Nuclear Waste Shell Game May Bring Contaminated Canadian Metals to the US – and Back

By John LaForge

Confronting radioactive waste seems like a Whack-a-Mole game. The nuclear industry launches a new dumping or dispersal scheme just when the opposition slows or halts the last one.

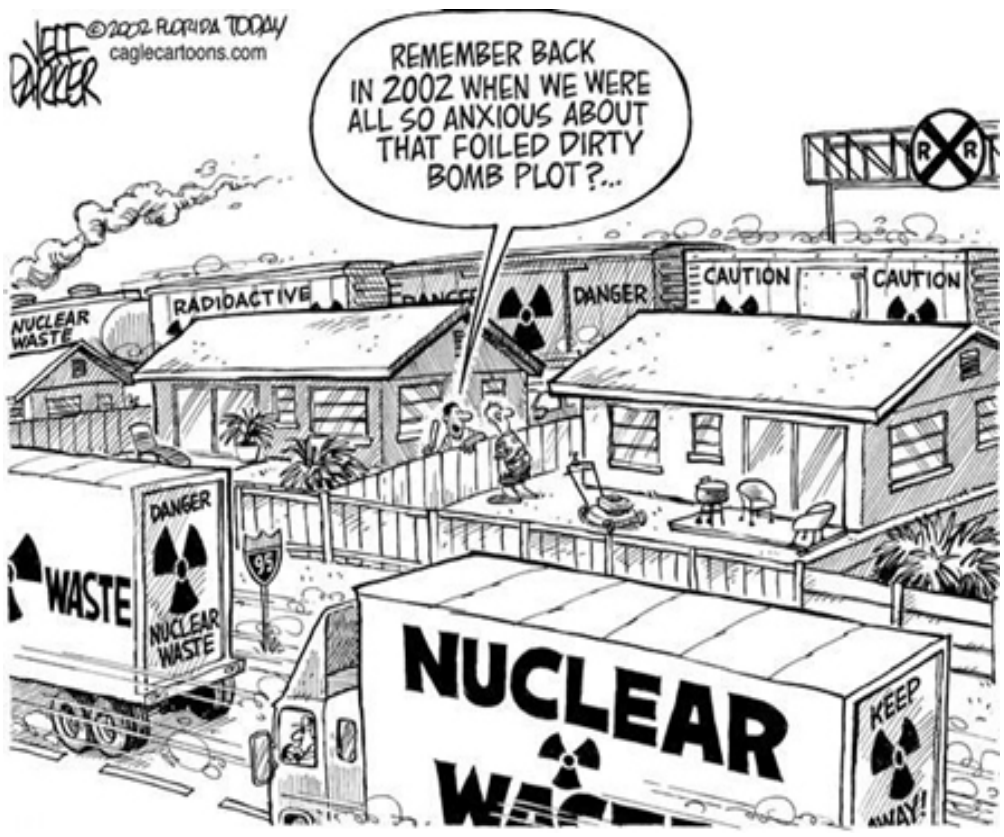
After millions of citizens pushed Canada's Environment Minister to delay plans for an underground radiation dump right next to Lake Huron (this fight is not yet over), two waste firms, UniTech Corp., with offices in France, Holland, Germany, England and all over the United States, along with PermaFix, in Atlanta, now make news with plans to ship tons of radioactive waste from Canada to the United States.

UniTech wants to truck 10,000 tons of "radioactive-contaminated tools, metals and other solid materials" across the border using five different border crossings. Can you say "Homeland Security"? To transport 10,000 tons, think of thousands of truckloads of "dirty bombs" driving across the country, around lakes and rivers, through cities and towns, over bridges and through tunnels for years and years.

Ten thousand tons is a lot of material, equivalent to the mass of an old Navy Heavy Cruiser two football fields long, four stories high, and 60 feet wide. The waste haulers want to truck the radioactive metal —the bulk of the waste is coming from Canadian nuclear power reactors and laboratories — some infused with plutonium, strontium, cobalt-60, americium, and neptunium. These so-called "low-level" wastes are not benign but contain some of the deadliest and most long-lasting poisons on Earth, and the worst from nuclear power reactors.

Both UniTech and PermaFix have applied to the Nuclear Regulatory Commission (NRC) for licenses to "export" and "import" thousands of truckloads. The vagueness of the applications—with nondescript references to "tools," "metals," "other solid materials," and the curious mention of "incremental amounts of special nuclear material"—is only partly cleared up by UniTech's list of 48 different radioisotopes that contaminate the "materials."

All the identified isotopes give off radioactive alpha particles, beta particles, and/or gamma rays to one degree or another. It's this "radiation" that makes the waste deadly. Exposure to it, especially inhaling or ingesting it, can cause heart disease, immune system dysfunction, birth abnormalities, cancer and other illnesses. And the effects are cumulative, so adding more radiation to the exposures people have already had, increases health risks, and shortens our lives.



Reactor Waste Recklessness in Court

UniTech has already won a NRC "export" license, allowing it to ship wastes into the US. (Plans to ship some of it back across the border to Canada are still being contested with the NRC and may end up in court.) Some of UniTech's waste will be trucked to waste-handling factories in Tennessee, Illinois and Pennsylvania for "processing."

According to UniTech's license application, the proposed US processing is for, "…segregation, survey, decontamination, unrestricted release, beneficial reuse." Kay Cumbow, the Secretary of the Great Lakes Environmental Alliance, warns that such "unrestricted release" means the waste can be dumped in ordinary municipal landfills. Tennessee state laws are so lax as to allow this. "Beneficial reuse," says Cumbow, means sending contaminated metals to ordinary metal smelters from which recycled metals are used in consumer products like jungle gyms, frypans, nails, etc.

This game of nuclear shuffle board, bumper cars, or demolition derby gets more and more bizarre. Waste resulting from US "processing" and declared "un-usuable" is to be shipped back into Canada, adding another lengthy round of packaging, handling and transport recklessness. If all this sounds absolutely cray-cray, you may be a precautionary or a prudent person. Dr. Gordon Edwards, president of the Canadian Coalition for Nuclear Responsibility, says that the processing can be done in Canada, so there is no need for the program at all. Cumbow's group and others have promised law suits.

Pierre Sadik, of US Public Interest Research Group, has pointed out that the Department of Energy and the nuclear industry try to create the impression that the transport of radioactive waste has been entirely safe. But this is bunk. A 1996 report by the State of Nevada documented 72 rad waste transport accidents in the US over 50 years. Sadik reported that four accidents involved radioactive material contamination beyond the vehicle; four involved contamination confined to the vehicle; 13 involved traffic accidents with no release or contamination; 49 involved accidental container surface contamination. The waste's radiation can escape through container cracks, poor shielding, or during truck crashes or fires.

Thanks to the unsung effort of watchdogs like Diane D'Arrigo and Mary Olson of Nuclear Information and Resource Service, US citizens have successfully rejected previous attempts to deregulate rad' waste and allow it into scrap metal. Federal attempts to declare such scrap "below regulatory concern" have repeatedly been halted as completely unacceptable. But the nuclear industry, like a Whack-a-Mole machine, just keeps trying.

High-Risk, Highly Radioactive Liquid Canadian Waste Bumbles into South Carolina

Partial Failure of Radiation Shielding

The first unprecedented and controversial shipment of high-risk, highly radioactive *liquid* waste from Canada arrived at the Savannah River Site (SRS), according to the Defense Nuclear Facilities Safety Board (DNFSB). The handling of the first armed convoy faced problems at SRS due to inadequacies in a container designed to shield workers from radiation.

A DNFSB report found that, "After loading ..., radiological protection (RP) [personnel] identified an unexpected hotspot on the side of the pig indicating that the pig was not providing adequate radiological shielding. RP labeled the hotspot before H-Canyon personnel relocated the pig so the hotspot would be facing the wall. H-Canyon personnel did not identify any similar issues on the other pigs and are planning to use the one spare 'pig' for future evolutions," 'pig' being an in-house term for the outer hauling container.

In response to the report of faulty shielding of workers from radiation exposure, SRS Watch filed a Freedom of Information Act request for more information.

The waste is from medical isotope production at Chalk River National Labs in Ontario, and contains a host of highly radioactive fission products. Once processed to remove uranium in the 61-year-old "H-Canyon" complex, newly resulting waste is to be dumped into nearly antique waste tanks at SRS. The Canadian liquid waste consists of about 6,000 gallons stored in the so-called Fissile Solution Storage Tank at Chalk River, and is to be shipped using up to 150 overland transports via unspecified routes from Canada to SRS.

The US Energy Department kept this first shipment secret, as well as the radioactive hot spot that was discovered on the shipping cask, but watchdog groups alerted the press and public.

A truck and a container like the one used in an unprecedented high-risk experimental shipment of high-level radioactive waste in liquid form from Chalk River, Ontario to Savannah River, South Carolina.

In February this year, environmental groups including SRS Watch, Beyond Nuclear and the Sierra Club lost a federal lawsuit urging DOE to prepare a full Environmental Impact Statement on the shipments. The court found no need for an in-depth analysis of transport risks, impacts of processing and disposal at SRS, or alternative methods of managing the waste in Canada. The groups argue that doing the "down-blending" of the highly enriched uranium in the liquid waste in Canada, and then solidifying it there, is the best option from nuclear non-proliferation and environmental perspectives.

This government-backed downblending option has been proven viable with the processing of similar liquid nuclear waste in Indonesia.

"For both non-proliferation and environmental reasons, the best option remains management of this liquid high-level waste in Canada," said Tom Clements, director of SRS Watch, an independent oversight group. "The unprecedented and unjustified import of the highly radioactive liquid waste from Canada to SRS will only place an additional burden on aging SRS waste tanks and slow down the urgent removal of waste from those tanks."

"The incident with the handling of the Canadian waste on its arrival at SRS gives the ... team a black eye for flubbing the very first shipment after years of preparation," Clement said.

—Augusta *Chronicle*, May 15; and Savannah River Site Watch, May 16, 2017; NIRS. ***—JL***