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Exposed: Soviet cover-up of nuclear fallout worse than Chernobyl



Semipalatinsk nuclear test site in Kazakhstan

Alain Nogues/Getty

By **Fred Pearce**

It was a nuclear disaster four times worse than Chernobyl in terms of the number of cases of acute radiation sickness, but Moscow's complicity in covering up its effects on people's health has

remained secret until now.

We knew that in August 1956, fallout from a Soviet nuclear weapons test at Semipalatinsk in Kazakhstan engulfed the Kazakh industrial city of Ust-Kamenogorsk and put more than 600 people in hospital with radiation sickness, but the details have been sketchy.

After seeing a newly uncovered report, *New Scientist* can now reveal that a scientific expedition from Moscow in the aftermath of the hushed-up disaster uncovered widespread radioactive contamination and radiation sickness across the Kazakh steppes.

The scientists then tracked the consequences as nuclear bomb tests continued — without telling the people affected or the outside world.

The report by scientists from the Institute of Biophysics in Moscow was found in the archive of the Institute of Radiation Medicine and Ecology (IRME) in Semey, Kazakhstan. “For many years, this has been a secret,” says the institute’s director Kazbek Apsalikov, who found the report and passed it on to *New Scientist*.

More nuclear bomb tests were conducted at Semipalatinsk than anywhere else in the world during the 1950s and early 1960s. Western journalists have reported since the breakup of the Soviet Union on the [apparent health effects on villagers downwind of the tests](#). And [some recent studies](#) have estimated radiation doses using proxies such as radioactivity in tooth enamel.

The newly revealed report, which outlines “the results of a radiological study of Semipalatinsk region” and is marked “top secret”, shows for the first time just how much Soviet scientists

knew at the time about the human-health disaster and the extent of the cover-up.

It details how Moscow researchers on three expeditions to Ust-Kamenogorsk found widespread and persistent radioactive contamination of soil and food both there and across the towns and villages of eastern Kazakhstan.

In the path of fallout clouds

In mid-September 1956, a month after the fallout cloud hit, dose rates in Ust-Kamenogorsk were still up to 1.6 millirems per hour, a hundred times what the report deems the “permissible rate”, and what is recommended as safe by the [International Commission on Radiological Protection](#).

The following month, the expedition moved on to a number of villages. “Near Znamenka, radioactive substances that affected the people and the environment fell out repeatedly for years,” the report says. The fallout there was “hazardous to health” and “more serious and dangerous than [in] the district of Ust-Kamenogorsk”.

Military medical officers visiting the village after the August test had found three people with acute radiation sickness.

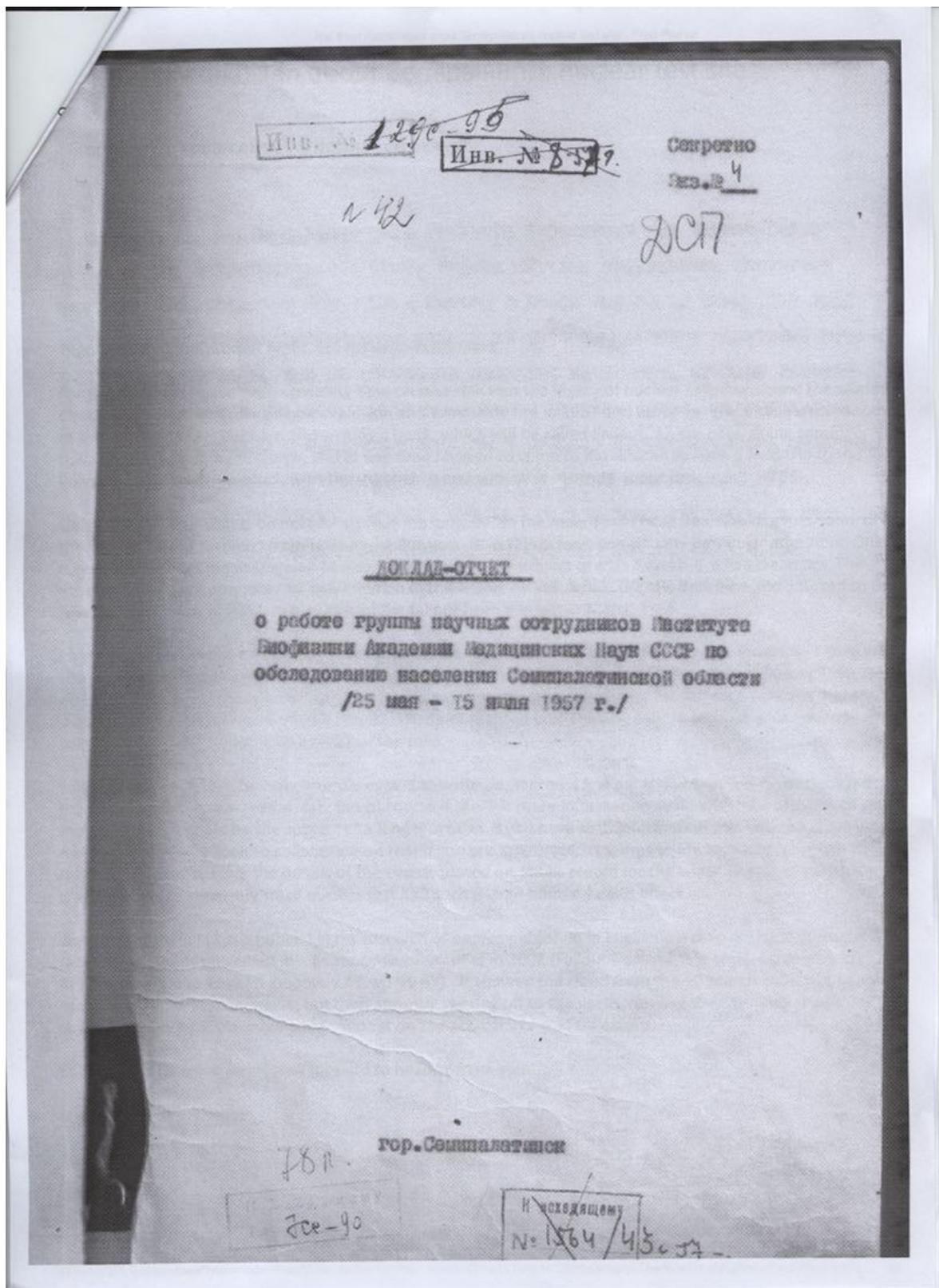
The findings tally with previous reports of the path of the fallout clouds. In 2002, Konstantin Gordeev at the Institute of Biophysics in Moscow [published a map](#) showing that on 24 August 1956 a cloud travelled directly over both Znamenka and Ust-Kamenogorsk.

Earlier, a test on 12 August 1953 had sent a cloud across Karaul, which the 1956 expedition reported had consequences that were still “hazardous to health” three years later.

One outcome of the scientific expeditions was the establishment of a special clinic known as a dispensary, under the control of

Moscow, tasked with tracking radiation and its health effects. It eventually had a register of some 100,000 people exposed to the tests and their children.

The facility was known for a long time as the Anti-Brucellosis Dispensary No. 4. The name was chosen, says Apsalikov, “in order not to draw attention to its real activity”, which was “classified as top secret until 1991”.



The top secret report itself

When the Soviet Union collapsed that year, the dispensary became the IRME. But according to its current chief scientist, Boris Gusev, who first worked at Dispensary No. 4 in 1962, many reports in its

archives were either taken to Moscow or destroyed before the handover.

One report, he says, recorded that 638 people were “hospitalised with radiation poisoning” in the city after the 1956 test. This was more than four times the 134 radiation cases diagnosed after the Chernobyl accident. Nobody knows how many died.

The newly exposed report of the expeditions in 1956 and 1957 was one of the few to escape the Soviet censors that destroyed or moved other reports from the country. It found “considerable radioactive contamination of soils, vegetable cover and food” in eastern Kazakhstan. Faecal samples taken from people on a collective farm just south of Ust-Kamenogorsk contained high levels of radioactivity, which were no longer detectable between two and five days after they stopped eating local food and switched to imported food.

The expedition called for a halt to eating local grain, and suggested that it was “inexpedient to conduct atomic tests (especially ground explosions) before the full harvest from fields” so the food was sheltered from the fallout.

But this recommendation was evidently not acted on. Gordeev mapped the fallout trajectories of subsequent major tests in August 1957 and August 1962.

The report also downplayed the dangers, saying that various changes in people’s nervous system and blood recorded by doctors, “could not be considered as the changes which arose only due to impact of ionizing radiation”. Instead, it goes on to blame poor sanitation, a “dreary diet” and various diseases such as brucellosis and tuberculosis.

Atmospheric bomb tests at Semipalatinsk stopped in 1963. Although much of the area downwind is now safe to live in, “some

areas will never return to nature”, says Apsalikov. “The situation in others is uncertain and potentially dangerous.”

[Roman Vakulchuk](#) of the Norwegian Institute of International Affairs welcomes the new openness from Kazakhstan about the issue. The report is the first contemporary record of research into the effects of the tests on local populations, he says. “Until 1956, the [Soviet] government conducted no studies.”

But there is still uncertainty about the extent of continuing contamination and health impacts, he says. “Much of the area presents no danger, but some parts need to be safeguarded indefinitely.”