

Case Study on Bio Mining at Auto Nagar, Hyderabad

Bio Mining – Process

Stabilization & Mulching

Based on dump analyses, & site drawings received, we have rearranged MSW, formulated Microbial strains for aerobic & anaerobic process. Leachate reuse, etc,... to control fire, smell, leachate, smoke, reduce pathogen,.. etc the primary concerns was met at stabilization stage.

Second stage of stabilization adapted was maintained green cover for reduction of moisture & mulched to increase non decomposed matter.

Several bacteria strains & plant grass species were part of our trials to optimize desired activity.



Segregation and Extraction

Trial pits were excavated at regular intervals in the dump to locate spots where waste is stabilized, based on recovery & pathogenic tests were conducted for further segregation.

Recovery percentage of Organic Material / sand silica could be as high as 40% to 55% which includes moisture. To be noted: In certain experiences the recovery is lower at 20 – 25% and higher to 90% by weight.

We have found not much recoverable or saleable could be extracted as we found less of plastic (due to presence of Rag Picking) & bulk fiber for furnace. And also cost to recover was not encouraging. However it might change on location & dumped specific.

Note: Several small trial bits process were tried at each step before taking up whole some on Auto Nagar dump site, on our broad understanding & success as a pilot, this could be solution for most solid waste dumps in India & else where.

Auto Nagar, Hyderabad MSW dump in about 47 acres. This dump was operational till 2007. As per GHMC estimates, it has MSW of about 2.6 million MT. (in 2007) Start date 1982-83

Auto Nagar MSW dump – View in 2007



Bhavani Bio has handled about 2.6 Million Tons of Solid Waste and has achieved stabilization of the entire dump, using in-house developed stabilization process

Auto Nagar MSW dump – View in 2010





Summary

- Bhavani Bio's bio-mining process offers the most eco-friendly solution to the above challenging issues. At the end, the reclaimed land can be used by Municipalities for setting up parks or for any of non-permanent human presence requirements.
 - Bhavani Bio ensures that nuisances and hardships caused by dumps are taken care in first 2-3 years' time (Under Stabilization). Further, Bhavani Bio's process will help municipalities to reclaim most of the dumped area. In addition, the organic material produced in the process can enrich the depleting soils.
 - Demand for organic manure in India is estimated at 10 million tons per annum. MSW landfill dumps in mega and major cities alone can produce 55 million tons of city compost.
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