

The worst accident in the history of nuclear power generation was the Chernobyl disaster. It occurred in 1986 in Ukraine, which was then part of the Soviet Union. The accident caused large amounts of radioactive particles to be released into the air. It caused illness and death in the local population and left the land in the area unusable. Many thousands of people had to leave their homes. The radioactivity spread over much of Europe, contaminating crops and livestock in some neighboring countries.

The Chernobyl power station was located near the town of Pryp'yat. It lay just northwest of the city of Chernobyl and 65 miles (104 kilometers) north of [Kyiv](#) (Kiev). The station had four reactors producing [electric power](#). The reactors began operating between 1977 and 1983.

The Chernobyl disaster occurred on April 25–26, 1986. Technicians at reactor Unit 4 attempted a poorly designed test to see if the reactor could be cooled if a power failure occurred. Workers shut down the reactor's power-regulating system and its emergency safety systems. They made a series of mistakes that caused the reactor to become unstable. At 1:23 AM on April 26, the chain reaction in the core went out of control. Several explosions triggered a large fireball. It blew off the heavy steel and concrete lid of the reactor, which released radioactive material into the atmosphere. Air currents then carried it great distances. A partial meltdown of the core also occurred.



© Dmitry Birin/Shutterstock.com©

On April 27 the Soviet government began to evacuate the 30,000 inhabitants of Pryp'yat. They then attempted to cover up the incident. However, on April 28 Swedish monitoring stations reported abnormally high levels of wind-transported [radioactivity](#). Officials pressed the Soviets for an explanation. The Soviet government admitted there had been an accident at Chernobyl. An international outcry arose over the dangers posed by the radioactive emissions. By May 4 workers had mostly contained both the heat and the radioactivity leaking from the reactor core. They buried radioactive debris at some 800 temporary sites. Later in the year workers enclosed the highly radioactive reactor core in a concrete-and-steel structure

known as a sarcophagus. However, it was later deemed structurally unsound, and the core was enclosed in a larger steel structure during the 2010s.



©Alessandro Lucca/Dreamstime.com



© Petr Pavlicek/IAEA©



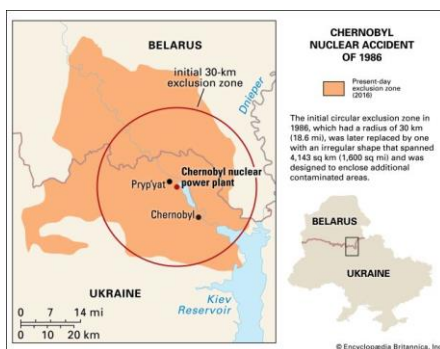
Brendan Hoffman/Getty Images

Some sources state that two people were killed in the initial explosions. Others report that the figure was closer to 50. Dozens more contracted serious [radiation sickness](#), with some later dying. More radioactivity than that created by the [atomic bombs](#) dropped on [Hiroshima](#) and [Nagasaki](#), Japan, escaped into the atmosphere. This radioactivity was spread by the wind over [Belarus](#), [Russia](#), and [Ukraine](#). It soon reached as far west as France and Italy. Millions of acres of forest and farmland were contaminated. Although many thousands of people were evacuated, hundreds of thousands more remained in contaminated areas. In addition, in subsequent years many livestock were born deformed. Some scientists predicted several thousand [radiation](#)-induced illnesses and [cancer](#) deaths among people in the long term.



[Petr Pavlicek/IAEA \(CC BY-SA 2.0\)](#)[Petr Pavlicek/IAEA \(CC BY-SA 2.0\)](#)

The Chernobyl disaster sparked criticism of unsafe procedures and design flaws in Soviet reactors. It also heightened resistance to the building of more such plants. Chernobyl Unit 2 was shut down after a 1991 fire, and Unit 1 remained on-line until 1996. Chernobyl Unit 3 continued to operate until 2000. At that time the nuclear power station was officially shut down.



[Encyclopædia Britannica, Inc./Kenny Chmielewski](#)[Encyclopædia Britannica, Inc./Kenny Chmielewski](#)



[Contunico © ZDF Enterprises GmbH, Mainz](#)[Contunico © ZDF Enterprises GmbH, Mainz](#)

Following the disaster, the Soviet Union created a circle-shaped exclusion zone. It extended about 18.6 miles (30 kilometers) in all directions from the nuclear power plant. Officials later added other areas to the zone. The government eventually allowed some former residents to return to the exclusion zone to live. In the 21st century Chernobyl became a tourist attraction, with sever