	...isolator 3.3 kV gang operated, off load, outdoor type pole mounted, 400 A with D.O.fuse	2	Nos.	10	20				20	
2.4	Switch board, 3.3 kV, 9 panel sectionalised, ... Amp, 75 MVA symmetrical breaking capcity with 9 circuit breaker panel of various capacities for pumping as under :- 2 Nos. incoming feeder control C.B. with CTR 300/5 3 Nos. main pump feeder control C.B. with CTR 100/5 2 No. spare feeder control C.B. 1 No. feeder control C.B. for LT power distr. trf. with CTR 150/5 1 No. sectionaliser with CTR 300/5	1	set	1880	1880				1880	

Appendix- A.3.2 (contd.)

SL.NO.	PARTICULARS	TOTAL CAPITAL PROVISION				PHASING OF CAPITAL				
		QTY.		UNIT RATE	AMT.	I YEAR	II YEAR	III YEAR	IV YEAR	V YEAR
2.5	Transformer 630 kVA, 3.3 kV/440 V for power supply to LT pump	1	No.	570	570				570	
2.6	440 V switchboard, 10 panel, suitable for outdoor use for pumps with circuit breakers as follows : 1 No. incoming feeder control 630 A MCCB with CTR 630/5 3 Nos. pumping feeder control MCCB.each of 200 A 4 Nos. pumping feeder control 32 A SFU with 16 A HRC fuse 1 No. spare feeder control MCCB. of 200 A 1 Nos. spare feeder control 32 A SFU with 16 A HRC fuse	1	set	175	175				175	
2.7	Capacitor bank, 3.3 kV grade,75 kVAR with control panel (manual)	3	Nos.	75	225				225	
	SUB-TOTAL - 2 :				3008	0	0	0	3008	0
3.0	**CABLE AND OVERHEAD LINES**									
3.1	PVCDWA mining type cable with copper conudctor, 3.3 kV grade of following sizes :									
	a) 3 x 35 mm^2									
	b) 3 x 50 mm^2	1	km	577	577				300	277
	c) 3 x 120 mm^2	1	km	776	776				500	276
	e) 3 x 150 mm^2	0.5	km	1853	927				650	277
		0.2	km	2327	465				200	265
3.2	Lighting cable of various sizes of 650 V/1100 grade a) 2 x 4 mm^2 b) 2 x 6 mm^2	LS		450	450				250	200
3.3	3.3 KV overhead line for quarry feeder with ACSR (4x100 sqmm) conductor on poles and other accessories.	2.5	km	700	1750				1750	
	SUB-TOTAL - 3 :				4945	0	0	0	3650	1295
4.0	**ILLUMINATION OF QUARRY**									
4.1	Lighting transformer, outdoor, pole mounted AN cooled, rated 16 kVA, 3.3 kV/230 V (L-L) alongwith its primary control, 3.3 kV isolator and D.O. fuse & D.P.structure	5	sets	236	1180			708	472	
4.2	Lighting distribution board suitable for 230 V supply system comprising 1 No. 63 A 2 pole MCB as incoming control & 2 Nos 30A 2 pole MCB as outgoing control	5	sets	5	25			15	10	

Appendix- A.3.2 (contd.)

SL.NO.	PARTICULARS	TOTAL CAPITAL PROVISION				PHASING OF CAPITAL				
		QTY.		UNIT RATE	AMT.	I YEAR	II YEAR	III YEAR	IV YEAR	V YEAR
4.3	Service road illumination including OHL, steel poles (10.5m high) HPSV Lamps and fittigs suitable for 150 W lamps with control, gears and other accessories.	1	km	600	600			300	300	
4.4	Approach road illumination including O.H.L. steel poles (10.5m). HPSV lamps and fittings suitable for 150 W lamps with control and other accessories.	0.5	km	600	300			300		
4.5	Illumination of quarry area, general dump area etc.with cluster of 6 Nos. 400 W HPSV Lamps mounted on steel towers gears approximately 15m high, fixed type.	4	Nos.	150	600			300	300	
4.6	Illumination of production faces with 400 W. HPSV Lamps, in symmetrical luminaire mounted on telescopic tower (self supporting 5.5m high).	4	Nos.	100	400			200	200	
4.7	Illumination of Haul road with 250 W HPSV lamps, fitted in street light fittings mounted on 12m high poles.	2	km	600	1200			600	600	
	SUB-TOTAL - 4 :				4305	0	0	2423	1882	0
5.0	TOWNSHIP ELECTRIFICATION									
5.1	Incoming 11 KV OHL with poles, other accessories	2.5	km	800	2000			2000		
5.2	Circuit breaker, (VCB) outdoor type, 11 kV, 400A, 250 MVA having protection and metering facilities with CTR 50/5	2	No.	380	760			760		
5.3	11 KV, AB isolator 400A Off load type with D.O. fuse 10 Amps	2	Nos.	16	32			32		
5.4	Lightning arrester, station class, 9 kV, 5 kA for 11 kV system	2	Nos.	15	30			30		
5.5	Transformer, outdoor type, pole mounted, 160 kVA, 3.3 KV/415V with all accessories	2	Nos.	160	320			320		
5.6	415 V L.T. pole mounted distribution box with on incoming 250 Amp T.P. MCCB and 3 Nos. T.P. outgoing circuit MCCB 100 Amp.	2	sets	52	104			104		
5.7	415V L.T. overhead distribution line with 5 Nos. ACSR conductor 65 Sqmm with ACSR conductor and other accessories.	1	km	600	600			600		

5.5	Transformer, outdoor type, pole mounted, 160 KVA, 3.3 KV/415V with all accessories	2 Nos.							
5.6	415 V L.T. pole mounted distribution box with on in... ...ing 250 Amp. T.P. MCCB and 3 Nos. T.P. outgoing circuit MCCB 100 Amp.	2 sets	52	104			104		
5.7	415V L.T. overhead distribution line with 5 Nos. ACSR conductor 65 Sqmm with ACSR conductor and other accessories.	1 km	600	600			600		

Appendix- A.3.2 (contd.)

SL.NO.	PARTICULARS	TOTAL CAPITAL PROVISION			PHASING OF CAPITAL				
		QTY.	UNIT RATE	AMT.	I YEAR	II YEAR	III YEAR	IV YEAR	V YEAR
5.8	HPSV Street light fitting, 70 W complete with control gear and lamp	35 Nos.	4	140			80	60	
5.9	11 KV Double pole structure for installation of 160 KVA transformer A.B. isolator D.O. fuse lightning arrestor etc.	2 Nos.	50	100			50	50	
5.10	PVCSWA aluminium conductor cable, 1.1 KV grade, 4 core x 35 Sqmm and 2 core x 25 Sqmm	LS	300	300			150	150	
5.11	Miscellaneous electrical for township including service connection line to the residence	LS	300	300			150	150	
	SUB-TOTAL - 5 :			4686	0	0	4276	410	0
6.0	**Testing and maintenance equipment**	LS	300	300			200	100	
	Meggar - 5000 V - 1 no. Meggar - 1000V - 2 nos. Multimeter - 2 nos. Tong Tester - 2 nos. Transformer oil testing machine - 1 no. Cable fault locator - 1 no. Portable motor checker with associated accessories - 1 set Telescopic big wheel ladder - 1 no., etc.								
7.0	**Energy Conservation measures**	LS	300	300			200	100	
8.0	**Miscellaneous Electrical P&M**	LS	800	800			400	300	100
9.0	**Erection and Commissioning**	LS	2700	2700			1600	700	400
	GRAND TOTAL			30895	0	0	18950	10150	1795

Appendix - A.3.3

POJECT REPORT FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED CAPITAL INVESTMENT ON P&M - WORKSHOP

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING		
					1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
		3	4	5	6	7	8
1	2						
1.	Excavation workshop equipment (Appendix A.3.3.1)	LS	-	8850	0	2991	5859
2.	E&M workshop equipment (Appendix A.3.3.2)	LS	-	2806	0	1403	1403
	TOTAL			11656	0	4394	7262

Appendix - A.3.3.1

POJECT REPORT FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED CAPITAL INVESTMENT ON P&M - EXCAVATION WORKSHOP

Amount in Rs.'000

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING		
					1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8
A.	**MACHINE SHOP:**						
1	Medium duty centre lathe, 260 mm CH, 2000mm DBC, with drive units and accessories	1	1211	1211		-	1211
1	Light duty centre lathe, 200mm CH and 1000mm DBC, 3.75 kW, motor power	1	250	250			250
2	Pillar drilling cum tapping machine, drilling capacity in steel 38mm, 1.75kW motor	1	104	104		104	
3	Portable hand drill, 25mm diameter capacity	1	36	36		36	
4	Pedastal grinder, double ended, 300 mm wheel dia.	1	40	40		40	
5	Tools, accessories, surface plates, measuring instruments, work tables, dies, gauges etc.	LS	-	100		50	50
	Sub-total:			1741	0	230	1511

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Appendix - A.3.3.1 (Contd..)

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	PHASING 3rd. Yr.	PHASING 4TH. Yr
1	2	3	4	5	6	7	8
B.	**ELECTRICAL REPAIR SHOP:**						
1	Coil drying chamber alongwith temperature control	1	30	30			30
2	Coil winding machine, wire size 0.5 - 2.5 mm diameter with accessories	1	39	39			39
3	Battery charging set,capacity 12-72V	1	61	61		61	
4	Distilled water plant, 15lph capacity	1	55	55		55	
5	Portable hand drill, drilling capacity 13 mm in steel	1	10	10		10	
6	Flexible shaft grinder, 100 mm wheel dia.	1	27	27			27
7	Testing instruments, meters, long testers, tools, hydrometer, measuring instruments, tackles, megger, tools, implements, soldering iron etc.	LS		50		25	25
	Sub total :			**272**	**0**	**151**	**121**
C.	**Engine/Hydraulic equipment repairshop:**						
2	Hydraulic press, 100t capacity	1	320	320			320
2	Hydraulic jack with pullar attachment, 50 t. cap. remote controlled	1	738	738			738
3	Master tool kits	1	150	150		150	
4	Tools, testing equipment, implements, tackles etc.	LS		100		50	50
	Sub-total :			**1308**	**0**	**200**	**1108**

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	PHASING 3rd. Yr.	PHASING 4TH. Yr
		3	4	5	6	7	8

4	Tools, testing equipment, implements, tackles etc.	1	150	150		150	
		LS	-	100		50	50
	Sub-total :			1308	0	200	1108

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	PHASING 3rd. Yr.	PHASING 4TH. Yr
1	2	3	4	5	6	7	8
D.	**Radiator repair shop :**						
1.	Oxy-accetylene gas cutting and brazing sets	1	10	10		10	
2.	Hand pump for radiator cleaning, work benches, partition racks, water tank, tools and tackles, soldering iron, hoist 3/5t capacity etc.	LS	-	50		25	25
	Sub-total :			60	0	35	25
E.	**Heavy repair and structural shop :**						
1	Transformer welding set, 400A	1	59	59		59	
2	Oxy acetylene gas cutting and brazing set	1	10	10		10	
3	Portable hand grinder, 100 mm wheel dia.	1	17	17		17	
4	Portable hand drill, drilling cap, 25 mm	1	36	36		36	
5	Vices, torque wrenches, screw drivers, wrenches, vices, handsaw, tools and tackles etc.	LS	-	50		25	25
	Sub-total:			172	0	147	25
F.	**Dumper Daily Maintenance :**						
1.	Air compressor, 2.3 m3/min capacity @ 7.0kg/cm2 pressure with tyre inflator and accessories	1	285	285		285	
2.	Grease guns, oil despensing unit	1	72	72			72
3	OH tank 2000 lit. capacity with stand for filling	LS	-	30			30
4	Diagnotic/testing instruments, wrenches, screw-drivers, other tools and implements	LS	-	50			50
	Sub-total:			437	0	285	152

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Appendix - A.3.3.1 (Contd..)

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8
G.	**Dumper schedule repair shops :**						
1	Transformer welding set,400A	1	59	59		59	
2	Oxy acetylene gas cutting and brazing set	1	10	10		10	
3	Nitrogen charging kit	1	81	81		81	
4	Master tool kits	1	150	150			150
5	Hydraulic bead breaker and tyre remover	1	330	330			330
6	Flexible shaft grinder, 100 mm wheel	1	27	27			27
7	Portable hand drill, 25 mm dia.	1	36	36		36	
8	Torque wrenches, screw drivers, wrenches, saw, gauges, tools, implements, feeler gauges, Pneumatic impact wrench etc.	LS	-	50		25	25
	Sub-total:			743	0	211	532
H.	**Dozer repair shop :**						
1	Grease guns, oil despensing unit	1	72	72		72	
2	Portable hand drill, 25mm drilling capacity	1	36	36			36
3	Portable hand grinde, wheel diameter 100mm	1	17	17			17
4	Transformer welding set, 400A	1	59	59		59	
5	Oxy acetylene gas cutting and brazing set	1	10	10		10	
6	Master tool kits	1	150	150			150
7	Tools, implements, mech. jacks, tackles, torque wrenches, gauges etc.	LS	-	50		25	25
	Sub-total :			394	0	166	228

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. &	3rd. Yr.	4TH. Yr

	[illegible] cutting and brazing set	1	10	10			10
6	Master tool kits	1	150	150			150
7	Tools, implements, mech, jacks, tackles, torque wrenches, gauges etc.	LS	-	50		25	25
	Sub-total :			394	0	166	228

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING		
					1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8

Appendix - A.3.3.1 (Contd..)

Sl.No	Particulars	Qty.	Unit Cost	Amount	1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
I.	**Washing System :**						
1	High pressure multi-jet, washing machine capacity 1760lph alongwith supply pump and its accessories	1	355	355		355	
3	Steam jenny set, water jet capacity 760 lph, steam jetcapacity 330 lph	1	158	158		158	
	Sub-total:			513	0	513	0
J	**Heavy repair shop:**						
1	Transformer welding set, 400Amps, 20kVA	1	59	59		59	
2	Flexible shaft grinder, 100mm wheel diameter	1	27	27		27	
3	Portable hand drill with drill bits, collets 25mm drilling capacity , 0.55kW motor power	1	36	36			36
4	Oxy-acetelene gas cutting & brazing set	1	10	10			10
5	Master tool kit	1	150	150		150	
6	Shockets, torque wrenches, stands, work bench	LS	-	50		25	25
	Sub-total:			332	0	261	71
K	**Material Handling Equipment:**						
1	Electric hoist 10t capacity	1	514	514			514
2	Tools and tackles etc.	LS	-	25		25	
	Sub-total:			539	0	25	514

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Appendix - A.3.3.1 (Contd..)

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	PHASING 3rd. Yr.	PHASING 4TH. Yr
1	2	3	4	5	6	7	8
L	**Field Service Equipment:**						
1	Mobile service unit		Refer Appendix No. A.3		-	-	
2	Diesel operated pump for washing shovels/drills	1	69	69			69
	Sub total:			69	0	0	69
M	**Stores and Common Equipments:**						
1	Material handling equipments for stores	LS	-	50		50	
2	Racks, bins, hand trolleys, skid pallets etc.	LS	-	50			50
3	Fire extinguishers	LS	-	50			50
	Sub total:			150	0	50	100
	Total (A to M)			6730	0	2274	4456
N	**Workshop power supply, illumination 15% (A to M)**	LS	-	1009	0	341	668
O	**Contingency expenditure 5% (A to M)**	LS	-	337	0	114	223
P	**Installation, commissioning etc. 10% (A to M) & P**	LS	-	774	0	262	512
	Total For Excavation Workshop			8850	0	2991	5859

Appendix - A.3.3.2

Appendix - A.3.3.2

POJECT REPORT FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED CAPITAL INVESTMENT ON P&M - E & M WORKSHOP

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING		
					1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8
A.	**Machine shop:**						
1	Light duty centre lathe, 200 mm CH and 1600 mm DBC.	1	364	364		364	
2	Tools and tackles etc.	LS	-	50		25	25
3	Power hacksaw to cut rounds upto 100 mm dia.	1	97	97		97	
4	Pillar drilling m/c, 25 mm dia. in steel	1	77	77		77	
	Sub-total			**588**	**0**	**563**	**25**
B.	**Electrical equipment repair shop :**						
1	Transformer oil filteration machine	1	300	300			300
2	Transformer oil testing kit	1	32	32			32
3	H.V. testing Kit	1	192	192		192	
4	Hydraulically operated cable crimping m/c	1	41	41		41	
5	Motor drying unit	1	107	107		107	
6	Cable vulcaniser for 3x150 sq.m cables	1	39	39		39	
7	Relay testing equipment	1	64	64			64
8	Cable fault detector	1	81	81			81
9	Measuring instruments, tong tester, meters, soldering rod, wrenches, screw drivers, hygroneter, tools, tackles etc.	LS	-	50		25	25
	Sub total			**906**	**0**	**404**	**502**

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Appendix - A.3.3.2 (Contd..)

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING 1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8
C.	**Mechanical repair shop :**						
1.	Hydraulic hand press, 20 t. cap.	1	67	67			67
2	Portable hand drill, drilling cap. 13 mm	1	10	10			10
3	Pedestal grinder, double ended, wheel dia. 300mm	1	40	40			40
4	Tools and tackles etc.	LS	-	50		25	25
5	Portable hand grinder, wheel dia. 100mm	1	17	17			17
	Sub-total			184	0	25	159
D.	**Structural shop :**						
1.	Transformer welding set, 400 A capacity	1	59	59			59
2.	Oxy acetylene gas cutting and brazing set	1	10	10			10
	Sub-total			69	0	0	69
E.	**LMV Repair shop:**						
1	Air compressor, 0.5 cu.M/min at 7kq/sq.cm alongwith tyre inflator, pressure gauge, receiver and electricals etc	1	75	75			75
2	High pressure water jet washing machine for light vehicle, jet capacity 760lph, 2.3kW power	1	162	162			162
3	Grease guns, tools jacks etc.	LS	-	50		25	25
	Sub-total			287	0	25	262

Sl.No	Particulars	Qty.	Unit Cost	Amount	PHASING		
					1 st. & 2nd. Yr	3rd. Yr.	4TH. Yr
1	2	3	4	5	6	7	8

Appendix - A.3.3.2 (Contd..)

F	**Material Handling Equipment/Common Eqpt.**						
1	Cutting tools, Chucks, Attachements, Face plates, Rests, Collets, Fixtures, Drill bits, Vices, Keys, Micrometer, Calliper, Spanners, Allen key sets, Hacksaws, Hammers, Swage blocks, Files, Screw driver, Pliors, Other tools and implements, Racks, Hand Trol	LS	-	100		50	50
	Sub-total			100	0	50	50
	TOTAL A to F			2134	0	1067	1067
G	**Workshop power supply, illumination @15% (A to F)**	LS	-	320	0	160	160
H	**Contengencies @ 5% (A to F)**	LS	-	106	0	53	53
I	**Installation and commissioning @ 10% (A to F) & G**	LS	-	246	0	123	123
	Grand total :			2806	0	1403	1403

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Appendix - A.3.4

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED CAPITAL INVESTMENT ON P&M - PUMPS, PIPES AND PIPE FITTINGS

Amount in Rs.'000

S.No.	Particulars	Total Quantity	Unit Cost	Total Cost	Phasing of Balance Capital								Depriciation of estimated Capital
					3rd Year		4th Year		5th Year		6th Year		
					Qty.	Amt.	Qty.	Amt.	Qty.	Amt.	Qty.	Amt.	
		3	4	5	6	7	8	9	10	11	12	13	16
1	2												
1.	Pump motor set consisting of :												
(i)	Pump, centrifugal, multistage, radial split casing Br.impeller, steep characteristic 200 lps,120m head 10% increased in rated head should decrease the rated discharge by 25%, 10% decrease in rated head should increase the rated discharge by 15%	4 3+1 (Standbye)	2240	8960							4	8960	497.78
(ii)	Motor TEFC, NFLP, 400kW, 3.3kV, 3 ph, 50 Hz, supply												
(iii)	Starter star delta NFLP mining type remote control												
(iv)	Base plate, sluice valve, foot valve, non return valve, flanges pressure gauges, flowmeter etc.												
2.	Pump motor set consisting of :												79.17
(i)	Pump, centrifugal, multistage, radial split casing Br.impeller, steep characteristic 80 lps,80m head 10% increased in rated head should decrease the rated discharge by 25%, 10% decrease in rated head should increase the rated discharge by 15%.	3	475	1425	1	475	1	475	1	475			
(ii)	Motor TEFC, NFLP, 110kW, 550/440V, 3 ph, 50 Hz, supply												
(iii)	Starter star delta NFLP mining type remote control												
(iv)	Base plate, sluice valve, foot valve, non return valve, flanges pressure gauges, flowmeter etc.												

Appendix - A.3.4 (contd..)

1	2	3	4	5	6	7	8	9	10	11	12	13	16
3.	Pump motor set consisting of :												

(iii)	Starter star delta NFLP mining type remote co[illegible]ol
(iv)	Base plate, sluice valve, foot valve, non return [illegible]alve, flanges pressure gauges, flowmeter etc.

..(ii)..

Appendix - A.3.4 (contd.)

1	2	3	4	5	6	7	8	9	10	11	12	13	16
3.	Pump motor set consisting of :												
(i)	Pump, centrifugal, multistage, horizontal split casing, steep characteristic, C.I. Impeller, 80 lps., 60 m head, 10% increase in rated head should give 25% decrease in rated discharge, 10% decrease in rated head should given 15% increase in rated discharge	1	473	473	1	473							26.28
(ii)	Diesel engine, 80 kW, battery start, fuel tank and other allied accessories complete												
(iii)	Base plate, sluice valve, foot valve, non-return valve, flanges, pressure gauge, flow meter etc.												
4	Portable face pump motor set consisting of :												
(i)	Pump, centrifugal, multistage, horizontal split casing, steep characteristic, C.I. Impeller, 11 lps., 30 m head, 10% increase in rated head should give 25% decrease in rated discharge, 10% decrease in rated head should given 15% increase in rated discharge	5 4+1 (Standbye)	76	380	1	76	1	76	1	76	2	152	21.11
(ii)	Motor TEFC,NFLP, 9.3 KW, 550/415 V, 3 Phase, 50 Hz												
(iii)	Starter Star- Delta, NFLP mining type remote control												
(iv)	Base plate, sluice valve, foot valve, non-return valve, flanges, trolley with 100m long trailling cable etc.												
5.	Pipes :												
(i)	ERW pipe 406.4 mm (m)	1000	3.84	3840	-	-	-	-	-	-	1000	3840	213.33
(ii)	ERW pipe 324 mm (m)	1000	2.108	2108	200	422	200	422	200	422	400	842	117.11
(iii)	ERW pipe 219 mm (m)	1000	1.391	1391	200	278	200	278	200	278	400	557	77.28
(iv)	G.I. Pipe 80 mm (m)	800	0.419	335	200	84	200	84	200	84	200	83	18.61
6.	Pipe fittings & misc. :	LS	LS	384	LS	39	LS	39	LS	39	LS	267	21.33
7.	Installation and foundation :	LS	LS	965	LS	92	LS	69	LS	69	LS	735	53.61
	TOTAL :			20261		1939		1443		1443		15436	1125.61

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APPENDIX - A.3.5

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT

(FIGURES IN RS.'000)

Sl.No.	Particulars	Total Capital requirement	Phasing of Capital Provision			
			Yr - I	Yr - II	Yr - III	Yr - IV
1	2	3	4	5	6	7
1.	Conveyors					
	1) Drive head and structurals	4229	-	-	2091	2138
	2) Idlers	1759	-	-	848	911
2.	Belting	1434	-	-	670	764
3.	Equipment	30172	-	-	15186	14986
4.	Electricals	7144	-	-	7144	-
5.	Miscellaneous Expenses	1129	-	-	564	565
6.	Erection	2930	-	-	1463	1467
7.	Civil & Structural Works	53043	-	-	53043	-
	Total	**101840**	-	-	**81009**	**20831**

APPENDIX - A.3.5.1

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

	... & Structural Works	53043	-	-	1463 53043	1467 -
	Total	**101840**	**-**	**-**	**81009**	**20831**

APPENDIX - A.3.5.1

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT - CONVEYORS

(FIGURES IN RS.'000)

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provision			
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III	Yr - IV
1	2	3	4	5	6	7	8	9
	Conveyors							
1.	ROM Conveyor C1,1200mm wide, 55kw drive, 2.3 m/sec speed, 400tph capacity, 118m long.	1 Set	2939	2939	-	-	2939	-
2.	ROM Conveyor C2,1200mm wide, 55kw drive, 2.3 m/sec speed, 400tph capacity, 135m long.	1 Set	3049	3049	-	-	-	3049
	Total			**5988**	**-**	**-**	**2939**	**3049**

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JOB No.:-4021291

APPENDIX - A.3.5.2

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE

(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT- BELTING.

(FIGURES IN RS.'000)

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provision			
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III	Yr - IV
1	2	3	4	5	6	7	8	9
	Belting i) 1200 mm wide, N/N belting	535 m	2.68	1434	-	-	670	764
	Total			**1434**	**-**	**-**	**670**	**764**

APPENDIX - A.3.5.3

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE

(March 2009)

APPENDIX - A.3.5.3

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT - EQUIPMENT

(FIGURES IN RS.'000)

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provision			
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III	Yr - IV
1	2	3	4	5	6	7	8	9
1.	Feeder Breaker,400 tph. cap., suitable to receive 60t. Dumpers	2 Nos.	9428	18856	-	-	9428	9428
2.	Road Weighbridge,Electronic, 100t. cap.	2 Nos.	1734	3468	-	-	1734	1734
3.	Feeder, Reciprocating,200 tph. cap.	4 Nos.	1862	7448	-	-	3724	3724
4.	Dust Suppression and fire extinguisher System	LS		400	-	-	300	100
	Total			**30172**	-	-	**15186**	**14986**

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IOB No.:-4021291

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT - ELECTRICAL

(FIGURES IN RS.[illegible])

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provis[illegible]			
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III	Yr[illegible]
1	2	3	4	5	6	7	8	9
1.	3.3kV, overhead line for incoming power supply to CHP	500 m	0.7	350	-	-	350	
2.	3.3kV, 95 sqmm. PVCSWA aluminium conductor cable from project substation to OHL and OHL to CHP	200 m	0.55	110	-	-	110	
3.	3.3 kV outdoor type AB isolator 400A with D.O. fuse 100A and lightning arrestor	2 Sets	17	34	-	-	34	
4.	3.3 kV outdoor type, 400A, 50 MVA, VCB for primary control of transformer with CT & PT.	1 No.	326	326	-	-	326	
5.	Power transformer 3.3 kV/440V, 1000 kVA	1 No.	1108	1108	-	-	1108	
6.	Motor control centre (MCC), 17 panel, 440V, 3 ph & N system comprising with - 1 No. ACB, 440 V, 1800 Amp having CT ratio 800/5 for incoming power supply control. - 1 No. ACB, 440 V, 400 Amp having CT ratio 100/5 for supplying power to C1. - 1 No. ACB, 440 V, 400 Amp having CT ratio 100/5A for supplying power to C2 conveyor. - 1 No. - do - as spare. - 2 Nos. ACBs, 440V, 800 A having CT ratio 400/5A for power supply to 2 Nos.feeder breakers. - 1 No. - do - as spare. - 1 No. 63 A FSU having HRC fuse 32 A for control of power to power socket outlets. - 4 Nos. 63 A FSU having HRC fuse 32 A and DOL starter 32A for reciprocating feeder control. - 1 No. - do - as spare. - 1 No. 16 A FSU having HRC fuse 10 A for control power supply. - 1 No. 32 A FSU having HRC fuse 16 A for dust suppression pump. - 1 No. 32 A FSU having HRC fuse 16 A as spare. - 1 No. ACB, 440V, 400 A having CT ratio 300/5 for capacitor bank control.	1 Set	850	850	-	-	850	
7.	Lighting transformer 25 kVA, 3.3 kV/230V (L-L)(Cu)	1 Set	61	61	-	-	61	
8.	Lighting distribution board, 11 panel, 200A suitable for 230V, (L-L) consisting of following : - 1 No. incoming control MCCB, 100 Amp. - 10 Nos. 16 Amp. DP MCB for lighting feeder controls.	1 Set	51	51	-	-	51	
9.	440V, 3 ph., 375 kVAR capacitor bank, delta connected	1 Set	60	60	-	-	60	

Sl.No.	
1	
10.	Industrial ty[illegible] luminaries w[illegible]
11.	Heavy duty SON tubula[illegible]
12.	Lighting tow[illegible] lighting purp[illegible]
13.	Industrial ty[illegible] tube, choke
14.	Power cab[illegible] conductor o[illegible]
15.	Lightin[illegible] ca[illegible] alum.[illegible]
16.	Testing and i) Megger, ii) Tong te[illegible] iii) Multime[illegible] iv) Misc. el[illegible] rubber r[illegible]
17.	3 way cable for PVCSW[illegible] facility for p[illegible]
18.	Industrial t[illegible] sockets wit[illegible] repair and r[illegible]
19.	3 way PVC x 10 sq.m[illegible] lighting circ[illegible] removable t[illegible]
20.	Earthing wit[illegible]
21.	Provision fo[illegible]
22.	Miscellaneo[illegible]
23.	Erection an[illegible]

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APPENDIX-A
C MINE
- ELECTRICAL
(FIGURES IN RS
Phasing of Capital Pro

nt			
ount	Yr - I	Yr - II	Yr - III
5	6	7	8
350	-	-	350
110	-	-	110
34	-	-	34
326	-	-	326
08	-	-	1108
50	-	-	850
-	-		61
-	-		51
-	-		60

APPENDIX - A.3.5.4 contd.
(FIGURES IN RS.'000)

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provision			
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III	Yr - IV
1	2	3	4	5	6	7	8	9
10.	Industrial type, low bay, dust proof, well glass type luminaries with 125 W HPSV lamps, integral control	60 Nos.	4	240	-	-	240	-
11.	Heavy duty flood light luminariws with 250W, HPSV, SON tubular lamps along with control gear etc.	30 Nos.	8.8	264	-	-	264	-
12.	Lighting tower 12m height (approximately) for outdoor lighting purpose.	4 Nos.	50	200	-	-	200	-
13.	Industrial type dust & jet proof tube light fixture with tube, choke, starter etc. suitable for 2 x 36/40 W tube.	40 Nos.	4.9	196	-	-	196	-
14.	Power cable, PVCSWA, 1.1 kV grade, aluminium conductor of following sizes :							
	3 x 400 sq.mm.	250 m	1.500	375	-	-	375	-
	3 x 240 sq.mm.	250 m	0.966	242	-	-	242	-
	3 x 70 sq.mm.	300 m	0.32	96	-	-	96	-
	3 x 50 sq.mm.	250 m	0.243	61	-	-	61	-
	3 x 16 sq.mm.	500 m	0.122	61	-	-	61	-
15.	Lighting cable, PVC, armoured, 650 V grade with aluminium conductor of sizes: 2 x 10 sq.mm.	1200 m	0.093	112	-	-	112	-
16.	Testing and maintenance equipment such as: i) Megger, 1000 V grade - 1 No. ii) Tong tester / clip on tester - 1 No. iii) Multimeter, earth resistance tester each - 1 No. iv) Misc. electrical tools such as hand gloves, rubber mats, avometer etc. - 1 lot	LS		50	-	-	50	-
17.	3 way cable junction box with cover, each way suitable for PVCSWA, 35/50 sq.mm. size cable termination facility for power sockets	LS	LS	30	-	-	30	-
18.	Industrial type 415 V, 30 A, 4 pin, 3 phase switch sockets with associated 3 pole, 30 A MCB as switch for repair and maintenance.	30 Nos.	1	30	-	-	30	-
19.	3 way PVC cable conductor 650 V grade suitable for 2 x 10 sq.mm. PVC aluminium cable to be used in lighting circuits for various lamps. The top cover will be removable type with screws.	LS	LS	30	-	-	30	-
20.	Earthing with earthpits as per IS 3043 (latest amendmen	1 Lot	LS	500	-	-	500	-
21.	Provision for control systems including control cables	LS	LS	1000	-	-	1000	-
22.	Miscellaneous	LS		163	-	-	163	-
23.	Erection and commissioning	LS		544	-	-	544	-
	TOTAL			7144	-	-	7144	-

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI - III) OC MINE
(March 2009)

ESTIMATED CAPITAL INVESTMENT ON COAL HANDLING PLANT-CIVIL & STRUCTURALS
(at a Cost Index of 360 in 1st. half of 2009 w.r.t. 100 base in Jan.92 at Nagpur)

(FIGURES IN RS

Sl.No.	Particulars	Total Capital requirement			Phasing of Capital Provision		
		Quantity	Unit Cost	Amount	Yr - I	Yr - II	Yr - III
1	2	3	4	5	6	7	8
1.	RCC retaining wall for coal unloading by rear discharge dumpers upto 60t. cap. with 2 nos. fixed plates for feeding coal, 2 nos. feeder breaker supporting structures and foundations including ramp, approach road etc., all complete with 2 nos. wing wall and main wall of 24m length and 6.0m ht. from G.L. with arrangement for monorail in F.B. support etc., all complete	1 No.		10815	-	-	10815
2.	Supporting structures for belt conveyor over ground & gantries						
	A) Ground						
	i) Without roof						
	a)>1000mm belt width (Conv C1=15m,C2=15m)	30 m		130	-	-	130
	ii) With roof						
	a)>1000mm (Conv C1=30m,C2=30m)	60 m		1426	-	-	1426
	B) Gantry						
	i)>1000mm belt width						
	a)upto 10m ht. (Conv. C1=42m, C2=42m)	84 m		4990	-	-	4990
	b)>10m ht. (Conv C1=21m, C2=38m)	59 m		3856	-	-	3856
3.	Drive house						
	a) upto 10m ht. (DH1 & DH2)	2 Nos.		2160	-	-	2160
4.	Truck loading house with 2 x 100t. capacity ROM twin hoppers including staircase structure etc complete (TH1 & TH2)	2 Nos.		17110	-	-	17110
5.	Hard stand below hoppers	528 sqm.		1020	-	-	1020
6.	Ground sump (35 cum cap) & pump house (10 sqm) for dust suppression	1 No.		620	-	-	620
7.	CHP office	25 sqm.		250	-	-	250
8.	Substation building	40 sqm.		480	-	-	480
9.	Electronic road weighbridge foundation & control room	2 Nos.		800	-	-	800
10.	Barbed wire fencing in Yard for transformer	15 m		10	-	-	10
11.	Earth work in excavation for laying 50mm dia pipe at 1m depth below GL for dust suppression	50 m		10	-	-	10
	Total 1 to 11			43677	-	-	43677
	Add 10% for foundations in poor soil			4368	-	-	4368
	Add 3% for contingencies			1441	-	-	1441
	Add for soil investigation	LS		300	-	-	300
	Add for general land development	LS		450	-	-	450
	Add for design engineering @3.75%			1802	-	-	1802
	Add 2% for sales tax			1005	-	-	1005
	Total			**53043**	-	-	53043

APPENDIX A.3.6

COAL(Mty)	1.25
PEAK OB(Mm^3)	8.45
AV.S.R.(m^3/t)	6.54
LIFE(Years)	23

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

ESTIMATED CAPITAL INVESTMENT ON PLANT & MACHINERY-OTHERS

(March, 2009)

(Amounts in Rs.'000)

Sl. No.	PARTICULARS	Total Nos.	Total Capital	INITIAL CAPITAL												Life	Depreciation
				I-YEAR		II-YEAR		III-YEAR		IV-YEAR		V-YEAR		VI-YEAR			
				No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount		
(A)	**OTHER P& M:**																
1.	C.H.P.		**101840**						**81009**		**20831**						**6213**
a(i)	P& M (MECHANICAL)	LS	34673						17418		17255					18	1926
a(ii)	P& M (MECHANICAL)	LS	7144						7144								397
b	IDLERS & BELTING	LS	3512						1670		1842					3	1171
c	CIVIL & STRUCTURALS	LS	53043						53043							30	2526
d	ELECTRONIC ROAD WEIGH BRIDGE	LS	3468						1734		1734.0						193
2.	PUMPING	LS	20261						1939		1443		1443		15436	18	1126
3.	WORKSHOP	LS	11656						4394		7262				0	18	648
4.	ELEC. P&M	LS	30895						18950		10150		1795		0	18	1716
5	TELECOMMUNICATION	LS	1925						345		707		873			18	107
5.	HOSPITAL EQUIPMENTS	LS	2500						0		1300		1200		0	18	139
6.	SURVEY EQUIPMENTS	LS	2500						0		1300		1200		0	18	139
7.	MISc.	LS	25751						13497		6652		4830		772	18	1431
	TOTAL.(A).		**197328**						**120134**		**49645**		**11341**		**16208**		**11517**

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Appendix- A.3.7

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED PHASED CAPITAL EXPENDITURE ON P&M - COMMUNICATION

OPTION : PARTIAL HIRING

(Base Price : MARCH'09)
(Amount in Rs. '000)

S.No.	Particulars	Qty	Unit Price	Total Cost	Yearwise Phasing							
					1st Year		2nd Year		3rd Year		4th Year	
					Qty	Cost	Qty	Cost	Qty	Cost	Qty	Cost
1	2	3	4	5	6	7	8	9	10	11	12	13
	COMMUNICATION :											
1	Surface mine communication	LS		500			LS	400	LS	100		
	a) EPABX 120 lines	10	4	40	5	20	3	12	2	8		
	b) BSNL lines	10	5	50	5	25	3	15	2	10		
	c) BSNL Cellone Mobile connection with sets	1	250	250					LS	250		
2	BSNL 2 Mpbs leased line	1	300	300					LS	300		
3	Router	1	35	35						35		
4	Ethernet Managed Switch	LS		500	LS	200	LS	200	LS	100		
5	Internet & LAN, Hardware and Software	LS		200	LS	100	LS	50	LS	50		
6	Cables & Overhead lines etc.	LS		50			LS	30	LS	20		
7	Testing & Measuring Equipment											
	Sub - Total :			1925		345		707		873		

1925			LS	30	LS	50				
		345			LS	20				
				7.		873				

APPENDIX - A.4

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI -III) OC

ESTIMATED CAPITAL INVESTMENT ON FURNITURE & FITTINGS

(MARCH,2009)

(Amt in Rs.`000)

Sl. No.	Particulars	Total Capital	Phasing of capital provision		
			III	IV	V
1.	General Furniture & Fittings	2500	500	1000	1000
	Total	2500	500	1000	1000

(Partial HiringOption)

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APPENDIX-A.6

PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI -III) OC

ESTIMATED CAPITAL INVESTMENT ON VEHICLES

(MARCH,2009)

(Amount in Rs. `000)

Sl.No.	Particulars	Nos.	Unit cost	Total capital provision	PHASING						Life (Years)	Depriciation
					III		IV		IV			
					Nos.	Amt.	Nos.	Amt.	Nos.	Amt.		
1.	Diesel Truck	1	1200	1200			1	1200			9	133
2.	Ambulance	1	458	458	1	458					13	35
3	Cash Van	1	700	700	1	700					9	78
4	Explosive Van	1	1200	1200	1	1200					9	133
	TOTAL	4		3558		2358		1200				380

* *Provision of 5 nos. of Diesel jeeps with a rate of Rs.25000/- per month including diesel has been made for hiring.*

** *Provision of 1 no. of School Bus & Job Pickup Van with a rate of Rs. 60000/- per month including diesel has been made for hiring.*

(Partial Hiring Option)

... per month including diesel has been made for hiring.

** Provision of 1 no. of School Bus & Job Pick-up Van with a rate of Rs. 60000/- per month including diesel has been made for hiring.

APPENDIX-A.7

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

ESTIMATED CAPITAL INVESTMENT ON PROSPECTING & BORING
(MARCH,2009)

(Amount in Rs `000)

Sl. No	Particulars	Total Capital	Phasing of capital provision		
			III	IV	V
1.	Proving of Geological structure (For about 400m of additional Exploration)	2000	1000	500	500
	TOTAL	2000	1000	500	500

APPENDIX -A.8 & A.8.1

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

ESTIMATED CAPITAL INVESTMENT ON MINE DEVELOPMENT

(March,2009)

(Amount in Rs. `000)

Sl. No.	Particulars	Total Capital	PHASING				
			I	II	III	IV	V
1	Incoming Power Supply (11kV)	11200	5500	5700			
2	Diversion of 66 kV power line	24000	2000	22000			
3	Haul Road	58184			2909	8728	46547
4	Diversion of PWD road	64182			12836	22464	28882
5	Diversion of Sakhri to Pauni Nallah (1.25 km)	28291	5000	23291			
6	Diversion of Lendi to Sakhri Nallah (1.80 km)	40739	5000	35739			
7	Diversion of Western nala to Lendi Nalla (1.50 km)	33949	5000	28949			
8	Misc	5000	1000	2000	1000	500	500
	TOTAL	265545	23500	117679	16745	31692	75929

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APPENDIX - A.8.2

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

SUMMARY OF ESTIMATED CAPITAL INVESTMENT ON ROADS & CULVERTS

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Amount in Rs.'000)

Sl. No.	Particulars	Total Cost at CI 360	Remarks
A	Approach Road	15125	App.A.8.2.1
B	Colony Roads	4508	App.A.8.2.2
C	Haul Roads	58184	App.A.8.2.3
D	Service Road	3992	App.A.8.2.4
E	Diversion of Roads	64182	App.A.8.2.5
	GRAND TOTAL	145991	

APPENDIX - A.8.2.1

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON APPROACH ROAD

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI100 at Nagpur as on 1.1.92	Total Cost at CI 360
1 (A)	**Approach Road to Mine Site**			
	SECTOR ROAD (STRATUM 'D') : 7.5 M wide with 2 m wide cycle track on both side (DOUBLE LANE)			
	Specifications : 22.5 cm thicK cobble soling over 27.5 cm moorum filling. 15 cm thick WBM in 2 layers 4 cm thick premix surfacing			
	Cycle track: 2.5 cm thick premix surfacing over 15cm WBM (2 layers) blinded with moorum.Brick edging on both sides.			
	Length in mtrs	750	1.896	5119
1 (B)	**Approach Road to Township**			
	SECTOR ROAD (STRATUM 'D') : 7.5 M wide with 2 m wide cycle track on both side (DOUBLE LANE)			
	Specifications : 22.5 cm thicK cobble soling over 27.5 cm moorum filling. 15 cm thick WBM in 2 layers 4 cm thick premix surfacing			
	Cycle track: 2.5 cm thick premix surfacing over 15cm WBM (2 layers) blinded with moorum.Brick edging on both sides.			
	Lengt in mtrs	500	1.896	3413
1(C)	**Approach Road to Magzine**			
	SECTOR ROAD (STRATUM 'C') :			
	3.75 M wide with 2 m Pucca shoulder on both sides.			
	Specifications :			
	15 cm thich cobble soling over 22.5 cm moorum filling. 15 cm thick WBM in 2 layers 2.5 cm thick premix bituminous carpeting with seal coat. Pucca shoulders : 7.5 cm moorum layer over 7.5 cm stone metalling blinded with moorum. Brick edging on both sides.			
	Length mtrs	1000	0.78	2808
2(A)	**CULVERTS (13 M Wide)**			
i)	4.57 M span R.C.C. slab culvert	1	297	1069
ii)	3.05 M span R.C.C. slab culvert	1	198	713
iii)	1.83 M span R.C.C. slab culvert	0	118.8	0
iv)	1.22 M span R.C.C. slab culvert	0	79.2	0
v)	0.61 m dia. hume pipe culvert	1	24.6	89

SL. NO.	
2(B)	CULVER
i)	4.57 M sp
ii)	3.05 M sp
iii)	1.83 M sp
iv)	1.22 M sp
v)	0.61 m d
3	Tree gua
4	Extra for
5	TOTAL
6	C··tinge
7	TOTAL
8	Add: Ta
9	GRAND

CMPDI

ENDIX - A.8.2.1

AD

ost in Rs.'000)

Total Cost at CI 360
5119
3413
2808
1069
713
0
0
89

..(ii)..

APPENDIX - A.8.2.1(contd.)

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI100 at Nagpur as on 1.1.92	Total Cost at CI 0
2(B)	**CULVERTS (7.5 M Wide)**			
i)	4.57 M span R.C.C. slab culvert			
ii)	3.05 M span R.C.C. slab culvert	1	225	810
iii)	1.83 M span R.C.C. slab culvert	0	150	0
iv)	1.22 M span R.C.C. slab culvert	0	90	0
v)	0.61 m dia. hume pipe culvert	0	60	0
		1	18.6	67
3	Tree guards			
4	Extra for poor/B.C. soil for items 2 @ 10%	48	0.19	33
5	TOTAL			275
6	Contingencies 3%			14396
7	TOTAL			432
8	Add: Tax on Works Contract @ 2%			14828
9	**GRAND TOTAL**			297
				15125

APPENDIX - A.8.2.2

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING BREAK-UP OF CAPITAL INVESTMENT ON COLONY ROADS

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI 100 at Nagpur as on 1.1.92	Total Cost at CI 360
1	COLONY ROADS			
1(A)	MAJOR-STRATUM 'B' ROAD 3.75 M wide with 2 M wide pucca shoulder on both sides.			
i)	Specifications:- 15 cm thich cobble metal soling over 22.5 cm moorum filling. 7.5 cm thick WBM 2cm thick premix bituminous carpeting. Pucca Shoulders: 7.5 cm moorum layer over 7.5 cm stone metalling blinded with moorum.Brick edging on both sides.			
ii)	Length of Road (in mtr)	800	0.61	1757
(B)	MINOR-STRATUM 'A' ROAD 3.75 M wide with 1.5 M wide shoulder on both sides. Specifications:- 15 cm thich cobble metal soling over 22.5 cm moorum filling. 7.5 cm thick WBM. 2cm thick premix bituminous carpeting. Brick edging on both sides.			
i)	Shoulders : Earth work and surface dressing			
ii)	Length of Road (in m)	500	0.47	846
2	CULVERTS (7.5 M wide)			
i)	4.57 M span R.C.C. slab culvert	1	225	810
ii)	3.05 m span RCC slab culvert	1	150	540
iii)	1.83 m span RCC slab culvert		90	0
iv)	1.22 m span RCC slab culvert	0	60	0
v)	0.61 M dia. hume pipe culvert	1	18.6	67
3	Tree guards	52	0.19	36
4	RCC Slab cover for Drain Crossing (153x61x7.5 cm)	162	0.16	93
5	Extra for poor/B.C. soil on item 2 only (@10%)			142
6	TOTAL			4291
7	Contingencies 3%			129
8	TOTAL			4420
9	Add: Tax on Works Contract @ 2%			88
10	GRAND TOTAL			4508

CMPDI

X - A.8.2.2

n Rs.'000)

Total Cost at CI 360
1757
846
810
540
0
0
67
36
93
142
4291
129
4420
88
4508

CMPDI

APPENDIX - A.8.2.3

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING BREAK-UP OF CAPITAL INVESTMENT ON HAUL ROADS

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI100 at Nagpur as on 1.1.92	Total Cost at CI 360
1)	**Haul Road and Culverts for 50 Te Rear Dumpers**			
	WIDTH Carriage way of double lane = 14 m Dozer track = 5 m Shoulder on both sides = 2 m Total road width = 23 m			
	Specifications suitable for CBR value 3 (Consolidated thickness) Total thickness of Pavement = 110 cm Thickness of gravel layer 63mm-40mm well graded=20cm Thickness of gravel layer 90mm-40mm well graded=25cm Thickness of moorum sand layer =65 cm			
	Shoulder moorum sand filling			
a)	Length (in m)	2000	5.84	42048
2)	**Culverts (14.00m Wide):**			
i)	4.57m span RCC slab culvert	1	484.2	1743
ii)	3.05m span RCC slab culvert	1	322.8	1162
iii)	1.83 m span RCC slab culvert	0	193.8	0
iii)	0.61m diameter hume pipe culvert	2	40.2	289
3	Road side drain (size 60cmx90cm)	4000	0.62	8928
4	Extra for poor /BC soil @ 10% for item 2&3			1212
5	Total			55382
6	Contingencies 3%			1661
8	TOTAL			57043
9	Add: Tax on works contract @ 2%			1141
10	GRAND TOTAL.			58184

APPENDIX - A 8.2.4

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON SERVICE ROADS.
[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI100 at Nagpur as on 1.1.92	Total Cost at CI 360
1	SECTOR ROAD (STRATUM 'C') :			
	3.75 M wide with 2 m Pucca shoulder on both sides.			
	Specifications :			
	15 cm thich cobble soling over 22.5 cm moorum filling. 15 cm thick WBM in 2 layers 2.5 cm thick premix bituminous carpeting with seal coat. Pucca shoulders : 7.5 cm moorum layer over 7.5 cm stone metalling blinded with moorum. Brick edging on both sides.			
	Length mtrs	1000	0.78	2808
2	**CULVERTS (7.5 M Wide)**			
i)	4.57 M span R.C.C. slab culvert	1	225	810
ii)	3.05 M span R.C.C. slab culvert	0	150	0
iii)	1.83 M span R.C.C. slab culvert	0	90	0
iv)	1.22 M span R.C.C. slab culvert	0	60	0
vi	0.61 m dia. hume pipe culvert	1	18.6	67
3	Tree guards	40	0.19	27
4	Extra for poor/B.C. soil for item 2 @ 10%			88
5	TOTAL			3800
6	Contingencies 3%			114
7	TOTAL			3914
8	Add: Tax on Works Contract @ 2%			78
9	**GRAND TOTAL**			3992

3.2.4

cost in Rs.'000)

Total Cost at CI 360
2808
810
0
0
0
67
27
88
3800
114
3914
78
3992

APPENDIX - A.8.2.5

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON DIVERSION OF ROADS.
[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate and total cost in Rs.'000)

SL. NO.	PARTICULARS	Total quantity required	Unit Rate at CI100 at Nagpur as on 1.1.92	Total Cost at CI 360
1 (A)	**Diversion of Village Road from Chincholi village to shakhari village to be used as Coal transportation road in future**			
	SECTOR ROAD (STRATUM 'D') : 7.5 M wide with 2 m wide cycle track on both side (DOUBLE LANE)			
i)	Specifications : 22.5 cm thicK cobble soling over 27.5 cm moorum filling. 15 cm thick WBM in 2 layers 4 cm thick premix surfacing			
	Cycle track: 2.5 cm thick premix surfacing over 15cm WBM (2 layers) blinded with moorum.Brick edging on both sides. Approach road to mine site (in mtrs)	6000	1.896	40954
1 (A)	**Additional road for presently proposed Coal transportation from CHPof Pauni-III OC to Dip side of existing Pauni OC**			
	SECTOR ROAD (STRATUM 'D') : 7.5 M wide with 2 m wide cycle track on both side (DOUBLE LANE)			
	Specifications : 22.5 cm thicK cobble soling over 27.5 cm moorum filling. 15 cm thick WBM in 2 layers 4 cm thick premix surfacing			
	Cycle track: 2.5 cm thick premix surfacing over 15cm WBM (2 layers) blinded with moorum.Brick edging on both sides. Approach road to mine site (in mtrs)	2000	1.896	13651
2	**CULVERTS (13 M Wide)**			
i)	4.57 M span R.C.C. slab culvert	2	297	2138
ii)	3.05 M span R.C.C. slab culvert	2	198	1426
iii)	1.83 M span R.C.C. slab culvert	2	118.8	855
iv)	1.22 M span R.C.C. slab culvert	2	79.2	570
v)	0.61 m dia. hume pipe culvert	8	24.6	708
3	Tree guards	320	0.19	219
4	Extra for poor/B.C. soil for items 2 @ 10%			570
5	TOTAL			61091
6	Contingencies 3%			1833
7	TOTAL			62924
8	Add: Tax on Works Contract @ 2%			1258
9	GRAND TOTAL			64182

APPENDIX - A.8.3

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

SUMMARY OF ESTIMATED CAPITAL INVESTMENT ON WATER SUPPLY & SEWERAGE

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Total Cost in Rs.'000)

Sl.No	PARTICULARS	Total cost at CI 360	Remark
A	Colony Water supply	7722	APPENDIX - A.8.3.1
B	Colony Sewerage	4048	APPENDIX - A.8.3.2
C	Industrial Water supply	12305	APPENDIX - A.8.3.3
D	Industrial Sewerage	11921	APPENDIX - A.8.3.4
	GRAND TOTAL :	**35996**	

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APPENDIX - A.8.3

Remark
APPENDIX - A.8.3.1
APPENDIX - A.8.3.2
APPENDIX - A.8.3.3
APPENDIX - A.8.3.4

APPENDIX - A.8.3.1 (A-8.3.4)

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON COLONY WATER SUPPLY

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate & Total Cost in Rs.'000)

SL NO.	PARTICULARS	Total quantity required	Unit Rate at CI 100 at Nagpur as on 01.01.92	Total Cost at CI 360
1	2	3	4	5
A	RAW WATER ARRANGEMENT			
1	Boring of borewell 150mm dia., 100m deep with pump house and suitable drawal arrangement, (2+2) Nos.	4	115	1656
2	Raw water boosting pump set 7.5 HP, (2+1)Nos. (Submersible Type)	3	35	378
3	Raw water rising main:			
	i) 80 mm dia.			
	ii) Add 7.5% for saddle, supports, valves, bends,etc.	600	0.38	821
4	Chlorinators			62
		2	LS	25
5	Ground water reservoir (kl)	20	3.9	281
6	Clear water pump 5HP (Centrifugal yppe)	3	12	130
7	Clear water rising main:			
	i) 80 mm dia.			
	ii) Add 7.5% for saddle, supports, valves, bends,etc.	600	0.38	821
8	RCC Overhead Tank (kl)			62.
		50	6.6	1188
9	Water Distribution Arrangement :			
	I) 80mm dia. CI Main			
	I) 50mm dia. Main	650	0.38	889
	ii) 40mm dia. Main	325	0.27	316
	iii) Add 7.5% for saddle, supports, valves, bends,etc.	325	0.16	187
10	Investigations for :			104
	a) Hydrogeological data			
	b) Raw water samples (Physico-chemical & bacteriolo-gical analysis)			80
	Sub - total 1 to 10			
11	Electrical Installation :			7000
	a) Transformer, switchgear & switch room			350
	b) Overhead line			
	c) Instruments, tools, etc.			
12	TOTAL :			
13	Contingencies @ 3%			7350
	Total			221
14	Add: Tax on Works Contract @ 2 %			7571
	GRAND TOTAL			151
				7722

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

APPENDIX - A.8.3.2 (A-8.

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON COLONY SEWERAGE

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Departmental)

NO.		quantity required	CI 100 at Nagpur as on 01.01.92	Cost at CI 360
1	2	3	4	5
A	COMBINED OPEN SURFACE DRAIN			
	i) 60x90 cm size	130	0.62	290
	ii) 30x45 cm size	260	0.34	318
	iii) 22.5x30 cm size	325	0.17	199
	SUB-TOTAL (A)			807
B	Sewage disposal for quarters	183	4.5	2965
C	Provision for Poor/BC soil for item-A @ 10%			81
	SUB-TOTAL (A+B+C)			3853
D	Contingencies 3%			116
	Total			3969
E	Add: Tax on Works Contract@ 2%			79
	GRAND TOTAL			**4048**

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APPENDIX - A.8.3.3 (A-8.3.3)

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON INDUSTRIAL WATER SUPPLY

[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate & Total Cost in Rs.'000)

SL NO.	PARTICULARS	Total quantity required	Unit Rate at CI 100 at Nagpur as on 01.01.92	Total Cost at CI 360
1	2	3	4	5
1	Boring of borewell 150mm dia., 100m deep with pump house and suitable drawal arrangement, (3+2) Nos.	5	115	2070
2	Raw water boosting pump set 7.5 HP, (3+1)Nos. (Submersible Type)	4	35	504
3	Raw water rising main:			
	i) 80 mm dia.	600	0.38	821
	ii) Add 7.5% for saddle, supports, valves, bends,etc.			62
4	Chlorinators	2	LS	25
5	Ground water reservoir (kl)	40	3.9	562
6	Clear water pump 5HP (Centrifugal yppe)	3	12	130
7	Clear water rising main:			
	i) 80 mm dia.	600	0.38	821
	ii) Add 7.5% for saddle, supports, valves, bends,etc.			62
8	RCC Overhead Tank (kl)	120	6.6	2851
9	Water Distribution Arrangement :			
	i) 80mm dia. CI Main	1375	0.38	1881
	i) 50mm dia. Main	688	0.27	669
	ii) 40mm dia. Main	688	0.16	396
	iii) Add 7.5% for saddle, supports, valves, bends,etc.			221
10	Investigations for : a) Hydrogeological data b) Raw water samples (Physico-chemical & bacteriological analysis)			80
	sub - total			11155
11	Electrical Installation : a) Transformer, switchgear & switch room b) Overhead line c) Instruments, tools, etc.			558
12	TOTAL :			11713
13	Contingencies @ 3%			351
	Total			12064
14	Add: Tax on Works Contract @ 2 %			241
	GRAND TOTAL			**12305**

Note- Cost of Industrial water supply has been taken as that of Departmental option.

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

APPENDIX - A.8.3.4 (A-8.4)

STATEMENT SHOWING ESTIMATED CAPITAL INVESTMENT ON INDUSTRIAL SEWERAGE
[AT COST INDEX 360 IN 2009 (1st HALF)]

(Rate & Total Cost in Rs.'000)

Sl.No.	PARTICULARS	Total quantity reqd	Unit Rate at Nagpur as on 01.01.92	Total cost at CI 360
1	2	3	4	5
A	COMBINED OPEN SURFACE DRAIN			
	i) 30x45 cm size (Length in mtrs)	1375	0.34	1683
	ii) 60cmX 90cm (Length in mtrs)	1375	0.62	3069
B	Sewage disposal arrangement for service buildings 5% of total cost of Service Buildings	122403	5%	6120
C	Provision for Poor/BC soil for item-A @ 10%			475
	SUB-TOTAL (A+B+C)			11347
D	Contingencies 3%			340
	Total			11687
E	Add: Tax on Works Contract@ 2%			234
	GRAND TOTAL			**11921**

Note- Cost of Industrial Sewerage has been taken as that of Departmental option.

APPENDIX-A.8.4

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP
ESTIMATED CAPITAL INVESTMENT ON PR PREPARATION
(MARCH,2009)

(Amount in Rs.`000)

Sl. No.	Particulars	Capital Provision	Phasing of capital provision		
			III	IV	V
1.	Preparation of Project report for SAKHARI-IRAWATI (Pauni-III) OCP	17972	10000	7972	
	TOTAL	17972	10000	7972	0

APPENDIX-A.8.4.A

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCM

ESTIMATED CAPITAL INVESTMENT ON SCIENTIFIC RESEARCH (MARCH,2009)

(Amount in Rs.`000)

Sl. No.	Particulars	Amount	Phasing of capital provision			
			V	VI	VII	VIII
1	Slope Stability Studies	1500	100	500	500	400
2	Study for nalla diversion	1000	100	300	300	300
3	Hydrogeological Studies	500	100	300	50	50
4	Other Scientific Studies	500		200	50	250
	TOTAL	3500	300	1300	900	1000

3500	300	1[illegible]00	900	1000

(Partial Hiring Option)

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PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

APPENDIX-A.9

STATEMENT SHOWING ESTIMATED PHASED CAPITAL EXPENDITURE ON 'DEVELOPMENT OTHER' EXPENSES OF REVENUE NATURE CAPITALISED DURING DEVELOPMENT PERIOD (PARTIAL HIRING OPTION)

(Amount in Rs.'000)

SL. NO.	PARTICULARS	I	II	III	Total
	Production (Mt)				
		0	0	0.4	0.4
1	Salaries & Wages				
		0	0	57772	57772
2	Stores				
		0	0	49313	49313
3	Power				
		0	0	6660	6660
4	Misc. Exp. Incl. W/D				
		0	0	11292	11292
5	Leasing/Outsourcing of HEMM				
		0	0	0	0
6	Interest				
		9841	32723	48087	90651
7	OBR charged to coal				
		0	0	21785	21785
8	Depreciation				
9	Total	11123	36347	62231	109701
		20964	69070	257140	347174
10	Less : Sale Proceeds				
11	Total (Before writing off depreciation)	0	0	452636	452636
		20964	69070	-195495	-105464
12	Less Depreciation				
13	Net-Total (Cash Portion)	11123	36347	62231	109701
14	OB Suspense(Cash Portion)	9841	32723	-257726	-215162
15	Total A.9	0	0	9966	9966
		9841	32723	-247762	-205198

JOB No. 4021291

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BOARD M

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APPENDIX:A.9.1

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT OF REVENUE EXPENDITURE CAPITALISED

PARTIAL HIRING OPTION

S.No.	PARTICULARS	YEAR I	YEAR II	YEAR III	TOTAL
1	Salaries & Wages	0	0	5535	5535
2	Stores	0	0	25143	25143
3	Power	0	0	0	0
4	Misc. Exp. Incl. W/D	0	0	151	151
5	Leasing/Outsourcing of HEMM	0	0	0	0
6	Interest	0	0	922	922
7	Depreciation	0	0	30	30
8	Total	0	0	31781	31781
9	Less : OBR CHARGED TO COAL	0	0	21785	21785
10	Deferred Revenue Exp.	0	0	9996	9996
11	Less Depreciation	0	0	30	30
12	OB Suspense(Cash Portion)	0	0	9966	9966

12	OB Suspense(Cash Portion)	0	0	9966	9966

APPENDIX:A.9.2

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP
STATEMENT SHOWING ESTIMATED INTEREST ON CAPITAL DURING DEVELOPMENT PERIOD
PARTIAL HIRING OPTION

YEAR	CAPITAL BALANCE AT THE BEGINNING	CAPITAL EXP. DURING THE YEAR	EXP. OF REV.NATURE CAPITALISED DURING THE YEAR	SALE PROCEEDS OF COAL	NET EXP. DURING THE YEAR	TOTAL CAPITAL EXP. FOR THE YEAR	LOAN POSITION OF CAPITAL FOR THE YEAR	INTEREST ON CAPITAL@ 11.5%
FOR COAL								
I	0	342300	0	0	342300	342300	85575	9841
II	352141	433897	0	0	433897	786038	284545	32723
FOR OB								
I	0	0	0	0	0	0	0	0
II	0	0	0	0	0	0	0	0

(Partial Hiring Option)

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BOARD MATTER
CONFIDENTIAL

	PROJECT REPORT FOR SAKHARI-IRAWATI (PAUNI-III) OCP		APPENDIX - B
	STATEMENT SHOWING JOBWISE/CATEGORYWISE ESTIMATED MANPOWER REQUIREMENT		
	PARTIAL HIRING OPTION		
			Coal (Mty) - 1.25
			Peak OB (Mm3) - 8.45
S.No.	Designation		Average SR(m^3/t) - 6.54
		Cat./Scale	Strength
	I. TOP OB (Direct)		
1	Mining Sirdar/Shot Firer		
2	Blasting Gang	6724-10360	15
		I / II	8
	Sub. Total I.		
			23
	II. COAL & PARTING		
	II. (A) COAL (Direct)		
1	Backhoe Operator		
2	Drill Operator	A	8
3	Dozer Operator	B	8
4	Rear Dumper Operator	B	8
5	Mining Sirdar/Shot Firer	B	28
6	Pitman/Tripman	6724-10360	4
7	Blasting Gang	5896-8542	4
		I/II	6
	Sub. Total II.(A)		
			66
	II. (B) CHP		
1	Exec. Engineer (E&M)		
2	Foreman Incharge (E&M)	13750-18700	1
3	Foreman (E&M)	7824-12054	1
4	Quality Control Despatch/Inspector	7824-12054	1
5	Feeder Breaker Operator/Crusher Operator	6219-9009	1
6	Weighbridge Clerk	V/VI	4
7	Mechanical Fitter	5962-8644	3
8	Electrical Fitter/ Control Room Operator	V / VI	2
9	Fitter Helper	V / VI	3
10	Chute/Feeder Operator	II	5
11	General Mazdoor / Shale Picker	II / III	4
		I	5
	Sub. Total II.(B)		
	TOTAL (II)		30
			96
	III. COMMON SERVICES		
	A. Common HEMM Operation		
1	Crane Operator		
2	Water Sprinkler Operator	C/D	2
3	Grader Operator	C	4
4	Mobile Maintenance Van	C	4
5	Front-end Loader Operator	D	4
6	Backhoe Operator	B	4
7	Fire-fighting Truck Operator	C	2
		B	3
	Sub- Total III (A)		
			23

(ii)

Sl.No.	Designation	Cat./Scale	Strength
	B. Excavation Equip. Maint. & Supervision		
1	Suptdg. Engineer (Excv)	17500-22300	1
2	Engineer (Excv.)	10750-16750	2
3	Foreman Incharge (Excv)	7824-12054	1
4	Foreman (Excv.)	7824-12054	3
5	M.T.K./LDC	6219-9009	4
	Sub-Total III(B)		11
	C) Excavation Plant & Equipment Maintenance		
1	Mechanic Grade I	A	1
2	Fitter Grade I	B	2
3	Fitter Grade II	C	2
4	Fitter Grade III	D	2
5	Auto Electrician	B	1
6	Auto Electrician	C	1
7	Auto Electrician	D	2
8	Welder Grade I	B	1
9	Welder Grade II	C	1
10	Welder Grade III	D	1
11	Turner/Machinist Grade I	B	1
12	Turner/Machinist Grade II	C	1
13	Turner/Machinist Grade III	D	1
14	Washing Machine Operator	C	2
15	Electrician	C/D	1
16	Black Smith	V	2
17	Helper/ Greaser	E	12
18	Mazdoor	I	12
	Sub- Total III (C)		46
	D. Electrical & Mech. Supervision		
1	Supdtg. Engineer (E&M)	17500-22300	1
2	Executive Engineer (E&M)	13750-18700	1
3	Foreman Incharge(E&M)	7824-12054	1
4	Electrical Supervisor	7824-12054	3
5	Foreman (Mech.)	7824-12054	2
6	Foreman (E& T)	7824-12054	2
	Sub- Total III (D)		**10**
	E) Electrical &Mechanical Maintenance		
1	Mechanical Fitter	IV/ V/ VI	3
2	Fitter Helper	III	3
3	Pump Attendant	III	7
4	Tyndal/Tyndal Jamadar	IV/ V	6
5	Turner	IV/ V	2
6	Electrician	IV/ V	4
7	Helper Electrician	II	4
8	Welder	V/ VI	1
9	S/S Attendant	III	4
10	Mazdoor	I	4
	Sub- Total III(E)		**38**

Sl.No.	
1	Man..
2	Asst..
3	Und..
4	Safe..
5	Ove..
6	Ove..
7	MTK..
1	Dy (..
2	Dy...
3	Fina..
4	Syst..
5	Cas..
6	Acc..
7	Acc..
8	LDC..
9	Driv..
10	Driv..
11	Wir..
12	Pec..
1	Sr...
2	Sto..
3	Ma..
1	*Sec..*
2	*Arn..*
3	*Wa..*
	** O..*
1	*Lal..*
2	*Sa...*
1	Me..
2	Dr..
3	Sw..
4	An..

Strength
1
2
1
3
4
11
1
2
2
2
1
2
1
1
1
1
1
1
2
1
2
12
12
46
1
1
1
3
2
2
10
3
3
7
6
2
4
4
1
4
4
38

(iii)

Sl.No.	Designation	Cat./Scale	Strength
	F. Mining Operations & Supervision		
1	Manager	17500-22300	1
2	Asst. Colliery Manager	16000-20800	1
3	Under Manager & Blasting Officer	10750-16750	5
4	Safety Oifficer	13750-18700	1
5	Overman	7824-12054	7
6	Overman (Blasting)	7824-12054	2
7	MTK/Typist	6219-9009	4
	Sub- Total III (F)		21
	G. Project Office		
1	Dy CME	18500-23900	1
2	Dy. Personnel Manager	16000-20800	1
3	Finance Officer	10750-16750	1
4	Systems Officer	10750-16750	1
5	Cashier	6724-10360	2
6	Accountant	7824-12054	1
7	Accounts Clerk	6724-10360	2
8	LDC / Typist	6219-9009	2
9	Driver (HMV)	6724-10360	3
10	Driver (LMV)	6219-9009	1
11	Wireless Operator	D	4
12	Peon	5691-8247	2
	Sub- Total . III (G)		21
	H. Stores and Purchase		
1	Sr. Store keeper	7824-12054	1
2	Store Mazdoor	I/II	3
3	Magazine Clerk	6219-9009	2
	Sub- Total III(H)		6
	I. Security		
1	*Security Officer **	10750-16750	0
2	*Armed Guard **	5896-8542	0
3	*Watchman/Security Guard **	5691-8247	0
	** On Hiring Total 22 persons*		
	Sub-Total III(I)		0
	J.Chemical Laboratory		
1	*Lab Assistant/Sampling Supervisor*	6219-9009	1
2	*Sampling Mazdoor*	I/II	2
	Sub-Total III(J)		3
	K.Medical & Sanitation		
1	Medical Officer	10750-16750	1
2	Dresser/Compounder	5962-8644	1
3	Sweeper	I	2
4	Ambulance Driver.	6219-9009	4
	Sub-Total III(K)		8

(iv)			
Sl.No.	Designation	Cat./Scale	Strength
	L. Civil Works		
1	Superintending Engineer	17500-22300	1
2	Overseer (Civil)	7824-12054	1
2	Carpenter	V	1
3	Mason	V	1
3	Plumber	IV	1
4	Filter House Attendant	IV	2
4	Pump Khalasi/Valveman	III	2
5	General Mazdoor/Rest House Attendant	I	4
	Sub-Total III(L)		13
	M. Welfare		
1	Welfare Officer	10750-16750	1
2	LDC / Typist	6219-9009	1
	Sub-Total III(M)		2
	N. Mine Planning & Surveying		
1	Survey Officer	10750-16750	1
2	Surveyor	7260-11184	2
3	Draftsman	6219-9009	2
4	Chainman	6219-9009	2
5	Survey Mazdoor	I	3
	Sub-Total III(N)		10
	Sub-Total III (A to N)		212
IV	**LAND RECLAMATION/ENVIRONMENT**		
1	Land Reclamation Supervisor	6219-9009	1
2	General Mazdoor	I	1
	Sub-Total(IV)		2
	Grand Total (I to IV)		333

CMPDI

PR FOR SAKHARI-IRAWATI (PAUNI-III) OCP

STATEMENT SHOWING SALARIES, WAGES & BENEFITS, MANPOWER ANALYSIS AND PRODUCTIVITY

APPENDIX-B.1
COAL in Mt : 1.25
OB in Mm3 : 8.45

SL.NO.	SCALE/GRADE	STRENGTH	WAGES	BENEFITS	TOTAL
I	**COAL**				
1	13750-18700	1	473260	127635	600895
2	5896-8542	4	703460	267532	970992
3	5962-8644	3	533895	202503	736398
4	6219-9009	1	185480	69715	255195
5	6724-10360	4	853180	311620	1164800
6	7824-12054	2	496342	176358	672700
7	I	8	1329984	511800	1841784
8	II	10	1699960	650790	2350750
9	III	2	350238	133176	483414
10	V	4	744664	279368	1024032
11	VI	5	1031385	378825	1207410
12	B	44	9593188	3489244	13082432
13	A	8	1851832	666104	2517936
SUB TOTAL		96	19846868	7264670	27111538
II	**O.B.**				
1	6724-10360	15	3199425	1168575	4368000
2	I	4	664992	255900	920892
3	II	4	679984	260316	940300
SUB TOTAL		23	4544401	1684791	6229192

(Partial Hiring Option)