

(Rs.in Lakhs)													
Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Deprn. Rate (%)	Total Depn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Amount				
									Y1	Y2	Y3		
A.	Face Equipment												
1	LHD 3.0 CU.M with push plate bucket,100 HP,without remote control arrangement tyre mounted and cable reel. GEB,550V for above,complete with safety feature.	4	142.84	3		1	142.84	142.84		142.84		16.66%	23.80
	LHD 1.5 CU.M Standard height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,2000 mm with GEB, and cable reel ,complete with safety feature.	4		4									
a	LHD 1.5 CU.M Extra Low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB, and cable reel ,complete with safety feature.	1	32.88			1	32.88	32.88	0.00	32.88		16.66%	5.48
b	LHD 1.5 CU.M low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB, and cable reel ,complete with safety feature.	1	32.88			1	32.88	32.88		32.88		16.66%	5.48
c	Roof Bolter,UDM standard height with electricals	8	160.00	4		4	40.00	160.00		160.00		11.11%	17.78
d	Multi shot exploder(IS-TYPE WS-330)	20	0.40			4	L.S.	0.40		0.40		11.11%	0.04
	Sub Total (A)		369.00		0.00			369.00	0.00	369.00	0.00		52.57
B.	FACE AND GATE TRANSPORT												
	Gate Belt Conveyor												
	1000 mm wide,850 m long,300 t/h Cap,2m/sec belt speed, 2X90 KW drive,Horizontal loop take up ,electricals suitable for 550 v FLP Electricals	2	205.72			2 Sets	102.86	205.72		102.86	102.86	5.15%	10.59
1.1	Drive Head , Structural etc.	2	202.16			2	101.08	202.16		101.08	101.08	33.33%	67.38
1.2	Idlers,Loading points etc.	3.57	68.00			3.57	19.05	68.00		34.00	34.00	33.33%	22.66
2	PVC Belting,1000mm wide,D5000 or equiva	2.00	60.00			2.00	30.00	60.00		60.00	60.00	33.33%	20.00
3	Pony belt conveyor	2	20.16			2	10.08	20.16		16.19	16.19	5.15%	1.04
4	Endless Haulage,37 KW,550V FLP electrical	48	32.38			48	0.6745	32.38		2.43	2.43	5.15%	1.67
5	Rails 15 Kg/m in t	L.S.	4.86			L.S.		4.86		1.20	1.20	100.00%	0.25
6	Track materials(15%)	3.36	2.39			3.36	0.71	2.39		2.42	2.42	100.00%	0.25
7	Haulage Rope,19 mm dia. (in km)		595.67					595.67	0.00	317.76	317.76		125.98
	Sub total(B)												

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A-3

[Rs. in Lakhs]													
Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Deprn. Rate (%)	Total Depn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Amount				
									Y1	Y2	Y3		
C	TRUNK TRANSPORT	4		3									
1	Trunk Belt Conveyor Cap. 2m/sec belt speed, 2X90 Kw drive, Horizontal loop take up, electricals suitable for 550 v FLP Electricals												
1.1	Drive Head, Structural etc.					0.00	0.00	0.00	0.00				0.00
1.2	Idlers, Loading points etc.					0	0.00	0.00	0.00				0.00
2	PVC Belting, 1000mm wide, D5000 or equivalent (in km)												30.90
4	Reciprocating Feeder (Cap. 300tph)	1	600.00				600.00		600	3.00	3.00	5.15%	0.46
5	Man riding haulage	LS	9.00			LS	9.00		3.00			5.15%	0.29
6	Transfer points	LS	5.67			LS	5.67		1.42			5.15%	0.29
7	Foundation for trunk conveyors		614.67				614.67		603.00	4.42	5.83		31.66
D	Transport Auxiliaries												
D	Transport Auxiliaries												
1	Coal Tubs	20	5.40			20	0.27	5.40	2.70			5.15%	0.28
2	Material Supply Trolleys	10	2.70			10	0.27	2.70	2.70			5.15%	0.14
3	Diversion pulleys, Catches, Friction pulleys, dog nails, nut, bolt, fist plates etc.					LS	-	4.00	2.00			5.15%	0.21
	Sub total (D)	LS	4.00				-	12.10	0.00	7.40	3.20		0.62
E	Miscellaneous Equipment												
E.1	Ventilation Equipment												
	Main Mechanical Ventilator, 330KW air discharge : 80-180cu.m/sec, wg : 50-150mm (with control system for RPM, blade angle, diffuser, etc. & condition monitoring panel)/complete with electricals/3.3kv/NFLP/AVA Fan stop indicator, temp. meter/ Jack shaft pulley etc.												
2	Auxiliary Fan, BDF-6.3.0-6.0.250-60mm/WG, 15KW, 550V FLP motor & DOL starter	4	1.57			1	1.57	1.57			1.57	11.31%	0.18
3	Flexible Ducting, 600mm (W)	500	5.45			0.5	10.90	5.45	3.00			33.33%	1.82
E.11	General Safety												
1	Cab Lamps	1121	3.00			100	0.03	3.00	3.00			33.33%	1.00
2	Battery Charger for 102 lamps & battery charging rack for the above	1	2.00			2	0.50	1.00	1.00			5.00%	0.05
3	Self Rescuers	150	0.00			1	2.00	2.00	2.00			5.00%	0.10
4	Rack for Self Rescuers (100 Nos.)	15	0.21					0.00					0.00
5	Flame Safety Lamp & Accessories	8	1.11			3	0.37	1.11	0.21			5.15%	0.01
6	Methanometer & Accessories	10	0.03			1	0.03	0.03	0.50			5.15%	0.06
7	Carbon Monoxide detector with tubes (10 tubes pack)								0.03			100.00%	0.03
8	Digital Portable CO detector (Multi-gas detector)							0.00					0.00
9	UG Safety Boring Machine		0.00					0.00					0.00
10	Roof Bolt (Anchorage) Testing Equipment	4	0.00					0.00					0.00
11													0.00

Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Depm. Rate (%)	Total Depm.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Y1	Y2	Y3		
12	Miscellaneous Safety Equipment (Dust respirator, Noise meter, Gravimetric Dust Sampler, Helmet, Safety Belt, Resuscitation Apparatus, Lux meter, First Aid & other general equipment, etc.)	3.00					L.S.	3.00		3.00		11.31%	0.34
13	Miscellaneous expenditure		2.00	LS				L.S.	2.00			11.31%	0.23
E.III	Strata Monitoring/Control Equipment (Load Cell, Convergence Recorder, etc.)	LS	2.00			LS		2.00		1.00		5.15%	0.10
E.IV	Survey Instruments/ Ventilation	LS	4.00	-		LS		4.00		2.00		5.15%	0.21
E.V	Measurement Equipment	LS	2.00	-		LS		2.00				11.31%	0.23
E.VI	Fire Fighting Equipment		0.00					0.00					0.00
	Other Equipment		0.00										0.00
1	Front End Loader (for ground stock)	1	0.00	-									0.00
2	Water Sprinkler (EMP purposes)	2	0.00										0.00
	Sub-Total (E)		77.37		0.00			77.37	0.00	65.74	2.18		0.00
F.	Sub-Total (F) Miscellaneous (3% of A to E)		50.06					50.06	18.09	22.93	8.08	11.31%	5.66
	Sub-Total (A to F)		1718.87		0.00			1718.87	621.09	787.24	277.54		0.00
G.	OTHER PLANT & MACHINERY		853.48					853.48	394.09	433.82	21.24	5.15%	43.95
G.I	ELECTRICALS for P&M (Appendix - A.3.1)												
G.II	WORKSHOP PLANT & MACHINERY (Appendix - A.3.2)		83.27					83.27	0.00	20.80	10.57	5.15%	4.29
G.III	PUMPS, PIPES & FITTINGS (Appendix - A.3.3)		16.17					16.17		6.74	4.08	5.15%	0.83
G.IV	COAL HANDLING PLANT (Appendix - A.3.4)		477.03					477.03		55.88	421.15	5.15%	24.57
	Sub-Total (G)		1429.95		0.00			1429.95	394.09	517.24	457.04		86.15
	GRAND TOTAL		4294.28		1145.46			3148.82	1015.18	1304.48	734.58		296.98

AN-9

REVISED PROJECT REPORT FOR BAGDEWA U/G PROJECT

Statement Showing Summary of the Estimated Capital requirement For Electrical Plant and Machinery (SDL & LHD option)

Sl.No.	Description	Total Amount	Year Wise Phasing						(Amount in Rs'lakhs)
			1 st yr	2nd yr	3rd yr	4th Yr	5rd yr	6th Yr	
1.0	Main Sub station:	71.92	0.00	71.92	0.00	0.00	0.00	0.00	0.00
2.0	Under Ground Power Distribution:	86.68	0.00	73.52	12.36	0.80	0.00	0.00	0.00
3.0	Under Ground Lighting and Light Fittings:	11.28	0.00	8.90	0.82	1.56	0.00	0.00	0.00
4.0	Cables	51.18	0.00	42.43	7.88	0.87	0.00	0.00	0.00
5.0	Electronics and tele communication	628.54	394.09	232.45					
6.0	Miscellaneous and contingencies	5.89	0.00	4.61	0.18	0.43	0.67	0.00	0.00
	GRAND TOTAL	853.48	394.09	433.82	21.24	3.66	0.67	0.00	0.00

AN-10

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A.3

Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Beyond Target	Deprn. Rate (%)	Total Deprn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Amount			Y3		
									Y1	Y2				
12	Miscellaneous Safety Equipment (Dust respirator, Noise meter, Gravimetric Dust Sampler, Helmet, Safety Belt, Resuscitation Apparatus, Lux meter, First Aid & other general equipment, etc.)		3.00				L.S.	3.00		3.00			11.31%	0.34
13	Miscellaneous expenditure		2.00	LS			L.S.	2.00					11.31%	0.23
E.III	Strata Monitoring/Control Equipment (Load Cell, Convergence Recorder, etc.)	LS	2.00			LS		2.00		1.00			5.15%	0.10
E.IV	Survey Instruments/ Ventilation Measurement Equipment	LS	4.00	-		LS		4.00		2.00			5.15%	0.21
E.V	Fire Fighting Equipment	LS	2.00	-		LS		2.00					11.31%	0.23
E.VI	Other Equipment		0.00					0.00						0.00
1	Front End Loader (for ground stock)	1	0.00	-										0.00
2	Water Sprinkler (EMP purposes)	2	0.00											0.00
	Sub-Total (E)		77.37		0.00			77.37	0.00	65.74	2.18			0.00
F.	Sub-Total (F) Miscellaneous (3% of A to E)		50.06					50.06	18.09	22.93	8.08		11.31%	5.66
	Sub-Total (A to F)		1718.87		0.00			1718.87	621.09	787.24	277.54			0.00
G.	OTHER PLANT & MACHINERY													0.00
G.I	ELECTRICALS for P&M (Appendix - A.3.1)		853.48					853.48	394.09	433.82	21.24		5.15%	43.95
G.II	WORKSHOP PLANT & MACHINERY (Appendix - A.3.2)		83.27					83.27	0.00	20.80	10.57		5.15%	4.29
G.III	PUMPS, PIPES & FITTINGS (Appendix - A.3.3)		16.17					16.17		6.74	4.08		5.15%	0.83
G.IV	COAL HANDLING PLANT (Appendix - A.3.4)		477.03					477.03		55.88	421.15		5.15%	24.57
	Sub-Total (G)		1429.95		0.00			1429.95	394.09	517.24	457.04			86.15
	GRAND TOTAL		4294.28		1145.46			3148.82	1015.18	1304.48	734.58			296.98

AN-9

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A.3

(Rs. in Lakhs)

Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Up to Target Year			Deprn. Rate (%)	Total Depn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Y1	Y2	Y3		
C	TRUNK TRANSPORT	4		3									
1	Trunk Belt Conveyor Cap. 2m/sec belt speed, 2X90 Kw drive, Horizontal loop take up, electricals suitable for 550 v FLP Electricals								0.00				0.00
1.1	Drive Head, Structural etc.					0.00		0.00					0.00
1.2	Idlers, Loading points etc.												
2	pvc Belting, 1000mm wide, D5000 or equivalent (in km)					0		0.00					
4	Reciprocating Feeder (Cap. 300tph)	1	600.00			1	600.00	600.00	600			5.15%	30.90
5	Man riding haulage	LS	9.00			L.S.		9.00	3.00	3.00	3.00	5.15%	0.45
6	Transfer points	LS	5.67			L.S.		5.67		1.42	2.84	5.15%	0.29
7	Foundation for trunk conveyors								603.00	4.42	5.83		31.66
	Sub total (C)		614.67					614.67					
D	Transport Auxiliaries												
D	Transport Auxiliaries												
1	Coal Tubes	20	5.40			20	0.27	5.40		2.70	2.70	5.15%	0.28
2	Material Supply Trolleys	10	2.70			10	0.27	2.70				5.15%	0.14
3	Diversion pulleys, Catches, Friction pulleys, dog nails, nut, bolt, flat plates etc.	LS	4.00			L.S.		4.00		2.00	1.00	5.15%	0.21
	Sub total (D)		12.10					12.10	0.00	7.40	3.70		0.62
E	Miscellaneous Equipment												
E.I	Ventilation Equipment												
	Main Mechanical Ventilator, 330kW air discharge : 80-180cu.m/sec; wg : 50-150mm (with control system for RPM, blade angle, diffuser, etc. & condition monitoring panel) complete with electricals/3.3kv/NFLP AVA Fan stop Indicator, temp. meter/Jack shaft pulley etc.												
2	Auxiliary Fan, BDF-6.3-0.6-0.250-60mm/WG, 15kW, 550V FLP motor & DOL starter	4	1.57			1	1.57	1.57			1.57	11.31%	0.18
3	Flexible Ducting, 600mm (W)	500	5.45			0.5	10.90	5.45		3.00		33.33%	1.82
E.II	General Safety												
1	Cap Lamps	1121	3.00			100	0.03	3.00		3.00		33.33%	1.00
2	Battery Channer for 102 lamps & battery charging rack for the above	1	2.00			2	0.50	1.00		1.00		5.00%	0.05
3	Self Rescuers	150	0.00			1	2.00	2.00		2.00		5.00%	0.10
4	Rack for Self Rescuers (100 Nos.)												0.00
5	Flame Safety Lamp & Accessories	15	0.02			3	0.07	0.21		0.21		5.15%	0.01
6	Methanometer & Accessories	8	1.11			3	0.37	1.11		0.50	0.61	5.15%	0.06
7	Carbon Monoxide detector with tubes (10 tubes pack)	10	0.03			1	0.03	0.03		0.03		100.00%	0.03
8	Digital Portable CO detector (Multi-gas detector)												0.00
9	UG Safety Boring Machine												0.00
10	Roof Bolt (Anchorage) Testing Equipment	4	0.00										0.00
11													0.00

Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Beyond Target		Deprn. Rate (%)	Total Depmn.	
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Y1	Y2	Y3	Target				
(RS. IN Lakhs)																
A.	Face Equipment															
1	LHD 3.0 CU.M with push plate bucket,100 HP,without remote control arrangement tyre mounted and cable reel. GEB,550V for above.,complete with safety feature.	4	142.84	3		1	142.84	142.84		142.84			16.66%	23.80		
	LHD 1.5 CU.M Standard height with push plate bucket,37 KW, 550V ,5.7te ,tyre mounted,height over canopy,2000 mm with GEB,and cable reel ,complete with safety feature.	4		4												
a	LHD 1.5 CU.M Extra Low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB,and cable reel ,complete with safety feature.	1	32.88			1	32.88	32.88	0.00	32.88			16.66%	5.48		
b	LHD 1.5 CU.M low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB,and cable reel ,complete with safety feature.	1	32.88			1	32.88	32.88		32.88			16.66%	5.48		
c	Roof Bolter,UDM standard height with electricals	8	160.00	4		4	40.00	160.00		160.00			11.11%	17.76		
d	Multi shot exploder(SI-TYPE W8-330)	20	0.40			4	L.S.	0.40		0.40			11.11%	0.04		
	Sub Total (A)		369.00		0.00			369.00	0.00	369.00	0.00			52.57		
B	FACE AND GATE TRANSPORT															
1	Gate Belt Conveyor															
	1000 mm wide,850 m long,300 tph Cap,2m/sec belt speed, 2X30 *Kw drive,Horizontal loop take up ,electricals suitable for 550 v FLP Electricals	2	205.72			2 Sets	102.86	205.72		102.86	102.86		5.15%	10.59		
1.1	Drive Head , Structural etc.	2	202.16			2	101.08	202.16		101.08	101.08		33.33%	67.36		
1.2	Idlers,Loading points etc.	3.57	68.00			3.57	19.05	68.00		34.00	34.00		33.33%	22.66		
2	PVC Belting,1000mm wide,D5000 or equivalent	2.00	60.00			2.00	30.00	60.00		60.00	60.00		33.33%	20.00		
3	Pony belt conveyor	2	20.16			2	10.08	20.16		16.19	16.19		5.15%	1.04		
4	Endless Haulage,37 KW,550V FLP electrical	48	32.38			48	0.6745	32.38		2.43	2.43		5.15%	1.67		
5	Rails 15 Kg/m in t	L.S.	4.86			L.S.		4.86		1.20	1.20		100.00%	0.25		
6	Track materials(15%)	3.36	2.39			3.36	0.71	2.39		2.39	2.39		100.00%	2.39		
7	Sub total(B)		595.67					595.67	0.00	317.76	27.76			125.98		

Appendix-A.2.3

Revised Project Report for Bagdewa Under Ground Mine (0.75-Mty)

Statement showing the Building Cost Index with reference to 100 Base in Delhi as on 1.10.76 in December 2010

SL. NO.	DESCRIPTION	UNITS	RATES AS ON 1.10.76 AT DELHI	RATES AT AREA	PERCENTAGE INCREASE (RATIO BETWEEN COL. 3&4)	WEIGHTAGE	COST INDEX
1	2	3	4	5	6	7	8
1	BRICKS	1000	106.15	1500	14.13	16.0	226.08
2	SAND 67% COARSE, 33 % FINE	Cu.M	21.92	150	6.84	5.0	34.20
3	CEMENT	QUINTAL	35.28	470	13.32	21.0	279.72
4	STONES 50% - 40mm AGGREGATE 50% - 20mm	Cu.M	27.10	820	30.26	6.5	196.69
5	TIMBER (SAL/BIJA SAL)	Cu.M	2021.00	33550	16.60	18.0	298.80
6	MILD/TOR STRUCTURAL STEEL	QUINTAL	183.20	3650	19.92	10.0	199.20
7	LABOUR						
	a) MASON	EACH	9.89	192.00	19.41	8.5	164.99
	b) CARPENTER	EACH	9.89	192.00	19.41	4.0	77.64
	c) UNSKILLED	EACH	4.41	135.00	30.61	11.0	336.71
					TOTAL		1814.03
					SAY		1814

Job No. 501085

Appendix - A.2.2

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)

Statement Showing the Estimated Capital Expenditure on Residential Buildings

(Amount in Rs. Lakhs)

Sl. No.	Category/Scale	Type of Qtr.	Sanctioned RPR Provision		Existing as on 31/03/10		Balance requirement			Total Amount
			Qtr. No.	Amount	Qtr. No.	Amount	Balance Qtrs. reqd.	Unit cost at 100 CI	Total cost at 1814 CI	
1	Cat-I to VI and Grades B,C,D&E	MQ	465	206.17			362	0.150	985.00	
2	8571.79 and 8575.06	A	5	6.92	108		0	0.157	0.00	
3	8880.56 to 15199.08 and Grade -A, Spl. Grade	B	88	123.78	34		54	0.224	219.42	
4	E1 to E6	C	12	35.24	6		6	0.359	39.07	
5	E7 and above	D	1	4.75	0		1	0.772	14.00	
6	Hostel type Accommodation		24	23.32			24	0.099	43.10	
7	Provision for rain water harvesting							LS	19.00	
8	Provision for land development and horticulture							LS	28.00	
	Total		595	400.18	148	371.99	447		1347.59	1719.58
	Contingencies @ 3%								40.43	
	Grand Total			400.18		371.99			1388.02	1760.01

Note : 1. Since no additional manpower is required, no. of balance quarters requirement will remain unaltered over RPR provision.
2. Excess A type quarters have been adjusted against MQ type requirement.
3. All quarters will be of minimum (G+3) configuration considering optimal utilisation of land.

Revised Project Report for Bagdewa Under Ground Mine(0.75 Mty)

Statement Showing the Estimated Capital Expenditure on Service Buildings

(Amount in Rs. Lakhs)

Sl. No.	Particulars	Unit	Sanctioned RPR Amount	Status	Existing Amount as on 31/03/10	Additional Provision			Total Amount
						Area/Length	Rate (Rs) at 1814 Cl	Amount	
1	Project Office	Sq.m.	17.23	Existing					
2	Stores shed	Sq.m.	14.39	Existing					
3	Boundary wall	RM	16.13						
4	Workshop			Existing					
	i) Various shops (clear height 6m)	Sq.m.	14.27						
	ii) Boundary wall	RM	1.86						
	iii) Bituminous pavement	Sq.m.	3.66						
	iv) Electrical switch room, control room, stores, engineer's room etc.	Sq.m.	6.50						
	v) Washing platform	Sq.m.	0.30						
	vi) Toilet	Sq.m.	1.14						
	vii) Reservoir	Ltr.	0.30						
	viii) Pump House	Sq.m.	0.28						
	ix) Stock/ scrap yard	Sq.m.	1.77						
	x) LMV/scooter/cycle shed	Sq.m.	1.62	Existing					
	xi) Time/security office	Sq.m.	0.33						
	xii) Gates	No.	0.45						
5	Sub-Station			Existing					
	i) Building	Sq.m.	5.15						
	ii) Boundary wall	RM	1.81						
	iii) Yard	Sq.m.	3.00						
6	Canteen (50 seater)	Sq.m.	4.70	Existing					
7	Dispensary	Sq.m.	6.34						
8	First Aid Centre	Sq.m.	0.73	Existing					
9	Lavatories & Urinals (4 seater)	Sq.m.	1.90						
10	Service Magazine	Sq.m.	4.00	Existing		86.00	9977.00	8.58	
11	Vocational Training Centre	Sq.m.	0.00						
12	Cap Lamp Room (800 lamps)	Sq.m.	5.72	Existing					
13	Garage	Sq.m.	3.10	Existing					
14	Fan House	Sq.m.	5.00	Existing					
15	Haulage Engine House	Sq.m.	4.20	Existing					
16	Security Room/Cabin	Sq.m.	0.21						
17	Parks & Play ground		2.50						
18	Soil Investigation		1.00						
19	Internal roads to service buildings		6.66						
20	Total		136.25						
21	Miscellaneous 3%		3.75						
22	Telephone Exchange			Existing					
23	Clay catridge shed			Existing					
24	Weigh Bridge			Existing					
25	MTK			Existing					
Total			140.00		163.49			8.58	172.07
Contingencies @ 3%								0.26	
Grand Total			140.00		163.49			8.84	172.33

APPENDIX-A.2Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)

Statement showing the Capital Expenditure on Civil Works

Sl.No.	Particulars	(Amount in Rs. Lakhs)			
		Sanctioned RPR Amount	Existing as on 31/03/10 Amount	Additional Amount	Total Amount
1.	Service Buildings	140.00	163.490	8.840	172.330
2.	Residential Buildings	400.18	371.990	1388.020	1760.010
3.	Roads and Culverts	43.68	84.980	187.670	272.650
4.	Water Supply arrangement	73.40	29.920	171.480	201.400
6.	Sewerage System	30.27	0.000	372.080	372.080
	Total	687.53	650.380	2128.090	2778.470

Revised Project Report for Bagdewa Under Ground Mine(0.75 Mty)

Statement Showing the Estimated Capital Expenditure on Service Buildings

(Amount in Rs. Lakhs)

Sl. No.	Particulars	Unit	Sanctioned RPR Amount	Status	Existing Amount as on 31/03/10	Additional Provision			Total Amount
						Area/Length	Rate (Rs) at 1814 CI	Amount	
1	Project Office	Sq.m.	17.23	Existing					
2	Stores shed	Sq.m.	14.39	Existing					
3	Boundary wall	RM	16.13						
4	Workshop			Existing					
	i) Various shops (clear height 6m)	Sq.m.	14.27						
	ii) Boundary wall	RM	1.86						
	iii) Bituminous pavement	Sq.m.	3.66						
	iv) Electrical switch room, control room, stores, engineer's room etc.	Sq.m.	6.50						
	v) Washing platform	Sq.m.	0.30						
	vi) Toilet	Sq.m.	1.14						
	vii) Reservoir	Ltr.	0.30						
	viii) Pump House	Sq.m.	0.28						
	ix) Stock/ scrap yard	Sq.m.	1.77						
	x) LMV/scooter/cycle shed	Sq.m.	1.62	Existing					
	xi) Time/security office	Sq.m.	0.33						
	xii) Gates	No.	0.45						
5	Sub-Station			Existing					
	i) Building	Sq.m.	5.15						
	ii) Boundary wall	RM	1.81						
	iii) Yard	Sq.m.	3.00						
6	Canteen (50 seater)	Sq.m.	4.70	Existing					
7	Dispensary	Sq.m.	6.34						
8	First Aid Centre	Sq.m.	0.73	Existing					
9	Lavatories & Urinals (4 seater)	Sq.m.	1.90						
10	Service Magazine	Sq.m.	4.00	Existing		86.00	9977.00	8.58	
11	Vocational Training Centre	Sq.m.	0.00						
12	Cap Lamp Room (800 lamps)	Sq.m.	5.72	Existing					
13	Garage	Sq.m.	3.10	Existing					
14	Fan House	Sq.m.	5.00	Existing					
15	Haulage Engine House	Sq.m.	4.20	Existing					
16	Security Room/ Cabin	Sq.m.	0.21						
17	Parks & Play ground		2.50						
18	Soil Investigation		1.00						
19	Internal roads to service buildings		6.66						
20	Total		136.25						
21	Miscellaneous 3%		3.75						
22	Telephone Exchange			Existing					
23	Clay cartridge shed			Existing					
24	Weigh Bridge			Existing					
25	MTK			Existing					
	Total		140.00		163.49			8.58	172.07
	Contingencies @ 3%							0.26	
	Grand Total		140.00		163.49			8.84	172.33

Appendix - A.2.2

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)

Statement Showing the Estimated Capital Expenditure on Residential Buildings

(Amount in Rs. Lakhs)

Sl. No.	Category/Scale	Type of Qtr.	Sanctioned RPR Provision		Existing as on 31/03/10		Balance requirement		
			Qtr. No.	Amount	Qtr. No.	Amount	Balance Qtrs. reqd.	Unit cost at 100 CI	Total cost at 1814 CI
1	Cat-I to VI and Grades B,C,D&E	MQ	465	206.17			362	0.150	985.00
2	8571.79 and 8575.05	A	5	6.92	108		0	0.157	0.00
3	8880.56 to 15199.08 and Grade -A, Spl. Grade	B	88	123.78	34		54	0.224	219.42
4	E1 to E6	C	12	35.24	6		6	0.359	39.07
5	E7 and above	D	1	4.75	0		1	0.772	14.00
6	Hostel type Accommodation		24	23.32			24	0.099	43.10
7	Provision for rain water harvesting							LS	19.00
8	Provision for land development and horticulture							LS	28.00
	Total		595	400.18	148	371.99	447		1347.59
	Contingencies @ 3%								40.43
	Grand Total			400.18		371.99			1388.02
									1760.01

Note : 1. Since no additional manpower is required, no. of balance quarters requirement will remain unaltered over RPR provision.
2. Excess A type quarters have been adjusted against MQ type requirement
3. All quarters will be of minimum (G+3) configuration considering optimal utilisation of land.

Appendix-A.2.3

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mt)
Statement showing the Building Cost Index with
reference to 100 Base in Delhi as on 1.10.76 in December 2010

SL. NO.	DESCRIPTION	UNITS	RATES AS ON 1.10.76 AT DELHI	RATES AT AREA	PERCENTAGE INCREASE (RATIO BETWEEN COL.5&4)	WEIGHTAGE	COST INDEX
1	BRICKS	1000	106.15	1500	14.13	16.0	226.08
2	SAND 87% COARSE 33% FINE	Cu.M	21.92	150	6.84	5.0	34.20
3	CEMENT	QUINTAL	35.28	470	13.32	21.0	279.72
4	STONES (50% - 40mm AGGREGATE 150% - 20mm)	Cu.M	27.10	620	30.26	6.5	196.69
5	TIMBER (SAL/BIJA SAL)	Cu.M	2021.00	33550	16.60	18.0	298.80
6	MILD/OT STRUCTURAL STEEL	QUINTAL	183.20	3650	19.92	10.0	199.20
7	LABOUR						
	a) MASON	EACH	9.89	192.00	19.41	8.5	164.99
	b) CARPENTER	EACH	9.89	192.00	19.41	4.0	77.64
	c) UNSKILLED	EACH	4.41	135.00	30.61	11.0	336.71
				TOTAL			1814.03
				SAY			1814

REVISED PROJECT REPORT BAGDEVA UG(0.75Mty)

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A.3

Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Beyond Target Y3	Deprn. Rate (%)	Total Deprn.	
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Y1	Y2	Amount				
(Rs.in Lakhs)															
A.	Face Equipment														
1	LHD 3.0 C.U.M with push plate bucket,100 HP ,without remote control arrangement tyre mounted and cable reel. GEB,550V for above ,complete with safety feature.	4	142.84	3		1	142.84	142.84		142.84			16.66%	23.80	
	LHD 1.5 C.U.M Standard height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,2000 mm with GEB and cable reel ,complete with safety feature.	4		4											
a	LHD 1.5 C.U.M Extra Low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB and cable reel ,complete with safety feature.	1	32.88			1	32.88	32.88	0.00	32.88			16.66%	5.48	
b	LHD 1.5 C.U.M low height with push plate bucket, 37 KW, 550V ,5.7te ,tyre mounted,height over canopy,1500 mm with GEB and cable reel ,complete with safety feature.	1	32.88	-		1	32.88	32.88		32.88			16.66%	5.48	
c	Roof Bolter,UDM standard height with electricals	8	160.00	4		4	40.00	160.00		160.00			11.11%	17.78	
d	Multi shot exploder(S-TYPE W6-330)	20	0.40	-		4	L.S.	0.40		0.40			11.11%	0.04	
	Sub Total (A)		369.00		0.00			369.00	0.00	369.00	0.00			52.57	
B	FACE AND GATE TRANSPORT														
1	Gate Belt Conveyor														
	1000 mm wide,850 m long,300 tph Cap,2m/sec belt speed, 2X90 Kw drive,Horizontal loop take up ,electricals suitable for 550 v FLP Electricals	2	205.72			2 Sets		205.72		102.86	102.86				
1.1	Drive Head , Structuralis etc.	2	202.16			2	101.08	202.16		101.08	101.08		5.15%	10.59	
1.2	Idlers,Loading points etc.	3.57	68.00			3.57	19.05	68.00		34.00	34.00		33.33%	67.38	
2	PVC Belting,1000mm wide,D5000 or equivalent	2.00	60.00			2.00	30.00	60.00		60.00	60.00		33.33%	22.66	
3	Pony belt conveyor	2	20.16			2	10.08	20.16					33.33%	20.00	
4	Endless Haulage,37 kW,550V FLP electrical	48	32.38			48	0.6745	32.38		16.19	16.19		5.15%	1.04	
5	Rails 15 Kg/m in t	L.S.	4.86			L.S.		4.86		2.43	2.42		5.15%	1.67	
6	Track materials(15%)	3.36	2.39			3.36	0.71	2.39		1.20	1.20		100.00%	0.25	
7	Haulage Rope,19 mm dia.(In km)		595.67					595.67	0.00	317.76	27.76			2.39	
	Sub total(B)													125.98	

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A.3

(Rs. in Lakhs)													
Sl. No	Particulars	Total Requirement		Existing		Additional Requirement			Upto Target Year			Deprn. Rate (%)	Total Deprn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Amount				
									Y1	Y2	Y3		
C	TRUNK TRANSPORT	4		3									
1	Trunk Belt Conveyor Cap. 2m/sec, belt speed, 2X90 Kw drive, Horizontal loop take up, electricals suitable for 550 v FLP Electricals												
1.1	Drive Head, Structural etc.						0.00	0.00	0.00				0.00
1.2	Idlers, Loading points etc.					0.00	0.00	0.00	0.00				0.00
2	PVC Belting, 1000mm wide, D5000 or equivalent (in km)												0.00
4	Reciprocating Feeder (Cap. 300tph)												0.00
5	Man riding haulage	1	500.00				500.00	600.00	600.00				30.90
6	Transfer points	LS	9.00			LS	9.00	9.00	3.00	3.00	3.00	5.15%	0.46
7	Foundation for trunk conveyors	LS	5.67			LS	5.67	5.67	1.42	1.42	2.84	5.15%	0.29
	Sub total (C)		614.67				614.67	603.00	4.42	4.42	5.83		31.66
D	Transport Auxiliaries												
D	Transport Auxiliaries												
1	Coal Tubs	20	5.40			20	0.27	5.40	2.70	2.70	2.70	5.15%	0.28
2	Material Supply Trolleys	10	2.70			10	0.27	2.70	2.70	2.70	2.70	5.15%	0.14
3	Diversions pulleys, Catches, Friction pulleys, dog nails, nut, bolt, flat plates etc.	LS	4.00			LS	-	4.00	2.00	2.00	4.00	5.15%	0.21
	Sub total (D)		12.10				12.10	12.10	0.00	7.40	3.70		0.62
E	Miscellaneous Equipment												
E.1	Ventilation Equipment												
	Main Mechanical Ventilator, 330KW air discharge : 80-180cu.m/sec, wg : 50-150mm (with control system for RPM, blade angle, diffuser, etc. & condition monitoring panel) complete with electricals 3.3kv/NFLP, AVA, Fan stop indicator, temp. meter, Jack shaft pulley etc.		50.00										2.50
2	Auxiliary Fan, BDF-3.0-6.0.250-60mm/MG, 15KW, 550V, FLP motor & DOL starter	4	1.57			1	1.57	1.57			1.57	11.31%	0.18
3	Flexible Ducting, 600mm (M)	500	5.45			0.5	10.90	5.45	3.00	3.00		33.33%	1.82
E.11	General Safety												0.00
1	Cap Lamps	1121	3.00			100	0.03	3.00	3.00	3.00		33.33%	1.00
2	Battery Charger for 102 lamps & battery	1	1.00			2	0.50	1.00	1.00	1.00		5.00%	0.05
3	Charging rack for the above	1	2.00			1	2.00	2.00	2.00	2.00		5.00%	0.10
4	Self Rescuers	150	0.00					0.00					0.00
5	Rack for Self Rescuers (100 Nos.)	15	0.21			3	0.07	0.21	0.21	0.21		5.15%	0.01
6	Flame Safety Lamp & Accessories	8	1.11			3	0.37	1.11	0.50	0.50	0.81	5.15%	0.06
7	Methanometer & Accessories	10	0.03			1	0.03	0.03	0.03	0.03		100.00%	0.03
8	Carbon Monoxide detector with tubes (10 tubes pack)												0.00
9	Digital Portable CO detector (Multi-gas detector)							0.00					0.00
10	UG Safety Boring Machine		0.00					0.00					0.00
11	Roof Bolt (Anchorage) Testing Equipment	4	0.00	4				0.00					0.00

STATEMENT SHOWING THE CAPITAL REQUIRED FOR P&M ITEMS WITH PHASING

Appendix-A.3

Sl. No	Particulars	(Rs. in Lakhs)											
		Total Requirement		Existing		Additional Requirement			Upto Target Year		Beyond Target Y3	Deprn. Rate (%)	Total Deprn.
		Qty.	Amount	Qty.	Amount	Qty.	Unit Price	Amount	Y1	Y2			
12	Miscellaneous Safety Equipment (Dust respirator, Noise meter, Gravimetric Dust Sampler, Helmet, Safety Belt, Resuscitation Apparatus, Lux meter, First Aid & other general equipment, etc.)		3.00				L.S.	3.00		3.00		11.31%	0.34
13	Miscellaneous expenditure		2.00	LS			L.S.	2.00				11.31%	0.23
E/II	Strata Monitoring/Control Equipment (Load Cell, Convergence Recorder, etc.)	LS	2.00			LS		2.00		1.00		5.15%	0.10
E/IV	Survey Instruments/ Ventilation Measurement Equipment	LS	4.00	-		LS		4.00		2.00		5.15%	0.21
E/V	Fire Fighting Equipment	LS	2.00	-		LS		2.00				11.31%	0.23
E/VI	Other Equipment		0.00					0.00					0.00
1	Front End Loader (for ground stock)	1	0.00	-									0.00
2	Water Sprinkler (EMP purposes)	2	0.00										0.00
	Sub-Total (E)		77.37		0.00			77.37	0.00	65.74	2.18		0.00
F.	Sub-Total (F) Miscellaneous (3% of A to E)		50.06					50.06	18.09	22.93	8.08	11.31%	5.66
	Sub-Total (A to F)		1718.87					1718.87	621.09	787.24	277.54		0.00 ⁰
G.	OTHER PLANT & MACHINERY												0.00
G/I	ELECTRICALS for P&M (Appendix - A.3.1)		853.48					853.48	394.09	433.82	21.24	5.15%	43.95
G/II	WORKSHOP PLANT & MACHINERY (Appendix - A.3.2)		83.27					83.27	0.00	20.80	10.57	5.15%	4.29
G/III	PUMPS, PIPES & FITTINGS (Appendix - A.3.3)		16.17					16.17		6.74	4.08	5.15%	0.83
G/IV	COAL HANDLING PLANT (Appendix - A.3.4)		477.03					477.03		55.88	421.15	5.15%	24.57
	Sub-Total (G)		1429.95		0.00			1429.95	394.09	517.24	457.04		86.15
	GRAND TOTAL		4294.28		1145.46			3148.82	1015.18	1304.48	735.58		296.98

AN-9

REVISED PROJECT REPORT FOR BAGDEWA U/G PROJECT

Statement Showing Summary of the Estimated Capital requirement For Electrical Plant and Machinery (SDL & LHD option)

Sl.No.	Description	Total Amount	Year Wise Phasing						(Amount in Rs'lakhs)
			1 st yr	2nd yr	3rd yr	4th Yr	5rd yr	6th Yr	
1.0	Main Sub station:	71.92	0.00	71.92	0.00	0.00	0.00	0.00	0.00
2.0	Under Ground Power Distribution:	86.68	0.00	73.52	12.36	0.80	0.00	0.00	0.00
3.0	Under Ground Lighting and Light Fittings:	11.28	0.00	8.90	0.82	1.56	0.00	0.00	0.00
4.0	Cables	51.18	0.00	42.43	7.88	0.87	0.00	0.00	0.00
5.0	Electronics and tele communication	626.54	394.09	232.45					
6.0	Miscellaneous and contingencies	5.89	0.00	4.61	0.18	0.43	0.67	0.00	0.00
	GRAND TOTAL	853.48	394.09	433.82	21.24	3.66	0.67	0.00	0.00

AN-10

REVISED PROJECT REPORT FOR BAGDEWA UG

ESTIMATED PHASED CAPITAL EXPENDITURE ON P&M ELECTRICALS
ELECTRONICS AND TELECOMMUNICATION

Particular	Qty.	Unit Price	Total Cost	(Amount in Rs'000)			
				YEAR WISE PHASING			
				1st Year		2nd Year	
				Qty	Cost	Qty	Cost
Surface & Underground Communication							
a. IP Enabled EPABX 250 lines expandable upto 500 lines	1	1000	1000	1	1000		
b. CDS System for 30 Lines	1	1000	1000	1	1000		
c. Leaky Feeder System with cables & 20 mobile handsets	LS	4500	4500	LS	2500	LS	2000
d. BSNL lines	15	4	60	10	40	5	20
e. BSNL Cellone Mobile connection with sets	10	5	50	5	25	5	25
f. BSNL 512 Kbps leased line	LS	250	250	LS	250		
15 PC with printer, H/W & S/W	15	50	750	10	500	5	250
Router	1	300	300	1	300		
L3/L4 Switch, 24 Ports	1	300	300	1	300		
Ethernet Managed Switch (L2) 24 Ports	2	100	200	1	100	1	100
Server with Xeon CPU alongwith Software	1	150	150	1	150		
Master-Slave Digital Clock	LS	100	100			LS	100
Electronic Attendance System (400 persons)	1	200	200			LS	200
UPS-2 KVA	1	100	100	1	100		
Cable & Accessories	LS	2000	2000	LS	1500	LS	500
Testing & Measuring Equipment	LS	50	50			LS	50
Installation and Commissioning		1096	1096		1096		
Spares		548	548		548		
Miscellaneous(Electronic surveillance for office,colony, security,Networking of Office of Manager & Agent etc.	LS		50000		30000		20000
SUB TOTAL			62654.0		39409.00		23245.0

DRAFT REVISED PROJECT REPORT FOR BAGDEWA UNDERGROUND PROJECT

Statement showing summary of the estimated capital requirement for unit workshop and unit stores Plant and Machinery

SI		Description	Requirement as per PR		Total requirement as per RPR OCT 2010		Existing		Additional			Year wise phasing					Amount in Rs lakhs
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Unit Cost	Total Cost	1st	2nd	3rd	4th	5th	
1		Unit Work Shop		0.00		65.90		0.00			65.90	0.00	18.16	7.57	13.80	26.38	
2		Unit Stores				17.37					17.37	0.00	2.65	3.00	2.65	9.06	
3		Total				83.27		0.00			83.27	0.00	20.81	10.57	16.45	35.44	

Amount in Rs lakhs

[illegible]

Q.N-13

DRAFT REVISED PROJECT REPORT FOR BAGDEWA UNDERGROUND PROJECT
Statement showing estimated capital requirement for unit workshop plant and machinery

Sl No.	Description	Requirement as per RPR		Total requirement as per RPR DEC 2010		Existing		Additional		Year wise phasing										Amount in Rs lakhs	
		Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Total Cost	1st		2nd		3rd		4th		5th			
										Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
D.	Structural and Fabrication shop																				
1	Hand operated plate shearing machine to shear plates upto 6mm thickness																				
2	Transformer welding set, 400 A.																				
3	Oxyacetylene gas cutting and brazing set																				
4	Electric hand tools																				
	a) Hand drill, drilling capacity, 25mm	1	0.59						0.59												
	b) Hand grinder, 100mm wheel dia.	1	0.32634						0.33												
5	Heavy duty impact sockets(set)																				
6	Hydraulic Press, cap-50t.																				
7	Misc. tools & tackles																				
	Sub-Total(D)							LS	0.35				LS	0.15			LS	0.20		0.20	
									1.27					1.07							
E.	Smithy shop																				
1	Black smith hearth with blower, 1.1 kW																				
2	Anvils, hammers and other tools and tackles, etc.																				
	Sub-Total(E)							LS	0.91782								LS	0.2			
									0.2									0.20			
F	Carpentry shop																				
	Sub-Total(F)							LS	0.50												
G	Light Motor Vehicle Repair Shop																				
1	High pressure washing machine																				
2	Air compressor 2.3 cum/min cap., 7 kg /sq. cm. pressure								2.01818												
3	Hydraulic jacks, mechanical jacks								2.35												
4	Bearing puller								0.60												
5	Electric hand tools								0.31												
	a) Hand drill, drilling capacity, 25mm	1	0.36						0.36												
	b) Hand grinder, 100mm wheel dia.	1	0.10						0.10												
	c) Electric Blower	1	0.07139						0.07												
6	Misc. items							LS	0.60												
	Sub-Total(G)								4.08												
									2.85												
H	Common Equipment																				
1	Pulling & lifting machine / Motorised electric hoist, 5t, monorail mounted																				
2	Air compressor 2.9 cu.m, 7 kg / sq. cm.								2.86												
3	Wall clock																				
4	Card punching machine alongwith elec. clock																				
5	Ventilation equipment								0.15297												
6	Electric Siren								0.15297												
7	Chain pulley block, cap 3/5 t.								0.27												
8	Fire Extinguishers etc.								0.50												
9	High pressure washing machine 110 bar, 760 lph																				
	Sub-Total(H)								3.63												
	Total								47.49												
J	Electricals for above								7.12												
K	Contingencies.								2.73												
L	Installation charges etc.								5.46												
M	Oil and Grease trap for workshop effluent (for EMP purpose)								3.10												
	Grand total (I TO M)								65.90												
N	Grand total (I TO M)								7.57												
									13.80												
									26.38												

APPENDIX - A.3.2.1(a)

PROJECT REPORT FOR BAGDEWA U G PROJECT

Statement Showing Estimated Additional Capital requirement For Electrical Plant and Machinery

(Amount in Rs'lakhs)

Sl.No.	Description	Qty.	Unit Rate	Total Amount	Year wise phasing					
					1 st yr	2nd yr	3rd yr	4th Yr	5th Yr	6th Yr
1.0	Main Sub station:									
1.1	Isolator, 33 kV, 3pole, outdoor type, gang operated, 630 amps conforming to IS:1818 (Current)	1	0.54	0.54		0.54				
1.2	-DO--but with earth switch	1	0.58	0.58		0.58				
1.3	-DO--but with earth switch and D.O. Fuses.	1	0.62	0.62		0.62				
1.4	Lightning arrester, station class, 30 kV, 10kA for 33kV system.	1	0.20	0.20		0.20				
1.5	Single phase current transformer, outdoor type with CT ratio 50/5 A for 33 kV system for metering and protection(1 set consists of 3 units for 3 phase system).	1 set	1.25	1.25		1.25				
1.6	Potential transformer, outdoor type 33kV, 100VA, each 33 kV/ 110V with two core for metering and protection for 33kV , 3-phase system.	1	1.25	1.25		1.25				
1.7	Vacuum Circuit Breaker , 33kV, 630 A, outdoor type, 750MVA symmetrical breaking capacity with remote control panel having IDMTL relay for O/L and E/F protection, Digital type microprocessor based Power Meter, battery charging system etc.	1	6.58	6.58		6.58				
1.8	Transformer outdoor type conforming to IS:2026(current) having OFF-LOAD tap	1	13.10	13.10		13.10				

Sl.No.	Description	Qty.	Unit Rate	Total Amount	(Amount in Rs'lakhs)					
					Year wise phasing					
					1 st yr	2nd yr	3rd yr	4th Yr	5th Yr	6th Yr
1.9	changer on HV side with all accessories as per IS:3639(current) rating as follows: Rated kVA: 1000 Rated Voltage(primary):33000V Rated Voltage(secondary):3400V Connection and vector group:Dy11 6 - Panel, 3.3 kV switch-board, indoor type with 6 vacuum circuit breaker panels, 1250 A for incomer and sectionaliser, 630 A for outgoing, 75MVA symmetrical breaking capacity. The function of each panel is as follows: 1 no incomer control circuit breaker panel having CT ratio 200/5 A -2 nos. for u/g feeder control circuit breaker having CT ratio 200/5 A -1nos capacitor bank control circuit breaker panels with automatic power factor control facility having CTR 100/5 A -2 nos reserve circuit breaker having CT ratio 250/5 A and 200/5 A All panels will conform to IS:3427 (current) and relevant parts to IS:2516. These will be provided with cable end boxes. The incoming panels will be provided with restricted earth fault Protection. All panels will be provided with IDMTL relays for over current and earth fault protection. All incoming control circuit breaker shall be provided with Digital	1 Set	15.00	15.00		15.00				

Sl.No.	Description	Qty.	Unit Rate	Total Amount	(Amount in Rs'lakhs)					
					Year wise phasing					
					1 st yr	2nd yr	3rd yr	4th Yr	5th Yr	6th Yr
1.10	type microproc based Power meter and outgoing control circuit breaker shall be provided with Digital type ammeter & energy meter. 415V switch board, indoor type with 4nos air circuit breakers having O/L, S/C and E/L protection, 25MVA symmetrical breaking capacity. (All out going panels will be provided with Energy meter & ammeter. The incoming panel with be provided Energy merer, ammeter and voltmeter). The functions of the panels will be as follows: --800 amps ACB, CTR 300/5 (1no.)- Incomer --400 amps ACB, CTR 150/5 (2 nos.)-outgoing --200 amps ACB, CTR 30/5 (1 no.)-outgoing	1	3.60	3.60		3.60				
1.11	Capacitor bank, 3.3kV indoor type 450 KVAR with automatic control panel	1 Set	6.75	6.75		6.75				
1.12	Substation Earthing and Lightning protection. T/F Neutral Resistance Earthing	LS LS	3.00 2.00			3.00 2.00				
1.13	Cables (Power , lighting and control) & lighting	LS	5.00			5.00				
1.14	33kV busbar , Insulators, nut, bolt etc	LS	5.00			5.00				
1.15	Installation charges.(10% of item 1 to 28)		7.45			7.45	0.00	0.00	0.00	
	Sub Total			71.92	0.00	71.92	0.00	0.00	0.00	0.00

AN-17

Sl.No.	Description	Qty.	Unit Rate	Total Amount	(Amount in Rs./laKhs)					
					Year wise phasing					
					1 st yr	2nd yr	3rd yr	4th Yr	5th Yr	6th Yr
2.0	Under Ground Power Distribution:									
2.1	5 panel, 3.3kV FLP switch board(S/B -I) with five vacuum circuit breakers, 400A, 50MVA breaking capacity for the following purposes -1no. incoming feeder control circuit breaker panel having CT ratio 250/5A - 2 nos. outgoing feeder control circuit breaker panels with CT ratio 200/5A - 2 nos. reserve feeder control circuit breaker panel with CT ratio 200/5A All panels will conform to IS:3427 (current) and relevant parts to IS:2516. These will be provided with cable end boxes. The incoming panels will be provided with restricted earth fault Protection. All All panels will be provided with IDMTL relays for over current and earth fault protection. All incoming and outgoing control circuit breaker shall be with ammeter, voltmeter and energy meter.	2 Sets	14.50	29.00		29.00				
2.2	Transwitch Unit, 315 kVA, 3.3/0.565 kVA, FLP	5	9.40	47.00		37.60	9.40			
2.3	ACB, FLP, 550V, 400A with O/L & E/L protection	5	0.40	2.00		1.60	0.40			
2.4	-DO- but 300A.	6	0.28	1.68		1.12	0.56			
2.5	-DO- but 100A. Sub Total	25	0.28	7.00		4.20	2.00	-0.80		
				86.68	0.00	73.52	12.36	0.80	0.00	0.00
3.0	Under Ground Lighting and Light Fittings:									

Sl.No.	Description	Qty.	Unit Rate	Total Amount	(Amount in Rs'lakhs)					
					Year wise phasing					
					1 st yr	2nd yr	3rd yr	4th Yr	5th Yr	6th Yr
3.1	Lighting Transformer, FLP, 5kVA, 550/115V	8	0.41	3.28		1.64	0.82	0.82		
3.2	FLP Light fitting and fixtures including lighting cables	LS		8.00		7.26		0.74		
	Sub Total			11.28	0.00	8.90	0.82	1.56		0.00
4.0	Cables ,									
4.1	Cables PVC DWA mining type, 3 core, copper conductors , 3.3kV grade, -do-- but 95 sq.mm. in km.	1.5	9.77	14.66		14.66				
	-Do--but 35 sq mm.	8.0	3.94	31.52		23.64	7.88			
4.2	Cable s,PVCDWA, mining type, 3 core, copper conductors, 1100V grade of sizes 95 sq.mm,70 sq.mm,35 sq.mm, 25 sq.mm,16 sq.mm,10 sq.mm.	LS		5.00		4.13		0.87		
	Sub Total			51.18	0.00	42.43	7.88	0.87	0.00	0.00
5.0	Total (items to 4)			221.05	0.00	196.76	21.06	3.23	0.00	0.00
6.0	Miscellaneous and contingencies			5.89	0.00	4.61	0.18	0.43	0.67	0.00
	GRAND TOTAL			226.94	0.00	201.37	20.41	3.66	0.67	0.00

This estimate is based on CMPDI price list of Nov'09
 * Cable lengths are indicative and may vary as per site conditions.

DRAFT REVISED PROJECT REPORT FOR BAGDEWA UNDERGROUND PROJECT
Statement showing estimated capital requirement for Pumps and Pipe fittings

Appendix-A.3.3

(Amount in Rs. lakhs)

Sl. no.	Description	Requirement as per RPR 99		Requirement as per RPR OCT 2010		Existing		Additional			Year wise phasing																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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1	FACE PUMP : Pump-motor set,centrifugal non clogging,self priming, drooping characteristics,bronze impeller,11 lps capacity,30 m head,7.5 kW motor,DOL starter, FLP electricals suitable for 550V,3 phase, 50 HZ supply,complete with accessories(such as base plate,required valves,presure gauge, flow meter etc.)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

DRAFT REVISED PROJECT REPORT FOR BAGDEWA U.G. PROJECT
Statement showing estimated capital requirement for Coal handling Plant

Sl.no	Description	Requirement as per RPR99		Total requirement as per RPR Dec2010		Existing		Additional		Year wise of Phasing			% Dep.	Annual Depreciation
		Quantity	Cost(000)	Quantity	Cost	Quantity	Cost	Quantity	Unit Cost	Total Cost	1st	2nd		
1	Belt conveyor 1000mm width, 50m long, 2.0m/s, 300tph, 37kw, 415v electricals			2	65.92			2	32.96	65.92			5.15%	3.40
2	Beltng 1000mm, NN 500/3 in m			220	2.92			220	0.01325	2.92			33.33%	0.97
3	Reciprocating feeder 200tph.	2.00	440.00	4	0.00			4	0.00	0.00			5.15%	0.00
4	Rack & pinion chute gate with liners	2	270	4	8.00			4	2.00	8.00			5.15%	0.41
5	Road Weigh Bridge, 300/100t capacity	1.00	645.00	1	15.32			1	15.32	15.32			5.15%	0.79
6	Dust Suppression System & Fire Fighting	LS	390.00	L.S.	6.50			L.S.	-	6.50			5.15%	0.33
7	Grizzly with chutes & liners	1	185.00										5.15%	0.00
8	Feeder breaker												5.15%	0.00
9	Miscellaneous items including chutes & liners, Chain pulley blocks, tools & tackles etc.			L.S.	25.00			L.S.	-	25.00			5.15%	1.29
10	Electrical Plant & Machinery	LS	610.00	L.S.	24.73			L.S.		24.73			5.15%	1.27
11	Total P & M Items (Item 1 to 10)				148.39					148.39				8.46
12	Erection & commissioning Charges	LS	305.00		14.84					14.84			5.15%	0.76
13	Civil & Structural Works	LS	2400.00		171.73					171.73			5.15%	8.84
14	Contingencies.													
	A) Plant & Machinery	LS	150.00		7.42					7.42			5.15%	0.38
	B) Civil & Structural	LS	70.00		5.08					5.08			5.15%	0.26
15	Design & engineering	LS	120.00	L.S.	40.83					40.83			5.15%	2.10
16	MISSCELLANOUS				88.74					88.74				
	GRAND TOTAL				477.03					477.03	55.88	421.15	-	20.82

STATEMENT SHOWING THE CAPITAL INVESTMENT ON FURNITURE & FITTINGS

(Amount in Rs. Lakhs)

Sl. No.	Particulars	Unit	Sanctioned Capital As Per RPR MARCH 1999	Total Capital	Existing Capital	Additional Capital			Year-wise Phasing of Capital Investment					
						Qty.	Unit Cost	Amount	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	General Office Furniture & Fittings other miscellaneous items, etc.	LS	5.07	2.00		LS		2.00	2.00					
2	General Office Equipment including Fax, Telephones, Computers, Printers, Copiers, conferencing equipment, wireless LAN for automated office works	LS		2.68	2.68			0.00						
3	Office Accessories Equipment including Water Coolers, Refrigerators, Air Conditioners & other accessories as required	LS	0.50	0.60		LS		0.60		0.60				
4	Fire Fighting Equipment (Office)	LS	0.50	0.00				0.00						
5	Furniture & Fittings, Equipment and Accessories for Control / CDS room	LS	5.00	0.00				0.00						
6	General Office Equipment & Accessories for Survey Dept. including computer workstation, Plotter/ Printer, Scanner & other peripherals	LS	1.93	0.00				0.00						
7	Miscellaneous Item/fittings	LS	13.00	5.28	2.68			2.60	2.00	0.60				
GRAND TOTAL														

Job No. 501085

STATEMENT SHOWING THE CAPITAL INVESTMENT ON VEHICLES

Sl. No.	Particulars	Sanctioned Capital As Per RPR March, 1999	Total Capital(lakh)	Existing Capital	Additional Capital Investment		Year-wise Phasing of Capital Investment						Depreciat ion Rate (%)	Total Depreciation
					Qty.	Amount	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
1	School/Staff Bus	18				0.00								
2	Tipper	6.4				0.00								
3	Diesel Truck	11.72				0.00								
4	Jeep	6.7				0.00								
5	Ambulance	3.5				0.00								
5	Car	3				0.00								
✓ 6	Fire Tender	-			1	27.00	27.00							
7	Explosive Van	4.21				0.00								
	GRAND TOTAL	53.53	28.98	28.98		27.00	27.00							

Job No. 501085

REVISED PROJECT REPORT FOR BAGDEVA UG PROJECT(0.75 MTY)

STATEMENT SHOWING THE CAPITAL INVESTMENT ON PROSPECTING & BORING

(Amount in Rs. Lakhs)

Sl. No.	Particulars	Sanctioned Capital as per RPR March, 1999	TOTAL REQUIREMENT	EXISTING		ADDL. CAPITAL INVESTMENT				Year-wise Phasing of Additional Capital				
				QTY. (m)	Capital	No. of boreholes	QTY.	UNIT COST	ADDITIONAL CAPITAL	Year 1	Year 2	Year 3	Year 4	Year 5
A.	Exploratory Boreholes	92.58				LS			12.00		5.00	7.00		
A.1	Additional Boreholes													
a	Within Mine Boundary for advance dewatering with submersible pumps													
b	CMPDIL Expenses								12.00		5.00	7.00		
	GRAND TOTAL	92.58	12.00											

Job No. 501085

STATEMENT SHOWING THE CAPITAL OUTLAY IN MINES

APPENDIX - A.8.1

(Amount in Rs. Lakhs)

Sl. No.	Particulars	X-section (mxm)/ (m - dia.)	Gradient	DEPTH (m)	Sanctioned Capital As Per RPR March 1999	Total Capital Requirement	Existing Capital as of 31.03.10	ADDITIONAL CAPITAL					Year-wise Capital				
								QTY:m	UNIT COST	TOTAL	Y 1	Y 2	Y 3	Y 4	Y 5		
A	Drivage of Mine Entries(Main Incline etc)		1 in 5	180	218.85			45	1.5	67.5	67.5						
1	Sinking Air Shaft (5m dia.)	5.0m	LS	45m		67.5		40	0.25	10	5	5					
2	Steeple pit between two seams Depth 20x2m	4.8m		20m		10		2X25X									
3	Drifting in 2 faults, throw 5m each, gradient 1in 5, 3 Nos-25m each, total 150m(Drift 1-Drift- 2x3)	4.8X 2.5	1in 5	2X25X3	31.00	37.5		3	0.25	37.5		37.5					
4	State Bunker, 2. No. - 10m x2	10x2	LS		40.00	5		20	0.25	5		5					
5	Thin Seam drivages for III-1		LS		15.00	25		100	0.25	25		25					
6	Drivage of driftage to III T seam from III B- 2 no.- 4/2x2.5- 100m					20		LS	LS	20	15	5		5			
7	Construction of landrill & MMV installation.					5		LS	LS	5				5			
8	Sump Construction		LS		10.00	20		LS	LS	10	5	5					
9	Other development work including community development.		LS		8.00												
10	Plantation in Colony & Industrial site				36.00	200		100	2	200	200						
11	Resettlement and Rehabilitation (R&R)					50		50	1	50	50						
12	Compensation For Land Ousters(50Nos of Humments)					50		LS	LS	50	50						
13	Telemetry System installation and study		LS		33.32	25		LS	LS	25	15	10					
14	Miscellaneous				392.17	1540.89	1125.89			515.00	407.50	87.50	20.00				
	Total																

Job No. 501085

1 Rate of purchase of tenancy land is considered as Rs21.0Lakhs/Ha as provided vide CHATTISHGARH notification

Note:

2. The estimates of area and capital provision for land requirement are tentative and may vary during implementation.

3. The rate for compensation for tenancy land (R&R) has been taken as average Rs 2Lakhs per Ha

4. The rate for construction of underground strata bunker is as per the civil norms.

515.00

Appendix A.8.2.

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)

Statement showing the Estimated Capital Expenditure on Roads and Culverts

(Amount in Rs. Lakhs)

Sl.No.	Particulars	Sanctioned RPR		Existing as on 31/03/10 Amount	Additional Amount	Total Amount
		Quantity	Amount			
1	Colony Roads and Culverts	2600 RM	18.26		187.67	
2	Approach Road, Service Road and Culverts	1800 RM	25.42		0.00	
Total			43.68	84.98	187.67	272.65

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)

Statement showing the Estimated Capital Investment on Colony Roads

Sl.No.	Particulars	Unit	Quantity	Cost at 100CI (RS.)	Cost at 18.14 CI (RS.)	Total Cost (Lakhs)
1	Colony Roads	M	2200.00		7193.00	158.25
2	3.75 M Wide Reinforced Concrete Road Rate estimated on the basis of CPWD DSOR 07 (equivalent Cost Index 1727) = Rs.6848/RM					
	Culverts (7.5m wide)	No	1.00	25000.00	453500.00	4.54
	i) 3.05m span RCC slab culvert	No	1.00			
	ii) 1.83m span RCC slab culvert	No	1.00	15000.00	272100.00	2.72
	iii) 0.61m diameter hume pipe culvert	No	3.00	3100.00	56234.00	1.69
3	Pucca Drains:	RM	550.00	28.00	508.00	2.79
	i) 22.5cm X 30cm	RM	440.00	57.00	1034.00	4.55
	ii) 30cm X 45cm	RM	220.00	104.00	1887.00	4.15
	iii) 60cm X 90cm	RM	88.00	31.00	562.00	0.49
4	Tree Guards:	No	88.00	26.00	472.00	0.84
5	RCC slab for drain crossing: (1.53m X 0.61m X 7.5cm)	No	179.00			
6	Add for poor soil @ 10% of 2 to 5					2.18
	Total					182.20
	Contingencies @ 3%					5.47
	Grand Total					187.67

Job No. - 501085

R.V.CMPDI

Appendix-A8.3 (b)

Revised Project Report for Bagdewa Under Ground Mine (0.75 Mty)**Water Demand Calculations****DATA AVAILABLE**

i) Manpower=	1121
ii) Total No. of houses required=	447
iii) Total No. of existing houses=	0
iv) Total No. of houses to be constructed=	447
Population:	2235
1. Residential population @ 5 persons per house=	0
2. Non - Residential workers=	

Water Demand:**A. Potable Water Demand:**

i) Water requirement for residential population @ 135 litres per capita per day=	301725 litres
ii) Water requirement for non - residential population @ 45 litres per capita per day=	0 litres
iii) Water requirement for service buildings 10% of item A(i)	30173 litres
iv) Sub - total of above (i), (ii) & (iii)	331898 litres
v) Process and other losses 10% of (iv)	33190 litres
Total Potable water demand	365087 litres
Say	0.37 MLD

Water Demand for Industry

For industrial Use 10 % of total potable water demand
 Water requirement for non- residential population
 10% of (ii)

Say

36509 litres
 0 litres
 36509 litres
 0.04 MLD

STATEMENT SHOWING THE REQUIREMENT OF MANPOWER (Grade-wise/Scale-wise/Category-wise)

Sl. No.	PARTICULARS	Category/Scale/Grade	Manpower (Nos.)	Leave/Sick (Nos.)	Total (Nos.)
	<u>SURFACE MANPOWER</u>				
G.	<u>SURVEYING</u>				
1.	Draftsman/Tracer	Gr-D	2		2
	TOTAL (G)		2	0	2
H.	<u>LAMP ROOM</u>				
1	Lamp room Incharge	Gr-C	1		1
2	MTK	Gr-D	3	1	4
3	Lamp issuer	III	3	1	4
4	Lamp Fitter	IV	2		2
5	Fitter Helper	II	2		2
6	Lamp Cleaner Mazdoor	II	3		3
	TOTAL (H)		14	2	16
I.	<u>SERVICES (SURFACE)</u>				
1	Body checker	III	3	1	4
2	Substation Attendant	III	3	1	4
3	Main Fan operator	III	3	1	4
4	Electrical Supervisor	Gr-E	1		1
5	Fitter (Mech./Elec.)	IV	2		2
6	Helper	II	2		2
7	Magazine Clerk/Issuer	Gr-D	2	1	3
8	General Mazdoor	I	2		2
	TOTAL (I)		18	4	22
J.	<u>WORKSHOP</u>				
1	Machinist	V	2		2
2	Turner Helper	IV	2		2
3	Motor Armature Winder	IV	1		1
4	Fitter(Mech./Elec.)	IV	4		4
5	Fitter / Armature winder helper	II	4	1	5
6	Welder	IV	2		2
7	Welder helper	II	2		2
8	Bit Sharpener	II	2		2
9	Blacksmith	IV	2		2
10	Hammerman	IV	2		2
11	Foreman (E&M)/Supervisor	Gr-B	1		1
12	Carpenter	V	1		1
13	Carpenter helper	II	2		2
14	General Mazdoor	I	3	1	4
	TOTAL (J)		30	2	32
K.	<u>STORE</u>				
1	Store keeper	Gr-C	1		1
2	Asst.Store Keeper	Gr-D	1		1
3	LDC/Typist	Gr-D	1		1
4	Store Mazdoor	I	3		3
	TOTAL (K)		6	0	6
L.	<u>PROJECT OFFICE/MANAGER OFFICE</u>				
1	Dy. Finance Manager	E4	1		1
2	Sr. Account Officer	E3	1		1
3	Accountant	Gr-B	2		2
4	Office Superintendent	Gr-A	1		1
5	UDC	Gr-C	2		2
6	Stenographer(Jr)	Gr-C	2		2
7	LDC/Typist	Gr-D	2		2
8	Cashier	Gr-C	1		1
9	Asst.Cashier	Gr-D	1		1
10	Peon	I	3		3
11	Data Entry operator	Gr-D	1		1
12	CDS operator	Gr-D	3	1	4
13	Central despatcher	Gr-D	2		2
	TOTAL (L)		22	1	23

STATEMENT SHOWING THE REQUIREMENT OF MANPOWER (Grade-wise/Scale-wise/Category-wise)

Sl. No.	PARTICULARS	Category/Scale/Grade	Manpower (Nos.)	Leave/Sick (Nos.)	Total (Nos.)
M. COAL HANDLING ARRANGEMENT					
1	Weigh bridge clerk	Gr-D	3	1	4
2	Despatch Munshi/Inspector	Gr-C	1		1
3	Fitter(Mech./Elec.)	IV	2		2
4	Helper	II	2		2
5	Chute operator	III	3	1	4
6	General Mazdoor	I	3		3
7	TOTAL (M)		14	2	16
N. WELFARE					
1	Personnel Officer	E2	1		1
2	Labour Welfare Officer	E1	1		1
3	Canteen Manager	Gr-E	1		1
4	Canteen Cook	IV	2		2
5	Canteen boy	II	2		2
6	TOTAL (N)		7	0	7
O. MEDICAL & SANITATION					
1	Medical Officer	E3	1		1
3	Compounder/Nurse	Gr-B	2		2
4	Dresser	Gr-C	2		2
5	Sweeper	I	5	1	6
6	Peon	I	1		1
7	TOTAL (O)		11	1	12
P. CIVIL WORK & WATER SUPPLY					
1	Civil Engineer	E3	1		1
2	Overseer	Gr-B	1		1
3	Pump Khalasi (for project & colony)	III	2		2
4	Valve Man	III	2		2
5	Pipe fitter	IV	2		2
6	General Mazdoor	I	2		2
7	Water treatment plant attendant	III	3	1	4
8	Electrician	IV	1		1
9	Electrician helper	II	1		1
10	Mason	IV	2		2
11	Mason helper	II	3		3
12	Carpenter	III	1		1
13	Carpenter helper	II	2		2
14	TOTAL (P)		21	1	24
Q. SECURITY					
1	Security Inspector	Gr-B	1		1
2	Armed Guard	Gr-D	3	1	4
3	Watchman	Gr-F	6	2	8
4	TOTAL (Q)		10	3	13
R. V.T.C.					
1	Training Officer	E2	1		1
2	Inspector	Gr-E	1		1
3	LDC/Typlst	Gr-G	1		1
4	TOTAL (R)		3	0	3
S. TRANSPORT					
1	Heavy Vehicle Driver	VI	6		6
2	Light Vehicle Driver	V	6	1	7
3	Driver Helper	II	2		2
4	TOTAL (S)		14	1	15
T. EMP.					
1	Water Sprinkler Operator (For water sprinkling, EMP)	Exc. D.	2		2
2	Helper	II	2		2
3	TOTAL (T.)		4	0	4
4	TOTAL (SURFACE)		173	17	195

Total (Underground)	926
Total (Surface)	195
Grand Total (Mine)	1121

APPENDIX-B.1

PROJECT REPORT FOR BAGDEVA U/G (.75MTY)

STATEMENT SHOWING THE SUMMARY OF MANPOWER ON SCALE/
GRADE/CATEGORY WISE AND CALCULATION OF ANNUAL SALARY,
WAGES & BENIFITS

(Rs.in Lakhs)

SCALE/GRADE CATAGORY	MANPOWER (Nos.)	ANNUAL SALARY	ANNUAL BENIFITS	TOTAL
(A) UNDERGROUND:				
-				
I	121	301.802	160.073	461.875
II	292	744.734	393.490	1138.225
III	156	409.863	215.475	625.338
IV	148	396.858	207.936	604.793
V	80	223.444	116.310	339.754
VI	14	43.327	22.205	65.532
8979.97	7	18.690	9.871	28.561
10127.7	59	188.804	100.570	289.374
10935.02	27	93.274	49.150	142.424
11785.52	4	14.893	7.770	22.664
20600-46500(E2)	11	79.314	58.702	138.016
24900-50500(E3)	2	15.937	11.692	27.629
29100-54500(E4)	2	17.189	12.532	29.721
32900-58000(E5)	2	17.568	12.786	30.354
36600-62000(M1)	1	9.368	6.898	16.266
TOTAL(A)	926	25.751	13.855	3960.525
(B) SURFACE:				
EXV GRADE-D	1	284.591	1.24018	408.609
I	24	59.86152	26.7684	86.62992
II	32	81.61472	36.32992	117.94464
III	29	76.19257	33.71511	109.90768
IV	26	69.71822	30.72706	100.44528
V	10	27.9305	12.2142	40.1447
VI	6	18.56868	7.97112	26.5398
8571.79	8	20.37912	9.22712	29.60624
8757.06	1	2.60207	1.17282	3.77489
8880.56	1	2.63851	1.18577	3.82428
8979.97	2	5.34004	2.39392	7.73396
9367.07	29	80.70004	35.873	116.57304
10127.7	10	32.0007	13.8517	45.8524
10935.02	7	24.18213	10.32906	34.51119
11785.52	1	3.72333	1.57101	5.29434
16400-40500(E1)	1	6.36817	3.9649	10.33307
20600-46500(E2)	2	14.42064	8.87574	23.29638
24900-50500(E3)	3	23.9058	14.55759	38.46339
29100-54500(E4)	1	8.59434	5.19472	13.78906
SUB TOTAL(B)	194	561.58701	257.16334	818.75035
NON-PRACTISING	1			
CHARGE ALLOANCE	1	0	1.8	1.8
TOTAL(B)	194	561.58701	257.18134	818.76835
(C) EMP:				
EXV GRADE-D	1	2.84591	1.24018	4.08609
TOTAL(C)	1	2.84591	1.24018	4.08609
GRAND TOTAL (A+B+C)	1121	3139.49749	1643.88154	4783.37903

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY)
STATEMENT SHOWING THE ESTIMATED COST PER TONNE OF
COAL AT 100% CAPACITY INCLUDING COST OF EMP

APPENDIX-C

SL.NO.	PARTICULARS	TOTAL COST OF PRODUCTION/TE		
		TOTAL COST (Rs.)	FIXED COST (Rs.)	VARIABLE COST (Rs.)
1.	SALARY, WAGES & BENIFITS	747.34	747.34	0
2.	STORES	112.62	11.09	101.53
3.	POWER	96.48	72.36	24.12
4.	MISC. EXPD. INCLUDING W/S DEBIT	93.10	27.33	65.78
5.	MINE CLOSURE COST	6.26	6.26	
5.	ADMINISTRATION EXPENCES	48.99	48.99	0
6.	COAL LOADING CHARGES & TRANSPORT COST	67.51		67.51
7.	INTEREST ON WORKING CAPITAL	56.66	44.15	12.52
8.	INTEREST ON LOAN CAPITAL	1.438	1.438	0
9.	DEPRECITATION	72.62	72.62	0
	TOTAL COST OF PRODUCTION	1301.59	1030.14	271.45
	(Including EMP Operating Cost) IMPACT OF EMP COST/TE	6.85		

APPENDIX-C.1

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY) STATEMENT SHOWING THE COST & PROFITABILITY AT VARIOUS LEVEL OF PRODUCTION

	80%	85%	90%	100%
PRODUCTION IN MILLION TONNES	0.6	0.6375	0.675	0.75
VARIABLE COST OF PRODUCTION/TE(Rs.)	271.4518	271.4518	271.4518	271.4518
FIXED COST OF PRODUCTION/TE(Rs.)	1287.671	1211.925	1144.596	1030.136
TOTAL COST/TE(Rs.)	1559.122	1483.377	1416.048	1301.588
CAPITAL INVESTMENT/TE OF ANNUAL OUTPUT(Rs.)	1960.046	1844.75	1742.264	1568.037
EQUITY CAPITAL/TE(Rs.)	1960.046	1844.75	1742.264	1568.037
RETURN ON EQUITY CAPITAL APITAL @12%	235.2056	221.37	209.0716	188.1645
MINIMUM SELLING PRICE TO YIELD THE ABOVE RETURN(Rs.)	1794.328	1704.747	1625.119	1489.753
PRESENT SELLING PRICE/TE(Rs.)	3658.026	3658.026	3658.026	3658.026
PROFIT/LOSS PER TE(Rs.)	2098.904	2174.649	2241.978	2356.438
RETURN ON EQUITY CAPITAL(%)	107.0844	117.8832	128.6819	150.2795
R.O.I.(GROSS i.e.BEFORE CHARGING				
INTEREST ON LOAN CAPITAL)	107.0844	117.8832	128.6819	150.2795
BREAK EVEN POINT(%)				30.41824
BREAK EVEN PRODUCTION(M.TE.)				0.228137

GRADE OF COAL WEIGHTED AVERAGE OF ROM COAL ("B"),
LONG FLAME IN ANNEXTURE-I

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APPENDIX-C.2

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY)
STATEMENT SHOWING THE ANNUAL EXPENDITURE FOR
EMP & IMPACT OF COST/TE ON COAL

SL.NO.	PARTICULARS	AMOUNT (RS.'000)
1.	SALARY, WAGES & BENIFITS	408.61
2.	STORES	75.00
3.	MISC. EXPENDITURE (excluding subsid. ma	10.22
4.	ADMINISTRATION CHARGES	818.56
5.	INTT. ON WORKING CAPITAL	63.43
6.	INTT. ON LOAN CAPITAL	
7.	EMP MONITORING COST	10
8.	DEPRECIATION	2115.38
9.	SUBSIDENCE MANAGEMENT	1500
10.	TOTAL ANNUAL EXPENDITURE	4991.20
11.	LIFE (YRS)	13
12.	MINEABLE RESV (MTE)	9.475
13.	EMP COST/TE (RS.)	6.848

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY)
STATEMENT SHOWING THE SENSITIVITY ANALYSIS
AT DIFFERENT LEVEL OF CAPACITY UTILISATION

APPENDIX-C.3

Sl.No.	Particulars	75%	80%	85%	90%	95%	100%	110%
1.	Fixed Cost (Rs./Te)	1373.515	1287.671	1211.925	1144.596	1084.354	1030.136	936.4877
2.	Variable Cost (Rs./Te)	271.4518	271.4518	271.4518	271.4518	271.4518	271.4518	271.4518
3.	Total Cost (Rs./Te)	1644.967	1559.122	1483.377	1416.048	1355.806	1301.588	1207.939
4.	Selling Price (Rs./Te)	3658.026	3658.026	3658.026	3658.026	3658.026	3658.026	3658.026
5.	Profit/Loss (Rs./Te)	2013.059	2098.904	2174.649	2241.978	2302.22	2356.438	2450.087

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APPENDIX D1

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY) STATEMENT SHOWING THE NET REVENUE CASH INFLOW (AT 100 % LEVEL)

(Rs. IN LAKHS)												
YEAR	SALARY & WAGES	STORES	POWER	MISC. EXPD.	ADMIN EXPD.	TRANS COAL & LOADING	INTT. ON WORKING CAPITAL 14.5%	MINE CLOSURE COST	TOTAL REVENUE COST	TOTAL SALES	NET CASH IN FLOW	
1	2	3	4	5	6	7	8	9	10	11	12	
1	3720.88	662.56	576.6	555.21	303.74	418.56	301.48	38.62	6577.64	22684.07	16106.43	
2	4783.38	818.84	723.6	685.40	367.43	506.33	381.11	40.55	8306.62	27440.54	19133.92	
3	4858.08	739.55	723.6	712.56	367.43	506.33	382.20	42.57	8332.32	27379.9	19047.59	
4	4932.78	740.41	723.6	718.85	367.43	506.33	386.15	44.70	8420.24	27440.21	19019.97	
5	5007.48	741.14	723.6	719.04	367.43	506.33	389.81	46.94	8501.75	27440.16	18938.41	
6	5082.18	741.14	723.6	726.04	367.43	506.33	393.76	49.28	8589.75	27440.7	18850.95	
7	5156.88	741.14	723.6	726.04	367.43	506.33	397.37	51.75	8670.52	27440.63	18770.11	
8	5231.58	741.14	723.6	726.04	367.43	506.33	400.98	54.34	8751.42	27440.37	18688.95	
9	5306.28	741.14	723.6	726.04	367.43	506.33	404.59	57.05	8832.45	27440.15	18607.7	
10	5380.98	741.14	723.6	726.04	367.43	506.33	408.20	59.91	8913.61	27437.59	18523.98	
11	5455.68	741.14	723.6	726.04	367.43	506.33	414.81	62.90	8994.92	27440.18	18445.26	
12	5530.38	741.14	723.6	726.04	367.43	506.33	415.42	66.05	9076.37	27440.6	18364.23	
13	4783.38	604.68	583.704	635.55	298.84	411.81	353.70	69.35	7741.02	22315.98	14574.96	

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APPENDIX D2

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY) STATEMENT SHOWING THE NET REVENUE CASH INFLOW (AT 85 % LEVEL)

(RS.IN LAKHS)											
YEAR	SALARY&STORES WAGES	POWER	MISC. EXPD.	ADMIN EXPPD.	TRANS COAL & LOADING	INTT.ON WORKI.C AP 14.5%	MINE CLOSURE COST	TOTAL REVENUE COST	TOTAL SALES	NET CASH IN FLOW	
1	2	3	4	5	6	7	8	9	10	11	12
1	3720.88	572.96	554.98	496.37	303.74	355.78	290.23	38.62	6333.55	19281.46	12947.91
2	4783.38	708.11	696.47	612.77	367.43	430.38	367.26	40.55	8006.33	23324.46	15318.13
3	4858.08	639.55	696.47	637.05	367.43	430.38	368.73	42.57	8040.25	23272.92	15232.67
4	4932.78	640.28	696.47	642.67	367.43	430.38	372.65	44.70	8127.35	23324.18	15196.83
5	5007.48	640.92	696.47	642.84	367.43	430.38	376.30	46.94	8208.74	23324.13	15115.4
6	5082.18	640.92	696.47	649.10	367.43	430.38	380.21	49.28	8295.95	23324.59	15028.64
7	5156.88	640.92	696.47	649.10	367.43	430.38	383.82	51.75	8376.73	23324.54	14947.81
8	5231.58	640.92	696.47	649.10	367.43	430.38	387.43	54.34	8457.63	23324.32	14866.69
9	5306.28	640.92	696.47	649.10	367.43	430.38	391.04	57.05	8538.65	23324.13	14785.47
10	5380.98	640.92	696.47	649.10	367.43	430.38	394.65	59.91	8619.82	23321.95	14702.13
11	5455.68	640.92	696.47	649.10	367.43	430.38	398.26	62.90	8701.12	23324.15	14623.03
12	5530.38	640.92	696.47	649.10	367.43	430.38	401.88	66.05	8782.58	23324.51	14541.93
13	4783.38	522.91	561.82	568.20	298.84	350.04	342.45	69.35	7496.98	18968.58	11471.6

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APPENDIX-E1

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (75M)
STATEMENT SHOWING THE CALCULATION OF FINANCIAL
IRR OF THE PROJECT AND DESIRED SELLING PRICE
TO YIELD 12% OF IRR

(Rs. IN LAKHS)
(AT 100% LEVEL)

YEAR	CASH OUT FLOW				CASH IN FLOW		NET CASH IN FLOW (Col.9-6)	NET CASH IN FLOW EXCL. SALES (DEFECIT)	PRODN. (LAKH TE)
	INITIAL CAP. INV.	REPLMNT OF CAPT.	REVENUE	EXPD.	TOTAL	SALES			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1	1927.5			1927.5	22684.069	22684.07	-1927.5	1927.5	
2	3169.089		6578	9747.089	22684.069	22684.07	12936.98	9747.0885	6.2
3	2882.77	208.6	8307	11398.37	27440.535	27440.54	16042.165	11398.37	7.5
4	2258.52	1.225	8332	10591.75	27379.904	27379.9	16788.159	10591.745	7.5
5	364.19	112.49	8420	8896.68	27440.212	27440.21	18543.532	8896.68	7.5
6	37.38	593.5	8502	9132.88	27440.159	27440.16	18307.279	9132.88	7.5
7		157.56	8590	8747.56	27440.698	27440.7	18693.138	8747.56	7.5
8		415	8671	9086	27440.631	27440.63	18354.631	9086	7.5
9		458.56	8751	9209.56	27440.371	27440.37	18230.811	9209.56	7.5
10		746.54	8832	9578.54	27440.149	27440.15	17861.609	9578.54	7.5
11		70.09	8914	8984.09	27437.587	27437.59	18453.497	8984.09	7.5
12		409.8894	8995	9404.889	27440.177	27440.18	18035.287	9404.8894	7.5
13		167.21	9076	9243.21	27440.6	27440.6	18197.39	9243.21	7.5
		-680	7741	7061	22315.981	22315.98	15254.981	7061	6.1
NET BLOCK	10639.45						223771.96		

DESIRED SELLING PRICE @12% :

1357.6333

IRR OF THE PROJECT (%) :

692.3092

NPV @12% (RS in lakhs):

107404.9

NPV @16%(RS IN LAKHS) :

88273.242

FINAL REVISED PROJECT REPORT FOR BAGDEVA U/G (.75MTY)
STATEMENT SHOWING THE CALCULATION OF FINANCIAL
IRR OF THE PROJECT AND DESIRED SELLING PRICE
TO YIELD 12% OF IRR

(Rs.IN LAKHS)

(AT 85 % LEVEL)

YEAR	CASH OUT FLOW				CASH IN FLOW		NET CASH IN FLOW EXCL.SALES (DEFECIT)	PRODUCTI ON(LAKH TON)	
	INITIAL CAP.INV.	REPLMNT OF CAPT.	REVENUE		SALES	TOTAL			
			EXPD.	TOTAL					
1.	2.	3	4.	5	6	7	8	9	10
1	1927.5			1927.5	19281.46	19281.45882	-1927.5	1927.5	5.27
2	3169.089		6334	9503.089	23324.46	23324.45503	9778.37	9503.09	6.38
3	2882.77	208.6	8006	11097.37	23324.46	23324.45503	12227.085	11097.37	6.38
4	2258.52	1.225	8040	10299.75	23272.92	23272.9181	12973.173	10299.745	6.38
5	364.19	112.49	8127	8603.68	23324.18	23324.18004	14720.5	8603.68	6.38
6	37.38	593.5	8209	8839.88	23324.13	23324.13478	14484.255	8839.88	6.38
7		157.56	8296	8453.56	23324.59	23324.59366	14871.034	8453.56	6.38
8		415	8377	8792	23324.54	23324.53677	14532.537	8792	6.38
9		458.56	8458	8916.56	23324.32	23324.31508	14407.755	8916.56	6.38
10		746.54	8539	9285.54	23324.13	23324.1264	14038.586	9285.54	6.38
11		70.09	8620	8690.09	23321.95	23321.9491	14631.859	8690.09	6.38
12		409.8894	8701	9110.889	23324.15	23324.15027	14213.261	9110.89	6.38
13		167.21	8783	8950.21	23324.51	23324.50994	14374.3	8950.21	6.38
		-680	7497	6817	18968.58	18968.58399	12151.584	6817	5.19
							175476.8		

DESIERED SELLING PRICE @12% : 1550.999485

IRR OF THE PROJECT (%) : 528.8478689

NPV @12 % (RS in lakhs): 83619.30198

NPV @16 %(RS IN LAKHS) : 68538.89544

ANNEXURES

परियोजना मुल्यांकन विभाग
सेन्ट्रल माईन प्लानिंग एण्ड डिजाईन इन्स्टीच्युट लिमिटेड
गोन्दवाना प्लेस, काँके रोड, राँची - 834 008

पत्र संख्या : पीएडी/जी-42/11/ 178 - 196

दिनांक : 17.01.2011

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विषय :- दिनांक 11.01.11 को सी.एम.पी.डी.आई.(मु) में आयोजित एस.ई.सी.एल.
के (1) बागदेवा भूमिगत खदान (पुनरीक्षण) (0.75 मि.टन. प्रतिवर्ष),
(2) बदरा वेस्ट एक्सटेंशन खुली खदान (1.5 मि.टन. प्रतिवर्ष), (3) बदरा
खुली खदान (4.0 मि.ट. प्रति वर्ष) की बैठक का कार्यवृत्त

उपरोक्त कार्यवृत्तों की एक-एक प्रति आपके अवलोकनार्थ प्रेषित है।

संलग्नक : यथोपरि

12/01/2011
मुख्य महाप्रबंधक (प.मु.वि.)

वितरण:

1. अध्यक्ष-सह-प्रबंध निदेशक, सी.एम.पी.डी.आई.
2. निदेशक तकनीकी, कोल इण्डिया लि., कोलकाता
3. निदेशक तकनीकी (पी.एण्ड.पी.), एस.ई.सी.एल, बिलासपुर
4. निदेशक तकनीकी (सी.आर.डी.), सी.एम.पी.डी.आई.
5. निदेशक तकनीकी (पी.एण्ड.डी.), सी.एम.पी.डी.आई.
6. निदेशक तकनीकी (ई.एस.), सी.एम.पी.डी.आई.
7. निदेशक तकनीकी (आर.डी.एण्ड.टी.), सी.एम.पी.डी.आई.
8. क्षेत्रीय निदेशक, क्षेत्र सं. -V, सी.एम.पी.डी.आई., बिलासपुर - फैक्स द्वारा.
9. मुख्य महाप्रबंधक (पी एण्ड पी), एस.ई.सी.एल, बिलासपुर
10. मुख्य महाप्रबंधक (खुली खदान), सी.एम.पी.डी.आई.
11. मुख्य महाप्रबंधक (यु.एम.डी.), सी.एम.पी.डी.आई.
12. मुख्य महाप्रबंधक (वित्त), सी.एम.पी.डी.आई.
13. महाप्रबंधक (विद्युत एवं यांत्रिकी), सी.एम.पी.डी.आई.
14. महाप्रबंधक (गवेषणा)
15. महाप्रबंधक (असैनिक)
16. महाप्रबंधक (इलेक्ट्रॉनिक्स)
17. महाप्रबंधक (पर्यावरण)
18. महाप्रबंधक (सी.एम.पी.)
19. महाप्रबंधक (टी.एस.)

12/01/2011

11/1

LIST OF PARTICIPANTS

CMPDI (HQ)

1. Shri A.K. Singh, CMD
2. A.K. Debnath, D (T) (P&D)
3. Shri A.N. Sahay, D (T) (RD&T)
4. Shri S.K. Mitra, D (T) (ES)
5. Shri D.P. Pandey, CGM (PAD)
6. Shri B.C. Dey, CGM (OC)
7. Shri P.K. Pal, GM (E&M)
8. Shri B. Dayal, GM (TS)
9. Smt Sujata Pal, GM (E&M)
10. Dr. R.K. Jain, GM (Geology)
11. Shri A.K. Das, GM (Min), UMD
12. Shri Sunil Kumar, GM (Min), PAD
13. Shri A.K. Gupta, CM (Civil)
14. Shri V. Sinha, CM (Civil)
15. Shri S.S.P. Singh, CM (Exevn)
16. Shri K.V.S. Subrahmanyam, CM (CP)
17. Shri D.K. Chatterjee, Sr Mngr (Fin)
18. Shri P. Pandey, Sr Mngr (Min)
19. Shri K.K. Singh, Sr Mngr (E&T)
20. Shri D.P. Singh, Sr Mngr (Min)
21. Shri R.K. Sinha, Sr Mngr (Exevn)
22. Shri T. Verma, Sr Mngr (Min)

RI-V

1. Shri Manoj Kumar, GM (Mining)
2. Shri P.K. Ghosh, GM (E&M)
3. Shri Md. Kalimuddin, Sr Mngr (Exevn)
4. Shri B.P. Mishra, Sr Mngr (Civil)
5. Shri M. Mishra, Sr Mngr (E&M)
6. Shri R. Ralhan, Sr Mngr (Min)
7. Shri B. Manna, Sr Mngr (Min)
8. Shri B.K. Thakur, Sr Mngr (Min)

दिनांक 11.01.11 को एस.ई.सी.एल. के बाग्देवा भूमिगत खदान (पुनरोक्षण) परियोजना (0.75 म.ट. प्रति वर्ष) के प्रारूप परियोजना प्रतिवेदन के प्रस्तुतिकरण के दौरान हुई चर्चा का कार्यवृत्त

The above report was presented by the team from RI-5 in the forenoon on 11.01.11 in the Board Room of CMPDI (HQ) for obtaining guidance of CMPDI (HQ) before finalization of the report. The list of participants is enclosed.

During the discussions, the following decisions were taken:

1. One more incline or air shaft of suitable cross-section area and a suitable main fan should be provided to handle the ventilation air requirement at the increased production level of 0.75 mty.
 2. Ventilation network analysis should be done and included in the report and the main fan specifications should be estimated from this analysis.
 3. Only 2 LHDs of 3 cum bucket capacity and 2 UDMs should be provided in the report for the additional panel proposed in the report, since the existing production is going to be increased by only 0.13 mty.
 4. Capital provision for residential buildings should be examined and reduced to the extent possible.
 5. The comments / observations submitted by PAD as well as other departments of CMPDI (HQ) should also be taken into consideration while finalizing the report.
-

MINUTES OF PLANNING COMMITTEE MEETING HELD ON 20.1.2011 IN
THE CONFERENCE HALL OF DIRECTOR (D.P&P, SECL TO DISCUSS
THE DRAFT REVISED PROJECT REPORT OF BAGDEWA UG (0.75 MTY).

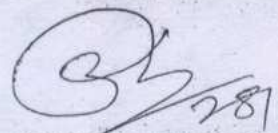
No. CMPDI : RV: UG:11: 3943

Date : 22.1.2011
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List of participants are enclosed as Annexure-I.

While presenting the Draft RPR of Bagdewa UG Project (0.75 Mty), following points were discussed which needs incorporation in the Final Report:-

1. SECL authority has pointed out that the forestry clearance already exists for Bagdewa UG Mine, the capital provision made against 50% NPV for forest land is not required.
2. Provision for Telemonitoring Systems should be included.
3. Provision for Advance Communication Systems (UG to Surface and Surface to Surface) should be made.
4. Capital Provision for one Fire Tender to be included.
5. Provision for Furniture & Fittings should be considered.
6. Miscellaneous / Contingency fund should be increased.


REGIONAL DIRECTOR

Distribution to :-

All participants

Enc : List of participants as Annexure-I.

PLANNING COMMITTEE MEETING AT SECL HQ ON 20.1.2011
PRs FOR BAGDEWA UG (0.75 Mty), KORBA AREA

LIST OF PARTICIPANTS

SECL(HQ), Bilaspur:-

1. S/Shri Gopal Singh, Director (P&P)
2. S.S.Mallwi, CGM(P&P)
3. S.K.Neogi, CG (P&P)
4. R.C.Gupta, GM(E&M)
5. S.H.Dhunde, GM (C)
6. Krishna Kumar, GM (C)
7. Gurmit Singh, GM(C/W)
8. P.R.Arya, GM (C)
9. Iqbal Ahmed, CM(Exp)
10. A.Bhattacharya, TS to DT(P&P)
11. P.Y.Puranik, Dy.Mgr (Forest Deptt.)

SECL, Korba Area:-

1. Shri Ajay Kumar Kar, SO(P&P)

CMPDIL, RI.V, Bilaspur:-

1. S/Shri V.G.Pratapam, GM(UG)
2. P.K.Ghosh, GM(E&M)
3. Dr.M.K.Mishra, Sr.Manager(E&M)
4. R.Dhingra, Sr.Manager(M)
5. B.K.Thakur, Sr.Manager(M)
