The Nuclear Disaster of Kyshtym 1957 and the Politics of the Cold War

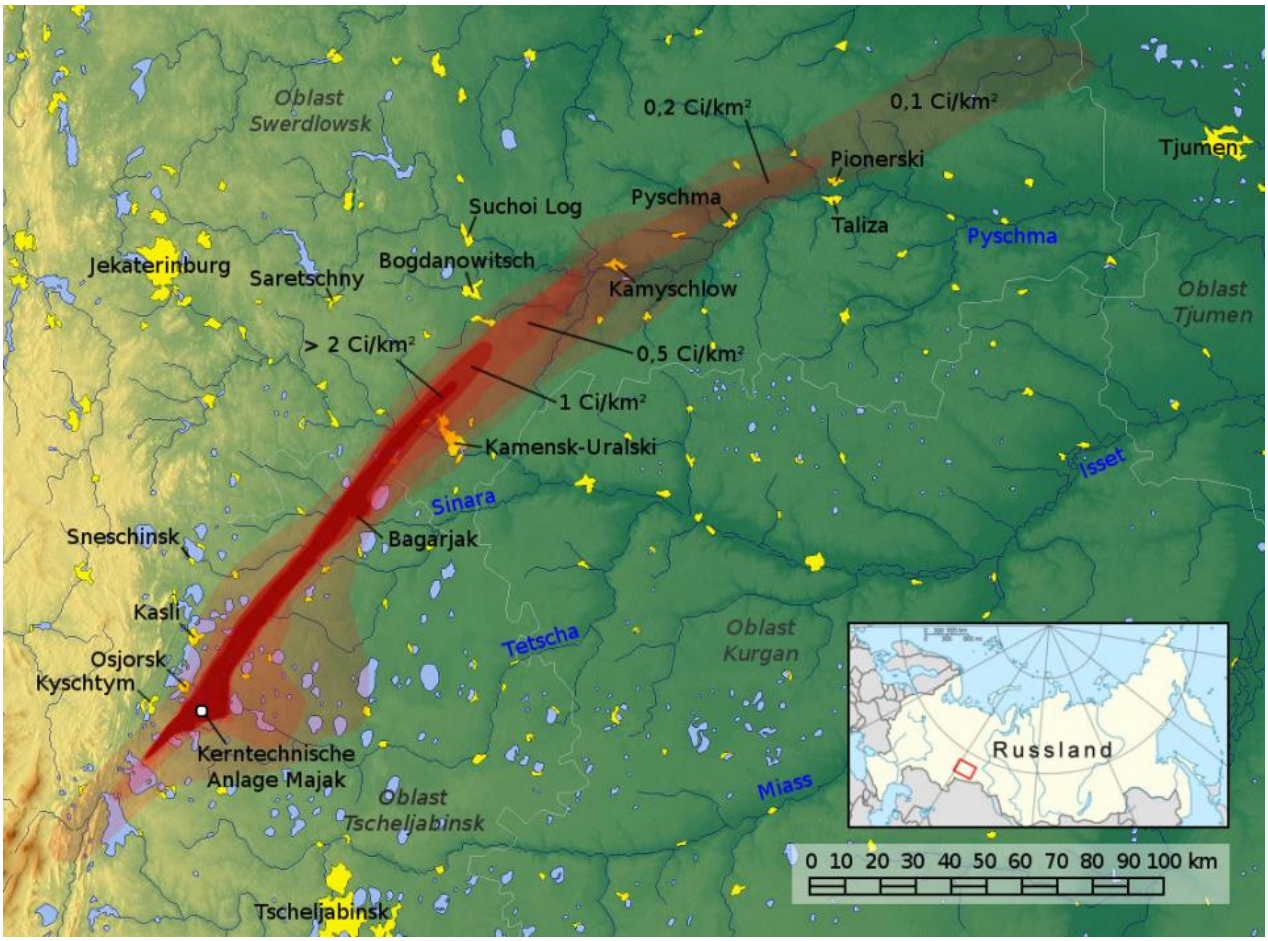
Thomas Rabl

Summary

In the late afternoon of 29 September 1957, a major explosion at the Soviet military nuclear facility "Mayak" located in Kyshtym in the Southern Urals, caused the contamination of an area of 20,000 square kilometers, home to 270.000 people. The Kyshtym incident was the first major nuclear accident in the world and is still considered the third most severe nuclear accident in history. However, it was kept almost completely secret by both the Soviet Union as well as by Western intelligence agencies such as the CIA until the end of the Cold War in 1989.

In the late afternoon of 29 September 1957, residents of the Chelyabinsk district in the Southern Urals noticed unusual bluish-violet colors in the sky. The regional press speculated about polar lights appearing exceptionally far south. However, within a few days, a slew of government activity became evident around the military area that housed the nuclear facility "Mayak." Peasants were required to slaughter their livestock, bury their crops and plow their farmland. More than 20 villages, comprising over 11,000 people, were evacuated and completely demolished. No official statement was given about any of these orders, but everybody could figure out for themselves that a major accident had happened at "Mayak."

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Map of the East Urals Radioactive Trace (EURT), the area contaminated by the Kyshtym disaster

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"Mayak" was established in 1946, and by 1949 it had produced the first Soviet nuclear bomb. After this initial success, Moscow demanded ever more bombs, and allowed ever less time to make them. "Mayak" delivered. But it paid a price. As a result of disregarding basic safety standards, 17,245 workers received radiation overdoses between 1948 and 1958. Dumping of radioactive waste into the nearby river from 1949 to 1952 caused several breakouts of radiation sickness in villages downstream. Residents of the area were thus familiar with the invisible dangers coming from the secret site.

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Cows by the contaminated river Techa

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This time, however, radioactivity descended on people and places without any obvious pattern. So what had happened? The cooling system of a cistern containing radioactive waste had failed. And nobody had noticed. The waste started to heat up, eventually exploding at a temperature of 350 degrees Celsius. The 160-ton concrete cover burst, flinging 20 million curies of radioactive material into the sky, where it was scattered by the wind. It settled over an area of 20,000 square kilometers, home to 270,000 people.

It was impossible to keep information about the disaster from leaking out, at least in the surrounding area. The Western world, though, came to hear about it only in 1976, when Soviet emigrant Zhores Medvedev first revealed some facts about the catastrophe. The CIA had known about it long before; by 1960 its network of informants and aerial spy photos had provided it with a clear picture of what had happened. Those documents were later published, but long kept away from the public so as not to put the image of the emerging nuclear industry at risk or cause people to ask questions about safety issues at the US government's own Hanford nuclear site. Indeed, government laboratories even put out statements downplaying Medvedev's accounts of the seriousness of the Kyshtym incident. Moscow, of course, was delighted.

Thus, the Kyshtym disaster also tells a story about the Cold War's occasional absurdities—the CIA actually

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helped the Soviet Union keep its first nuclear catastrophe a secret until 1989.

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Further readings:

- Cochran, Thomas B., Robert S. Norris, and Oleg A. Bukharin. *Making the Russian Bomb: From Stalin to Yeltsin.* Boulder, Colo.: Westview, 1995.
- Josephson, Paul R. *Resources Under Regimes: Technology, Environment, and the State*. Cambridge: Harvard University Press, 2005.
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- Trabalka, John R., L. Dean Eyman, and Stanley I. Auerbach. "Analysis of the 1957–1958 Soviet Nuclear Accident." *Source: Science, New Series* 209, no. 4454 (1980): 345–53.

Related links:

- Official Soviet documents related to Kyshtym disaster
  http://nuclear.tatar.mtss.ru/official.htm
- Article about an "aurora" in the Soviet newspaper Chelyabinsky rabochy, 6 October 1957
  http://www.kommersant.ru/doc/1292571

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- http://de.wikipedia.org/w/index.php?title=Datei:Ecodefense_Mayak_Exhibition_37_Techa_Warning_Sign.jpg&filetimestamp=20110726224052

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Thomas Rabl was born in 1987. He studied history and Russian language at the Humboldt University Berlin and East European Studies at the Ludwig Maximilians University Munich. His main area of research is the economic history of the USSR. His master's thesis dealt with reforms of the planned economies in Eastern and Central Eastern Europe, especially in the Soviet Union. He received his MA in 2013. Currently he is working in the field of public relations.

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