Jáchymov, Czech Republic

Uranium mining site

Having grown rich by the discovery of uranium in its mines, the town of Joachimsthal/Jáchymov soon became one of the Soviet Union’s suppliers of fissile material for its nuclear weapons program. A large number of miners, many of whom were forced laborers, soon developed lung cancer due to exposure to radioactivity.

History

Radioactive ore was first discovered near the Bohemian town of Joachimsthal in the 19th century. A spa was opened, promising miraculous healing through the effects of radioactivity. Unaware of the harmful effects of ionizing radiation, many thousands of guests came every year to have their ailments “treated” through radium exposure. Additionally, scientists such as Marie Curie used uranium from Joachimsthal for their research on radioactivity. After WW2, Joachimsthal became part of Czechoslovakia and changed its name to Jáchymov.

In the 1920s, radioactive soaps and other gadgets from Jáchymov became profitable export items. Radioactive dyes were sold to the U.S. for luminous wrist watches. The women who worked with the dyes had the habit of licking the paintbrushes. After many of them lost their teeth or developed oral cancers, U.S. public health authorities looked into the matter and prohibited further radioactive imports.

After annexation by Germany in 1938, Jáchymov was returned to Czechoslovakia after WW2. With the beginning of the nuclear arms race and the Soviet Union’s massive demand for fissile material, the uranium deposits in Jáchymov’s mines suddenly acquired strategic importance. Jáchymov fell victim to the uranium rush and became a strictly guarded security zone. Little help was given to public health or environmental concerns. In order to meet demand, forced laborers and political prisoners were sent to the Jáchymov mines in the 1950s and 1960s.

Health and environmental effects

While drilling for uranium ore, many miners contracted what became known as “Jáchymov miners disease”: lung carcinoma. The average life expectancy of Jáchymov miners was only 42 years. The significant rise in the incidence of cancer prompted much scientific debate as well as parliamentary inquiries. Despite protests by the local tourism and spa industry, which feared for the “good name” of radiation, the Czechoslovak Ministry of Public Health opened a screening station to perform routine investigations of miners. In 1952, the main cause of “Jáchymov miners disease” was finally explained as a consequence of inhaling radioactive aerosols. The government was forced to include lung cancer in the law of indemnification for occupational diseases and pay compensation to bereaved families. Nevertheless, uranium mining was continued in Jáchymov until 1964.

In 1992, the Institute of Public Health investigated the use of radioactive waste as mortar and plaster in local construction projects. Increased gamma-exposure and radon gas concentration were found in the interior of houses in the region. People lived for many years with dosages of several hundred mSv per year. Estimates of the probability of developing cancer from exposure to ionizing radiation are about 2% per 100 mSv.1

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References

8. Hibakusha worldwide

Hibakusha worldwide

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