The original federal superfund law for cleanup of old dumps (CERCLA) was amended in 1984 and is now called SARA. SARA requires the EPA to select the cheapest way to achieve that goal. And SARA tells the EPA that the protection it should aim for is permanent protection. The law could hardly be clearer.

Despite SARA's clear requirement that wastes be treated to render them safe, these 75 RODs reveal that the EPA required full waste treatment in only 6 cases (8%); they required partial treatment in 18 cases (24%) and no treatment whatsoever in 51 cases (68%).

In 2 out of every 3 superfund cleanups, the EPA recommends not treating the wastes to detoxify them. In some cases, wastes are left where they are but a clay or soil or concrete or asphalt "cap" is placed over them to prevent rain from moving the wastes off-site. In some cases EPA adds a "slurry wall" (a "curtain" of clay placed in the ground around the wastes by deep trenching). In other cases, they recommend excavating the wastes and reburying them in another landfill--a 'solution' that U.S. Congressman John Dingell calls "the superfund shell game." (RTWT, pg. 14) Thus in 2 out of every 3 superfund cleanups during 1987, EPA selected a landfilling remedy that is intended, by law, to be the "least favored method for managing hazardous wastes." (RTWT, pg. 12)

In most instances, RODs give cost as the reason for selecting a remedy that does not involve treatment of wastes. EVEN HERE, THE EPA IS IGNORING THE LAW. Congress explicitly changed the meaning of "cost effective" when it amended CERCLA to create SARA. Under CERCLA, a "cost effective" remedy meant the lowest cost remendy. However, the term 'cost-effective' means that in determining the appropriate level of cleanup, the President [through his agency, the EPA] first determines the appropriate level of environmental protection to be achieved and then selects a cost effective means of achieving that good." (RTWT, pg. 14). In other words, the EPA is supposed to decide what is needed to protect public health, and then is supposed to select the cheapest way to achieve that goal. And SARA tells the EPA that the protection it should aim for is permanent protection. Thus, the EPA is never justified in selecting a short-term, impermanent remedy (like landfilling or capping) simply because it is cheaper than a permanent alternative. The law could hardly be clearer.

In the case of organic wastes (like PCBs or DDT or solvents), often the most effective remedy will be to break down the wastes, rendering them much less toxic. One way to do this is through high-temperature incineration. However, the EPA often rejects this alternative on the basis of erroneous cost estimates. For example, at the Crystal City, Texas site, EPA received a bid of $250 per ton for incinerating the soil to detoxify it. In the Crystal City ROD, EPA multiplied this by 4 and said $1000 per ton was too expensive. At Sand Springs, Arkansas, the bid was $150 per ton for incineration; the agency multiplied this by 13 and issued the ROD saying $2000 per ton was too much to pay. REAL INCINERATION PRICES VARY FROM $125 PER TON UP TO $250 PER TON, not the $450 to $2000 per ton the EPA likes to use in RODs. (RTWT, pg. 28)

EPA is now starting to favor a modified landfilling approach; they seem now to favor "solidification" or "stabilization" (S/S) of wastes in the ground. The goal is to turn mixed soil and chemicals into a rock-like mass that won't release toxic chemicals to the environment. Sometimes soil is dug up and mixed with concrete-like glop, the mixture is put back in the ground and it hardens. Sometimes the glop is pumped into the ground where, the hope is, it will mix with the waste uniformly and harden.

However, the OTA report ARE WE CLEANING UP? (see HWN #86) makes it very clear that this remedy has many problems and, in any case, is not known to be a permanent remedy.

Solidification increases the volume of the wastes by an amount that varies from 50% to 200%. (OTA pg. 61) [This is important for people in the garbage incineration ash disposal debate.] More importantly: "There is, at present, no set protocol for evaluating the efficacy of stabilization technologies." (OTA, pg. 8) In other words, there's no agreed-upon way to decide whether S/S technology is working or not, no standard way to test it so that people can reach agreement on whether it's good or bad.

"The ability of any chemical stabilization technology to reduce toxicity of a wide range of organic and inorganic contaminants has not been proven nor is it generally accepted by the technical community." (OTA pg. 73)

In short, the achilles heel of S/S technology is this: "Considerable research data exists demonstrating the effectiveness of this technology in immobilizing a wide range of contaminants, primarily inorganics. A substantial amount of data does not exist, however, to accurately judge the long term reliability of the process." (OTA pg. 20). LONG-TERM SOLIDIFICATION-STABILIZATION TECHNOLOGY IS DUBIOUS AND UNPROVEN.


--Peter Montague

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Descriptor terms: sara; ota; laws; legislation; cercla; landfilling; epa; congress; remedial action; incineration; ota; hazardous waste industry; studies; findings; hazardous waste treatment council; environmentalists; records of decision; waste treatment technologies; caps; soil; soil contamination; john dingell; cercla; alternative treatment technologies; toxicity; tx; crystal city, tx; ak; sand springs, ak; waste solidification; solidification; ash; linda greer; leachate;