

Workers poisoned for decades at Kentucky nuclear weapons plant

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The Clinton administration announced September 16 that the Department of Energy (DOE) would spend \$22 million to compensate workers at a uranium processing facility in western Kentucky who were exposed to plutonium and other radioactive materials during more than four decades.

An investigation by the *Washington Post* first reported on August 8 that workers had been exposed to plutonium during the 23 years that the Paducah Gaseous Diffusion Plant was used to recycle uranium powder. Produced as waste material by nuclear weapons plants, the powder was enriched for use as fuel in civilian and military nuclear reactors.

The *Post* report touched off a series of state and federal investigations into the safety conditions at the plant in Paducah and the dangers to the population and environment of the surrounding area. The newspaper's report was itself sparked by a lawsuit filed by three workers at the factory, with the support of an environmentalist group, the Natural Resources Defense Council.

The union at the factory, formerly the Oil, Chemical and Atomic Workers, now merged with the International Paperworkers, played no role in the lawsuit. According to one report, union officials were notified of the presence of plutonium in the plant but did not tell the workers.

The Paducah plant opened in 1952 in an impoverished region of western Kentucky. With 2,000 workers, it was by far the largest and best-paying employer. The huge 3,500-acre facility, together with sister plants near Portsmouth, Ohio, and Oak Ridge, Tennessee, played a key role in the enormous US nuclear weapons production complex.

Some 103,000 tons of uranium dust were recycled through Paducah between 1953 and 1976. Later the

plant's function shifted to dismantling old or obsolete nuclear weapons to recover precious metals, and making depleted uranium metal for armor-piercing shells and anti-tank missile warheads.

While the plant had been designed to handle uranium oxide safely—a substance consisting largely of U238, the most common and least radioactive isotope of uranium—there was no provision for protection from far more radioactive substances, including plutonium, which entered the plant as trace elements mixed with the uranium powder. Plant workers were never told about the presence of these substances, nor were they tested for exposure to them.

According to one estimate provided to the DOE by one of the contractors operating the Paducah plant, the contaminating radioactive substances included as much as 12 ounces of plutonium—100,000 times as deadly as uranium—40 pounds of neptunium and 1,320 pounds of technetium-99, a byproduct of nuclear fission. These materials were concentrated especially in the piping through which the uranium oxide was pumped for reprocessing—pipes that workers at the Paducah plant had to crawl inside to maintain and clean.

The environmental and worker-safety conditions at the Paducah plant are almost beyond description. Workers inhaled uranium oxide dust, laced with plutonium, carried it home in their clothes, and awoke after a night's sleep to find purple or green-tinted dust on their sheets, where it had been exuded from the pores of their skin.

No monitoring was done for plutonium or other highly radioactive substances, and workers were told there was no more danger from working in the plant than in having an x-ray at the dentist. Even the radiation monitoring which was done, for low-level uranium exposure, was defective. The “film” badges

worn by employees to detect radiation would occasionally pop open, and the workers could see that there was no film inside.

One worker involved in cleaning the pipes, Joe Harding, took a disability discharge from the plant in 1971 and later unsuccessfully brought suit against the DOE charging that he had been disabled by radiation poisoning. Harding had compiled a list of 50 cancer deaths among his 200 coworkers. The Energy Department blamed Harding's illnesses on smoking and the fact that he "frequently ate country ham." He was denied a pension, and after his death in 1980 his widow had to sell their home.

In 1983, as part of the failed lawsuit, Harding's body was exhumed for testing, and uranium was found in his bones, at levels ranging from 133 to 97,000 times the level that would have been expected. The results of these tests were never publicized.

The result of 47 years of nuclear reprocessing is a vast nuclear waste dump. Some 30,000 metal tanks on the site contain a mixture of depleted uranium and fluorine. Radioactive waste has seeped into ground water and streams or been dumped illegally outside the plant. One effort to test the site recently had to be halted when contractors found a radioactive black ooze coming up out of the ground beneath them. Measurements of plutonium showed levels three to thirty times those set for cleanup after nuclear tests in the South Pacific.

Much of this information was available to DOE officials and the contracting companies—first Union Carbide, then Martin Marietta and Lockheed Martin—in internal reports compiled in the 1980s and 1990s. These reports were open to the public, but workers were never told of their existence. Union leaders were first told of the conditions in 1990 after a state health inspector found unacceptable levels of radioactivity in a farmer's well near the plant. No alert went out to the workers or former workers.

The contamination at Paducah may have other far-reaching effects. The plant conducted high-security operations extracting precious metal residues, including gold, from dismantled nuclear weapons, which may have been radioactively contaminated. One test on gold leaf residue at the plant found radiation levels more than 700 times the average. Some of this gold may have been shipped to Fort Knox, and contaminated the US

gold reserve.

After the publication of the *Post* report, Energy Secretary Bill Richardson announced an investigation by the National Academy of Sciences and expanded screening of former workers. A week later an internal DOE investigation found serious deficiencies in safety procedures at Paducah, there was a 24-hour shutdown to review safety measures, and the manager of the site retired.

Meetings held in the Paducah area to discuss the findings of these investigations with local residents have been tense and bitter, as state and federal officials, their credibility completely shattered, tried to reassure residents they were not in danger. At one meeting a woman in the audience stood up and shouted, "You don't care if people get sick!"

While there has been enormous media coverage of alleged espionage involving individuals at DOE facilities, where there has been virtually no evidence to back it up, there have been practically no reports in the press of this atrocity inflicted on the workers at the Paducah plant.

The day that Richardson traveled to Paducah to announce the compensation plan, an Ohio newspaper reported that almost identical conditions of plutonium contamination had existed at the Portsmouth Gaseous Diffusion Plant.



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