm to children or normal adults?

Dr. Bruce Ames (an outstanding biochemist at the University of California) has pointed out that edible plants often contain *natural* pesticides making up 5% to 10% of the plant's dry weight, and that "we are ingesting in our diet at least 10,000 times more, by weight, of natural pesticides than of man-made pesticide residues" (*Science,* 236: 271-280, 1987). Of those that have been adequately tested, about half were found to be carcinogenic. He and Lois Gold, in the National Center for Policy Analysis, March 1998, confirmed that more than 99% of the pesticides we ingest are produced by live plants. How will the EPA deal with pesticides that are produced naturally by live plants, but are more toxic than many synthetic pesticides?

Biotechnology has been opposed by the EPA. The process of "gene-splicing" (with genes from one organism placed into another organism) can quickly transfer desirable qualities into the recipient. The "new" form then can pass the beneficial traits to its offspring. Each year, plant breeders run field tests on as many as 50,000 new genotypes, many of which result in genetically-altered crops. For example, they have experimentally incorporated *Bacillus thuringiensis* into the plants' genetic makeup. It kills insects just as quickly as if the plants had been sprayed with a *Bacillus thuringiensis* insecticide. Because genetically-altered plants have produced within themselves effective natural chemical insecticides, the EPA

is seeking to ban them by classifying each individual plant as a pesticide!

Scientists have also developed a bacterial strain of *Pseudomonas syringae* that prevents frost from damaging plants. Desperate for more power, the EPA declared frost to be an agricultural pest, and said that the bacteria are therefore "pesticides," and must be regulated by the EPA (*CEI Update,* April 1999).

Greenpeace recently called a press conference to urge the Mexican government to ban genetically-altered corn which produces a natural pesticide that kills European corn borer larvae, and can result in the production of thousands of tons of grain that would otherwise be destroyed. Greenpeace warns that the pollen of that corn may fall on milkweed leaves and kill monarch butterfly larvae that eat those leaves (*San Jose Mercury,* May 21, 1999). Which is more important, caterpillars or human nutrition?

Can this power-hungry EPA, constantly striving to regulate everything in order to gain more power, be trusted to determine when there is a "reasonable certainty of no harm" from the presence of such plants and bacteria in the fields? Will they place strict limits on the numbers of genetically-altered plants and bacteria permitted in each field? It would not really be too surprising.

What might the EPA refer to as 'harm'?

The method used to establish the amount of each chemical permitted in the environment will be based on the EPA's "*reasonable certainty of no harm*." We have now reviewed much evidence displaying EPA's tendency *not* to be "reasonable." They now evidently plan to regulate our health, welfare, recreation, and business based on vague, biased calculations of "reasonable certainty." But, what must they be "reasonably certain" about? The answer they provide is that they must be reasonably certain about "*harm*." Unfortunately, their definition of "harm" will surely lead to unending confusion and catastrophic results. Based upon past EPA actions, we may anticipate that they will utilize a multitude of questionable interpretations of "harm," in order to regulate all chemicals in our diet, our homes, our businesses, and our environments.

Now, let us seek to determine what they might consider to be *harm*.

EPA does not specify if they intend to include only the effects of intentional applications of chemicals, *or,* if they will also seek to regulate all other chemicals. Will they inspect homes for chemicals in our kitchens, bathrooms, and garages? What about other chemicals applied on our property, including house paint, lawn chemicals, and living plants? Chemicals in the soil, water, and air must presumably pass inspection. Many chemicals alter the breathability of air. Others pollute our water, including those that destroy pathogens, protect our teeth, etc. Some chemicals, either natural or synthetic, get into soil and may inhibit the growth of plants or the survival of arthropods and microorganisms. Many chemicals may render soil unsuitable for plant growth, but others are added to increase plant growth, flowering, or fruit production. (Remember Alar, 2,4-D, and 2,4,5-T?) Presumably *all* such chemicals can be classified by the EPA as "harmful," at *some* concentrations, thus could be banned or restricted because high levels may cause harm, and may thus be banned under the Food Quality Protection Act.

The EPA might also prosecute citizens who own property on which traces of chemicals are found, even if the pollution preceded their ownership. They may then assess charges that the owner cannot afford to pay, and then confiscate the property.

Harm to humans or animals might include cancers, tumors, coughing, skin rashes, aches and pains, effects on pulmonary, gastrointestinal, nervous, or reproductive systems, harm to sense organs, cholinesterase alterations, and so forth. Also, the EPA immediately appeared to relish the unsupportable warnings of endocrine disruptions causing sperm declines, undescended testicles, shortened penises, and attention disorders, as alleged in the book, *Our Stolen Future*. The American Council on Science and Health called that book "an alarmist tract, crafted for political impact," but the EPA quickly accepted the anecdotes, unconfirmed allegations, and unsupported hypotheses in that book.

Regardless of what the EPA determines to be "reasonable," and how they define "harm," further difficulties center on their explanation of what the meaning of the word "no" is. Doesn't the word "no," as in "no harm," also threaten society? Rather than seeking to measure the *effects caused* by any chemicals, the EPA is more likely to just measure the levels of chemicals that cause those effects or the amounts of substances that might be harmful to the environment. The EPA certainly realizes that "no," meaning "zero," is not attainable. They could legally settle on *any* level, but the standard decreed obviously will be less stringent than "no," or "zero." How large or how small an amount might be considered by the EPA to be "harmless"? In the past, they have measured chemicals in parts per million (ppm), parts per billion (ppb), parts per trillion (ppt), or simply "traces" of chemicals, They then could guess what concentrations might cause "harm." Their decisions obviously are all subjective, for there is no way to base them on correlated "facts." The EPA nevertheless must somehow establish permissible "tolerance levels" and enforce them as harshly as possible.

Those "tolerance levels" are extremely important, even though they are wholly subjective. How many parts per million or parts per billion of a chemical should they permit in the habitat before they ban it and order the crop to be destroyed? Such decisions were formerly based on how toxic the chemical was and how much harm it would cause. Now, it must only be the result of the "reasonable certainty of no harm," based on the opinion of some EPA employees! There are no factual data to support EPA's decisions, and no bases

for prosecuted citizens or organizations to dispute EPA's delineation of "no harm."

How much is a part per million? Imagine a pile of pennies worth $10,000 and then imagine adding one more penny to the pile. That additional penny would be one part per million (1 ppm) Now imagine the EPA calculating how many parts per million of an insecticide should be legally permitted on a apple. Would one part per million be frightening? Would it be dangerous to the environment, or to the person eating the apple? If the EPA decides that the concentration in ppm exceeds their "tolerance level," that apple, or the entire crop, will be condemned and must be destroyed.

How much is a part per billion? Imagine an 8,000-gallon railroad tank car full of gin, and imagine adding one jigger of vermouth. That addition would be one part per million (ppm). If you added that same jigger of vermouth to the total contents of a thousand of those tank cars, you would have added one part per billion (ppb).

Is the EPA still a cesspool?

During a hearing on the EPA, Representative Dingell, the Chairman of the House Energy and Commerce Committee, referred to the EPA as "a cesspool." That designation harks back to earlier comments by a disgusted EPA staff member, Oren Long, who stated: "The EPA has a word for the process whereby civil servants just rise to the top. . . . It's called cesspoolation" (*Human Events,* Dec. 31, 1977, pp. 1039-1042).

In June 1998 letter to the *Washington Times* signed by 19 EPA employees, they said: "We are but a few of the EPA scientists, managers, and affiliated persons protesting fraud or waste in our agency involving hundreds of millions of dollars, and alerting the public that EPA regulations and enforcement actions based on poor science stand to harm, rather than protect, public health and the environment. We find the situation so reprehensible that we submit this letter, risking our careers rather than to remain silent." The details were published by the National Wilderness Institute, May 12 1998, in "The People v. Carol Browner: EPA on Trial" (see www.nwi.org).

In 1993, the EPA began dumping human sewage on coastal farmlands, instead of pumping it out to sea. Dr. David Lewis said: "A handful of non-elected government officials at the EPA decided to protect whales in the ocean from potential risk by dumping contaminated sewage onto croplands, thereby exposing many Americans to food supplies with contamination by serious disease organisms" (From *Accuracy in Media,* November 1998). As a result, he was targeted for trumped-up charges by an official. Lewis, a microbiologist, fought back, and won a $115,000 libel settlement. He continued to be pilloried, and several of his supporters were forced to resign. Alan Rubin, who wrote EPA's sludge regulation, told the New Hampshire state legislature in November 1998 that "the sludge was *not* too toxic for the ocean. The reason we got it out of the ocean was basically an image-political-type deal." Numerous illnesses have developed in communities where the sludge was dumped, and at least one death resulted (*Environment News,* May 1999).

Recent troubles for the EPA

In May 1999, the EPA suffered another defeat when a U.S. Appeals Court ruled that the agency had overstepped its constitutional authority when it ignored the "non-delegation" doctrine, which holds that some issues are too important to be delegated to agencies by Congress. The judges said that the EPA "had acted on legal assumptions that amounted to unconstitutional delegations of legislative power," and ordered the EPA to explain how its rule-making process was justified under the Constitution. Legions of scientists have complained about such unjustified regulations by the EPA for almost 30 years, but could not influence so powerful an organization. The Supreme Court's decision may finally begin to protect America from irresponsible environmental extremists.

Referring to the EPA's actions, a conscientious American scientist once wrote: "It appears increasingly unlikely that a free society can coexist with such a capricious monolithic organization whose uninformed zeal so greatly surpasses its expertise."