

Annexure

Pre-feasibility Report OF URIMARI UGP

1.0 Introduction

Urimari UGP is located in South Karanpura Coalfield and is within Ramgarh District of Jharkhand. The UGP is within the leasehold area of existing Urimari colliery under Barka-Sayal Area of CCL. By road the mine is about 60 Km from Ranchi. The nearest railway station from the site is Patratu on Gomoh-Barkakhana line. Area is covered under toposheet no 73 E/6 of 1:50,000, Survey of India.

2.0 History of Mining

The Urimari Project Report of 0.36 MTY was prepared in March 1990 for Rs 16.33 Crs. and was approved on 26.06.1990.

As per the approved report, it was proposed to be worked by SDL, but due to steep gradient (1 in 4.5), number of faults, stratum contour line and horse shoe pattern, no SDL has been deployed. From inception till date, the development is being done manually by Bord & Pillar method. Its present production is about 0.050 MTY. Till date, it has produced 1.57 MT of coal. Balance reserve is 3.55 MT.

3.0 Existing Scenario

At present it is working in Upper Nakari, Lower Nakari, Upper Samana, Lower Samana 'A' & 'B', local 'A' and 'B', Hathidari seam and Bansgarha seam.

Sector-I

The overlying Hathidari seam has been developed up to 16th level through Inclines 1 & 2 and is standing on pillars. At present only pumping is done here.

At present, development work is going on in Bansgarha seam through Inclines 5 & 6. The present working has reached beyond 24th level. Depillaring cannot be done in both the seams, because 2/3rd of the property lies under the H.F.L of Damodar river.

Sector-II

Hathidari seam is being developed through a pair of rising drifts from the underlying Bansgarha seam. At present, development has been done beyond 15th level.

The underlying Bansgarha seam has been developed up to 16th level through a pair of Inclines 3 & 4. Depillaring of both the seams will start after the construction of earthen embankment between sector-I and sector-II. Construction of earthen embankment is in progress.

Sector-III

Both the seams are virgin. Preparatory work is going on for the development of Hathidari seam . A proposal for separate Incline cutting is under process at CCL HQ.

Coal Production since inception is shown in the following table:

YEAR	ACTUAL PRODUCTION (MTPA)
91-92	0.002128
92-93	0.020162
93-94	0.031588
94-95	0.033473
95-96	0.040153
96-97	0.41651
97-98	0.032645
98-99	0.035350
99-2000	0.041284

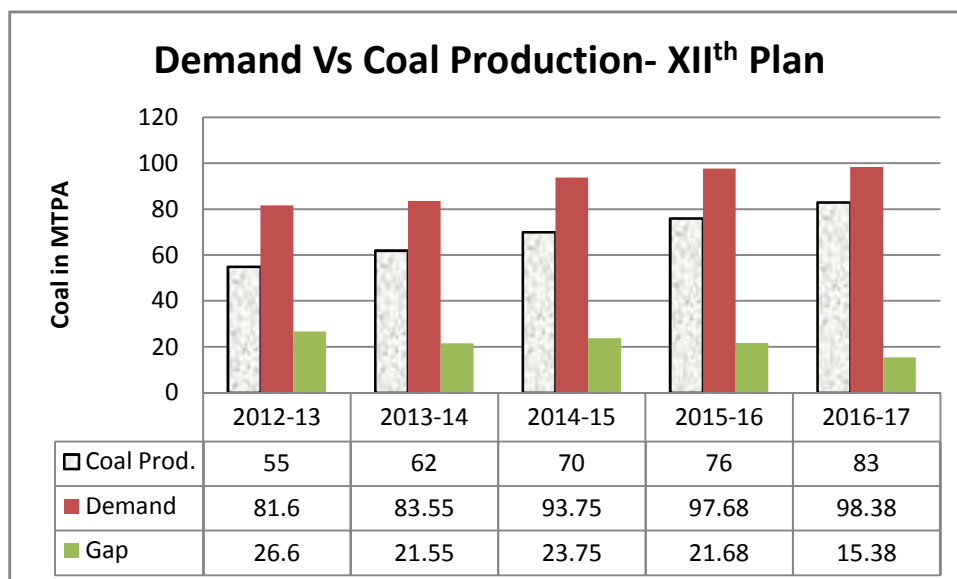
2000-01	0.059491
YEAR	ACTUAL PRODUCTION (MTPA)
2001-02	0.053880
2002-03	0.061095
2003-04	0.079000
2004-05	0.100620
2005-06	0.084290
2006-07	0.091550
2007-08	0.073150
2008-09	0.057280
2009-10	0.055001
2010-11	0.050584
2011-12	0.048966
2012-13	0.057107
2013-14	0.048546

4.0 Scope of this Conceptual Report

Scope of this conceptual note is to get Environmental Clearance for Urimari UG.

5.0 Marketability:

The demand Vs production of coal in XIIth Plan Period of CCL is given below :



Gap in production and demand of coal from CCL justifies increase in production from Urimari UGP.

6.0 Geology:

1	Seams existing in mining area	Upper Nakari, Lower Nakari, Upper Samana, Lower Samana 'A' & 'B', local 'A' and 'B' Hathidari seam and Bansgarha seam.
2	Seams worked in the mining area	Hathidari seam and Bansgarha seam
3	Status of remaining seams (underlying and overlying)	Virgin and not workable due to thinning and uneconomic.
4	Potential of remaining (underlying and overlying seams) . if not worked, why?	Not workable. Not workable due to thinning of seam, and found in a very small path and declared uneconomic in P.R.
5	Seam description and thickness	Hathidari seam Bansgarha seam 2.30 M to 4.40 M 4.10 to 7.10 M
6	Depth from surface	8.0 M to 112 M 11.50 M to 130 M
7	Gradient(Dip)	1 in 4.5 1 in 4.5
8	Grade of coal realised	B'LF' C'LF'
9	Grade of coal as per GR	D (partly 'C') D (partly 'E')

7.0 Target Output and Life Of The Mine

Within the existing mine boundary, balance minable reserves of 3.55 MT has been estimated. With this mineable reserves, the life of the proposed UGP has been estimated to be 10 years for a rated capacity of 0.36 MTY of coal.

The capacity of the mine has been fixed on the basis of average geo-mining conditions, average climatic conditions and average breakdown hours. There may be increase in the capacity of coal production due to following reasons:

- a) favourable geo-mining condition.
- b) favourable climatic conditions

c) better utilization of equipment.

As such peak capacity of mine has been fixed at 0.41 MTPA.

8.0 Coal Handling Plant

Existing Arrangement

The railway siding is being used for despatch of coal to the Saunda sale center and Bhurkunda Rly Siding at about 4km & 8 km respectively. The siding is almost 2 KM away from the mine.

9.0 BASIC PARAMETERS OF THE MINE

i)	Annual Coal production	0.36 MTY
ii)	Grade of Coal	G-6/G-5
iii)	No. of working days	300
iv)	No. of shifts/day	3 nos. & 8 hours each

10.0 Existing Power supply and communication

Source of Supply :

At present, the project is receiving power from DVC . The present consumption is 194400 KWH per month.

The existing source of Power Supply System of M/s. DVC will continue.

Communication:

To facilitate efficient functioning of the operational units, service units, maintenance units, workshop and administration units, road and rail dispatch etc effective and reliable communication system has been provided.

An EPABX Exchange with required numbers of subscriber lines for facilitating voice communication between various offices, residential buildings and other strategic points within the mine is existing. The same system shall continue.

11.0 Mine facilities

Workshop

The existing workshop at Urimari UGP is suitable for the existing equipment. Only routine and scheduled maintenance/repair job will be carried out in this workshop. The major repair/overhaul will be done in the Regional/Central workshop.

Store

The existing store at Urimari UGP is suitable for the existing capacity of mine.

12.0 Civil Construction

Residential Buildings

Since no additional manpower will be employed in the project, no new residential quarters have been envisaged. A total of 177 Nos. of quarters exists in the project which meets the needs of the manpower deployed in this project.

Service Buildings

Service buildings such as Administrative building, Office building, Manager's office, Pit-head bath, Rest shelter, First aid center, Coal Testing lab, Cycle shed etc., are already existing.

13.0 Environmental Management

Environment Management addresses the following possible adverse environmental impact.

- i) Land degradation
- ii) Solid waste management problem
- iii) Water pollution
- iv) Air pollution

- v) Noise pollution
- vi) Effect on habitat
- vii) Effect on flora & fauna

14.0 Land Use

Pre mining land use of the area

Project	Existing land use pattern area in Ha.		
	Forest	Tenancy and G.M.K. land	Total
Urimari	31.22	74 Ha.	105.22

Present land use of the area

Sl no	Present land use	Area in Ha.
1	Mining area	70.01
2	Colony and infrastructures	35.21
	Total	105.22

15.0 **Capital Outlay**

The total capital investment of the project is Rs 16.33 crores (as per approved PR)

16.0 **Mine Closure Plan**

Mine closure planning needs to be initiated for the purpose of productive and sustainable after-use of the mine site, which is acceptable to the mine owner and the regulatory authority.

The mine closure plan was approved by CCL in its 390th CCL Board meeting, dtd. 01.10.12 at a cost of Rs. 225.24 lakhs. The details of Mine Closure Plan is give below :

The total mine lease area is 105.22 Ha, so the corpus based on August, 2009 rate is Rs. 105.22 Lakh @ Rs. 1.0 Lakh/Ha of lease area. The wholesale price index in August, 2009 and April 2012 is 129.60 and 163.50 respectively. So the current value of corpus is Rs $105.22 \times 163.50 / 129.60$ Lakh, which comes to Rs. 132.74 lakh. The provision for mine closure expenditure made in the accounts of 2010-11 and 2011-12 for Urimari UGP is 30.83 Lakh. So the net corpus has become Rs. $(132.74 - 30.83) =$ Rs. 101.91. Since this is an operating/existing mine, this corpus is to be divided by balance life of mine. The balance life of the mine is 25 years. So, by dividing by 25 years, the annual corpus comes to Rs. 4.08 Lakh. This amount is to be deposited in escrow account every year with 5% escalation.

ESCROW ACCOUNT (Urimari UGP)

1) Current value of Corpus (Total project areax1x163.50/129.6, fig. in Rs. Lakh)	132.74
2) Provision for MCP made in the accounts of 2010-11 and 2011-12 (in Rs. Lakh)	30.83
3) Net corpus for MCP (Total corpus - Provision made in the accounts of 2010-11 and 2011-12) (in Rs. Lakh)	101.91
4) Balance Life of mine as on 1.4.11 (years)	25
5) Annual corpus (Net corpus / Balance life, in Rs. Lakh)	4.08
Year	Amount in Lakh (Rs.)
1	4.08
2	4.28
3	4.49
4	4.71
5	4.95
6	5.20
7	5.46
8	5.73
9	6.02
10	6.32
11	6.64
12	6.97
13	7.32
14	7.69
15	8.07
16	8.47
17	8.89
18	9.33
19	9.80
20	10.29
21	10.80
22	11.34
23	11.91
24	12.51
25	13.14
Total	194.41

As per above an amount will be deposited every year up to the last year of mine life.

The amount calculated by the above formula shall be deposited every year by CCL in the Escrow amount opened with the Coal Controller organization in a scheduled Bank. An agreement, outlining detailed terms and conditions of operating the said Escrow Account shall be executed amongst CCL, the Coal Controller and the commercial Bank.

However the additional amount beyond the escrow account, if any estimated later on, will be provided by the mine operator after estimating the final mine closure cost five years prior to mine closure (as per the mine closure guideline).

The details of Mine Closure Cost

The above escrow account will meet the cost of different activities of Mine Closure cost which is given in the table below:

SL. NO.	ACTIVITY	% OF TOTAL MINE CLOSURE COST	AMOUNT IN LAKH (RS.)
A	Dismantling of Structures		
	Service Buildings	3.50	7.88
	Residential Buildings	37.58	84.65
	Industrial structures like CHP, Workshop, field sub-station etc.	6.33	14.26
B	Permanent Sealing of mine entries (incline mouth and air shaft)		
	Sealing of incline mouth and air shaft	2.32	5.23
C	Subsidence Management	1.75	3.94
D	Landscaping		
	Landscaping of the cleared land for improving its esthetic	5.80	13.06
E	Plantation		
	Plantation over the cleared area obtained after dismantling and on other barren spaces	10.00	22.52
F	Monitoring/ Testing of paramaters for three years		
	Air Quality	3.83	8.63
	Water Quality	3.34	7.52
G	Enterpreneurship Development (Vocational/ skill development training for sustainable income of affected people	4.65	10.47
H	Miscellaneous and other mitigative measures	11.60	26.13
I	Manpower cost for supervision	9.30	20.95
	TOTAL	100.00	225.24

Time Schedule

The closure of mines evolves environmental, technical, social aspect and financial assurance for implementing the post closure activities as per guidelines of Ministry of Coal. The post closure implementing activities will run for three years. The following activities will be implemented as per bar chart.

S.N	Activities	Time Frame	Half Yearly						
			1	2	3	4	5	6	
1.	Preparation of Survey & Disposal Report	1 month							
2.	Disposal of P&M including HEMM, CHP, W/S, Siding	2 and half years							
3.	Dismantling of Industrial structure	2 years							
4.	Clearing of Coal Stock and Infrastructural Area.	2 years							
5.	Disposal / Dismantling of Residential colony	2 &1/2 years							
6.	Plantation over cleaned land of Infrastructure.	from 2nd year							
7.	Sealing of mine entries for UG mine								
8.	Environmental Monitoring	3 years							
9.	Subsidence Management for U/G	3 years							
10.	Post closure subsidence monitoring for UG	3 years							

The manpower for implementing the above activities with time bound manner have been provided in the subsequent chapter with cost details.

NOTE : The subsidence management of UG mines will be taken up whenever the cracks develop or the ground area subsides.

17.0 Economics

Selling Price

The average selling price is Rs. present price of coal is Rs 2800/- per tonne.