Power Plants

The nuclear power plant is a particularly nefarious use of nuclear energy. Unlike conventional power plants, nuclear plants have a relatively short life-span -- 30 years -- before critical reactor components become irreparably radioactive. At that point the plant must be decommissioned (`mothballed'), or its entire reactor core replaced at great expense. To date, there is no solution regarding where to store spent power plant reactor cores. Compounding the storage problem is an accumulation of spent radioactive fuel rods, which have a life-span of only three years.

3 January 1961
A reactor explosion (attributed by a Nuclear Regulatory Commission source to sabotage) at the National Reactor Testing Station in Idaho Falls, Idaho, killed one navy technician and two army technicians, and released radioactivity "largely confined" (words of John A. McCone, Director of the Atomic Energy Commission) to the reactor building. The three men were killed as they moved fuel rods in a "routine" preparation for the reactor start-up. One technician was blown to the ceiling of the containment dome and impaled on a control rod. His body remained there until it was taken down six days later. The men were so heavily exposed to radiation that their hands had to be buried separately with other radioactive wastem, and their bodies were interred in lead coffins.

24 July 1964
An accident at a commercial nuclear fuel fabrication facility in Charlestown, Rhode Island left one person dead.

19 November 1971
The water storage space at the Northern States Power Company's reactor in Monticello, Minnesota filled to capacity and spilled over, dumping about 50,000 gallons of radioactive waste water into the Mississippi River. Some was taken into the St. Paul water system.

March 1972
Senator Mike Gravel of Alaska submitted to the Congressional Record facts surrounding a routine check in a nuclear power plant which indicated abnormal radioactivity in the building's water system. Radioactivity was confirmed in the plant drinking fountain. Apparently there was an inappropriate cross-connection between a 3,000 gallon radioactive tank and the water system.

28 May 1974
The Atomic Energy Commission reported that 861 "abnormal events" had occurred in 1973 in the nation's 42 operative nuclear power plants. Twelve involved the release of radioactivity "above permissible levels."

22 March 1975
A technician checking for air leaks with a lighted candle caused $100 million in damage when insulation caught fire at the Browns Ferry reactor in Decatur, Alabama. The fire burned out electrical controls, lowering the cooling water to dangerous levels, before the plant could be shut down.

28 March 1979
A major accident at the Three Mile Island nuclear plant near Middletown, Pennsylvania. At 4:00

a.m. a series of human and mechanical failures nearly triggered a nuclear disaster. By 8:00 a.m., after cooling water was lost and temperatures soared above 5,000 degrees, the top portion of the reactor's 150-ton core collapsed and melted. Contaminated coolant water escaped into a nearby building, releasing radioactive gasses, leading as many as 200,000 people to flee the region. Despite claims by the nuclear industry that "no one died at Three Mile Island," a study by Dr. Ernest J. Sternglass, professor of radiation physics at the University of Pittsburgh, showed that the accident led to a minimum of 430 infant deaths.

1981
The Critical Mass Energy Project of Public Citizen, Inc. reported that there were 4,060 mishaps and 140 serious events at nuclear power plants in 1981, up from 3,804 mishaps and 104 serious events the previous year.

11 February 1981
An Auxiliary Unit Operator, working his first day on the new job without proper training, inadvertently opened a valve which led to the contamination of eight men by 110,000 gallons of radioactive coolant sprayed into the containment building of the Tennessee Valley Authority's Sequoyah I plant in Tennessee.

1982 The Critical Mass Energy Project of Public Citizen, Inc. reported that 84,322 power plant workers were exposed to radiation in 1982, up from 82,183 the previous year.

25 January 1982
A steam generator pipe broke at the Rochester Gas & Electric Company's Ginna plant near Rochester, New York. Fifteen thousand gallons of radioactive coolant spilled onto the plant floor, and small amounts of radioactive steam escaped into the air.

15-16 January 1983
Nearly 208,000 gallons of water with low-level radioactive contamination was accidentally dumped into the Tennesee River at the Browns Ferry power plant.

25 February 1983
A catastrophe at the Salem 1 reactor in New Jersey was averted by just 90 seconds when the plant was shut down manually, following the failure of automatic shutdown systems to act properly. The same automatic systems had failed to respond in an incident three days before, and other problems plagued this plant as well, such as a 3,000 gallon leak of radioactive water in June 1981 at the Salem 2 reactor, a 23,000 gallon leak of "mildly" radioactive water (which splashed onto 16 workers) in February 1982, and radioactive gas leaks in March 1981 and September 1982 from Salem 1.

1988
It was reported that there were 2,810 accidents in U.S. commercial nuclear power plants in 1987, down slightly from the 2,836 accidents reported in 1986, according to a report issued by the Critical Mass Energy Project of Public Citizen, Inc.

28 May 1993
The Nuclear Regulatory Commission released a warning to the operators of 34 nuclear reactors around the country that the instruments used to measure levels of water in the reactor could give false readings during routine shutdowns and fail to detect important leaks. The problem was first bought to light by an engineer at Northeast Utilities in Connecticut who had been harassed for

raising safety questions. The flawed instruments at boiling-water reactors designed by General Electric utilize pipes which were prone to being blocked by gas bubbles; a failure to detect falling water levels could have resulted, potentially leading to a meltdown.

15 February 2000
New York's Indian Point II power plant vented a small amount of radioactive steam when a an aging steam generator ruptured. The Nuclear Regulatory Commission initially reported that no radioactive material was released, but later changed their report to say that there *was* a leak, but not of a sufficient amount to threaten public safety.