

LINING OF URA IV DAM		
GRAND SUMMARY		
ITEM	ITEM DESCRIPTION	AMOUNT (KES)
1	BILL NO. 1: Preliminaries and General	-
2	BILL No. 2: Geotechnical and Geophysical Investigations	-
3	BILL No. 3: Rehabilitation and desilting works	-
4	Sub-Total 1	-
5	Add 7.5% Contingencies	-
6	Sub-Total 2	-
7	Add 16% VAT	-
	GRAND TOTAL TO FORM OF TENDER	-

LINING OF URA IV DAM					
BILL NO:1 PRELIMINARIES AND GENERAL ITEMS					
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	CLASS A: GENERAL ITEMS				
	Contractual Requirements				
A110	Allow for Provision of Performance Bond in accordance with conditions of Contract	Item	Sum		-
A120	Allow for Provision of Contractors All Risk Insurance in accordance with conditions of Contract.	Item	Sum		-
A130.1	Allow for Provision of third party insurance (including employer's property) in accordance with conditions of contract	Item	Sum		-
A130.2	Allow for Provision of Insurance against accidents to workmen	Item	Sum		-
	Specified Requirements				
A224	Maintain, insure, fuel, lubricate, and servicing of the transport vehicle in use by the Engineer during the contract period - Allow approximately 5,000 km per vehicle month	Veh-Months	10		-
A225	Add % for profit, administration, attendance upon, overheads, etc. for Item A224 above.	%	-		-
	Total Carried to Collection Sheet				-

	Attendance Upon Engineers Staff				
	Allow for the following Staff for the Project Officer's Office. (Note: The Staff to be employed by the Contractor but to be under the exclusive day to day instruction of the Project Officer). The rate to include for all overtime, accommodation costs, requisite Government of Kenya mandatory deductions, etc. all necessary for the Staff to perform their duties. The minimum relevant experience for the Staff should be at least 5 years				
A240	1No. Intern	Months	10		-
A244	Inspector of Works	Months	10		-
A245	Add % for profit, administration, attendance upon, overheads, etc. for Item A240 and A244 above.	%	-		-
	Temporay Works				
A270	Provide, erect and maintain (1 No) project sign board at the positions shown by the Engineer at site of works inclusive of removal and storage as directed by the Engineer at the end of the maintenance period.	No.	1		-
	Method Related Charges				
A311	Provide Kshs. 500,000 for Contractors Campsite establishment and removal on completion. Mobilization and demobilization of equipment and personel and disposal of all waste material away from site as directed by the project Engineer.	Item	LS		-
A371.1	Provide Kshs. 1,500,000 to Cover the Cost of Employers Counterpart Staff Attached to the Project	PC Item	1		-
A371.2	Allow for Monthly Provisional Sum for Cost of Site meetings to be spent as instructed by the Engineer	Months	10		-
A371.3	Add % for profit, administration, attendance upon, overheads, etc. for Item A371.1- A371.2 above.	%	-		-
A374	Allow for production and provision of As-Built Drawings for all the works under the dedicated system in accordance with the General Conditions of Contract and Specifications/Requirements.	Item	1.00		-
	Provisional Sums				
A410	Allow a provisional sum of Kshs.150,000 for utilisation under schedule of dayworks for labour	Item	Sum		-
A412	Add% for profit, administration, attendance upon, overheads, etc. for Item A410 above	%	0		-
A413	Allow a provisional sum of Kshs.100,000 for utilisation under schedule of dayworks for materials	Item	Sum		-
A414	Add% for profit, administration, attendance upon, overheads, etc. for Item A413 above	%	0		-
A420.1	Allow a provisional sum of Ksh. 200,000 for project's Commissioning (plaque etc.) as per Project Officer's instructions.	Prov sum	1		-
A420.3	Allow a Provisional Sum of Kshs.100,000 for training of Employer's Staff during Construction, Testing and Commissioning of the Works as specified in the Specifications/Requirements.	Prov-Sum	1		-
A420.4	Add% for profit, administration, attendance upon, overheads, etc. for Items A420.3 above	%	-		-
	Total Carried to Collection Sheet				-

	The Setting Out / Survey Work including establishment of Level Datum, production of Survey Drawings to an agreed scale will include the following:				
A420.5	Allow Provisional sum of Ksh 200,000 for Setting Out and Survey of the Works as directed by the Engineer in accordance with the General Conditions of Contract Document.	Item	1.00		-
A420.6	Add% for profit, administration, attendance upon, overheads, etc. for Item A420.5 above	%	-		-
A420.7	Allow a Provisional sum of Ksh 250,000 for any costs associated with compliance with Environmental, Health and Safety Requirements	Sum	L.S		-
	Total Carried Forward to Bill Collection Sheet				-
	Page 1 Total				-
	Page 2 Total				-
	Page 3 Total				-
	Grand Total Carried to Summary Page (exclusive of VAT)				-

BILL NO: 2 GEOTECHNICAL AND GEOPHYSICAL INVESTIGATIONS					
Item No	Description	Unit	Qty	Rate (KES)	Amount (KES)
Bill 2	Electrical Resistivity Tomography (ERT)				
B644.1	ERT along dam axis e.g. Wenner/Schlumberger/DP arrays	No	2		-
B644.2	ERT across reservoir area(multiple lines)	No	4		-
B833	Data processing, inversion & interpretive report(Sections and Plans) , factual and interpretative geotechnical reports (ERT, geotechnical boreholes, laboratory tests) and recommendations for proposed civil works	LS	1		-
	Geotechnical Investigations				
B113	Trial pits to 3m depth including shoring (if required) logging, sampling and backfill	Pit	4		-
B160	Backfilling & site reinstatement	BH	4		-
B324	Allow for Drilling in soil (rotary wash/auger), incl. sampling and logging	m	16		-
B324.1	Borehole 0-3m	No	4		-
B324.2	Borehole 3-6m	No	4		-
B324.3	Borehole 6-9m	No	4		-
B324.4	Borehole 9-12m	No	4		-
B324.5	Borehole 12-16m	No	4		-
B343.1	Rock core drilling (NX), recovery and preservation	m	12		-
B343.2	Core logging (RQD, TCR,strength index, defects)	m	12		-
B350	Temporary casing/consumables (as	m	20		-
B513	SPT (N-value) in boreholes (incl. sampler, blow count recording)	Test	28		-
B511	Rock packer (Lugeon) permeability tests (single/double)	Stage	6		-
	Laboratory Testing at an Accredited Laboratory				
B712	Atterberg Limits (LL, PL, P.I,LS)	Sample	4		-
B713	Specific Gravity (soil/rock)	Sample	4		-
B714	Particle Size Distribution (Sieve Analysis)	Sample	4		-
B715	Particle Size Distribution (Hydrometer Analysis)	Sample	4		-
B731	Standard Proctor (MDD/OMC)	Sample	4		-
B751	Bulk Density	Sample	4		-
B751	Permeability	Sample	4		-
B742	Consolidation	Sample	4		-
B761	UCS(Unconfined Compressive Strength)Test (CD/QU, per sample)	Sample	4		-
B762	Triaxial U-U (Unconsolidated Undrained Test)	Sample	4		-
B763	Triaxial C-U (Consolidated Undrained Test)	Sample	4		-
B771	Rock UCS (per core)	Sample	4		-
	Total Carried Forward to Grand Summary (Exclusive of VAT)				-

LINING OF URA IV DAM					
BILL NO. 3: REHABILITATION AND DESILTING WORKS					
ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Testing of the Works				
A260	Allow for conducting leakage and pressure testing on existing scour and outlet pipes.	Item	L.S		0
	Access Road				
A273	Allow for spot improving of access road to gravel standards. Provide transport and place all materials required to construct 5m wide access road. Rates shall include Grading, laying and compacting of approved gravel material with a 2% slope for drainage.	M	500		0
	RIVER DIVERSION				
A275	Allow for all costs involved in providing temporary diversion of the river during construction of works. Rates to include any necessary culverts, diversion channels, masonry works etc, all for the purpose of diversion of the water	Item	1		-
	Site Clearance				
D120	General site Clearance in dense bushes.Dispose locally	m ²	200		-
D120.1	Clear Site of all grass, bushes, trees, shrubs, etc, grub up roots and cart away within the reservoir and spillway.	m ²	35,000		0
D120.2	Remove all stones arranged in the embankment,carry out levelling using granular materials at the specified slopes and compact the surface to receive the Dam Liner (measured separately)	m ²	3,550		0
D120.3	Clear all vegetation and remove all debris and silt accumulated in the inlet channel.	m	170		0
D210	Cut down trees over 1.0m girth, grab out roots and dispose as directed	No.	2		-
D310	Stumps of diameter:500mm -1m,locally disposed (Provisional)	No.	2		-
	Impervious Clay Material				
E522	Use approved impervious clay material 200mm thick on the reservoir floor,embankment slopes and spread in layers of 100mm thick as directed, level and compact to achieve 95% MDD and prepare a smooth finished ground level ready to receive the Dam liner (Contractor to Identify Source of Clay for Approval by the Engineer)	m ³	7,000		0
	EarthWorks				
E560	Allow for stripping of pan bottom including removal of rock/hard material at the reservoir base to 200-400mm below finished ground level in accordance with the drawings and as directed by project engineer. Cart away to Spoil	m ³	14,000		0
	Intake and Channel Rehabilitation Works				
	DEMOLITION & SITE CLEARANCE				
D521	Allow a Provisional Sum of Ksh 100,000 for hacking and rebar treatment of Existing Intake structure	Sum	1		0
	EARTHWORKS FOR REINSTATEMENT OF SIDE MASONRY WALLS				
E311	Allow for foundation excavation, by excavating 250mm top soil and disposing it.	m ³	100		-
E322	Ditto extra over excavation in rock	m ³	5		-
E534	Ditto above items for the over-burden material, cart away to Spoil as directed by the engineer	m ³	1600		-
	CONCRETE WORK				
F132	Provide & Allow for mixing and placing of concrete Class 15 to form 50mm thick blinding	m ³	10		-
F152	Provide and allow for Batching, mixing and placing of vibrated reinforced concrete Class 25-20mm aggregate, with waterproof cement to form concrete weir across the river section width as directed, including intake and off-take chambers as per the drawings to finish smooth to the satisfaction of the engineer	m ³	30		-
F142	Provide and allow for Batching, mixing and placing of vibrated reinforced concrete Class 20-20mm aggregate, with waterproof cement to form diversion Channel base from the Intake to the Inlet Channel as directed by the Engineer	m ³	5		-
	Total Carried to Collection Sheet				-

ITEM No.	DESCRIPTION	UNIT	QUANTITY	RATE (Kshs)	AMOUNT (Kshs)
	Testing of the Works				
	FORMWORK				
F215	Erect and strike sawn formwork to sides of the weir and chambers n.e. 2m	m²	50		-
	REINFORCEMENT				
	Provide, cut, fix and position high tensile reinforcement bars as per the working drawings:				
G524	T12 bars	Kg.	1600		-
G523	T10 bars	Kg.	1000		-
G562	A 142 BRC Mesh for Diversion Channel	SM	30		-
G570	Binding wire	Kg.	35		-
	Outlet Filter Media				
N162	Remove existing cage for the outlet Filter Media and replace with galvanised metal tubes with 12mm grills all	Nr	1		0
	AUXILIARY WORKS				
UR20	Provide, install gabion boxes and rock fill to these gabions	m²	400		-
UR21	Allow for Stone pitching along the inner section of the Inlet Channel.	m²	400		-
	DAM LINING				
W655	Supply, transport to site and install 1.5mm thick HDPE geomembrane liner in accordance with industry standards and project-specific requirements. Contractor to ensure a smooth even surface to satisfaction of engineer prior to installation. Allow for inspection and approval of liner by engineer prior to supply and installation. Rate to include Excavation and backfilling of 800x800mm ditch round the top of embankment to hold the liner in place.	m²	35,000		0
	Total Carried to Collection Sheet				0
	Page 1 Total				0
	Page 2 Total				0
	TOTAL CARRIED FORWARD TO GRAND SUMMARY (EXCLUSIVE OF VAT)				0

DAYWORKS SCHEDULE					
ITEM	DESCRIPTION	Unit	QTY	RATE (KSHS)	AMOUNT (KSHS)
4.1	THE WHOLE OF THIS BILL IS PROVISIONAL LABOUR				
	The rates should include for all costs, such as insurance, travelling time, overtime, accommodation, use of small tools of trade, supervision, overheads and profit. Only time engaged upon work will be paid for:				
4.1.1	Unskilled labour	Hrs	Rate Only		
4.1.2	Semi-skilled labour	Hrs	Rate Only		
4.1.3	Skilled Labour	Hrs	Rate Only		
4.2	PLANT				
	The rates should be included for all operational and maintenance costs, fuel, oil, operators, turn boys, Supervision, overhead and profits. Only the time employed on work will be paid for and the rates should include the idle, travelling and overtime.				
4.2.1	Compressor CP with 2 jacks	Hrs	Rate Only		
4.2.2	Concrete vibrator (petrol or diesel)	Hrs	Rate Only		
4.2.3	Portable water pump 50mp 50mm inclusive of hoses, couplings, valves and strainer)	Hrs	Rate Only		
4.2.4	Concrete mixer	Hrs	Rate Only		
4.2.5	Backhoe Excavator	Hrs	Rate Only		
4.3	MATERIALS				
4.3.1	Ordinary Portland cement	tonne	Rate Only		
4.3.2	Mild steel/High yield steel	tonne	Rate Only		
4.3.3	Murram	tonne	Rate Only		
4.3.4	River sand	tonne	Rate Only		
4.3.5	Hard core	m ³	Rate Only		