

Rachel's Environment & Health News

#183 - Radiation -- Part 1: Coming Your Way: Radioactive Garbage

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Many of us have spent so much time fighting hazardous chemicals, leaking landfills, and municipal incinerators that we have not had time to focus on another serious problem that will soon affect us all: growing stockpiles of so-called "low-level" radioactive wastes that have to be put somewhere. These wastes are created by nuclear power plants (which split uranium atoms to make electricity) and by medical labs and hospitals (for diagnosis and therapy, for example). Over two-thirds of the volume and over 80% of the radioactivity in the nation's low-level radwaste today come from nuclear power plants; by the year 2020, 80% of the volume and 97% of the radioactivity will come from nuclear power plants (because, by then, old nuclear plants will be dismantled and will themselves become part of the waste stream). Low-level radwaste is currently being sent to the nation's three operating radwaste landfills (at Beatty, Nevada, Richland, Washington, and Barnwell, South Carolina). Beatty and Barnwell will fill up and be closed by 1993. Washington state plans to restrict Richland's intake to locally-produced radwastes. Where will the stuff go after 1993?

The government has two answers to this question. One answer is an effort to site 16 new low-level radioactive wastes landfills in New York, Maine, Massachusetts, Texas, Pennsylvania, Nebraska, Illinois, Michigan, New Jersey, Connecticut, Washington state, Nevada, Colorado, South Carolina, North Carolina, and California.

The federal government's other answer is to press ahead with a plan to simply declare 1/3 of the nation's "low-level" radioactive waste "below regulatory concern" (BRC) and thus to remove these materials from the "radioactive waste" category entirely. Then these BRC radwastes will be allowed to go wherever municipal trash is going today. If your community has a dump, BRC radioactive materials will be allowed into your dump; if you incinerate, you'll be allowed to incinerate radioactive materials; since liquid wastes are now entering your town sewer, you'll be able to have radioactive liquids (for example, from laboratory drains) entering your sewage treatment plant and if you then compost your sewage sludge, you'll be allowed to have radioactivity in your compost; if you recycle, you'll be able to recycle radioactive materials which may then be remanufactured into radioactive household products such as appliances or kitchen utensils.

Why would our government declare millions of cubic feet of radioactive materials "below regulatory concern?" The reason is simple: economics. Nuclear power is brought to you by a partnership between Uncle Sam and big companies like Westinghouse and G.E. Since these companies still hope to sell the American public more nuclear power plants (it's potentially a partial answer to the greenhouse global warming problem; another possible solution is solar energy, but solar suffers from a fatal disadvantage: Westinghouse and G.E. can't sell sunlight), the Bush administration is trying to reduce the costs of nuclear energy by declaring large quantities of radioactive wastes "below regulatory concern" so they can be dumped cheaply. It's just one more way that Uncle Sam can subsidize the nuclear power industry, to reward industrial friends who may later make substantial campaign contributions.

BRC would be a major gift to the nuclear industry. As the nation's nuclear power plants approach the end of their useful lifetimes (about 25 years), they must be dismantled piece by piece and put somewhere. All the radioactive pipes, tubes, tanks, tools, instruments, gauges, filters, and so forth will vastly increase the nation's stockpile of "low-level" radioactive wastes. If all these wastes have to be handled with special care and buried in special vaults under ground (or above ground) at \$40 per cubic foot (or more), the total costs of nuclear energy will increase substantially. At today's prices, the BRC program would save the nuclear power industry an estimated billion dollars over the next 20 years. And when the government gets around to cleaning up the nation's enormous, contaminated nuclear weapons sites (such as Fernald, Ohio, Rocky Flats, Colorado, and Hanford, Washington--see RHWN #124), a BRC program could reduce cleanup costs by many billions of dollars.

The key problem with the BRC proposal is that it seems certain to increase exposure of the general public to radiation. Why is this bad?

To begin with, medical doctors who use radiation for diagnosis or therapy agreed on ethical standards long ago. Medical views of radiation are based on the assumption that any amount of radiation causes some harm and some risk of serious consequences (such as genetic damage or cancer). Medical ethics dictate that a person should not be exposed to any radiation unless that person derives a benefit from the exposure. Secondly, the general public has a right to know, a right to be informed before they are exposed to any hazards such as radiation. The BRC program will result in people being exposed without their knowing it, and the exposed individuals will very likely not have received any benefits from the sources of the exposures. Thus the BRC program violates medical ethics.

The federal government ignores these ethical standards and simply says that existing exposure limits for radiation are safe enough to protect the public. The current regulations are intended to allow the development of one fatal cancer in every group of 100,000 exposed individuals. The government's position seems to be that it's OK to risk killing one out of every 100,000 Americans in order to reduce costs for the nuclear power industry. Thomas Cochran, a physicist with Natural Resources Defense Council (NRDC), says that, according to the government's logic, "it is 'BRC' to randomly fire a bullet into a crowded Manhattan street on the basis that the individual risk to a person in New York City is less than one in several million." In short, it just doesn't make sense, and isn't ethical, to expose the general public to additional radiation if it can be avoided. Furthermore, there is a great deal of new evidence (which we will discuss later in this series) indicating that radiation is five to 10 times more dangerous than was believed when current exposure limits were set. Radiation-- particularly at low levels of exposure--is now thought to be much more dangerous to humans than was previously believed. Lastly, since the government does not intend to monitor solid waste to see if permissible radiation levels are being exceeded (by accident or more likely by unscrupulous waste haulers), the BRC program appears to be opening the door for abuses and violations that will further endanger the public and which cannot be controlled.

The term "low-level" does not accurately describe the hazards from some "low-level" radwastes. For example, "low-level" wastes may contain dangerous amounts of nickel-63 (a radioactive form of the metal, nickel), which has a half-life of about 100 years and will therefore remain radioactive for about 1000 years. The well-known nuclear physicist, Theodore Taylor, says he used to think the problem of radwaste disposal was "politically difficult because of the NIMBY [not in my back yard] syndrome, but that technically it was probably solvable. Well," he says, "I don't think that anymore. I don't see any evidence of a solution that we can say with certainty will get rid of this stuff safely."

What can you do? 1) Inform yourself. For example, get: Scott Saleska, "Low-Level Radioactive Waste: Gamma Rays in the Garbage," BULLETIN OF THE ATOMIC SCIENTISTS (April, 1990), pgs. 19-25. For a good (though somewhat out-of-date), detailed review of the problems of radioactive waste, get Ronnie Lipschutz, RADIOACTIVE WASTE (Cambridge, MA: Ballinger, 1980).

2) Keep in touch with Nuclear Information Resource Service (NIRS), 1616 P Street, NW, Washington, DC 20036; (202) 328-0002, and the Radioactive Waste Campaign, 625 Broadway, 2nd floor, New York, NY 10012; (212) 473-7390.

3) Get involved in your state's plan to deal with radioactive wastes. Your involvement is the key.

--Peter Montague

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