

## **HEAVY METAL DISTRIBUTION IN A MINE TAILINGS DRAINAGE SYSTEM**

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Evaluation of the correlation between sediment size, heavy mineral content and heavy metal concentration in differing geomorphic environments in an acid mine drainage system is the focus of this study. Specifically, this study tests the hypotheses that in stream bed sediments: 1. Heavy metal concentrations increase as heavy mineral contents increase. 2. Heavy metal concentrations increase as sediment size decreases. No positive trend was found between trace metal element concentrations and heavy mineral percents. The trend tended to be rather negative, with heavy metal concentration decreasing as heavy mineral content increased. No correlation between heavy metal concentrations and decreasing sediment size was found. Some of the sediment sizes consistently contained denser sediment (2.9 g/l). X-ray diffraction analysis revealed, however, that those sediments contained mainly heavy minerals, not trace metals.