

### Appendix A: Budgetary Cost for TF Treatment Process (Phase 1, Module 1)

NO	DESCRIPTION	SECTION	SUB TERRAIN WORKS				CONCRETE WORKS						REINFORCEMENT STEEL			FORM-WORK & SUPPORTS			PLASTER & HA CEMENT			PAINTING & FINISHING			MECHANICAL & ELECTRICAL				TOTAL COST	TOTAL COST		
			L	M	UNIT COST RM	SUB TOTAL RM	L	W	D	T	M3	UNIT COST RM	SUB TOTAL RM	TON	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	COMPONENT	UNIT	UNIT COST RM	SUB TOTAL RM	RM	USD	
1	Excavation & Soil works (Imported soil in Million M3)		300,000		40	6,408,000																								6,408,000	1,602,000	
2	Ground Treatment* Piling 3000 Points, Length 36M		36	3,000	3500	10,500,000																								10,500,000	2,625,000	
3	Inlet Works / Screen Chamber	WALL BASE					10	5	5	0.3	45	400	18,000	11.25	4,000	45,000	300	45	13,500	300	35	10,500	300	12	3,600	SS SCREEN	2	120,000	240,000	330,600	82,650	
							10	5	0.5	0	25	380	9,500	2.5	4,000	10,000	15	45	675	15	0	-	15	0	-					20,175	5,044	
4	Tanker Sludge Reception Point	MH					1					15,000	15,000													FACILITY	2	45,000	90,000	105,000	26,250	
5	Pumping Station	STAIR-CASE TOP SLAB									15	400	6,000	1.5	4,000	6,000	15	45	675	15	35	525	10	12	120	SCREW PUMP	2	220,000	440,000	453,320	113,330	
							10	5	0	0.4	20	400	8,000	2	4,000	8,000	50	45	2,250	50	35	1,750	0	0	-							
6	Grit and Grease Chambers	WALL BASE					20	5	3	0.3	90	400	36,000	22.5	4,000	90,000	45	45	2,025	400	35	14,000	300	12	3,600	SS BAFFLE	2	35,000	70,000	215,625	53,906	
							20	5	0	0.5	50	380	19,000	5	4,000	20,000	15	45	675	15	0	-	15	0	-					39,675	9,919	
7	Secondary Screen Chambers	WALL BASE					20	5	3	0.3	45	400	18,000	11.25	4,000	45,000	300	45	13,500	400	35	14,000	300	12	3,600	SS SCREEN	2	20,000	40,000	134,100	33,525	
							20	5	0	0.5	50	380	19,000	5	4,000	20,000	15	45	675	15	0	-	15	0	-					39,675	9,919	
8	Distribution Chamber	WALL BASE					5	5	3	0.3	18	400	7,200	4.5	4,000	18,000	300	45	13,500	200	35	7,000	300	12	3,600	PENSTOK	8	15,000	120,000	169,300	42,325	
							5	5	0	0.3	7.5	380	2,850	0.75	4,000	3,000	15	45	675	15	0	-	15	0	-					6,525	1,631	
9	Anoxic Tank (Based On Module)	WALL BASE					140	30	3	0.5	510	400	204,000	127.5	4,000	510,000	2040	45	91,800	2040	35	71,400	2040	12	24,480	PUMP	2	45,000	90,000	991,680	247,920	
							140	30	0	0.4	1680	380	638,400	168	4,000	672,000	170	45	7,650	170	0	-	170	0	-	MIXER	2	41,200	82,400	1,400,450	350,113	
	Filter Media																									FILTER MEDIA	162,000	30	4,860,000	4,860,000	1,215,000	
10	Trickling Filter Tanks	WALL BASE					140	140	3.5	0.4	784	400	313,600	196	4,000	784,000	3920	45	176,400	3920	35	137,200	3920	12	47,040	BOOSTER ARM	2	175,000	350,000	1,808,240	452,060	
							140	140	0	0.4	7840	380	2,979,200	784	4,000	3,136,000	280	45	12,600	280	0	-	280	0	-					6,127,800	1,531,950	
11	Secondary Clarifier	WALL BASE					70	140	5	0.5	1050	400	420,000	262.5	4,000	1,050,000	4200	45	189,000	4200	35	147,000	4200	12	50,400	SS BAFFLE	2	50,000	100,000	1,956,400	489,100	
							70	140	0	0.4	3920	380	1,489,600	392	4,000	1,568,000	210	45	9,450	210	0	-	210	0	-	PIPING &	1	1,300,000	1,300,000	4,367,050	1,091,763	
12	Disinfection Tank	WALL BASE					5	140	3	0.5	435	400	174,000	108.75	4,000	435,000	1740	45	78,300	1740	35	60,900	1740	12	20,880	ELECTRICAL	1	2,000,000	2,000,000	2,769,080	692,270	
							5	140	0	0.4	280	380	28	42	4,000	168,000	145	45	6,525	145	0	-	145	0	0	-						
	TOTAL RAW PROJECT COST																														42,702,695	10,675,674
13	DESIGN, SUPERVISION AND T&C 15% OF TOTAL COST																														6,405,404	1,601,351
																															49,108,099	12,277,025
14	CONTINGENCY 15% OF TOTAL COST																														7,366,214.89	1,841,554
	PROJECTED PROJECT COST FOR MODULE 1 (100,000 M3)												6,377,378			8,588,000			619,875			464,275			157,320					9,782,400	56,474,314	14,118,579

### Appendix B: Budgetary Cost for SBR Treatment Process (Phase 1, Module 1)

NO	DESCRIPTION	SECTION	SUB TERRAIN WORKS		CONCRETE WORKS						REINFORCEMENT STEEL		FORM-WORK & SUPPORTS			PLASTER & HA CEMENT			PAINTING & FINISHING			MECHANICAL & ELECTRICAL				TOTAL COST	TOTAL COST		
			UNIT COST RM	SUB TOTAL RM	L	W	D	T	M3	UNIT COST RM	SUB TOTAL RM	TON	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	M2	UNIT COST RM	SUB TOTAL RM	COMPONENT	UNIT	UNIT COST RM	SUB TOTAL RM	RM	USD
1	Excavation & Soil works (Imported soil in Million M3)		40	3,600,000																								3,600,000	900,000
2	Ground Treatment* Piling 3000 Points, Length 36M		3500	3,500,000																								3,500,000	875,000
3	Inlet Works / Screen Chamber	WALL			10	5	5	0.3	45	400	18,000	11.25	4,000	45,000	300	45	13,500	300	35	10,500	300	12	3,600	SS SCREEN	2	120,000	240,000	330,600	82,650
		BASE			10	5	0.5	0	25	380	9,500	2.5	4,000	10,000	15	45	675	15	0	-	15	0	-				20,175	5,044	
4	Tanker Sludge Reception Point	MH			1					15,000	15,000													FACILITY	2	45,000	90,000	105,000	26,250
5	Pumping Station	STAIR-CASE							15	400	6,000	1.5	4,000	6,000	15	45	675	15	35	525	10	12	120	SCREW PUMP	4	220,000	880,000	893,320	223,330
		TOP SLAB			10	5	0	0.4	20	400	8,000	2	4,000	8,000	50	45	2,250	50	35	1,750	0	0	-						
6	Grit and Grease Chambers	WALL			20	5	3	0.3	90	400	36,000	22.5	4,000	90,000	45	45	2,025	400	35	14,000	300	12	3,600	SS BAFFLE	2	35,000	70,000	215,625	53,906
		BASE			20	5	0	0.5	50	380	19,000	5	4,000	20,000	15	45	675	15	0	-	15	0	-				39,675	9,919	
7	Secondary Screen Chambers	WALL			20	5	3	0.3	45	400	18,000	11.25	4,000	45,000	300	45	13,500	400	35	14,000	300	12	3,600	SS SCREEN	2	20,000	40,000	134,100	33,525
		BASE			20	5	0	0.5	50	380	19,000	5	4,000	20,000	15	45	675	15	0	-	15	0	-				39,675	9,919	
8	Distribution Chamber	WALL			5	5	3	0.3	18	400	7,200	4.5	4,000	18,000	300	45	13,500	200	35	7,000	300	12	3,600	PENSTOK	8	15,000	120,000	169,300	42,325
		BASE			5	5	0	0.3	7.5	380	2,850	0.75	4,000	3,000	15	45	675	15	0	-	15	0	-				6,525	1,631	
9	Anoxic Tank (Based On Module)	WALL			30	20	3	0.5	150	400	60,000	37.5	4,000	150,000	600	45	27,000	600	35	21,000	600	12	7,200	PUMP	8	45,000	360,000	625,200	156,300
		BASE			30	20	0	0.4	240	380	91,200	24	4,000	96,000	50	45	2,250	50	0	-	50	0	-	MIXER	8	41,200	329,600	519,050	129,763
	Decanter, PLC, SCADA																							DECANTER	1,000,000	6	6,000,000	6,000,000	1,500,000
10	SBR Tanks	WALL			100	120	3.5	0.4	616	400	246,400	154	4,000	616,000	3080	45	138,600	3080	35	107,800	3080	12	36,960	PIPING AIR	2	175,000	350,000	1,495,760	373,940
		BASE			100	120	0	0.4	4800	380	1,824,000	480	4,000	1,920,000	220	45	9,900	220	0	-	220	0	-				3,753,900	938,475	
11	Disinfection Tank	WALL			15	140	3	0.5	465	400	186,000	116.25	4,000	465,000	1860	45	83,700	1860	35	65,100	1860	12	22,320	ELECTRICAL	1	4,000,000	4,000,000	4,822,120	1,205,530
		BASE			15	140	0	0.4	840	380	84	126	4,000	504,000	155	45	6,975	155	0	-	155	0	0	BLOWERS	6	1,000,000	6,000,000	6,511,059	1,627,765
																								GEN SET	2	2,000,000	4,000,000	4,000,000	1,000,000
	TOTAL RAW PROJECT COST																										12,479,600	32,781,084	8,195,271
12	DESIGN, SUPERVISION AND T&C																												
	15% OF TOTAL COST																											4,917,163	1,229,291
																												37,698,247	9,424,562
13	CONTINGENCY																												
	15% OF TOTAL COST																											5,654,736.99	1,413,684
	<b>PROJECTED PROJECT COST FOR MODULE 1 (100,000 M3)</b>									<b>2,566,234</b>			<b>4,016,000</b>			<b>316,575</b>			<b>241,675</b>			<b>81,000</b>				<b>34,959,200</b>	<b>43,352,984</b>	<b>10,838,246</b>	