

MICROBIAL ACTIVITY IN FABRICATED SOILS FOR LANDSCAPE REHABILITATION¹

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Abstract. Fabricated soil is a mixture of organic and inorganic components creating a substrate rich in aluminosilicates, carbon, nitrogen, phosphorus, and potassium. A year after incorporation into coal mine soil, dramatic increases in bacterial heterotrophic microflora (BHM) and equally dramatic decreases in mold colonies were observed. Later decreases in mold colonies were particularly noted in plots containing poplar and willows, whose root excretions appear to act as natural antiseptics. BHM may, in turn, play an important role in the transformation of phenolic inhibitors (allelopathogens) thus maintaining healthy soil-plant relationships and emphasizing the role of fabricated soils in landscape rehabilitation.

Additional Keywords: Mine land reclamation, microbial components

¹Poster paper presented at the 7th International Conference on Acid Rock Drainage (ICARD), March 26-30, 2006, St. Louis MO. R.I. Barnhisel (ed.) Published by the American Society of Mining and Reclamation (ASMR), 3134 Montavesta Road, Lexington, KY 40502

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