



Efrem Lukatsky | AP

A cadet pays his respects at a Chernobyl disaster firefighter memorial in Kyiv, Ukraine, in April 2025.

# MELTDOWN & FALLOUT

## The Chernobyl disaster 40 years ago stands alone in human annals

**CARSON GERBER**  
CNHI STATE REPORTER

**O**n April 28, 1986, workers at the nuclear power station in Forsmark, Sweden, detected an alarming spike in radioactive particles. Officials quickly determined the toxic material wasn't a leak at their plant.

It came somewhere from within the Soviet Union nearly 700 miles away. That same evening, a TV station in the USSR broadcast a 20-second statement announcing an "accident" at the nuclear power plant in Chernobyl two days earlier.

What the announcement didn't say was that a routine safety test at the Chernobyl facility had spiraled into the worst nuclear disaster in human history.

In the early hours of April 26, a sudden surge of power triggered an explosion that blew the roof off Reactor No. 4, sending a plume of radioactive material into the night sky 100 times higher than the atomic bombs dropped on Japan.

At first, the scale of the accident wasn't fully understood. Firefighters rushed in, unaware they were stepping into toxic radiation. Within weeks, 30 people were dead, including plant workers and first responders who succumbed to acute radiation sickness.

The nearby city of Pripyat — once home to nearly 50,000 people — wasn't evacuated until 36 hours after the explosion. Resident Lyudmila Ignatenko remembers

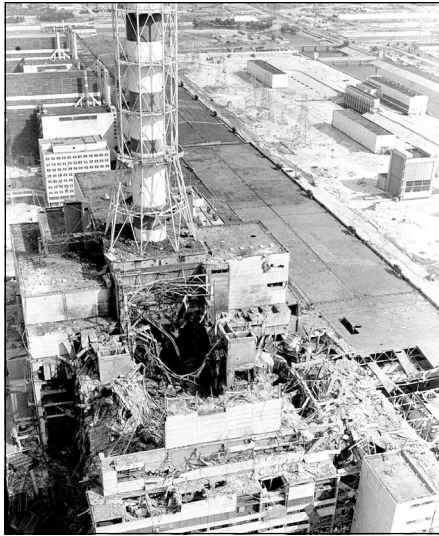


Photo provided by the Ukrainian Society for Friendship and Cultural Relations with Foreign Countries

**The destroyed Chernobyl reactor**, one of four units operating at the site in Ukraine in 1986, as seen from a helicopter several months after the explosion.

the sky turning a "terrifying, beautiful violet" following the meltdown.

"We stood on our balconies and watched the light, not knowing we were breathing in our own death," she said in the 2026 documentary "Chernobyl: 48

Hours To Escape."

Residents of the city were given three hours to leave and told they would return in a few days. They never did. Today, Pripyat remains a ghost town.

In the months and years that followed, an army of more than 500,000 "liquidators" worked to contain the damage. Many did so with minimal protection. They cleared radioactive debris, buried contaminated soil, and constructed a massive concrete shell, or "sarcophagus," over the ruined reactor.

In 2015, a new steel structure—the New Safe Confinement—was slid into place, designed to contain the remains of the facility for the next 100 years.

Today, a 1,600-mile exclusion zone remains in place around Chernobyl. Authorities sometimes allow workers, authorized researchers and some tourists to enter the mostly uninhabited region.

Forty years later, the health toll of the meltdown is still coming into focus. The World Health Organization and United Nations estimate that up to 4,000 people among the most exposed populations may ultimately die from radiation-related cancers, while thousands more have faced long-term health consequences.

The financial cost has been staggering. Analysts estimate the cleanup, resettlement and lost economic output from the disaster ring in at more than \$200 billion. Ukraine and its neighbors have shouldered much of the cost.

### TIMELINE OF A DISASTER

#### APRIL 25, 1986

Routine safety test begins by engineers at Chernobyl Nuclear Power Plant. Critical safety systems are shut off. Reactor becomes increasingly unstable.

#### APRIL 26 — 1:23 A.M.

Sudden power surge triggers two massive explosions. Reactor 4 is destroyed. Burning graphite sends radiation into the sky.

#### APRIL 26 — EARLY MORNING

Firefighters arrive within minutes with no radiation protection. Many suffer fatal exposure.

#### APRIL 27

The 50,000 residents of City of Pripyat evacuated 36 hours after explosions.

#### APRIL 28

The world is alerted after radiation detected in Sweden. Soviet Union admits "accident," triggering global concerns.

#### MAY 1986

Army of more than 500,000 "liquidators" mobilized. Helicopters drop sand, lead and boron. Twenty-mile exclusion zone created.

#### NOVEMBER 1986

Construction of a concrete sarcophagus completed around reactor to contain radiation.

### CHERNOBYL TODAY

Cleanup at the site remains active, but has been complicated by the war between Ukraine and Russia. The steel dome built over the power plant to contain radiation was damaged by a drone strike in 2025, leading to emergency repairs and international funding pledged to restore its protective functions.

Inside the exclusion zone, workers continue the slow dismantling of the plant's reactors while managing radioactive waste. Crews are removing polluted soil and vegetation to limit the spread of radiation, and rotational teams of workers still live on-site temporarily to maintain facilities and safety systems.

Wildlife has also made a comeback in the exclusion zone. With humans gone, animals such as wolves, deer, boars and wild, elusive Przewalski's horses have thrived. A significant portion of the zone is now the Chernobyl Radiation and Ecological Biosphere Reserve.

— Sources: Nuclear Energy Agency; Environment and Society Portal



Unknown photographer | via Creative Commons

**Rare Przewalski's horses** — as well as bears, wolves, wild boars and other animal species — thrive in the absence of humans in the Chernobyl Exclusion Zone.



Viktor Tolochko | Sputnik via AP

**A worker** measures radiation levels in the Belorussian portion of the Chernobyl Exclusion Zone in 2016.



Volodymyr Tarasov | Ukrinform-NurPhoto via AP

**Rescuers look** at the New Safe Confinement at the Chernobyl Nuclear Power Plant near Kyiv in February 2025 after the plant was hit by a Russian attack drone in January.

### ONGOING HEALTH EFFECTS

Four decades after the meltdown, the health legacy of Chernobyl continues to unfold.

The most clearly documented impact remains a sharp rise in thyroid cancer among those exposed as children, with roughly 5,000 cases directly linked to radioactive iodine. Tens of thousands more have been diagnosed throughout the region around the site.

Long-term studies show elevated risks of other cancers, including leukemia and solid tumors, though estimates vary and remain difficult to measure precisely. New research is still identifying how radiation exposure altered survivors' genetic makeup.

Beyond physical illness, widespread anxiety and psychological trauma remain among the most enduring health consequences for survivors and displaced communities.

— Sources: Canadian Nuclear Safety Commission; National Institutes of Health

### IN THEIR OWN WORDS

"Voices from Chernobyl: The Oral History of a Nuclear Disaster" excerpts

**"I'm afraid of the rain. ... I'm afraid of snow, of the forest."**  
— Former Pripyat resident Aleksandr Revalskiy

• Radiation contamination made ordinary elements of nature feel dangerous—capturing the invisible, pervasive fear after the disaster.

**"You're a normal person! And then one day you're suddenly turned into a Chernobyl person. Into an animal, something that everyone's interested in, and that no one knows anything about."** — Former Pripyat resident Nikolai Kalugin

• Living through an unprecedented nuclear disaster changed the identity of survivors, setting them apart from the rest of humanity.



Photo by Clay Gilliland

**Long-abandoned** stuffed animals sit on a windowsill in the Chernobyl Exclusion Zone in the fall of 2013.

**"What's it like, radiation? Maybe they show it in the movies? Have you seen it? Is it white, or what? What color is it? Some people say it has no color and no smell, and other people say that it's black. But if it's colorless, then it's like God. God is everywhere, but you can't see Him."** — Anna Badaeva, a villager who returned to the Chernobyl area

• The rural population lacked the scientific education to understand radiation.

**"Chernobyl is like the war of all wars. There's nowhere to hide. Not underground, not underwater, not in the air."** — Svetlana Alexievich, author of "Voices from Chernobyl: The Oral History of a Nuclear Disaster"

• Survivors of the disaster felt powerless, like civilian casualties of war.