

INFLUENCE OF OIL SHALE MINING ON STRONTIUM DISTRIBUTION IN STREAM SEDIMENTS, NORTH-EAST ESTONIA

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Oil shale mining in North-East Estonia results in extensive discharge of carbonate-rich mine water into the local river systems. The results of robust regression of strontium concentration on major element concentration in stream sediment samples, taken from two surveys in 1994 and 1998, suggests that naturally occurring Sr is associated with calcite and potassium-rich minerals. Carbonate-rich discharge appears to coincide with samples containing anomalous Sr concentrations and high CaO content. The spatial differences in Sr enrichment between the two surveys also reflect the reduction in the amount of mine water discharged into the local river systems between 1994 and 1998.