

Rachel's Environment & Health News

#271 - National Academy Study Says Superfund Dumps Cause Many Illnesses In Humans

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Big guns in industry and government are aiming to kill the 12-year-old Superfund program, the multi-billion-dollar federal effort to clean up old chemical dumps. NEWSWEEK fired the opening salvo in the summer of 1989, calling Superfund sites "boring"--a code word for NOT WORTH THE MONEY WE'RE SPENDING TO PROTECT NEARBY RESIDENTS.[1] EPA [U.S. Environmental Protection Agency] appears to be helping Superfund critics by running a corrupt, wasteful, inefficient and ineffective program, all the while claiming great success. October 17, 1989, EPA issued a press release with the headline, "EPA Achieves Superfund Milestones." The press release announced that cleanups had begun at 254 sites. "The Superfund program is making significant progress," EPA chief William Reilly said. "These accomplishments are results-oriented. They reflect my management initiatives, which make cleaning up sites... our highest Superfund priority."

Two years later, the NEW YORK TIMES reported at length on Superfund (June 16, 1991, Section 3, pgs. 1, 6), revealing that only 60 Superfund sites had been cleaned up despite expenditures and commitments of \$11.5 BILLION since 1981. (That's \$191 million per cleanup.) The WASHINGTON POST clarified the matter three days later (pgs. A1, A14), pointing out that actual expenditures were only \$7.5 BILLION and that really 64 sites had been cleaned up--so the actual cost per site was only \$117 million.

To be fair, these costs-per-cleanup are not accurate because money has been spent conducting studies at many other sites. But in a sense, that is the Superfund problem. A whole industry has been created to study Superfund dumps, with little actual success cleaning anything up.

The TIMES said the official Superfund list in June, 1991, included 1126 sites but also revealed EPA's estimate of "other potentially hazardous sites" included 32,645 sites. So, despite massive expenditures and hundreds of fat, expensive studies, Superfund has accomplished little, and compared to the size of the problem, it has accomplished almost nothing. "Lawyers and consultants are the only ones cleaning up," quipped one critic.

Critics of Superfund in industry and government are now using these sorry statistics to gather their forces for a major assault on the Superfund program itself. But Congress hasn't yet shown much stomach for a fight on this issue. In the dead of night and without public discussion--Congress reauthorized Superfund for another five years in late fall 1990, so no real debate will take place until 1993 or 1994, when people begin to gear up for the next Superfund reauthorization, which will be needed in 1995.

In the meantime, real people are living near real chemical dumps. Many of them are frightened to death. Their property has lost its value entirely, in the sense that no one in their right mind would buy it. These victims are thus imprisoned in a toxic nightmare. Highly-paid consultants in moon suits take soil samples, separated by only a chain-link fence from play areas used by children whose parents are trapped and powerless because they have lost the only thing of real value that they ever owned--their home.

Is fear of chemical dumps justified? The National Research Council of the National Academy of Sciences recently published an excellent book-length study that tries to answer that question.[2] The National Academy recently issued a short essay by Anthony B. Miller, the project leader of the study. We reprint it here verbatim. Dr. Miller is a professor in the Department of Preventive Medicine and Biostatistics at University of Toronto. --Peter Montague

ASSESSING THE THREAT OF TOXIC WASTE SITES

If you live in the United States, there's roughly a one-in-six chance that your home is located within four miles of a chemical dump or other potentially hazardous waste site. Given our unpleasant memories of Love Canal and other incidents, it's reasonable to ask

which of these more than 31,000 sites truly pose a threat.

Unfortunately, more than a decade after Congress established the Superfund program, we still cannot answer that question. A committee that I chaired for the National Research Council reported recently that the federal government has no comprehensive inventory of waste sites, no program for discovering new sites, insufficient data for determining safe exposure levels, and an inadequate system for identifying sites that require immediate action to protect public health.

The Environmental Protection Agency (EPA) has conducted preliminary investigations of 27,000 of the reported sites. About 9,000 of these have been studied more extensively, and 1,200 have been placed on the National Priorities List for eventual cleanup. Yet the methods used to assess the public health danger at these sites are questionable, and it is far from clear how much nearby residents have benefitted.

Opinion polls show the public believes that hazardous wastes constitute a serious threat, but many scientists and administrators in the field disagree. Our committee, which included experts in toxicology, exposure assessment and other fields, found the available evidence too skimpy to confirm or refute either view.

More than 5 billion metric tons of hazardous waste is produced each year in the United States. There's no question that substances toxic to humans and several animal species abound in hazardous waste sites. It's a big step, however, to say that, most, or many, or even a substantial fraction of the sites pose a threat to nearby residents. Residential proximity does not necessarily mean that exposures and health risks are occurring, although the potential for exposure obviously is increased.

Epidemiologic studies of hazardous waste sites have complex technical limitations. However, SUCH CONDITIONS AS BIRTH DEFECTS, SPONTANEOUS ABORTIONS, CARDIAC ANOMALIES, FATIGUE, AND NEUROLOGIC IMPAIRMENT HAVE BEEN TIED TO EXPOSURE AMONG NEARBY RESIDENTS. [Emphasis added.]

It is less clear whether exposure to the wastes can be blamed for medical problems in which there is a long delay between exposure and disease. However, SOME STUDIES HAVE DETECTED EXCESSES OF CANCER IN RESIDENTS EXPOSED TO COMPOUNDS FOUND AT HAZARDOUS WASTE SITES. [Emphasis added.]

As for which sites are a problem or how close people have to live to be affected, much remains uncertain. Without clear answers, the only prudent course is to err on the side of public safety, just as we do in designing bridges or buildings. In evaluating the potential danger of a dump, officials should apply a large margin of safety.

Everyone would benefit, however, by reducing the uncertainty about hazardous wastes generally and about specific sites. Of the \$4.2 billion [sic] spent annually on hazardous waste sites in the United States, less than one percent has gone to study health risks.

The scientific basis for evaluating Superfund sites must be improved. Expanded studies are needed--and soon. As toxic wastes disperse, more people will be exposed and it will become increasingly difficult to design studies that compare the health of exposed and unexposed populations. One kind of research that is especially important is identifying biologic markers that indicate whether someone has been exposed to toxic chemicals.

More broadly, the federal government should establish an aggressive program to discover hazardous waste sites. It needs to revamp its methods for evaluating known sites for population exposures, health effects and the need for cleanup measures. Washington also should expand technical assistance to state hazardous waste programs and

increase support for university research in "environmental epidemiology."

After spending billions of dollars during the past decade to study and manage hazardous waste sites, the American people are entitled to firmer information. The only way to end the uncertainty over how much the sites endanger the public is to perform the necessary studies. We should strive to clear up this scientific mystery even as we clear up the wastes themselves. With more than 40 million people living near the sites, the public needs answers.

by Anthony B. Miller

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[1] Gregg Easterbrook, "Cleaning Up [Our Mess]," NEWSWEEK, July 24, 1989, pg. 29."

[2] Anyone interested in chemical dumps MUST read this book, which evaluates hundreds of health studies and puts them into perspective: Anthony B. Miller, editor, ENVIRONMENTAL EPIDEMIOLOGY, VOLUME 1: PUBLIC HEALTH AND HAZARDOUS WASTES. \$29.95 plus \$3.00 shipping, from: National Academy Press, 2101 Constitution Ave., NW, P.O. Box 285, Washington, DC 20055. Telephone: (202) 334-2000.

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