



## **Heavy metal removal from minewaters by alkaline waste products**

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One of the serious environmental problems of the Western Urals area (Russia) is the consequence of the cessation of mining in the Kizel Coal Basin. After mine closure, acid mine waters (pH about 3) with excessive heavy metal contents began to pollute ground surface and rivers. The methodology of neutralization of acid mine water and heavy metal removal by alkaline waste products is discussed in the paper. Waste products are non-toxic and consist of 70-80% of calcite. As a result of neutralization, the sediment becomes a mixture of iron and gypsum hydroxide and carbonate calcium with neutral pH. Mobile forms of Fe, Al, Mn, Pb and others were not revealed. The pilot field experiment showed the prospect and low cost of this technology.