

REQUIRED REGOLITH DATA - PRE-MINER DESIGN

TYPE OF REGOLITH DATA REQUIRED	SOURCE	QUALITY NOW AVAILABLE	PRIORITY	MEANS OF ACQUIRING BETTER DATA
Dust Mobility	Apollo data & operations	B (but know enough to know that design must prevent)	1	In situ measurements
Dust Electrostatic Properties	Apollo data & samples	C (may be a problem in separating fines but not a problem in fluidized streams)	1	“
Thermal Environment	Surveyor, ALSEP, and Apollo data	A	1	
Thermal Inertia of Fine Fraction	Apollo data & samples	A	1	
Specific Gravity	Apollo data	A	1	
Bulk Density and Porosity	Apollo cores In situ seismic	A	1	

	data			
Relative Density	Apollo data	A	2	
Compressibility	“	A	2	
Shear Strength	“	B (estimate comes from indirect data)	1	In situ measurements
Permeability and Diffusivity	“	C (“)	2	Might be possible using unopened Apollo cores
Bearing Capacity	“	B (“)	2	
Slope Stability	“	B (“)	1	
Trafficability	“	A	2	
Abrasiveness				
Particle-Size Distribution	Apollo cores & samples	A	1	
Particle Shape vs Size Distribution	“	A	1	
Particle Hardness vs Size Distribut'n	“	A	1	

3D Cohesion Distribution	Apollo cores	C (?)	1	
He Thermal Release Profile	Apollo sample analysis data	B (in situ profile may differ somewhat)	1	
H₂ Thermal Release Profile	“	B (“	1	
H₂O Thermal Release Profile	“	B (“	1	
C/N Species Thermal Release Profile	“	B (“	1	
S Thermal Release Profile	“	B (“	1	