RINGKASAN

Areal Penambangan PT. Bukit Asam (Persero) Tbk Unit Penambangan Tanjung Enim (PTBA UPTE) berlokasi di Kecamatan Tanjung Enim, Kabupaten Muara Enim, Propinsi Sumatera Selatan. Lokasi penelitian berada pada disposal Pit 3 Banko Barat dengan koordinat titik tengah daerah BA (sampel tanah tidak terganggu mengandung akar tanaman bambu) A,B,C (X = 0368129m ; Y = 9586972m) dan koordinat titik tengah daerah TA (sampel tanah tidak terganggu tidak mengandung akar tanaman bambu) D,E,F (X = 0368113m ; Y = 9586987m). Penelitian ini berawal mula dari tanaman yang ditanam pada area disposal PTBA sebagai penahan gerakan tanah yakni tanaman akasia pada waktu yang belum lama diketahui bahwa bunganya dapat mengganggu pernapasan manusia sehingga dicari alternatif tanaman lain. Secara khusus dalam penelitian ini yang dianalisis adalah tanaman bambu sebab pada lokasi sekitar ditemukan sejumlah rumpun bambu yang mampu hidup.

Pengujian secara khusus yang dilakukan adalah uji geser langsung menggunakan alat uji motorized direct shear test (sifat mekanik) dan beberapa pengujian lain : kandungan air tanah dan batuan, specific gravity tanah, densitas tanah dan batuan, batas cair, batas plastis, dan indeks plastisitas tanah, serta ukuran butir tanah (sifat fisik)

Hasil analisis pengujian sifat mekanik menunjukkan bahwa akar tanaman bambu memberikan pengaruh peningkatan terhadap besarnya nilai kuat geser tanah pada sampel BA apabila dibandingkan dengan sampel TA. Nilai kuat geser pick point sampel BA adalah 61,5 kPa sedangkan sampel TA adalah 57,21 kPa kemudian nilai kuat geser residual point sampel BA adalah 53,76 kPa sedangkan sampel TA adalah 43,54 kPa.

Hasil analisis pengujian-pengujian sifat fisik bahwa keseluruhan sampel tergolong lempung anorganik, berplastisitas tinggi, pada sampel BA A, BA B, BA C, TA D, TA E termasuk pada golongan tanah basah sedangkan sampel TA F termasuk pada golongan tanah sangat lembab, berdasarkan sistem USCS seluruh sampel termasuk golongan CH sedangkan berdasarkan sistem AASHTO sampel BA termasuk A-7-6 (34) dan sampel TA termasuk A-7-6 (36)

ABSTRACT

PT. Bukit Asam (Persero) Tbk, Tanjung Enim Mining Unit (PTBA UPTE) District is located in Tanjung Enim, Muara Enim regency, South Sumatra Province. The study site is located at disposal Pit 3 West Banko in which the midpoint coordinates of BA area (undisturbed soil samples containing roots of bamboo plants) is A, B, C (X = 0368129m ; Y = 9586972m) and the coordinates of the midpoint of TA area (undisturbed soil samples did not contain bamboo plant roots) is D, E, F (X = 0368113m ; Y = 9586987m). This study begins from plants grown in the PTBA disposal area in order to retain soil movement, the plant chosen is acacia, in which recently knows that the pollen can interfere human's respiration, so that alternative plant is needed. The object analyzed in this study is bamboo, seeing that bamboo groves grow on that area.

The certain test conducted is direct shear test using test equipment motorized direct shear test (mechanical properties) and some other tests: the water content on the ground and rocks, specific soil gravity, soil and rock density, liquid limit, plastic limit, and plasticity index of the soil, as well as soil grain size (physical properties)

The analysis results on the mechanical properties show that bamboo roots influence the increasing magnitude in shear strength of the soil at the BA samples compare with the TA samples. The pick point shear strength value in sample BA is 61.5 kPa, while the TA sample is 57.21 kPa. However the residual shear strength value of the sample point BA is 53.76 kPa, while the TA sample is 43.54 kPa.

The result analysis of the tests shows that the physical properties of the overall samples are classified as inorganic clays, high plasticity. The BA A, BA B, BA C, D TA, TA E samples are including wet soil. However the TA F sample is categorized as very humid soil. Based on USCS system, all samples are categorized on CH group. However based AASHTO system, the BA samples are categorized as A-7-6 (34) and the A-TA samples are categorized as 7-6 (36).