The original superfund law to clean up old dumps was called CERCLA; in 1986 CERCLA was substantially amended and is now called SARA. Under SARA, Congress ordered the EPA to prefer PERMANENT remedies for old dumps. EPA is generally ignoring this direct order from Congress. Permanent remedies are usually more expensive than temporary ones, and EPA usually chooses to save money today at the expense of future generations.

Congress's Office of Technology Assessment (OTA) recently studied 100 Records of Decision (RODs) from superfund. A ROD is the official explanation of what EPA has decided to do about a superfund site; the ROD is the culmination of the RIFS (remedial investigation, feasibility study) process. After looking at 100 RODS, OTA wrote up 10 case studies that typify superfund problems. The OTA report is short (76 pgs.) but landfill fighters everywhere, and anyone working on a superfund cleanup, will find a wealth of useful information among the 10 case studies.

This week, in Part 1, we'll present GENERAL lessons that citizens can learn about superfund cleanups. Next week, well present DETAILED information that landfill fighters everywhere should know.

The OTA report gives an excellent overview of how superfund works (pg. 3).

It is "not uncommon [says OTA] to have a multi-million dollar cleanup decision made without ANY technical data to support it, either from the technical literature or from tests done on site material." (pg. 10) CITIZENS MUST INSIST THAT EPA GIVE REAL EVIDENCE FOR ALL ITS CLAIMS.

Very often the Agency selects a remedy without actually testing the chemicals from a site to see if they are amenable to the selected remedy. For example, they may call for "solidifying" or "fixing" chemicals in the ground without any evidence that such solidification can work, and sometimes despite direct evidence that it CANNOT work. "Treatability testing"--to see if chemicals at a site can be made safe by the proposed method--is an important part of designing a good remedy, but EPA VERY OFTEN selects remedies without any treatability testing. Furthermore, CITIZENS MUST INSIST THAT TREATABILITY TESTING BE DONE DURING THE RIFS PROCESS, WHICH PRECEDES THE ROD, NOT AFTER THE ROD IS PUBLISHED. (pgs. 10-11)

In the absence of treatability studies, a remedy may actually constitute a research project, not a reliable, proven solution to a problem, but EPA often fails to note that a selected remedy is experimental or highly uncertain. (pg. 15) By EPA's own rules, superfund remedies are not supposed to be experimental--they are supposed to use proven technologies (pg. 52). CITIZENS MUST INSIST ON EVIDENCE THAT A TECHNOLOGY HAS WORKED ELSEWHERE.

Often the agency says a remedy will be used and if it fails a second remedy will be used, but "failure" is not defined. Lawyers and engineers can argue for decades whether a remedy has "failed," so RODS MUST CONTAIN QUANTITATIVE CRITERIA FOR DECIDING WHAT CONSTITUTES "FAILURE."

Experience at other superfund sites is often not used in RODs. For example, chemical stabilization or fixation at the Conservation Chemical site in Kansas City, MO, failed [started leaking] after only a few years of use, yet this technique is being proposed at similar sites MORE THAN EVER BEFORE. EPA does not seem to learn from its past mistakes (pg. 10). CITIZENS MUST INSIST ON EVIDENCE THAT A REMEDY HAS BEEN USED SUCCESSFULLY ELSEWHERE.

Risk estimation is an art, not an exact science, and deciding on 'acceptable risk' is highly political. The ROD for the Re-Solve site in North Dartmouth, MA, says 25 ppm [parts per million] of PCBs in soil will produce a risk of 1 cancer among 100,000 people living near the site; the ROD for the Liquid Disposal Site in Michigan says 1 to 6 ppm PCBs in soil will produce the same cancer risk.

Furthermore, EPA allows vastly different levels of risk to be deemed acceptable; sometimes they allow risks as great as 1 cancer in 10,000 people, but other times they use 1 in 10 million [a risk 1000 times lower]. The usual risk used is 1 in 1 million, but there's no consistency. PUBLIC PRESSURE CAN CHANGE THE RISKS THAT ARE DEEMED ACCEPTABLE.

Citizens need to be wary that a remedy will be selected because the engineering firm preparing the FS (feasibility study, which is supposed to provide a technical basis for the ROD) may own a particular cleanup technology, or one of its subsidiaries may stand to profit if a particular remedy is selected.

Sometimes EPA says it has evidence that a remedy will work when in fact it has no such evidence. RODS sometimes cite studies that have never been conducted and claim to be based on results that have never in fact been reported (e.g., pg. 22). Some RODs use fake prices to make certain technologies look expensive, thus fraudulently tilting the balance in favor of other technologies (e.g., pg. 44, 48).

EPA often claims that a solution is permanent "even when technical factors suggest a high probability of failure, that is, release of hazardous substances, and of another cleanup" (pg. 11). INSIST ON A DEFINITION OF PERMANENT, AND INSIST ON EVIDENCE THAT PERMANENT REMEDY CAN BE ACHIEVED BY THE SELECTED METHOD.

Contrary to the law, RODs recommending containment and land disposal seldom analyze the risks of future failures, damages and future cleanups (pg. 11). Containment means trying to contain wastes on a site, usually by installing a plastic or soil cap over the site, sometimes by installing a cap and a "slurry wall" (an underground wall built by deep trenching around the site). Containment is a temporary solution because the cap or wall will eventually fail and leak. Some RODs admit containment is temporary; other RODs claim containment is a permanent solution. But as OTA says, "...there is widespread agreement, even within EPA, that landfill cleanup will ultimately fail." (pg. 14) RODS ARE SUPPOSED TO DISCUSS WHAT WILL HAPPEN (WHO WILL BE HARMED, WHO WILL PAY, for example) when containment or capping fails (pg. 12).

Another popular EPA "solution" is to excavate wastes and re-bury them in a different landfill. OTA comments: "Moving hazardous waste from one hole in the ground to another is the nonsolution that was behind SARA's preference for permanent cleanup." (pg. 14) Yet EPA persists in favoring such nonsolutions.

When EPA decides to move wastes from one place and bury them in a landfill elsewhere, often the new landfill does not meet the requirements of RCRA [Resource Conservation and Recovery Act] Subtitle C, which calls for double liners, leachate collection systems, groundwater monitoring and a cap. Subtitle C burial is expensive and RODs often save money by recommending burial in unplined landfills, which the law specifically prohibits.

Pressure from the community can definitely be effective. You need to get involved way before the ROD is prepared, and knowing what has appeared in RODs elsewhere can help you get what you want at your site.

For a free copy of ARE WE CLEANING UP?, write to Joel Hirschhorn, Congress of the United States, Office of Technology Assessment, Washington, DC 20510-8025; or phone (202) 224-8713. If that fails, purchase a copy for $3.75 from U.S. Government Printing Office, Washington, DC 20402-9325; phone (202) 783-3238; request GPO stock number 052-003-01122-1.