

Lies Of Our Times

MAY 1993

A MAGAZINE TO CORRECT THE RECORD

\$8.00



The Holocaust That Didn't Happen And the Black Soldiers Who Weren't There

**The Truth on El Salvador
Stalling on South Africa
Mexican "Miracle"**

**Twin Towers Theories
Howard Zinn vs. John Silber**

000023

Letters to LOOT

The Dispute Over Dioxin

John J. Burton, Washington, New Jersey:

March 3, 1993

Peter Montague's "The Times Detoxifies Dioxin" accuses the *Times* of presenting only one side of the dioxin controversy (LOOT, January/February 1993, p. 9). But I find this article also to be biased.

A picture is shown of the meeting where the EPA offered to buy the town of Times Beach, Mo., because of dioxin contamination. No mention is included of the fact that nine years later Dr. Vernon Houk, director of the Centers for Disease Control, said that if he knew in 1982 what he knows now about dioxin's threat, he never would have recommended that Times Beach be evacuated.

Michael LaCombe, in the same issue, said "Dioxin's gruesome reputation, derived from disclosures of its effects in mass exposures like Agent Orange during the Vietnam War and the 1983 evacuation of Times Beach, has fueled extensive research." This is misleading; no effects have been shown in either case, so the judge in the Agent Orange veterans lawsuit was not able to determine which veterans should get the benefits.

I have been involved in the problem of dioxin for about 30 years. In 1951 I designed and put into operation a unit at Diamond Shamrock (then Kolker Chemical) to manufacture 2, 4, 5-T and for the next nine years, the occurrence of chloracne among the workers was one of my biggest concerns. My last involvement was being a consultant to the group of lawyers in their lawsuit against the manufacturers of Agent Orange. I emphasized to this group that I could provide indisputable evidence that at least one manufacturer, contrary to their claimed ignorance, knew of the presence and toxicity of dioxin in Agent Orange. But I also emphasized there was no evidence of any effect on U.S. troops in Vietnam. My experience, and I believe this is generally correct, was that the first effect of dioxin was to cause chloracne and there was no evidence of this on Americans in Vietnam. I was pleased to see the \$180 million awarded to the Vietnam veterans because the conditions under which they served made all such benefits warranted; I had been an active opponent of the Vietnam war.

There must have been much harm from Agent Orange to the Vietnamese who were directly exposed to it and who had to use contaminated water from streams and lagoons. I know of no study made to investigate this.

When there was an outbreak of chloracne among workers at German 2, 4, 5-T plants in the early 1950s, their government forced them to stop production and not to resume it until they had found the cause and the means to prevent it. Their research found that dioxin, formed in small amounts in the process, was the cause, and the toxicity of dioxin was described in an article in *Dermatologica*. Reference to this article appeared in our *Chemical Abstracts* in 1959 but was apparently not noticed by our manufacturer's research groups.

In 1960 Monsanto purchased from a German firm the technical information on dioxin, and I understand Dow Chemical did the same in 1965 when they had an outbreak of chloracne among their workers. In spite of their having good contacts with German 2, 4, 5-T manufacturers, Diamond failed to similarly purchase this available technical information but instead relied on piecemeal and often contradictory free bits of information from the Germans.

The story of dioxin includes much incompetence, culpability, and disinformation on the part of our government and our manufacturers. But *Lies Of Our Times* should be careful to maintain its own credibility if it is to properly carry out its role of promoting honesty in the media.

Peter Montague responds:

The statement by Dr. Houk that Mr. Burton cites was one he made as an individual, not as a representative of government (incidentally, Houk's title is Special Assistant to the Director for Environmental Health; he is not, and never was, "director of the Centers for Disease Control" as Burton identifies him). Furthermore, on June 10, 1992, Dr. Barry Johnson, assistant administrator of the federal Agency for Toxic Substances and Disease Registry testified before Congress that the government's official position today is that, faced with another Times Beach situation, the government's response today would be exactly what it was 10 years ago—they would evacuate the citizenry. At that same public hearing on June 10, Houk's views were characterized by Rep. Ted Weiss as "cockamamie" and "quirky" (see Rachel's Hazardous Waste News #290).

As for Burton's claim that there is no evidence of harm to Vietnam veterans from exposure to Agent Orange (an herbicide containing dioxin and sprayed extensively in Vietnam), it appears that he is simply misinformed. Unfortunately, since no one was measuring dioxin exposures in Vietnam at the time they were happening, the only kind of study possible today is epidemiological, and the exposures must be estimated, not measured. Epidemiology cannot "prove" a cause-and-effect relationship but it can indicate a correlation between two things, such as exposure to herbicides and presence of disease conditions.

In April 1990, the Agent Orange Scientific Task Force (composed of seven prominent, independent scientists and physicians) published a report called Human Health Effects Associated With Exposure to Herbicides And/Or Their Associated Contaminants—Chlorinated Dioxins (Washington, D.C.: National Veterans Legal Services Project [2001 S Street, NW, Washington, D.C. 20009-1125; (202) 265-8305]; 41 pages, plus 33 pages of useful appendices; \$10.00 plus \$3.00 shipping).

In their report, the authors reviewed 285 separate studies of human exposures to the kinds of herbicides used in Vietnam (called phenoxy herbicides).

The panel concluded that there is a "significant statistical association" between exposure to herbicide Agent Orange and various cancers (non-Hodgkin's lymphoma and soft tissue sarcoma), serious skin disorders (chloracne), and liver disorders. The panel said, "The aggregate interpretation of several sound studies showing a statistically significant association for each of these conditions make this conclusion inescapable" (see Rachel's Hazardous Waste News #73 and #212).

600024

SOURCE RECOVERY: What Questions for Citizens

nda Howe

Attempting to head off pending garbage crisis in New Jersey, the state legislature, in 1970, transferred control of solid waste disposal from local to state government. 1975 amendments to the Waste Management Act added 21 garbage dumps in the state, 20 islands and the Hackensack Meadows Development Corporation. Each district old it must design a plan for disposing of its solid waste. The Department of Environmental Protection was charged with reviewing these plans. State policy called phasing out of landfills and a phasing in of high technology incinerators (i.e., "resource recovery"). There are two basic types of resource recovery plant: those where materials are removed before incineration, and where recyclables are removed before incineration—the so-called burn facilities. Both types, however, have as their theme the burning of solid waste to obtain energy in the form of steam electricity. Moreover, whether the plant is called a resource recovery facility, a waste-to-energy plant, or a garbage incinerator, there is magic about it. Garbage is burned, but it does not totally disappear. A volume of the solid waste is left over (as ash, noncombustibles like glass, and sludge). Thus a small, albeit a smaller, amount is always associated with resource recovery. In addition, smoke and gases go up the stack along with many toxic chemicals that do not burn in typical incinerator temperatures. These may or may not be caught by sophisticated pollution control devices. Since nearly every plant in the state is currently considering some form of resource recovery, the Hazardous Waste Act is concerned that citizens obtain the information they need to make private decisions. This is the first of a series. It offers some suggestions about what questions citizens should ask.

Resource recovery does not eliminate the need for fill space. Ask where the ash will go and whether groundwater can be protected from possible contamination. If it can be, fill it be.

4. Plants do not always operate at peak efficiency. Ask whether the plant will be shut down for repairs when monitoring shows that emissions exceed the limits that have been set. Ask where the garbage will go when the plant is "down." Is there a contingency plan?

5. Much air pollution comes directly from the materials that are being burned. Ask whether metals will be removed before incineration so they are not volatilized (changed into a gaseous or particulate form in the heat) and sent up the stack. Ask whether plastics will be removed so dioxins and furans are not produced during combustion.

6. The theory in resource recovery circles often appears to be "the bigger the better." Once a large plant is built, efficiency demands a steady supply of garbage. Contractual arrangements also require a steady output of steam or electricity. Plants should be sized conservatively to allow for and encourage increased recycling. Ask how resource recovery and recycling programs will be integrated. Is the plant too big? Will the demand for garbage to burn threaten to end successful and growing recycling programs.

7. Siting difficulties and political pressures often make government choose to build a few large facilities rather than many smaller ones. This means that the risks associated with waste disposal are not always shared equitably among the waste producers. Clarifying the trade-offs that must be made between the need for garbage disposal, the risk of possible environmental contamination, and the need to protect everyone's right to clean air and water is not always easy. Citizens should ask themselves and then ask their governors whether fairness and equity have been considered in the siting process.

8. And lastly, when the hard questions of risk, responsibility, and trade-offs have been fairly answered, citizens should ask the promoters of resource recovery whether they, honestly, would be willing to have the facility in their backyard.

(In the next issue: Air pollution and resource recovery.)

Chemicals in the News: DIOXIN

The term dioxin is generally used to refer to a group of 75 compounds known as dibenzo-p-dioxins. The most toxic of these is 2,3,7,8-tetrachlorodibenzo-p-dioxin, or TCDD for short.

Dioxin is an unsought waste product of many manufacturing processes. It is particularly associated with the production of herbicides (Agent Orange), pesticides, and other chlorinated hydrocarbons (for example, the cleanser hexachlorophene).

Dioxin is also found, whenever it is looked for, in the fly ash (smoke and soot) of garbage incinerators. The majority of this dioxin is produced by the combustion of chlorinated hydrocarbons, including polyvinyl chloride (PVC) plastic (used in plastic wraps, textiles, pipe, and bottles, for example). A much smaller amount of dioxin is produced by the combustion of wood, paper, and coal.

Dioxin clings tightly to soil particles. It is practically insoluble in water. Dioxin does not, therefore, leach easily through soil, and so one does not generally find dioxin contaminating water supplies under a dump site. Dioxin may, however, be moved around by wind as it blows contaminated dust, or by the tires of moving vehicles, or other everyday means.

Dioxin is soluble in alcohol, oil, and fat. It will stay in body tissue; therefore exposure to dioxin has a cumulative effect.

Ultraviolet light causes dioxin to break down. Tests show the half-life of dioxin in sunshine to be 1 to 2 weeks. (Half-life is the time it takes for half an amount of the substance to break down.) In soils, however, dioxin is long-lasting. Genetic engineering techniques have been used to develop bacteria capable of biodegrading some varieties of dioxin. These experiments may someday lead to an improved method of cleanup.

Health effects TCDD is one of the most potent poisons known. One of the most perplexing properties of all dioxins is, however, that different amounts affect different species in different ways. For example, as little as one millionth of a gram per kilogram of body weight (1 kg = 2.2 lbs. and 1 g = 1/28 oz.) of TCDD will kill a guinea pig. The lethal dose for a hamster is 5000 times this amount. Scientists do not know which species will prove to be the closest model for the way dioxins affect human beings.

Scientists do agree that very small amounts of dioxin, measured in parts per million or billion, are dangerous to various body systems. Dioxins have been associated with a variety of human health problems, from chloracne to liver disease and neurological disorders. Exposure to dioxin also increases the likelihood of certain cancers. Researchers do not agree whether dioxin itself causes the cancer or whether dioxin acts as a "promoter," that is it increases a person's susceptibility to other carcinogens in the environment, cigarette smoke or engine exhaust, for example.

Ingestion of dioxin appears more harmful than either inhalation or skin absorption. In children the greatest risk of exposure comes from playing in contaminated dirt. Adults ingest dioxin by eating fish or shellfish that feed in waters where the soil bed has been contaminated by dioxin.

Standards There is no agreement about how much exposure to dioxin is safe for human beings. Some scientists argue that there is no safe level of exposure.

In 1983, responding to the needs of the Times Beach, Mo., cleanup, the National Center for Disease Control set levels for human exposure to dioxin in soils as one part per billion (ppb). This standard was set not because research had indicated this to be the proper level, but because it was the lowest level of concentration that could be practically measured. Homes in Times Beach, bought by the government, showed contamination levels of 200-300 ppb. The Diamond Alkali site in Newark showed contamination levels of 500-1200 ppb, with some spot contamination of 51,000 ppb.

The U.S. Food and Drug Administration regulates consumption of contaminated fish with these standards: 500 parts per trillion (ppt)—no consumption; 25-50 ppt—once a week; under 25 ppt—unlimited consumption. It has been said that one part per trillion is the equivalent of one postage stamp in an area the size of Dallas. There is no federal standard for dioxin in air.