

JUST SAY NO TO THE RADIOACTIVE WASTE REPROCESSING RELAPSE

Since the Gerald Ford Administration thirty years ago, the United States has not extracted plutonium or uranium from commercial high-level radioactive waste. In fact, during the Carter Administration, reprocessing of commercial waste was banned as a nuclear weapons non-proliferation safeguard. Here are a few uncomfortable historical facts showing that that ban should be re-asserted...

“INTERIM” BECOMES DE FACTO PERMANENT WASTE STORAGE

General Electric’s reprocessing facility in Morris, Illinois was built and opened in the early 1970s but never operated due to major equipment failures and technical problems. However, the 772 tons of high-level radioactive commercial waste stored underwater remain there to this day. Recently, the U.S. Nuclear Regulatory Commission extended the facility’s original operating license for another 20 years, till 2022. Thus a proposed reprocessing facility has instead become a several-decades-long storage site for commercial high-level radioactive waste from reactors throughout several states.(1)

Although the West Valley, New York reprocessing center only operated from 1966 to 1972 (and then at only about one-sixth its design capacity due to chronic equipment breakdowns and accidents involving radioactive contamination, thus reprocessing only one year’s worth of projected quantity in six years of operations), the last un-reprocessed irradiated fuel was not removed from the site until 2003, and vitrified (glassified) logs of highly radioactive waste still remain at the site, 40 years after its opening and 33 years after cessation of reprocessing operations. In addition, high-level radioactive sludges remain in the underground storage tanks, threatening eventual leakage into Lake Erie.(2)

REPROCESSING CAUSES SEVERE RADIOACTIVE CONTAMINATION OF THE ENVIRONMENT

The only commercial reprocessing done in the United States was a dismal failure. Of the three commercial reprocessing facilities built (Morris, IL; Barnwell, SC; West Valley, NY), only one actually operated (West Valley). In the six years reprocessing was underway at West Valley, NY only 27 ‘runs’ were completed – an amount that was supposed to have been completed in the first year of operations. There were fires and high worker exposures. There were radioactive releases into the water and into the air—some of which left a radioactive “prong” of contamination identifiable decades later by aerial surveying. According to the U.S. Dept. of Energy, the clean up bill for the mess made by these minimal reprocessing operations at the West Valley, New York site is projected to cost over \$5 billion in taxpayer money (in 1996 dollars; adjusted for inflation, the clean up bill has now surmounted \$6 billion).(3)

According to a 2001 report published by the European Parliament’s Scientific and Technological Options Assessment, 80% of the collective radiation dose of the entire French nuclear power industry, and 90% of the radioactive emissions and discharges from the British nuclear power program, come from commercial waste reprocessing. The collective radiation dose from 70 years of “routine” (that is, accident-free) operations of the French and British reprocessing plants would be equivalent to the collective radiation dose from the Chernobyl

nuclear catastrophe. In addition, leukemia clusters have been observed near both the French and British reprocessing facilities. Research into these leukemia clusters is inconclusive, but the role of radiation as an initiating or contributing factor has not been ruled out. Indeed, toxic chemicals used in the reprocessing facilities is also pointed to as a possible contributing factor in addition to radioactive discharges. The British reprocessing center has discharged over 1,000 pounds of plutonium – known to be carcinogenic in microscopic quantities if inhaled or ingested – into the sea, which has been detected in children’s teeth throughout the British Isles. A large accidental leak of highly radioactive liquids containing 20 tons of uranium and enough plutonium to make 20 nuclear warheads that occurred April 19, 2005 threatens to permanently close Britain’s \$3.8 billion reprocessing facility.(4)

(1) David A. Lochbaum, Nuclear Waste Disposal Crisis, PennWell Publishing Company, Tulsa, OK, 1996, pages 71-72; Chicago Tribune, 8/23/2001; NRC press release, Dec. 30, 2004.

(2) Lochbaum, pgs. 69-71; Newsday (NY), “Train Loaded with radioactive waste leaves New York,” July 16, 2003.

(3) Table 5-9, “Summary of Closure Costs for Implementing Alternative I (Removal),” pg. 5-35, U.S. Department of Energy and New York State Energy Research and Development Authority, Draft Environmental Impact Statement for Completion of the West Valley Demonstration Project and Closure or Long-Term Management of Facilities at the Western New York Nuclear Service Center, January 1996.

(4) “STOA Report Condemns Reprocessing,” World Information Service on Energy News Communique, Dec. 7, 2001; “Plutonium in Children’s Teeth,” Cumbrians Opposed to a Radioactive Environment press release, Dec. 11, 2003; “Huge radioactive leak closes Thorp nuclear plant,” The London Guardian, May 9, 2005; “Thorp reprocessing should never be restarted – boss,” The London Observer, May 15, 2005.

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