Table 6 SUMMARY OF ENGINEERING ASSESSMENT OF THE EARTHFILL MATERIAL FOR THE SELECTED DAMSITES

Damsite	Sayong Damsite	Sedili Besar Damsite	Linggiu Damsite	Upper Pengli Damsite		
Site Fresh tight granite, Geologic partly weathered		Phyllite of Paleozoic, moderately weathered	Sandstone of Paleozoic	Semi-consolidated clayey silt of Pleistocene to Pliocene		
Soil Type	Silty sand- Sandy silt gravel	Sandy silt	Silty clay / Sandy silt	Silty sand		
Plasticity Index	PI = 27-45% PI ≈ 20-36%	.PI = 17-36%	PI = 24-29% PI = 6%	pi = 22-60%		
Natural Water Content	150-20% 30-35%	25-35%	30% 14-19%	20-30%		
Optimum Water Content	168 348	20%	208 148	158		
Compaction Character- istics	Easily compacted with- out special handling- operation related to moisture control.	Compacted with some exphasis on "broken-up" procedure, that is, chewing up soft rock to creata sufficient fines while the moisture content be reduced to the designated value by air-drying.	Compacted with some difficulties in mois- ture control in case that the clay content is significantly high.	Moisture content should be reduced to the designated value by air-drying before compaction.		
Impervious- ness	Imperviousness is easily obtained under the normal quality control.	Imperviousness is easily obtained when properly compacted under careful quality control.	Imperviousness is easily obtained when properly compacted under normal quality control.	Imperviousness is easily obtained when properly compacted.		
Design prob- lems to be considered	Filter design is in- dispensable to avoid piping through to potential cracks.					
Construction problem to be encountered	Drying crack on the compacted surface when exposed to sunshine.	- All the efforts should be concentrated on the reduction of moisture content in dry season.	- All the efforts should be concentrated on the reduction of moisture content in dry season.	- Reduction of moisture content by excavating as thinly as possible and exposing to sun- shine in dry season.		
·		- The neary tamping roller will be effec- tive in breaking down large fragments and compacting material to a suitable density.	 In the wirst case, be blended with sand in the stockpile, Drying cracks on the compacted surface when exposed to sunshine. 	- Drying cracks on the compacted surface.		
Accessi- bility	Easy: the site is not so far from the main road.	Not so easy: the site is located on a count- ainous area as well as far from the main road.	Not so easy: the site is situated within the logging area as well as far from the main road.	Very easy: the site is very close to the main road.		
Assumed Reserves	More than 750,000 m ³ (300m x 500m x 5m)	More than 750,000 m ³ (500m x 500m x 3m)	About 250,000 m ³ (500m x 100m x 5m)	Nore than 3,000,000 m ³ (1,000mx 500m x 6m)		
Remarks	The soil occurred in T.P. NO.1, is silty sand-gravel while the soil in T.P. NO.2 is salty silt.	The soil can be expected to be uniformly distributed.	The soil occurred in the shallow portion is silty clay while the soil is sandy silt in the deeper portion.	The soil can be expected to be uniformly and widely distributed.		

TENTATIVE DESIGN VALUES OF CONSTRUCTION MATERIA	татс	МАФЕрт	TON	CONSTRUCT	OF	VALUES	DESIGN	TENTATIVE	rable /
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Earthfill Mate	rial
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 			Sayong	Sayong		н 1	Upper			Rock
			(A)	(B)	Sedili	Linggiu	Pengli	Filter	Drain	rip-rap
							-			
	Specific Gravity	Gs	2.67	2.66	2.75	2.66	2,59	2.64	2.60	2.60
	Wet Density	jt (t/m ³)	1.94	1.80	1.74	1.72	1.73	2.00	2.07	1.98
	Saturated Density	}sat (t/m³)	2.04	1.84	1.92	2.07	2.06	2.24	2.18	2,17
	Shear Strength*	C' (t/m2)	2	3	4	5	. 2	. 0	0	Ó
		ø' (degree)	30	28	25	20	30	33	35	40
		Cuu (t/m ²)	5	5	6	8	5			-
		øuu (degree)	25	25	20	15	25			-
:	•									

Permeability

*

m-i-1

k (cm/sec) $1 \times 10^{-5} 1 \times 10^{-6} 1 \times 10^{-6} 1 \times 10^{-6} 1 \times 10^{-6} 1 \times 10^{-3} 1 \times 10^{-2} 1 \times 10^{-1}$

All the values of shear strength are assumed for preliminary design purpose, not based on the laboratory tests.











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