

THE USE OF GEOTECHNOLOGIES IN ENVIRONMENTAL MANAGEMENT OF MINING IN LARGE URBAN AREAS – THE CASE OF METROPOLITAN REGION OF SÃO PAULO, BRAZIL

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There are presented the results of researches on relationships between mining, urbanization and environment, in the large urban area of São Paulo, Brazil. The research aimed to identify and evaluate the use of geotechnologies in environmental control and reclamation of selected mining areas, as well as to develop new techniques, in order to improve control and reclamation measures already adopted in such areas. There are only considered mining of natural aggregates, usually consumed by the civil construction industry, like sand and crushed stone. These materials are largely applied in the region, specially in the construction of commercial and residential buildings, industrial plants and public works. The results show an overview of geotechnologies applied in mining areas of the region and can be analysed under various aspects as follows: Improvement of mitigation measures already adopted in mining areas; Prevention of environmental degradation in existing or abandoned mining areas; Improvement of management practices and methods; Post-mining land uses; Action of local governments organisms and communities; and Challenges for achievement of environmental sustainability in the region.