

# Rachel's Environment & Health News

## #191 - Deja Vu

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Deja vu means "already seen," a French phrase for "I've already lived through this before." During the early '70s, we participated in a noisy national debate over radioactive waste disposal. Now the debate over toxic ash from garbage incinerators is replaying those tapes.

Garbage incinerators produce large quantities of ash heavily laced with toxic heavy metals; for example, lead runs anywhere from 2500 ppm (parts per million) to 6000 ppm in ash. The main problem is the duration of the hazard: lead, cadmium, arsenic, and other toxic metals simply do not degrade as time passes. They remain toxic, waiting to poison the next generation, or the generation after that, as soon as the waste "containment" system breaks down. The hazard is of infinite duration, but human "containment" systems are all subject to the ravages of time. Humans have never constructed anything that lasts "forever," yet the natural hazards of heavy metals DO last forever. That is the fundamental problem facing the producers of incinerator ash; it is the very same problem faced by those who create radioactive wastes.

The garbage incineration industry--exactly like the nuclear industry 30 years before it--has gone through several obvious stages in trying to "manage" the waste issue.

Stage 1. Don't worry, be optimistic. In 1956, the nuclear industry put forth "Citizen Atom," a smiley-faced little fellow who was going to deliver electricity "too cheap to meter." No mention of radioactive waste. In the early 1980s, the garbage incinerator industry renamed itself "resource recovery" and "waste to energy" even though it destroyed resources instead of recovering them, and wasted far more energy than it saved. Again, no mention of toxic waste ash.

Stage 2. Oblivious to the problem. During this period, the nuclear industry simply buried wastes in the ground out back behind laboratory buildings (for example, at Los Alamos, New Mexico), or wherever it was convenient. Often they did not even mark the burial sites on maps or in any other way. Today they are spending billions of our taxpayer dollars to locate the hazards and confine them the best they can.

The garbage incineration industry went through a similar stage. For example, at Saugus, Massachusetts, Wheelabrator ran an incinerator for over 10 years and simply heaped the ash in a nearby swamp. Today, a \$63 million containment program has been proposed at Saugus to confine the problem, without any assurance that it will work.

Stage 3. Declare that a technical fix is all that we need. The nuclear industry for 50 years has declared that all they need is a new, sturdy barrel, or new type of cement or epoxy, or a glass block to encapsulate the waste, or some other "engineering" solution. Likewise, the garbage incineration industry today is declaring that all they need is a double-lined "secure" landfill with a leachate collection system, or the addition of some cement to the ash, or a special secret ("proprietary") way of mechanically crushing the ash to "solve" the problem. [1] Reducing the problem to a "technical fix" means that only technicians are welcome in the debate; in particular the "public" should have no say. The social and human aspects of the problem--for example, do we really need to make this ash?--are excluded when the problem is defined in terms of a "technical fix."

Stage 4. Declare that the waste isn't a waste but is a resource in disguise. The nuclear industry started saying this in the early 1950s and sometimes still says it today. For example, after World War II, plutonium-238 was proposed as an inside liner for deep sea divers' suits to produce perpetual warmth. (This idea died because of obvious dangers.) In the '70s, the industry declared that nuclear waste could be used to irradiate sewage sludge, to kill bacteria and viruses. Proponents of this particular technical fix forgot that humans would have to package, transport, handle, install, maintain,

and process the radioactive wastes and that a commerce in powerfully dangerous radioactive metals would thus be opened up (with attendant errors, stupidities, accidents, mismanagement, malice, terrorism and so forth). In short this "technical fix" ignored the human "management system" that must accompany any technical system. (This idea eventually died from citizen opposition bolstered by technical critiques from groups like Southwest Research and Information Center in Albuquerque, NM.)

The garbage incinerator industry has just recently entered this stage. Consulting firms like Roy F. Weston, [2] and independent consultants funded by the incineration industry, have begun claiming that incinerator ash shouldn't be considered dangerous. On the contrary, they claim, incinerator ash is a resource that should be "recycled" to make roads and build buildings, and thus should be distributed throughout the environment. [3]

This is a form of the old argument, "dilution is the solution to pollution"--spread the stuff around enough and there will be only a low concentration in any particular place. (At one point, complete dilution was half-heartedly proposed as a way to "get rid of" nuclear waste--fly it over the oceans and toss it out, distributing it thinly everywhere.) These "solutions" ignore the well-known and well-documented phenomenon called bioconcentration or biomagnification. When toxic (or radioactive) metals enter the environment, they enter food chains and they concentrate as they move up the food chain. Since humans eat from the top of the food chain, toxic heavy metals (or nuclear wastes) spread throughout the environment will affect humans most severely. Dilution is most definitely not the solution to pollution. Once incinerator ash is put beneath highways, or into the walls of buildings, or into other construction projects, we will (a) no longer remember where we put it; (b) no longer be able to control where it goes next; (c) no longer be able to protect ourselves and our children from its poisonous effects as it enters food chains.

Stage 5. Develop a "public relations" solution: simply declare the problem solved by renaming the waste. In the nuclear industry, this is being attempted now. The proposal is to strip the name "radioactive" from one-third of the nation's stockpile of so-called "low level" radioactive waste. Instead of being termed "radioactive," the renamed wastes would be called BRC, which is short for "below regulatory concern." BRC wastes would be allowed to join the stream of household trash and to be put into landfills, incinerators, recycling programs, compost, or wherever normal trash now goes. (See RHWN #185.)

A parallel move is underway by the people who produce toxic incinerator ash. There are bills in Congress now to strip the name "hazardous" off incinerator ash that has earned that label by failing the EPA's decade-old "EP Toxicity test," which is the official test for deciding which wastes are "hazardous" and which are not. Incinerator ash often tests "hazardous" by the EP Tox test, but if you rename it "special waste" maybe people won't realize it's toxic enough to poison their children. (Do they really think people are so stupid?)

After two decades of debate, the radioactive waste makers have now agreed that burial half a mile below ground is the only reasonable solution to their problem--and even that may not work. The people who make incinerator ash could perhaps benefit from studying history.

--Peter Montague

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[1] Keith E. Forrester and Richard W. Goodwin, "Engineering Management of MSW Ashes: Field Empirical Observations of Concrete-like Characteristics." In Theodore G. Brna and Raymond Klicius, eds., Vol. I of PROCEEDINGS INTERNATIONAL CONFERENCE ON MUNICIPAL WASTE COMBUSTION,

HOLLYWOOD, FL, April 11-14, 1989, pg. 5b-16. Ottawa, Cn: Minister of Supply and Services Canada, 1989. Catalog No. En 40-11/14-1989e.

[2] Charles O. Velzy and Matthew Goldman, "Waste-to-Energy Ash: Hazardous or Non-Hazardous Waste?" NEW JERSEY EFFLUENTS Vol. 23 (Winter, 1989), pgs. 31-37.

[3] See Robert Collins and Hank Cole, ALERT: TOXIC HIGHWAYS; THE PLAN TO USE INCINERATOR ASH IN MINNESOTA ROADS (Washington, DC: Clean Water Fund [317 Pennsylvania Ave., SE, Washington, DC 20003; phone (202) 546-6616], 1989).

Descriptor terms: incinerator ash; radioactive waste; waste repositories; hlw; llw; brc; incineration; wheelabrator; saugus, ma; roy weston; biomagnification; labeling; nuclear energy;