

MINING AND RECLAIMING EXISTING SANITARY LANDFILLS

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Although the idea of "mining" landfills is not new, the authors are to be commended for initially testing the process and providing the impetus for potential application. The data imply that further research should be performed to make the process more efficient. We trust this will occur.

As indicated, mining a landfill has the basic purpose of recovering usable space and materials which can translate into cost reduction. This is normally not considered in a landfill operation.

However, it is cautioned that potential hazards, such as toxic chemicals and asbestos, be thoroughly considered and investigated prior to mining. Not only would this govern the approach taken, but may alert the operator to potential regulatory action. Conversely, the investigation may reveal that the procedure will cause little or no adverse effects, thus satisfying those groups chiefly concerned with the environment. If regulatory action is involved, costs may increase significantly.

Regarding estimated closing costs, the data are confusing and perhaps misleading. Modern landfills are closed and covered incrementally throughout the op-

erating life and thus the large differentials in Table 1 (Items 2-6) do not make sense. If a landfill is closed and covered incrementally, only a small area will remain uncovered at the end of its life, with attendant lower cost at final closure. Incremental closure will result in further lowering the total cost because it is performed as a normal operating function using personnel and equipment that have to be on-site. As a result, the cost differential per acre should be very little.

The cost differential between new soil and reuseable soil is somewhat small (\$1.52 per ton), and consideration also should be given to moving and stockpiling. Normally, new soil can be directed to the area where it is used, whereas the reuseable soil must be moved from point of processing to either the area of use or to a stockpile, and then from stockpile to area of use. Moving soil and stockpiling involves a cost and must be subtracted from the cost differential, thus possibly reducing or eliminating the potential savings.

However, looking to the future, regulations are moving in the direction of requiring synthetic lining systems and drainage layers for municipal solid waste landfills. These systems are very expensive to install. Mining such landfills can preserve these liner and drainage systems for additional use, lowering the total long term cost for disposal of waste. Thus, perhaps the biggest gain to mining a landfill is space which translates into added landfill life — a very valuable commodity.