Research Facilities

The U.S. Department of Energy spends over $4 billion each year for the restoration and management of sites contaminated by nuclear materials. Their 2000 Federal budget noted: "The Environmental Management (EM) program is responsible for addressing the environmental legacy resulting from the production of nuclear weapons. The nuclear weapons complex generated waste, pollution, and contamination that pose unique problems, including unprecedented volumes of contaminated soil and water, radiological hazards from special nuclear material, and a vast number of contaminated structures. Facotries, laboratories, and thousands of square miles of land were devoted to producing tens of thousands of nuclear weapons. Much of this is largely maintained, decommissioned, managed, and remediated by the EM program, which is sometimes referred to as the "cleanup program." EM's responsibilities include facilities and sites in 30 states and one territory, and occupy an area equal to that of Rhode Island and Delaware combined - or about 2.1 million acres."

2 September 1944
An explosion of radioactive material at the Oak Ridge National Laboratory in Tennessee resulted in the deaths of two workers and the injury of three others.

21 August 1945
Louis Slotin , a physicist, was killed during the final stages of the Manhattan Project undertaken at Los Alamos, New Mexico to develop the first atomic bomb) from a radiation burst released when a critical assembly of fissile material was accidentally brought together by hand. This incident pre-dated remote-control assembly of such components, but the hazards of manual assembly were known at the time (the accident occurred during a procedure known as "tickling the dragon's tail"). A similar incident occurred nine months later (dramatized in the Hollywood movie *Fat Man and Little Boy*); this time, eight people were exposed, one of whom died days later. Hand-maniuplations of critical assemblies was abandoned only after another accident on 30 December 1958.

2 July 1956
Nine persons were injured when two explosions destroyed a portion of Sylvania Electric Products' Metallurgy Atomic Research Center in Bayside, Queens, New York.

1957
A radiation release at the the Keleket company resulted in a five-month decontamination at a cost of $250,000. A capsule of radium salt (used for calibrating the radiation-measuring devices produced there) burst, contaminating the building for a full five months.

30 December 1958
A nuclear criticality accident occured from a solution in a plutonium recovery operation at Los Alamos Scientific Laboratory in New Mexico. The operator died later of acute radiation sickness. The March, 1961 *Journal of Occupational Medicine* printed a special supplement devoted to the medical analysis of this accident.

1959
A partial sodium reactor meltdown occurred at the Santa Susana Field Laboratory in Simi Valley Hills, California.

5 October 1966
A sodium cooling system malfunction caused a partial core meltdown at Detroit Edison's Enrico Fermi I demonstration breeder reactor near Detroit, Michigan. Radioactive gases leaked into the containment structures, but radiation was reportedly contained.

1974
Whistleblowers at the Isomedix company in New Jersey reported that radioactive water was flushed down toilets and had contaminated pipes leading to sewers. The same year a worker received a dose of radiation considered lethal, but was saved by prompt hospital treatment.

1982
International Nutronics in Dover, New Jersey, which used radiation baths to purify gems, chemicals, food, and medical supplies, experienced an accident that completely contaminated the plant, forcing its closure. A pump malfunctioned, siphoning water from the baths onto the floor; the water eventually was drained into the sewer system of the heavily populated town of Dover. The NRC wasn't informed of the accident until ten months later -- and then by a whistleblower, not the company. In 1986, the company and one of its top executives were convicted by a federal jury of conspiracy and fraud. Radiation has been detected in the vicinity of the plant, but the NRC claims the levels "aren't hazardous."

1986
The NRC revoked the license of a Radiation Technology, Inc. (RTI) plant in New Jersey for repeated worker safety violations. RTI was cited 32 times for various violations, including throwing radioactive garbage out with the regular trash. The most serious violation was bypassing a safety device to prevent people from entering the irradiation chamber during operation, resulting in a worker receiving a near-lethal dose of radiation.

ca. December 1991
One of four cold fusion cells in a Menlo Park, CA, laboratory exploded while being moved; electrochemist Andrew Riley was killed and three others were injured. The other three cells were buried on site, leading to rumors that a nuclear reaction had taken place. A report concluded that it was a chemical explosion; a mixture of oxygen and deuterium produced by electrolysis ignited when a catalyst was exposed. The Electric Power Research Institute, which spent $2 million on the SRI cold fusion research, suspended support for the work pending the outcome of an investigation