

# **SERIOUS POLLUTED AREA BY DRAINAGE AND TAILING FROM SULFIDE MINE AND COPPER MELTING IN KARABASH, SOUTH URALS**

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Karabash is a typical Ural industrial town which was formed on the base of large sulfide ore deposit and copper-smelting plant. The sulfide ores consist mainly of copper and iron with zinc, gold, silver, antimony, cadmium, cobalt, gallium, germanium, indium, scandium and thallium. The copper-smelting plant was built in 1910 and has functioned during more than 80 years. The Karabash mine was closed in 1991. About 30 million tons of tailings from the deposit had been accumulated in the town of Karabash for more than 70 years. The plant have processed only ores and concentrates of other deposits, such as Gay, Sibay and Uchaly in south Urals at present. Depend on the ore wastes, tailing and drainage from the deposit and the copper-smelting plant, the soils, water, atmosphere and vegetation in Karabash area have been seriously polluted. The vegetation's on the Mt Karabash (611m) are absolutely destroyed by the smoke contained rich SO<sub>2</sub> from the smelting. Therefore no soil cover on the surface of the mountain.

In this presentation, the distribution and contents of toxic elements in the various ore-waste, acid mine drainage, sediments, tailing, surface water, soils and so on are reported.