

Rachel's Environment & Health News

#87 - Part 2: More Lessons From Superfund

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The original federal superfund law for cleanup of old dumps (CERCLA) was amended in 1984 and is now called SARA. SARA requires the U.S. Environmental Protection Agency (EPA) to prefer PERMANENT remedies when they clean up old dump sites. Unfortunately, the EPA is systematically ignoring this directive from Congress (see HWN #86). A permanent remedy for an old dump would involve treating the wastes in some way to render them much less dangerous. For example, special high-temperature incinerators (not to be confused with mass burn garbage incinerators) might be used to detoxify wastes, or chemical processing might be used to break down toxic molecules.

Last week we reviewed a study of EPA's performance by the U.S. Congress's Office of Technology Assessment (OTA). This week we continue learning from EPA's superfund failures and we add a new source of information that all superfund activists should have: the report RIGHT TRAIN, WRONG TRACK, subtitled, "Failed leadership in the superfund cleanup program" issued by a group of traditional environmental groups and by an industry trade group (Hazardous Waste Treatment Council) in June, 1988. Throughout this issue of HWN, we refer to this study as RTWT.

RIGHT TRAIN, WRONG TRACK looks at all 75 'records of decision' (RODs) produced by EPA during fiscal year 1987. A ROD is the final document that EPA issues for a superfund site; it says what will be done to remedy the site and it gives a rationale for the decision.

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 remedy. However, under SARA, "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 hightemperature 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.

The 106-page report by Linda Greer and others, RIGHT TRAIN, WRONG TRACK is available for \$25 from the Hazardous Waste Treatment Council, 1440 New York Ave., Suite 310, Washington, DC 20005; phone (202) 783- 0870.

--Peter Montague

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