

HARD TECHNOGENIC COMPONENTS IN ALLUVIUM AND ENVIRONMENT

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Modern alluvial sediments on the territories of city-industrial agglomerations are polluted by artificial particles. The main sources of such components are enterprises situated within river valleys. Technogenic particles have been accumulating in sediment for a long time and result in negative tendencies of environment development. Technogenic compounds are rather different. There are metallic particles (lead, iron, steel, zinc, tin, etc.), glass, brick, magnetic sphaerules, slag, fertilizer and so on among them. Definite combinations of technogenic grains may be named by technogenic assemblages. The rivers became transport arteries for technogenic product migration. That is one of the reasons why technogenic components had polluted great territories situated far from their sources. Accumulation of technogenic products is usual at flood plains, ponds, reservoirs, etc. In results in sedimentation of technogenic-alluvial type of deposits. Perm University researchers investigated river sediment at the territories of big industrial centers in the Urals. Amount of technogenic products in river sediments depends on industrial and agricultural activity. Sometimes they prevail in sediments. Near coal mines the association of ash, magnetic sphaerules, coal particles and slag was found. High percentage of rare elements (Sc, Be, Zr, Y, Yb, Nb, Li, La) in soils are typical for such regions. Metallurgical profile of industrial activity is connected with another association of technogenic products. It includes specifically slag and metallic fragments, glass and magnetic sphaerules. There are high percentage of Zn, Pb, Cu, Cr, Mn, Bi, Sn in soils and clay sediments. Besides, toxic elements appear here, that are As, Sb, Cd²⁷².