

Atom-Waste Blast Contaminates Ten

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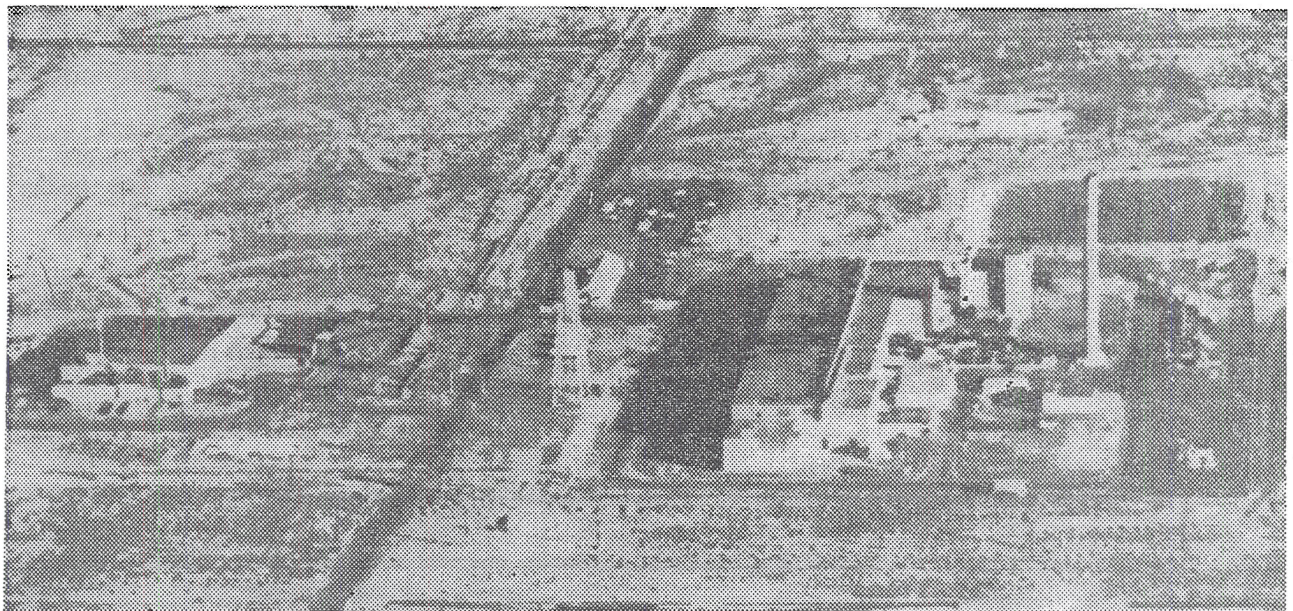
RICHLAND, Wash., Aug. 30

—A decade-old mixture of radioactive wastes blew up for unexplained chemical reasons today in a small building on the Hanford Nuclear Reservation, slightly injuring one workman and contaminating him and nine other workmen with radioactivity.

The man, an employee of the Atlantic Richfield Hanford Company, which uses the building for radioactive-waste recovery, was cut by flying pieces of glass from the so-called "glove box chamber," which contained the 13-liter container that blew

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Associated Press

Aerial view of a plant of the Hanford Nuclear Reservation near Richland, Wash., where explosion occurred yesterday

up. His name was withheld by the company. He and one other man were still hospitalized for radiation observation tonight. The eight other workmen were released after being decontaminated.

No nuclear explosion was involved. Hal Lindberg, a company spokesman, said an investigation was under way to determine what caused the accident. He said it was believed that all the radioactive wastes were confined inside the concrete building where the explosion occurred.

The building is about 30 miles from this small city on the banks of the Columbia River where it cuts southwestwardly through eastern Washington before turning west to become the Washington-Oregon boundary.

The building is on the high plateau on the most westerly part of the Hanford reservation, which was established in 1942 as the site of the then-secret plant where plutonium was produced to be used in the nation's first atomic weapons.

American Recovery

The Atlantic Richfield Hanford Company, part of the big Atlantic Richfield energy company, is involved in the recovery of worthwhile radioactive materials from the thousands of gallons of waste material that are buried beneath the desert floor on the old atomic reservation.

The material being recovered where the accident occurred was americium, which gathers in plutonium, another artificial product of radioactive furnaces, when the plutonium has been stored for a long period.

Americium is used as a source of radiation in some medical and oil drilling procedures.

Mr. Lindberg said he understood that acids and resins were used to free the element from the other materials in the radioactive wastes, but he could not describe the process. He said he did not know whether heat was involved.

A "glove box chamber" is a device with holes cut into the sides, with airtight gloves fitted into the holes. The workmen use the gloves to reach into the contaminated area and manipulate the tools and materials.

The glove box involved in the explosion was eight feet high, eight feet wide and four feet thick, Mr. Lindberg said. The minor cuts suffered by the one workman came from the shattered panel of plexiglass that flew out in the explosion, which occurred at 3:30 A.M.

Atlantic Richfield has been on the Hanford reservation



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for about a decade. One of the I. E. du Pont companies operated the plutonium works in World War II, but asked to be freed of the responsibility when the war ended. In 1946, the General Electric Company took over the contract and in 1964 announced that it, too, wanted to end it.

Other companies took up various sections of the work. Atlantic Richfield took on the chemical processing and waste management functions.

The wastes involved have become a major concern of environmentalists and a matter of contention between them and the Federal Government, whose operations created the wastes.

By some estimates, more than 75 million gallons of waste are buried beneath the desert in huge tanks. Some scientists have drawn frightening pictures of the lethal nature of this concentration. The liquid is said to boil from the heat of the radioactivity it still holds. It will continue to be dangerous for up to 500,000 years, according to critics of the system of burying radioactive wastes.

The Plutonium Reactor

Only one nuclear reactor still operates here for production of plutonium. None of the underground storage tanks for waste are closer than a quarter-mile from the five-story building where the explosion occurred. There was no indication of any release of radioactive waste into the air, or of any fracturing of the underground tanks that would allow the waste to drain into the Columbia River here, 300 miles from the Pacific Ocean.

About two dozen employees were on duty in the area where the accident occurred, Mr. Lindberg said. Atlantic Richfield Hanford has 2,470 employees in this area.

Dr. David R. Allen, assistant professor of pharmaceutical sciences and radiology at the University of Washington, in Seattle, said to United Press International: "I would be surprised

under the circumstances if they were exposed to much or ingested significant quantities. In most cases where ingestion of radioactive substances has been a problem, the persons involved were unaware of it. But with the explosion, one would have to assume they left the contaminated area very quickly."

Company Comments on Blast

Hugh Warren, a vice president of the Atlantic Richfield Hanford Company, said of yesterday's glove-box chemical explosion in the center of the Hanford nuclear reservation, "This is the first time we've had this sort of accident in there."

Until an inspection—perhaps today—of the one part of a small building in the reservation's 200 West area where the explosion occurred, Mr. Warren said, it could not be determined if the blast took place in a stainless steel column for isolating the artificial element americium or in a tank for receiving the americium after weak nitric acid is used to drive it from the column.

The column was one of two within the glove box. In the explosion, the box's plexiglas windows burst and cut the face and shoulder of a workman, who Mr. Warren said last night had not yet been questioned about the accident.

The workman, whose name has not been released pending his consent, was still considered contaminated with radioactivity last night, Mr. Warren said.

"He has a few cuts from when he was hit by the broken plexiglas, but other than that, he's O.K., up and walking around," he said.

Handles Waste Treatment

The room in which the accident occurred is in a building 30 miles from Richland and seven miles from the Columbia River, Mr. Warren said.

The facility has been isolating the forms of americium called americium 241 and 243 for more than a decade, Mr. Warren said. The Atlantic Richfield Hanford Company became responsible for waste-treatment operations at the reservation, now owned by the Energy Re-

search and Development Administration, in 1967.

The amount of americium isolated in the room each year, he said, has been running lately at 4.4 pounds a year. The material, which emits the radiation known as alpha rays, is shipped to the Oak Ridge National Laboratory, which fashions it into radiation sources used in the oil industry and in medicine.

Mr. Warren said he understood that a helicopter bearing several reporters had landed without authorization near the site of the explosion and had been directed to the local airport.

The nuclear waste being processed in the building to extract the americium was said by officials of the Energy Research and Development Administration to result from re-purification of the artificial element plutonium, in which americium builds up during periods of storage longer than a year or two.

The plutonium is being re-purified, the officials said, for use in the fuel rods of the so-called Fast Flux Test Facility, an experimental breeder nuclear reactor being built at the Hanford site.