

EPA in the Dumps: Superfund Squabbles



Images of hazardous chemical wastes insidiously leaking into groundwater and seeping into people's lives at places like Love Canal in Niagara Falls, N.Y., and other abandoned, forgotten toxic-waste dumps drove the U.S. Congress late in 1980 to enact legislation to ensure quick action in cleaning up these sites. Two years later, the Comprehensive Environmental Response, Compensation and Liability Act, called "Superfund" because of the \$1.6 billion fund established to finance the cleanup, seems to be mired in procedure and politics. By last week, six congressional subcommittees were investigating the Environmental Protection Agency, the agency charged with implementing the act, amid accusations of EPA mismanagement, conflict of interest and cronyism.

For Rep. James J. Florio (D-N.J.), who was largely responsible for the Superfund legislation, the problem is the administration's failure to spend available funds quickly enough to clean up hazardous waste sites promptly. An aide to Florio says, "We're criticizing them on not doing much work at the sites."

Last fall, several House subcommittees demanded access to EPA files on Superfund programs. Rep. Elliott H. Levitas (D-Ga.), oversight subcommittee chairman for the Public Works and Transportation Committee, in particular, asked for 785,000 pages of data covering all 160 sites then on the cleanup priority list. The files were needed for an investigation into whether the agency negotiated settlements favoring corporate polluters. EPA Administrator Anne McGill Burford (she changed her name from Gorsuch when she married last week), on instructions from the White House, refused to turn over the documents because disclosure, she said, could harm the agency's efforts to prosecute companies for illegally dumping toxic wastes. In December, Burford was cited for contempt of Congress (SN: 1/6/83, p. 6). Last week, the Reagan administration, in a compromise with Levitas, agreed to give House committee members controlled access to the documents in exchange for passage of a resolution lifting the contempt citation. Although Levitas was pleased with the result, other subcommit-

tee chairmen complained about the remaining restrictions. Rep. John D. Dingell (D-Mich.) said the agreement set a bad precedent and sanctified a president's ability to hold back information on government misconduct.

Recent EPA actions, like the firing of Assistant Administrator Rita M. Lavelle, who was in charge of Superfund work, and the suspicious erasing of computer records and the use of paper shredders at the agency, have further muddied the situation. This week, the Justice Department and the Federal Bureau of Investigation began to examine whether EPA employees had illegally destroyed records that had been subpoenaed by Congress. The investigation is also looking into allegations that Lavelle violated conflict-of-interest laws. Lavelle's appointment calendar, which she made available to a Senate committee, reveals that she frequently met and dined with officials from chemical companies, some of whom were potential defendants in waste dumping cases, but never with lobbyists from environmental groups.

Meanwhile, Burford has defended the Superfund program. When EPA released its

list of 418 priority dump sites late in December, Burford said, "It is only 16 months since President Reagan assigned EPA the lead role in implementing the Superfund law. Given the complexities of searching out and ranking by threat the major uncontrolled sites, we can take satisfaction in having moved so far so fast."

NUS Corp. is one of two companies that collect data, propose remedial action plans and conduct feasibility studies for EPA at hazardous waste sites. Paul Goldstein, Superfund division project manager for NUS, says data acquisition and analysis, making drawings and specifications and all the other necessary work takes time. "The agency is pushing us and anybody else involved in it to find a way to expedite the decision-making process," says Goldstein. "There is a conscious effort in the program to speed it up."

"The investigative technology is pretty well established," Goldstein adds, but, "there are problems at sites for which the solution really isn't obvious. . . . You can't dig up the world and burn it, or dig it up and bury it somewhere else. Solutions that are reasonable at some sites are not reasonable at others."

The buying of Times Beach: A town unfit for

EUREKA, MO. — Residents of Times Beach, Mo., a small, Meremec River town tainted by the dangerous chemical dioxin, crowded into a Holiday Inn here this week to hear the news that some of them had fought, hoped and prayed for over the past several months. The U.S. Environmental Protection Agency and state officials are offering to buy out home owners and business proprietors of a town now considered unfit for human habitation. This is the first such buyout under Superfund (see above story). In addition, EPA Administrator Anne M. Burford announced the agency is putting Times Beach on the National Priority List, which indicates that additional superfunds will be used to clean up the town.

The decision for the EPA buyout — which amounts to \$33 million, to be matched by 10 percent of that in Missouri monies — was based on a series of Times Beach soil analyses and a written recommendation by the Centers for Disease Control. The latest results, released by the CDC at a press conference here, show dioxin levels of up to 300 parts per billion on the town's road shoulders and in ditches and from 1 to 5 ppb in yards and homes. Officials at the Atlanta-based CDC recommend that human exposure be restricted to soil dioxin levels less than 1 ppb.

Times Beach has been plagued by a form of dioxin — 2,3,7,8-TCDD — that has been linked in animal studies to various maladies, including cancer and birth defects, but whose precise effects on human health remain unclear. Contamination stemmed from the spraying of dioxin-containing waste oil in the early 1970s to control dust on the town's unpaved roads (SN: 1/22/83, p. 60).

While news of the buyout was met with applause and joyous cheers among Times Beach residents, it has done little to disarm those who have been criticizing EPA's handling of the Times Beach affair. For example, critics still maintain that EPA should have stepped in with emergency superfunds to stabilize roads and ditches as early as last December, shortly after a flood swept through the town.

Moreover, the incident has seriously called into question EPA's ability to handle its analysis of environmental samples. According to CDC officials, for example, EPA could only provide CDC with incomplete raw data (seven soil sample analyses out of 350 were missing) for the latest tests, which critics say EPA should be able to perform itself. "We've had to hold EPA's hands through their own data analysis," one CDC official told SCIENCE NEWS.

Meanwhile, officials are conducting various health effect studies to determine

According to EPA information, by the end of last year, federal activities were underway at 112 sites, with state programs at 29 others. Five priority sites had been cleaned up. By Sept. 30, 1982, Congress had appropriated \$265 million for Superfund, and \$221 million had been committed to specific projects, although the money was not necessarily spent. EPA also expended considerable effort in negotiating with companies to clean up hazardous waste sites "voluntarily." One example was the \$7.7 million deal involving 24 companies to clean up a dumpsite in Seymour, Ind. (SN: 11/13/82, p. 310). The deal remains controversial, however, because some critics believe that the companies are not paying their full, proper share and the cleanup will not be complete. Others argue that EPA should clean up first and then negotiate to recover its costs.

Last year, at a special workshop organized by the Office of Technology Assessment with representatives from federal agencies, chemical companies, state environmental offices and environmental groups, the element of greatest consensus was the need for faster remedial action using Superfund resources. "While there was strong interest in improving the site selection process, almost everyone agreed that such efforts should not lead to any further delays in the allocation of funds and remedial action," reported Joel S. Hirschhorn, OTA industrial hazardous

waste project director.

Charges of EPA foot-dragging and enforcement laxity have been common themes in the Superfund story ever since the law was enacted. For example, a report on "Hazardous Waste Enforcement" released in December by the House oversight and investigations subcommittee notes that since it became effective in December 1980, the Superfund statute requires persons who release "substances into the environment in amounts exceeding certain quantities to notify immediately the National Response Center." To date, EPA has failed to define clearly how it will implement and enforce this policy. And, as of April 1982, "the National Response Center was receiving approximately 150 reports of significant releases monthly, only 41 percent of the anticipated number of approximately 365 per month," according to the subcommittee report.

Another Superfund order that has not been carried out calls for the Department of Health and Human Services to establish a special "Agency for Toxic Substances and Disease Registry," which would provide emergency care and testing of persons exposed to toxic chemicals, maintain registries (or long-term health records) of these exposed persons and establish a data bank for the hundreds of known toxic materials. The Chemical Manufacturers Association and the Washington-based public interest group the Environmental Defense Fund, longtime foes, now have joined in a lawsuit against EPA and HHS in an attempt to force action. CMA thinks the generated data will result in future environmental issues being decided more on scientific and less on emotional grounds; EDF thinks the generated data will support its contention that toxic chemicals and human illnesses can be linked.

In separate litigation, EDF is also suing EPA over the inadequacy of the agency's National Contingency Plan, which outlines a system for ranking hazardous waste sites according to the risks they pose. This determines whether the sites belong on the Superfund National Priorities List. In an earlier suit, says EDF lawyer Christine Hall, the public interest group sued EPA because the agency was not meeting its deadline for issuing the plan, which was to outline in detail how the Superfund law was to be implemented. "After it was finally published," she says, "we weren't sure it was worth the fight. As published, it is practically a worthless document.

"The major question that needs to be answered [during this litigation] is, 'How clean is clean?'" says Hall. EPA has stated that "the appropriate extent of remedy shall be determined by the lead agency's selection of the remedial alternative which the agency determines is cost-effective." On the other hand, an OTA statement suggests that "without standards as to acceptable levels of releases from sites, it is difficult to know whether or not a remedy is satisfactory."



Anne McGill Burford

EPA

Instead of setting uniform national standards for releases from hazardous waste dumps, the National Contingency Plan currently calls for case-by-case determinations of risk. The CMA has strongly supported this approach from the start, says Dick Stoll, a lawyer for CMA. Hall maintains that case-by-case decisions "take a hell of a long time," and that this is what Superfund was meant to avoid.

Other critics of the National Contingency Plan are concerned about the system used for ranking hazardous waste sites. An OTA report says that because of flaws that exist in the mathematical ranking system used, "sites that present substantial threats to public health and the environment may not get a sufficiently high numerical score to qualify them for funding."

Confusion also surrounds whether the priority list really represents the worst hazardous waste sites in the nation. The list identifies only those sites that the states select for Superfund eligibility, and the law requires that EPA include the highest-ranking site from each state. An EPA official says that the agency suspects certain sites that should be on the list are missing because the state is unable to provide its share of the cleanup costs (50 percent in the case of dumps on municipal or state land). Hirschhorn points out that one obstacle to improved state preparedness is the lack of federal funding to the states to provide better data on their sites. EPA has chosen not to provide \$20 million available under the Resource Conservation and Recovery Act to develop a "Hazardous Waste Site Inventory," which would describe the location of each site within the state where hazardous waste has at any time been stored or been abandoned.

The original Superfund bill allowed EPA, under the "joint and several liability" concept to hold any generator of waste who contributed to a toxic dump responsible

human beings

whether specific human maladies can be linked to dioxin exposure. CDC researchers, under the direction of Gary Stein, continue to collect health data from Times Beach residents (SN: 1/22/83, p. 54). In addition, Marilyn A. Fingerhut and associates at the National Institute for Occupational Safety and Health in Cincinnati, are coordinating two separate studies that look at data on workers who were exposed to dioxin. The major study involves examining the causes of death of U.S. workers who made the herbicide 2,4,5-T (a component of Agent Orange) and other chemicals whose production results in the unwanted byproduct 2,3,7,8-TCDD. This study, which began in November 1979, also includes workers exposed to pentachlorophenol, a widely used wood preservative that is contaminated with several dioxins other than the 2,3,7,8-TCDD variety.

To date, the NIOSH team has identified 3,000 workers to include in the study and expects to gather information on another 1,500. The NIOSH group will compare the number of deaths from specific causes in the exposed group to the number of deaths from the same causes that would be expected in different age and sex categories in the general U.S. population to see if there is a statistically significant difference. Results are not due until 1985.

—L. Garmon

for the cleanup of the entire dump. Then, it would be up to the firm to collect from the other contributing waste generators. "This got to be such a hot political item that Congress, when enacting Superfund, ducked the issue," says EDF's Hall. The absence of this concept makes it difficult for EPA to sue. "If you don't have 'joint and several liability,' before EPA can sue parties to a site, it has to be able to establish what precise contribution that party had made," Hall says. "That's an impossible burden of proof for the government. The chemistry companies have better records than EPA."

The nature of the \$1.6 billion trust fund for cleaning up sites also presents problems. More than 80 percent of the money in Superfund comes from taxes on chemicals and petroleum products. The petrochemical industry is unhappy about the inclusion of some listed sites, like the vast Tar Creek area in Oklahoma where abandoned lead and zinc mines hold millions of gallons of acid-contaminated water from defunct mining operations. CMA's Stoll complains, "When Congress passed Superfund, it was clear . . . they were talking about chemical waste sites. . . . If the fund starts getting used and diverted to cleaning up other potential environmental problems, we may have an unfair situation on our hands."

Once sites are on the National Priority List, EPA is supposed to use Superfund money to conduct in-depth analyses at each site to define the extent of the problem and to recommend cleanup goals. Thus far, only 30 of these studies have begun, says Hall. "I think that's a miserable record."

If Superfund money is not spent quickly enough and the "unobligated balance" exceeds \$900 million on Sept. 30, 1983, or Sept. 30, 1984, the law provides for a halt in collecting the taxes on chemical and petroleum products. The OTA workshop report noted, "There are those who fear that there might be a strategy of not spending the funds in order to amass sufficient unspent monies to stop collecting the fees in 1983 or 1984, according to the provisions in the law."

During the next few months, numerous congressional investigations and hearings will focus on how EPA is carrying out the Superfund law. The law itself expires at the end of 1985. Some groups, like CMA, foresee that such a law will no longer be needed, while others are looking toward new, tougher legislation that includes, for example, a fund to compensate victims of toxic pollution. Hirschhorn, whose OTA report on hazardous industrial waste is due in March, says the substance of the report is extremely critical of the Superfund program and considers whether the whole design of Superfund as it now exists really "gets you where you want to go." Hirschhorn concludes, "That's why I say some new legislation will probably be introduced."
—J. Peterson, L. Garmon

Estrogens against heart disease

During the 1970s a handful of studies linked estrogen treatment for menopausal symptoms to an increased risk of uterine cancer (SN: 1/3/76, p. 9). Subsequently estrogen treatment was also linked with an increased risk of breast cancer. But now growing evidence—the latest and perhaps strongest of which is reported in the Feb. 18 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION by Trudy L. Bush of the Oklahoma Medical Research Foundation in Oklahoma City and colleagues—implies that it can protect against death from heart disease and perhaps from other causes as well.

Bush and her team studied 2,389 women aged 40 to 69 years for an average of 5.6 years to see whether those women who used estrogens for menopausal symptoms experienced fewer deaths due to various causes than did subjects who didn't use estrogens. Indeed, the death rate among estrogen users was found to be only 0.37 that of nonusers. In addition, this lower death rate could not be accounted for by differences in age, education, smoking habits, alcohol use, blood pressure or some other possible biases in the selection of subjects, they found.

These results should "come as a reassurance to women for whom estrogen treatment is being recommended by their physicians," says Basil M. Rifkind of the National Heart, Lung and Blood Institute in

Bethesda, Md., and one of the scientists who conducted the study. "I wouldn't advocate, however, that women take estrogens merely because of our findings."

These findings, combined with previous ones, imply that "there are tradeoffs in estrogen use," asserts Thomas Mack of the University of Southern California in Los Angeles and one of the scientists to previously link estrogens to both beneficial and detrimental side effects. However, they don't make women's decisions over whether to use estrogens easy, he concedes. For instance, he says, answers to questions of whether women who smoke or women who have benign breast cancer should take estrogens or not "are going to depend on a lot more information than we currently have."

Yet another challenge facing estrogen investigators, Rifkind points out, is to determine against which causes of death other than heart disease estrogens exert their protective effects. —J.A. Treichel

Correction:

In "Eating away your pain" (SN: 2/19/83, p. 125) patients were given 3 grams of tryptophan, not 30 grams. Also, Samuel Seltzer of Temple University in Philadelphia, Pa., warns that under no circumstances should people try to treat themselves with tryptophan supplements in order to relieve pain.

Elephant seals rise from near extinction



Cooper, Stewart/Science

The good news on the northern elephant seal is that last year almost 25,000 pups were born in Mexico and along the California coast. This count is up dramatically from the six known pup births of 1911. Northern elephant seals were thought to be extinct due to hunting by about 1880, but a population was later discovered on an island of Baja California. Transient animals began visiting California islands, and breeding began there after 1950. Now protected from hunters, the population on the California islands is increasing more than 14 percent each year. "Since the entire adult population is not ashore at once, pup numbers are the most satisfactory indicators of population trends," Charles F. Cooper of San Diego State University and Brent S. Stewart of Hubbs/Sea World Research Institute say in the Feb. 25 SCIENCE. "Pups are sedentary and conspicuous, allowing reliable counts of both live and dead animals."