Using Acid Mine Water for Removal of Phosphates from Sewage Effluent, P. H. van der Merwe, J. P. Maree and N. D. Basson, pp. 155-167

Discussion by A. S. Harley, Steffen, Robertson and Kirsten Inc., South Africa

Is there any chance of precipitation of either ferric hydroxide or ferrous phosphate in the 12km pipeline between the ERPM Gold Mine and the Rondebult sewage works?

Reply

The iron in the mine water occurs in the ferrous state. Little or no oxidation occurs in the pipeline, the sewage being anaerobic or nearly so. Therefore practically no ferric hydroxide should precipitate in the pipeline.

Referring to Figure 1 in the paper it will be noted that ferrous phosphate precipitate peaks at pH 8.0. The pH of the sewage concerned is approximately 6.0-6.5. Whatever ferrous phosphate precipitation may occur in the pipeline will merely amount to phosphate removal in the pipeline.