

Rachel's Environment & Health News

#150 - How To Find Out About Permanent Hazardous Waste Cleanup Technologies

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What can be done to clean up superfund sites permanently? A recent publication from the New York Environmental Institute addresses that question: PERMANENT CLEANUPS, A CITIZEN'S GUIDE TO HAZARDOUS WASTE TECHNOLOGIES & RESOURCES.

Selecting a permanent cleanup technology is not a simple matter. Different kinds of wastes require different technologies. Metals will require one kind of cleanup, organic chemicals will require something different. Often, a single site may require several different approaches.

It is not easy to find out which technologies are best for your site because much of the information you will get is filtered through the U.S. Environmental Protection Agency (EPA) before it gets into your hands. EPA has a definite bias toward low-cost cleanup. The U.S. Congress required EPA to "prefer permanent cleanups" over non-permanent cleanups, but permanent cleanups are often more expensive than temporary "fixes," so EPA has continued to go its own way, ignoring Congress, ignoring science and ignoring common sense. As we reported earlier (RHWN #86 and #87), the Congress's Office of Technology Assessment (OTA) studied 100 Superfund cleanups and reported (in a study called ARE WE CLEANING UP) that it is "not uncommon 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."

The key here is "treatability studies" of the actual wastes at your own site. Treatability studies should reveal which technologies have any hope of success with your particular wastes in your particular geology. Unfortunately, in the past, EPA has frequently not done treatability studies and has rushed ahead with a "cleanup" that had no hope of permanence.

Superfund cleanups are not supposed to be experiments, with the public serving as guinea pigs. Cleanups are supposed to be restricted to cleanup technologies that have been demonstrated. To allow new technologies to be tested, EPA operates the SITE program (Superfund Innovative Technology Evaluation). Companies that think they have invented a better mousetrap can request that the SITE program evaluate their technology; if it looks promising, presumably that technology becomes one of the ones EPA can consider at your site.

To learn more about the SITE program, get yourself put on the free SITE publications mailing list by writing to the EPA Office of Research and Development (ORD) Publications, 26 W. Martin Luther King Drive (G72), Cincinnati, Ohio 45268, or phone them at (513) 569-7562.

The following SITE publications are currently available free from the same phone number:

TECHNOLOGY PROFILES (EPA/540/5-88/003); SECOND REPORT TO CONGRESS (EPA/540/5-89/009); TECHNOLOGY SCREENING GUIDE FOR TREATMENT OF CERCLA [SUPERFUND] SOILS AND SLUDGES (EPA/540/2-88/004)

Actual results from tests of five new technologies are available in a series of SITE reports: HAZCON-SOLIDIFICATION APPLICATIONS ANALYSIS (EPA/540/A5-89/001); SHIRCO-INFRARED INCINERATION APPLICATIONS ANALYSIS (EPA/540/A5-89/010); AMERICAN COMBUSTION-OXYGEN ENHANCED INCINERATION APPLICATIONS ANALYSIS (EPA/540/A5-89/005); TERRA VAC-VACUUM EXTRACTION APPLICATIONS ANALYSIS (EPA/540/A5-89/003); IWT-IN SITU STABILIZATION APPLICATIONS ANALYSIS (EPA/540/A589/004). Each of these documents summarizes test results and will lead you to other, more detailed EPA documents if you want them.

To learn more about the status of particular technologies in the SITE

program, you can dial into a free computer bulletin board system (BBS) operated for EPA by a contractor in Maryland; set your communications software for 1200 or 2400 baud, no parity, 8 data bits, phone (301) 589-8366 and sign on. There are currently 49 short SITE documents available on the system. The EPA contact in DC for this system is Jim Cummings at (202) 382-4686. This same bulletin board has a section devoted to waste minimization, which we have not looked into.

EPA also operates a program called Alternative Treatment Technology Information Center (ATTIC), to help people find and evaluate innovative cleanup technologies. ATTIC is only available to EPA employees, EPA contractors, and employees of state governments. However, a friendly federal or state official can legally extract information from the system and give it to you. The system is computerized but is not available on-line; you phone a human and request information, which is then mailed to you. The EPA man in charge is Michael Mastracci at (202) 382-5747; he is notorious for not returning phone calls, but his office will mail you publications describing ATTIC. The ATTIC system is run for EPA by Technical Resources, Inc., in Rockville, Md; phone Sheryl Williams at (301) 816-9153.

At many Superfund sites no one knows for sure how to achieve permanent cleanup. But the goal of the Superfund program is a valid one--to protect people and wildlife from leaking dumps, so it is important not to allow uncertainty to cause paralysis.

One solution at many sites would be to excavate the wastes and store them for a few decades in multi-story concrete buildings built up on concrete posts so the underside of the entire building could be inspected for leaks. The safe excavation of wastes, and the storage of wastes in concrete buildings, have both been studied and they appear to be feasible and affordable. (See bibliography, below.) So far, EPA has resisted these solutions, perhaps because the resulting buildings would be large, visible symbols of technical failure by American industry--evidence of decades of negligent slovenliness by the nation's corporate leaders. EPA would rather cap the evidence with clay and hide it underground. But excavation and above-ground storage often make sense and should definitely be evaluated thoroughly.

To learn about Superfund in general, get:

Anne Rabe, TOOLS FOR ACTION; A CITIZEN'S HANDBOOK ON NEW YORK STATE'S SUPERFUND PROGRAM for \$7.00 from: NY Environmental Institute, 33 Central Ave., Albany, NY 12210; phone (518) 4625527. Much of this publication applies to sites outside New York. Deals with the whole superfund process.

And: U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, SUPERFUND STRATEGY [OTA-ITE-252]. Dated April, 1985. Available for \$10 from: U.S. Government Printing Office, Washington, DC 20402-9325; phone (202) 783-3238. Everyone who cares about Superfund should read this.

And: ARE WE CLEANING UP? Available 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. Also available (free) from Joel Hirschhorn, Congress of the United States, Office of Technology Assessment, Washington, DC 205108025; or phone (202) 224-8713. OTA's look at 100 Superfund cleanups, showing that EPA has missed the boat much more often than not.

A brand new publication, which we haven't seen, is the Superfund Implementation Plan--the Bush administration's plan for cleaning up old dumps; it's available by phoning the "Superfund Docket Office" in DC: (202) 382-3046, though it may be several weeks before they're ready to mail you a copy.

To learn about permanent cleanup technologies, get:

Jamie Risedorph, Leslie Dame and Anne Rabe, PERMANENT CLEANUPS [28 pgs.] for \$3.00 from: NY Environmental Institute, 33 Central Ave., Albany, NY 12210; phone (518) 462-5527. An overview of cleanup technologies and a resource guide for citizens.

And: Steven Lester and others, INNOVATIVE TECHNOLOGIES FOR DISPOSAL OF HAZARDOUS WASTES \$8.95 from: Citizen's Clearinghouse for Hazardous Wastes, P.O. Box 926, Arlington, VA 22216; phone (703) 276-7070. An overview of cleanup technologies and a lot of good advice about how to approach the problem of evaluating technologies for cleaning up a site.

And: PRE-FEASIBILITY STUDY: THE SAFE EXCAVATION OF HYDE PARK DUMP. 15 pages. Technical appendices are also available. The main Study is available to citizen groups for "cost of photocopying," from Pollution Probe Foundation, 12 Madison Avenue, Toronto, Ontario M5R 2S1, Canada; phone Pam Millar at (416) 926-1907. A pioneering study of safe ways to excavate wastes, then store them above-ground while new technologies for detoxifying them can develop.

And: James V. Walters and others, "Elevated Concrete Buildings for Long-Term Management of Hazardous Wastes." Environmental Progress (Vol. 7, No. 4) [Nov., 1988], pgs. 224-229. Argues from an engineer's perspective that huge concrete buildings can store hazardous wastes more safely and at less cost than a landfill for several decades while permanent detoxification technologies are developed.

--Peter Montague

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Descriptor terms: hazardous materials; superfund; epa; remedial action; superfund innovative technology evaluation; waste disposal technologies; studies; alternative treatment technologies; landfilling; above-ground storage buildings; ota;