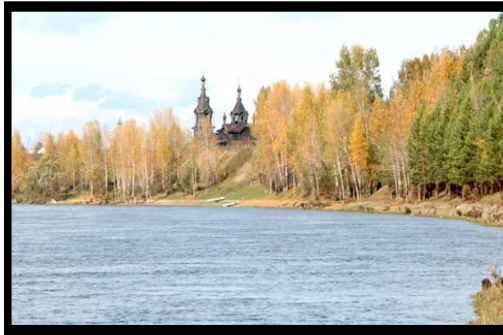




Project Completion Report: Bolshoi Balchug River Bank Zone and Radionuclide Remediation



Project Details:

Location	Krasnoyarsk Region, Russia
Contaminant	Radioactive Waste in the Yenisei River
Project Duration	July 2006—April 2007
Project Cost	\$9,870, all from Blacksmith
Implementing Partners	Citizens' Center for Nuclear Non-Proliferation, Regional Public Charity Organizations

Performance Metrics:

Toxin	Plutonium-239, Cesium-136, and Strontium-90
Affected Population	64,000

○ **Background and Scope:**

During its 30 years of operation, the mining and chemical Combine at Zheleznogorsk discharged its cooling water contaminated with radioactive wastes directly into the Yenisei River. Now, 300 kilometers along the river can be officially declared an environmental disaster zone based on the amount of contamination over that time. The village of Bolshoi Balchug lies immediately downstream from the plant, and at least 64,000 are potentially affected by radionuclides like plutonium-239, cesium-136, and strontium-90.

○ **Solution Implemented:**

The main goal of the project was to improve radiation situation in the riverbank zone in the Bolshoi Balchug community. Specialists of the Citizens' Center on Nuclear Non-Proliferation have examined the Bolshoi Balchug bank. All "hot" particles found together with surrounding soil were to be excavated from the riverbank and buried in a proper radioactive waste landfill.

○ **Project Performance:**

The main goal of the project was to mitigate the radiation in the river bank zone in Bolshoi Balchug community. The project included:

- An independent radiological survey of the river bank (1300 m) in Bolshoi Balchug community and mapping of radioactive hotspots;
- Detection and extraction of active "hot" particles from the soil and submitting them for burial to a specialized landfill;
- Informing the population and authorities of Krasnoyarsk region about radiation pollution of the territory in Bolshoi Balchug community through mass media;
- Bringing results of independent survey to the attention of local authorities and appropriate controlling units;
- Making the Mining-Chemical Combine perform a rehabilitation of polluted areas through public response in mass media and governmental agencies.

In the period from September 14 to October 4, 2006 specialists of the Citizens' Center on Nuclear Non-Proliferation examined an area of the Bolshoi Balchug bank longer than 14 km, and up to 50 km wide. All measurements were made with dosimetric instruments verified at the state organizations scintillation survey--radiometer SRP-68-01 and dosemeter DRG-01T.

○ **Outcomes and Follow Up:**

The places of discovery of "hot" particles were plotted on a topographic map. 300 kilometers along the river were found to be declared an environmental disaster zone, after soil and sediment samples collected from the area showed radiation levels hundreds of times higher than permissible levels. All "hot" particles found together with surrounding soil were taken from the soil and placed into a lead container. On November 22, 2006 the "hot" particles were handed over to a specialized organization "Quant" Ltd for proper disposal.