

ABSTRACT

In Kadipulo Kulon Village, Salam Subdistrict, Magelang Regency, Central Java Province, there are the land mined mineral stone sand (gravel). Mine was done worked by the society. This land neglected since 1998. The land of area is 8.000 m². With the neglected condition of the land, the land are unfit for agriculture to society. Thus it is necessary to do the improvement of land. The initial phase is to do with landscaping.

According to Minister of Energy and Mineral Resources No. 18 of 2008, On Reclamation and Closure, "Every holder of *Izin Usaha Pertambangan/IUP* (Mining Business License) and *Izin Usaha Pertambangan Khusus/IUPK* (Special Mining Business License) are required to return the land in a way that does not pose a hazard or other dangerous diseases".

Based on the above rules, it is necessary to repair the land. Initial efforts were landscaping. Landscaping method applied in this area is the cut and fill method. Cut and fill method is arrangement by moving the high ground to the lower areas and vice versa. Pattern is applied with divide the land into 4 blocks by 4 weeks processing time. Every block is done by 1 week.

The division of the land block is:

1. Block 1 with a height of 101 meters above sea level.
2. Block 2 with a height of 100,5 meters above sea level.
3. Block 3 with a height of 100,5 meters above sea level.
4. Block 4 with a height of 100 meters above sea level.
5. High of level is 0,5 meter/level.

The volume calculation result of the soil before and after landscaping is:

1. Total volume of the native land in all the blocks are 2.037,99 m³.
2. Total volume of solid ground on all the blocks are 1.467,352 m³.

Based on the comparison of the total volume of soil in the land cut in the fill, then the volume of soil has been shrinking. It is 163,04 m³.

The calculation result of land erosion rate is 34,8 tons/ha/year. Based of the *Kriteria Nilai Tingkat Bahaya Erosi/TBE Tanah* (criteria value erosion potential of soil) is classified as mild. Of these criteria, it can be used as a guideline for the next phase of reclamation.