

DAM WALL GROUTING

ITEM NO	PAYMENT REFERS	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
13		Preliminary and Generals				
13.1		Fixed				
13.1.1		Establishment and De-Establishment on site to include all necessary Storages.	sum	1		
13.1.2		Plant or lifting equipment required to reach +/- 65 m height and radius of 40 m. (To include Operating personnel)	sum	1		
13.2		Time Related				
13.2.1		Supervision , Accomodation and Travel	Months	3.00		
13.3		Insurances				
13.3.1		Cost for Performance Bond, All Risk Contractors Insurance, SASRIA,etc	sum	1.00		
13.4		Health & Safety Management				
13.4.1		Allow for the necessary Workman's Compensation Fund or FEM contributions for the duration of the project with and including renewals	sum	1.00		
13.4.2		Allow for the preparation and approval of project-specific H&S Plan & File [CR 7(1)(a)]	sum	1.00		
13.4.3		Allow for the implementation and maintenance of project-specific H&S Plan & File. [CR 7]	Months	3.00		
13.4.4		Allow for the appointment of a Part-Time Competent Construction Health & Safety Officer (SACPCMP Registered) to assist in the control of all health and safety related aspects on site as per CR 8(5)	Months	3.00		
13.4.5		Allow for provision of Basic Emergency Preparedness and Response equipment & at least Two (2) First Aiders	sum	1.00		
13.5		Provide, supply and maintenance for each worker the following SANS approved personal protective equipment & clothing as per the site-specific risk assessments:				
13.5.1		Hard Hats (High Density polyethylene, & 6-point lining)	sum	1.00		
13.5.2		Overall/work suit (100% Cotton)	sum	1.00		
13.5.3		Rain suits	sum	1.00		
13.5.4		Safety boots/shoes (Steel-Toe)	sum	1.00		
13.5.5		Safety Gumboots (Steel-Toe)	sum	1.00		
13.5.6		Safety gloves	sum	1.00		
13.5.7		Ear Plugs/Muffs	sum	1.00		
13.5.8		Dust Mask (at least FF2 type)	sum	1.00		

13.5.9		Respiratory Protective Equipment	sum	1.00		
13.5.10		Safety goggles/ Eye Protective Equipment	sum	1.00		
13.5.11		High visibility reflective vests and/or bibs	sum	1.00		
13.5.12		Personal Fall arrest and rescue equipment with and including life lines and associated equipment	sum	1.00		
13.5.13		Temporary warning signs and symbols	sum	1.00		
13.5.14		SANS approved safety netting (orange color with minimum of 1,2 meters high)	sum	1.00		
13.5.15		Allow for Pre-employment medical examinations	sum	1.00		
13.5.16		Allow for exit medical examinations	sum	1.00		
13.5.17		Allow for all compulsory health and safety awareness programme (e.g. Inductions, toolbox Talks, Safety Promotions, Risk Assessment, First Aid, Fire Fighting, H&S related training, etc.)	sum	1.00		
13.6		Environmental Management				
13.6.1		Provide for adequate handling and storage of materials so as to minimize contamination of ground, air or water.	Months	3.00		
13.6.2		Provide for the adequate and safe collection and disposal of waste material from site by an approved method.	Months	3.00		
	PPS-9	DRILLING AND GROUTING (DAMS)				
	PPS9.14.1	Setting up equipment for drilling grout & drainage holes				
		a) Percussion drilling rigs for grouting (DWG. 9368-331)				
		i) for grouting primary holes	No	16		
		ii) for grouting secondary holes	No	19		
		iii) for grouting tertiary holes	No	38		
		iv) for grouting quaternary holes	No	76		
		v) for exposing drain holes (within 0.5m radius)	No	9		
		vi) for new piezometers in Gallery	No	6		

PPS9.14.2	Drilling of holes				
	a) Percussion drilling 0 - 25 m, 0 - 30 degrees (DWG. 9368-331)				
	i) for grouting primary holes	m	400		
	ii) for grouting secondary holes	m	475		
	iii) for grouting tertiary holes	m	950		
	iv) for grouting quaternary holes	m	1900		
	v) for exposing drain holes	m	40.5		
	vi) for new piezometers in Gallery	m	81		
	b) Percussion drilling 25 - 50 m, 0 - 30 degrees (DWG. 9368-331)				
	i) for grouting primary holes	m	80		
	ii) for grouting secondary holes	m	95		
	iii) for grouting tertiary holes	m	190		
	iv) for grouting quaternary holes	m	380		
PPS9.14.3	Re-drilling of grouting holes				
	a) Grout Holes (All)	m	447		
PPS9.14.7	Curtain and Consolidation grouting				
	Curtain grouting - Stage to 1m above joint	No	94		
	Curtain grouting - Stage from 1m above joint to end	No	94		
PPS9.14.4	Water pressure tests				
	a) Abbreviated water pressure tests (DWG. 9368-331)	No	298		
PPS9.14.8	Grouting materials				
	CEM 1 cement	kg	13330		
	Bentonite	kg	400		
PPS9.14.16	Backfilling of exploratory boreholes				
	Backfilling of new piezometer holes	No	76		
				TOTAL	
				CONTINGENCY @ 5%	
				SUBTOTAL	
				VAT @ 15 %	
				GRAND TOTAL (INCL VAT)	