



Project Completion Report:
Romanovka Village Old Uranium Mining
Sites Remediation

- **Project Details:**
- **Short title: Romanovka's Uranium Mine**
- **Short problem: Mining and poor land-use decisions caused a cancer cluster**
- **Short solution: Cap and seal radioactive soils and teach locals better land-use methods**
- **Quote: Fighting pollution down to the last radioactive hole in the ground**

Location:	Buryatiya region, Russia
Contaminant:	Uranium
Project Duration:	June 2006—May 2007
Project Cost:	\$5,000
Implementing Partners	The Baikal Center of Public Ecological Examination

- **Problem:**

The village of Romanovka is located 50km from the Talakan uranium mine. Uranium concentrates are transported across the River Vitim by ferries and cargo boats. Some of the mine's abandoned ditches, known to be radioactive, were for many years exposed to open air, and studies showed a correlation between air- and water-borne exposure to this uranium supply and a cancer cluster in the local community. However, as is frequently the case with mining in developing regions, there had been no technical documentation throughout this mine's history and thus solidly proving a causal link was difficult. The village is also located just 1.5 km from other natural uranium deposits, and residents are known to raise crops and livestock in those zones. Regardless of the immediate source, villagers were definitely suffering from exposure to radioactive material.
- **Solution**

Blacksmith had to provide the technical expertise and resources to assess the toxicity of this site. This involved providing radiometers and training local partners in their use; mapping the district for canals, ditches, and other zones of high radioactivity; and providing heavy earthmoving equipment (bulldozers, excavators, and front-loaders) necessary to seal or remove the contaminated soil as judged appropriate.

- **Results:**

In August 2006 Blacksmith's local partner--the specialists of the Baikal Center for Public Environmental Expertise--visited and examined the site in order to judge the severity of radiation and the effectiveness of proposed solutions. According to their data the level of radiation in two ditches near the mine were 800 and 2,350 $\mu\text{R}/\text{h}$. Surrounding the ditches for an area of 100m was a zone of increased radiation levels, testing at 50-75 $\mu\text{R}/\text{h}$.

The small river Holoy in the region washes away uranium deposits near the surface. River sediments closest to these deposits showed high radioactivity, 500-600 $\mu\text{R}/\text{h}$. Vegetation in the Holoy featured elevated levels of both uranium (3.3-6.8x10⁻⁴%) and thorium (5.8 - 10.9x10⁻⁴%). The uranium deposits had contaminated other small local water bodies as well.

Based on this information, Blacksmith's Technical Advisory Board recommended sealing the toxic ditches and educate villagers about the hazards.

On September 9, 2006, the specialists and volunteers of the Center, in the presence of local administration and environmental committee staff, covered the two dangerous ditches with fresh and safe soil. The Center also conducted a teaching workshop to educate community members of the potential risks, raise public awareness of mining impacts, and recommend personal steps to avoid future exposure.

- **Follow-up:**

Future monitoring of the site will be necessary to make sure no new hazardous ditches or radiation accumulation media threaten public health. Locals should be encouraged to practice farming as far from the ground-level uranium deposits as possible.