



सीएमपीडीआई
cmpdi

A Mini Ratna Company

संख्यत प्रतर्बिधति

सरिफ कम्पनी के प्रयोग के लिए

इस रिपोर्ट में दी गई जानकारी प्रत्यक्ष या अप्रत्यक्ष रूप से प्रेस या किसी ऐसे व्यक्ति, जो सीआईएल/भारत सरकार का अधिकारी नहीं है, को संबोधित नहीं किया जाय ।

**MINING PLAN AND MINE CLOSURE PLAN
FOR
AMALGAMATED
MURAIIDH, PHULARITAND (Part), COLLIERY**
(Falling in Cluster-II Group of Mines of BCCL)
(BARORA AREA)
(PREPARED IN ASSOCIATION WITH BCCL)

August - 2019

भारतीय मानक ब्यूरो

IS / ISO 9001



BUREAU OF INDIAN STANDARDS



QMS

सेंट्रल माईन प्लानिंग एण्ड डिजाइन इंस्टीट्यूट लिमिटेड

(कोल इंडिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार की एक लोक उपक्रम)

पंजीकृत कार्यालय : गोंदवाना प्लेस, कान्के रोड, राँची - 834001 (झारखण्ड) भारत

क्षेत्रीय संस्थान-2, पत्रा. बीसीसीएल टाउनशिप, कोयलानगर, धनबाद - 826005 (झारखण्ड) भारत

Central Mine Planning & Design Institute Limited

(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)

Registered Office : Gondwana Place, Kanke Road, Ranchi - 834001 (Jharkhand)

Regional Institute-II, P.O. BCCL Township, Koylanagar, Dhanbad 826005 (Jharkhand) India

CORPORATE IDENTITY NO. U14292JH1975GOV

ASHOK KUMAR
Project Officer
Muraidih Colliery

G.M.P.P. 11
846
17-9-19



भारत कोकिंग कोल लिमिटेड
Bharat Coking Coal Limited
(A Mini Ratna Company)
(A Subsidiary of Coal India Ltd.)
(www.bccweb.in)

पं.का - १, कोयला भवन, कोयला नगर, धनबाद - 826005,
रजि. ऑफ: Koyla Bhawan, Koyla Nagar,
Dhanbad - 826005.
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ईमेल: cos.bcc@coalindia.in

बोर्ड सचिवालय / Board Secretariat

Ref. No. BCCL:CS:F 1A: 435

Dated: 16.09.2019

To,
GM(P&P)
BCCL, Koyla Bhawan.

Sub: Certified copy of Minutes of 354th Board Meeting held on 06.09.2019.

Dear Sir,

We send herewith certified copy of Minutes of **Item No. 354.4D, Item No. 354.5D and Item No. 354.6M** of 354th Meeting of the Board of Directors of Bharat Coking Coal Limited held at Registered Office, Koyla Bhawan, Dhanbad on 06.09.2019 for taking necessary action at your end.

Encl: As above

Yours faithfully

(B.K. Parui)
Company Secretary

Ashok
ASHOK KUMAR
Project Officer
Muraidih Colliery
(H)



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BHARAT COKING COAL LIMITED

MINING PLAN AND MINE CLOSURE PLAN

FOR

AMALGAMATED

MURAIIDIH-PHULARITAND(Part) COLLIERY

(Falling in Cluster-II Group of Mines of BCCL)

(BARORA AREA)

(PREPARED IN ASSOCIATION WITH BCCL)

August - 2019

**CENTRAL MINE PLANNING & DESIGN INSTITUTE LTD.
REGIONAL INSTITUTE NO.-II
DHANBAD**

Ashok
ASHOK KUMAR
Project Officer
Muraidih Colliery

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Job No. 200218023

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Ashok
ASHOK KUMAR
 Project Officer
 Muraidih Colliery
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GENERAL INFORMATION

1. Name of the Coal Block (Acre/Hactare/Sq.Km) Block: OCP-III Geological Block
2. Total Amalgamated Area of Muraidih-Phularitand Colliery(Part) : 1118.71 Ha
(Falling in Cluster-II Group of Mines of BCCL)
3. Name of the Coalfield and its location i.e District and State :Jharia Coalfield,
District-Dhanbad
State-Jharkhand
4. Name and Address of the Applicant : Sri C.Kumar
General Manager
Barora Area,
Bharat Coking Coal Limited
Post- Nawagarh
Dist.- Dhanbad, Jharkhand
Pin- 828306
5. Indication, if it is a Revised Mining Plan and if so,
the Revision no. i.e First Revision, Second Revision etc : Not Applicable
6. Total Targeted Capacity : 9.90 Mty
(UG- 2.60 Mty, OC- 7.30 Mty)
7. Date of preparation of Mining Plan : August 2019
8. Indication, if the Mining plan is re-submitted : No
after incorporation the suggestions of Standing Committee

A/c to EC (CI-II), Peak Prodⁿ
Capacity is 12.87 MTPA.
but in MP, it is 9.90 MTPA.

Job No. 200218023

General Information

Ashok
ASHOK KUMAR
Project Officer
Muraidih Colliery
(H)

SUMMARISED DATA

1. General	
a) Name and Addresses of the applicant company	Bharat Coking Coal Limited, Public Sector Undertaking, owned by Govt. of India. Koyla Bhawan, Koyla Nagar, Dhanbad-826005, Jharkhand
b) Name and address of the Block allottee	Not Applicable
c) Relationship between the applicant allottee company	Not Applicable
d) Status of the applicant company: Central / Public Sector Undertaking / state Government Undertaking / IV Company/ Pvt Company / Public Co/ Others (Specify).	Public Sector Undertaking
e) Name of the coal block together with name of coalfield & state where located	OCP-III Geological Block Jharia Coalfield, Jharkhand
f) Date of allotment	By Nationalisation
g) End use of coal as per approval by the Competent Authority	As per linkage
h) ROM quantity proposed to be produced as per mining plan	UG- 2.60 Mt / Year OC- 7.30 Mt / Year ✓ Total- 9.90 Mt / Year
i) Norms adopted for calculating ROM quantity requirement is case is differs from the quantity indicated in the allotment order.	Not Applicable
j) Beneficiation required – Yes/No	No
k) Requirement of beneficiated coal & expected availability thereof.	Not decided. ROM coal is presently being sent to Power Sector through Railway
l) Period for which mining lease is to be renewed	30 years
m) Date of Expiry of earlier mining lease, if any	2002 for Coking Coal and 2003 for non- Coking Coal.
n) RQP who has prepared the mining plan	


The data/information about the colliery and different seam working plans submitted by colliery authority has been kept in mind during preparation of this mining plan. This Mining Plan has been prepared by CMPDI, RI-II in association with BCCL.

ASHOK
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Project Officer
Muraidih Colliery

D. Information regarding earlier approved Mining Plans, if any	
a) Approval letter no and date	Not Applicable
b) Lease Area	
c) Date of grant of lease	
d) Date of Expiry of lease	
e) Targeted Production	
f) Proposed year of start of production	
g) Propose year of achieving the targeted production level	
h) Envisaged life of the colliery (in years)	
i) Date of actual commencement of mining operations, if operations already started	
j) Likely date of Mining Operations, if operations not yet started & reasons for non-commencement of operations	
k) Planned production and actual levels achieved in last 3 years.	
l) Coal – U/G	
m) Reasons for difference between the planned and actual production levels.	
n) Reason for revision of the Mining Plan	
o) Details of changes in the new mining plan compared to earlier approval	
(i) Lease Area	
(ii) Block boundary	
(iii) Production level	
(iv) Reserves	
(v) Mining technology / (Additional sheets to be used, if required)	
(vi) Land use pattern	
E. Location	
a) Location of the Block Taluka / Village / Khasra / Plot / Block Range/ Etc.	The area of OCP III Geological block lies between latitude 23°46'23" to 23°48'34" N and longitude 86°12'46" to 86°15'36" E (As per GR). The area falls in Open Source Survey of India Toposheet No. (RF-1:50000/Year-2009).
b) Name of the Coalfield / Coal belt	Jharia Coal Fields
c) Particulars of adjacent blocks / Colliery North, South, East, West	<p>The block is bounded as follows-</p> <p>North- Metamophics/Talchirs South- Kharkharee-Dharmaband & Madhuban-Phularitand UG Blocks East- OCP-IV Geological Block West- OCP-II Geological Block / Madhuban-Phularitand UG/ Mahuda-Gomoh Rly. Line (S:E Rly)</p>

Mining Plan and Mine Closure Plan for Amalgamated Muraidih-Phularitand (Part) Colliery, BCCL

d) Area of the allotted block (hectares)	
i. Geological block area	1400.0 Ha (OCP-III)
ii. Mining block area	1118.71 Ha
	(Out of which, Project area of 887.75 Ha is considered in Mining Plan of Amalgamated Muraidih- Phularitand (part) Colliery falling in Cluster-III)
e) Reference no. of plan of block boundary issued by CMPDI/SCCL / NLCL (a copy of the plan also to be annexed)	Enclosed Surface Plan
f) Whether the lease boundary / required boundary is same as demarcated by CMPDI/SCCL / NLCL for delineating block / sub-block.	No. Lease hold boundary and Geological Block boundary of OCP-III are different.
g) Existing Mining Lease Area in case of existing Collieries, (hectares)	<p>Lease Hold area of different Collieries –</p> <p>Muraidih Colliery - 536.40 Ha,</p> <p>Shatabdi Colliery - 181.31 Ha</p> <p>Phularitand Colliery - 741.88 Ha. (Total area falling in Cluster-II and also in Cluster-XV)</p>
h) Applied / Required Lease area as per the Mining Plan under consideration	<p>For mining operation, DGMS has already given permission for amalgamation of above Muraidih Colliery & Shatabdi Colliery and presently amalgamated Colliery is named as amalgamated Muraidih Colliery.</p> <p>Part of Phularitand total Lease hold area (i.e an area of 401 Ha lying on northern side of D.C Railway line) falls within boundary of Cluster-II group of mines of BCCL.</p> <p>For ease of mining operation in Cluster-II, BCCL management has decided to further amalgamate already amalgamated Muraidih-Shatabdi Colliery along with the above part of Phularitand Colliery which falls in Cluster-II. Considering the above, the Amalgamated area of Muraidih- Phularitand (part) Colliery falling in Cluster II is measured as 1118.71 Ha. Details as below-</p> <p>Amalgamated Muraidih Colliery - 717.71 Ha,</p> <p>Phularitand (Part) Colliery - 401.0 Ha.</p> <p>Total Amalgamated area 1118.71 Ha</p>
i) Whether the applied lease area falls within the allotted block	Both amalgamated Muraidih Colliery & Phularitand Colliery (part) are existing Collieries of BCCL and they are lying in geological Block of OCP-III
j) Area (hectares) of lease which falls outside the block/ sub-block delineated by CMPDI/SCCL/NLCL.	About 146.2 Ha towards northern side of OCP-III Geological Block.


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 Muraidih Colliery

<p>k) Details of outside area:</p> <ul style="list-style-type: none">- Whether forms part of any other coal block- Whether it contains any coal/ lignite reserves- Purpose for which it is required, e.g. roads/ OB dumps/service buildings/ colony safety zone / others (specify)	<p>No</p> <p>It is in Metmophic/Talchirs (Non-coal bearing area) For Quarters(NHS), Magazine, roads, external OB Dumps, plantation in future, etc</p>																																																															
<p>l) Whether some part(s) of the allotted block has not been applied for mining lease.</p> <ul style="list-style-type: none">- Total area in Ha. of such part(s)- Total reserves in such part(s)- Brief reasoning for leaving such part(s)	<p>Yes</p> <p>Approximately an area of 487.77 Ha of OCP-III geological block falls in Cluster-XV</p> <p>Not yet estimated</p> <p>Environmental Clearance for Collieries falling in Cluster-II group of mines of BCCL is required. Hence, the area falling in Cluster-XV has not been considered in this Amalgamated Mining Plan.</p>																																																															
<p>m) Type of land involved in Hectares (within the amalgamated area of Muraidih-Phularitand (Part) Colliery falling in Cluster-II)</p> <ul style="list-style-type: none">- Forest land :-- Other type of land:-<ul style="list-style-type: none">- Private/Tenancy land- Govt. land- BCCL Land <p>Total Land</p>	<table><thead><tr><th><u>Amalgamated Area</u></th><th><u>Project Area</u></th></tr></thead><tbody><tr><td>10.01 Ha</td><td>9.54 Ha</td></tr><tr><td>220.56 Ha }</td><td>132.91 Ha }</td></tr><tr><td>210.35 Ha }-1108.70 Ha</td><td>625.11 Ha }- 878.21 Ha</td></tr><tr><td>677.79 Ha }</td><td>120.19 Ha }</td></tr><tr><td>1118.71 Ha</td><td>887.75 Ha</td></tr></tbody></table>	<u>Amalgamated Area</u>	<u>Project Area</u>	10.01 Ha	9.54 Ha	220.56 Ha }	132.91 Ha }	210.35 Ha }- 1108.70 Ha	625.11 Ha }- 878.21 Ha	677.79 Ha }	120.19 Ha }	1118.71 Ha	887.75 Ha																																																			
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<p>n) Broad land use pattern (Forest, Township, Industrial, Agricultural, Grazing, Barren etc.)</p> <p><i>Ambiguity in forest land area. - 7.60 Ha + 133.69 Ha</i></p>	<p>Details of existing Land Use Pattern within Project area of 887.75 Ha is given below-</p> <table><thead><tr><th></th><th><u>Phularitand(Part)</u></th><th><u>Amalg Muraidih</u></th></tr><tr><th></th><th colspan="2">(North of DC line)</th></tr></thead><tbody><tr><td>1)Running Quarry</td><td></td><td></td></tr><tr><td>Back filled</td><td>7.61 Ha</td><td>75.79 Ha</td></tr><tr><td>Not Back filled</td><td>34.07 Ha</td><td>107.58 Ha</td></tr><tr><td>1)Abandoned</td><td></td><td></td></tr><tr><td>Back filled</td><td>45.78 Ha</td><td>124.78 Ha</td></tr><tr><td>Not Back filled</td><td>0.93 Ha</td><td>15.18 Ha</td></tr><tr><td>3) Agriculture Land-</td><td>41.68 Ha</td><td>54.19 Ha</td></tr><tr><td>4) Barren land-</td><td>78.82 Ha.</td><td>63.34 Ha</td></tr><tr><td>5) Homestead-</td><td>72.90 Ha</td><td>62.03 Ha.</td></tr><tr><td>6) Service Building-</td><td>1.10 Ha</td><td>8.38 Ha</td></tr><tr><td>7) Road (Includ.Haul Rd)</td><td>4.95 Ha</td><td>3.72 Ha</td></tr><tr><td>8) Rail -</td><td>0.00 Ha.</td><td>0.00 Ha</td></tr><tr><td>9) Water Body-</td><td>2.34 Ha</td><td>13.11 Ha</td></tr><tr><td>10)Plantation, -</td><td>15.00 Ha</td><td>12.00 Ha</td></tr><tr><td>11)Fire area -</td><td>4.54 Ha</td><td>12.40 Ha</td></tr><tr><td>12)Coal dump</td><td>0.0 Ha</td><td>0.24 Ha</td></tr><tr><td>13)Ext. OB Dump -</td><td>6.38 Ha</td><td>18.91Ha</td></tr><tr><td>Total</td><td>316.10 Ha</td><td>571.65 Ha</td></tr><tr><td colspan="3">Total Phularitand & Muraidih – 887.75 Ha</td></tr></tbody></table>		<u>Phularitand(Part)</u>	<u>Amalg Muraidih</u>		(North of DC line)		1)Running Quarry			Back filled	7.61 Ha	75.79 Ha	Not Back filled	34.07 Ha	107.58 Ha	1)Abandoned			Back filled	45.78 Ha	124.78 Ha	Not Back filled	0.93 Ha	15.18 Ha	3) Agriculture Land-	41.68 Ha	54.19 Ha	4) Barren land-	78.82 Ha.	63.34 Ha	5) Homestead-	72.90 Ha	62.03 Ha.	6) Service Building-	1.10 Ha	8.38 Ha	7) Road (Includ.Haul Rd)	4.95 Ha	3.72 Ha	8) Rail -	0.00 Ha.	0.00 Ha	9) Water Body-	2.34 Ha	13.11 Ha	10)Plantation, -	15.00 Ha	12.00 Ha	11)Fire area -	4.54 Ha	12.40 Ha	12)Coal dump	0.0 Ha	0.24 Ha	13)Ext. OB Dump -	6.38 Ha	18.91Ha	Total	316.10 Ha	571.65 Ha	Total Phularitand & Muraidih – 887.75 Ha		
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Not Back filled	34.07 Ha	107.58 Ha																																																														
1)Abandoned																																																																
Back filled	45.78 Ha	124.78 Ha																																																														
Not Back filled	0.93 Ha	15.18 Ha																																																														
3) Agriculture Land-	41.68 Ha	54.19 Ha																																																														
4) Barren land-	78.82 Ha.	63.34 Ha																																																														
5) Homestead-	72.90 Ha	62.03 Ha.																																																														
6) Service Building-	1.10 Ha	8.38 Ha																																																														
7) Road (Includ.Haul Rd)	4.95 Ha	3.72 Ha																																																														
8) Rail -	0.00 Ha.	0.00 Ha																																																														
9) Water Body-	2.34 Ha	13.11 Ha																																																														
10)Plantation, -	15.00 Ha	12.00 Ha																																																														
11)Fire area -	4.54 Ha	12.40 Ha																																																														
12)Coal dump	0.0 Ha	0.24 Ha																																																														
13)Ext. OB Dump -	6.38 Ha	18.91Ha																																																														
Total	316.10 Ha	571.65 Ha																																																														
Total Phularitand & Muraidih – 887.75 Ha																																																																

o) Proximity of public road / railway line/ major water body if any and approximate distance.	<p>1) The area is easily negotiable by Hirak Ring Road (Dhanbad-Chandrapura Road) from Dhanbad town. Distance of proposed Project of Amalgamated Muraidih-Phularitand(part) Colliery from Dhanbad town is 40Km.</p> <p>2) The Dhanbad-Chandrapura Railway line passes through southern part forms the southern boundary whereas the Gomoh-Mohuda Railway lines of S.E Railway forms the western side boundary of the amalgamated Muraidih-Phularitand (part) Colliery. From Dhanbad Railway station, distance of of Amalgamated Muraidih-Phularitand(part) Colliery is about 35Km.</p> <p>3) Khudia(Khodo) Nala is flowing along the north-eastern side of the proposed area of Amalgamated Muraidih-Phularitand(part) Colliery.</p>
p) Topo sheet no. with latitude and longitude	<p>It is included in Open Source Survey of India Topo Sheet No.F45C1.</p> <p>Latitude- 23°46'30.732" to 23°49'0.436" N</p> <p>Longitude-86°12'38.997" to 86°15'15.998" E</p>

F. GEOLOGY AND EXPLORATION					
a) Name of the Geological Block and area in hectares		OCP-III Geological block, Total area of the block is 14 Sq.Km			
b) Name of the Geological Report (GR) with year of preparation		The amalgamated area under consideration falls in "Geological Report on Exploration for coal in Opencast Block-III, Jharia Coalfield" prepared by CMPDIL in March 1982			
c) Name of the agency which conducted exploration and prepared GR		CMPDIL			
d) Period of conducting exploration		October 1976 to April 1980			
e) Details of drilling (by all agencies)	Series	Agency		No. of BHs	Meterage
	BA	CMPDI		23	4876.25
	MR	CMPDI		25	4876.09
	PH	CMPDI		05	1045.72
	Total			53	10793.06
f) No. of boreholes drilled within the block		53 boreholes drilled in OCP-III geological Block			
g) Overall borehole density within the block (no./sq.km)		BH Density- 5 boreholes(approx.)/Sq.Km			

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h)	Area covered by 'detailed' exploration within the block(hectares)		1118.71 Ha (Amalgamated Muraidih-Phularitand (Part) area falling in Cluster-II)		
i)	Area covered by 'detailed' exploration outside the block(hectares) - No. of boreholes drilled outside the block - Borehole density for outside area (no./sq.km)		Not Available Not Available Not Available		
j)	Whether entire lease area has been covered by 'detailed' exploration.		Amalgamated area of 1118.71 Ha considered in this Amalgamated Mining Plan falls within the detailed exploration.		
k)	Whether any further exploration is required or suggested and time frame in which it is to be completed		Yes, because no bore holes have been drilled upto Seam-III in south-western corner of the amalgamated area considered in this mining plan. Area is considered as indicated area for Seam-III and seams lying below of this seam.		
l)	Number of coal/lignite seams/horizons - Thickness range of coal seams - Mean Thickness of total coal horizon - Standard Deviation of thickness - Minimum & maximum depth of coal seams		Details are given in Chapter-IV Table No.		
m)	Gross Calorific Value (GCV in K Cal/kg) and useful Heat Value (UHV in K. Cal/Kg) as per GR : Range Mean		Seam wise details of Grade are given in Chapter-IV		
n)	Quality(Grade) of coal as per GR:	Geo Name	Colliery. Name	.Coking	Non-Coking
	Range Mean	XIII	XIII	W-III	
		XI/XII	XI/XII	W-IV	
		IX/X	10 Seam	W-IV	
		VIII C	9 Seam(Top)	W-III to UG	G5
		VIII B	9 Seam (Bot)	W-IV to UG	G5-G7
		VIIIA	8 Seam	W-IV to UG	G4
		VIII		W-IV	
		VVI/VII Comb.	7 Seam	-	G4 to G6
		IV T	Virgin(Impersistent)	-	G8
		IV Comb/IV	Virgin	-	G7 to G9

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	IVB	Virgin (impersistent)	-	G9 to G18
	III	III	-	G4 to G15
	II	II	-	G1 to G5
	I/II Comb	I/II Comb	-	G4
	I	I	-	G3 to G10
o) Total geological reserves in the block	The present geological reserve (Amalgamated Muraidih-Phularitand(part) Leasehold Area) in OCP-III block is given below-			
		Geo Name	Colli. Name	Geo.Resv.(Mt)
		XIII	XIII	0.271
		XI/XII	XI/XII	5.229
		IX/X	10 Seam	9.83
		VIIIC	9 Seam(Top)	3.827
		VIIIB	9 Seam(Bot)	5.537
		VIIIA	8 Seam	9.296
		VIII		1.149
		VM/VI Comb.	7 Seam	99.66
		IV T	Virgin (Impersistent)	2.42
		IV Comb /IV	Virgin	7.64
		IVB	Virgin (Impersistent)	0.94
		III	III	50.07
		II	II	12.93
		I/II Comb	I/II Comb	6.59
		I	I	31.65
		Total		247.039
p) Depletion of reserves (in case of running colliery)		<p>Muraidih OCP was initially sanctioned as patch in 1979. Earlier production data is not available with the Barora Area. The Production of Shatabdih OC was started from 2000-01. The total production from following Collieries since 1989-90 upto March 2019 is as follows-</p> <p>i) Muraidih- 50.610 Mt</p> <p>ii) Shatabdi- 12.903 Mt</p> <p>iii) Phularitand- 18.074 Mt</p> <p>Total 81.587 Mt</p>		
q) Additional reserves established (if any for running colliery)		Nil		
r) Geological reserves considered for mining: by opencast by underground		<p>Total OC- 72.76 Mt (Excluding 11.0 Mt of IV Seam & its splits)</p> <p>Total UG- 85.95 Mt (Excluding of 12.93 Mt of Seam-II reserves)</p>		

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s) Corresponding Extractable reserves:		
by opencast-		Total OC - 65.48 Mt (Seam-V/VI/VII OCP - 63.35 Mt Seam- III OCP - 2.13 Mt)
by Underground		Total UG- 41.164 Mt (Muraidih UG - 25.794 Mt Phularitand UG(part) - 15.37 Mt) Total (OC+UG) - 106.64 Mt
t) .Percentage of recovery w.r.t. geological reserves		
by opencast		90 %
by Underground		47.89 %

G. Mining	
a) Existing and proposed method of mining (opencast for OB & coal separately with dragline/ shovel / surface collierys / manual / etc.) (Underground by long wall/ Bord & Pillar / continuous collierys/ LHD/SDL / manual / etc..)	<p>Existing- Opencast Mining- In Muraidih Colliery (i.e in area of amalgamated Muraidih & Shatabdi Colliery), a departmental opencast mine is in operation with V/VI/VII seam base. Transportation of Coal & OB is being done with Shovel- Dumper combination. In Phularitand Colliery, a hired HEMM opencast patch is in operation with V/VI/VII seam base. Transportation of Coal & OB is being done with Shovel- Dumper combination.</p> <p>Underground Mining- Existing- In Muraidih Colliery, a Global Bid Project was approved in 265th meeting by Board of Directors of BCCL and work is awarded to the successful Bidder/Contractor (M/s Minop/BHEC Consortium) to extract coal from Seams-III & I by Longwall Technology package. Two numbers of Inclines & drift drivges have been completed by the successful bidder. Drifts have touched the coal of Seam-III. All type of works was suspended by the Contractor since 01.06.2016 due to financial dispute with BCCL. It is expected that the contractor is likely to re-start / commence the suspended project work soon.</p> <p>In Phularitand Colliery, two inclines and drift drivages have been made departmentally to approach coal of Seam-III and presently it is being developed by Bord & Pillar method of mining. Coal is being produced by drilling-blasting method at coal faces and transported to surface by SDL-Haulage Combination.</p>

	<p>Proposed- Opencast Mining-</p> <p>This Mining plan has been prepared after amalgamating the area of amalgamated Muraidih Colliery & part of Phularitand Colliery falling in Cluster-II. It has been proposed to make one single opencast mine after amalgamation of existing Muraidih Colliery OCP (operating departmental) with existing Hired HEMM patch quarry with base as V/VI/VII seam lying within the Project area.</p> <p>Another OCP with base as floor of seam-III has also been proposed in area lying in-between Incrop of Seam-III and northern side of Khodo River. As per the approved DPR, Longwall panel of Seam-I has been identified by successful bidder below this proposed Seam-III OCP. To extract longwall panels in Seam-I below this area, earlier developed B&P workings along with virgin areas of overlying Seam-III has to be excavated. Hence, this OCP of Seam-III is proposed in this amalgamated Mining plan. It has to be decided by BCCL whether these OCPs to operated departmentally or Hired basis.</p> <p>Underground Mining-</p> <p>In Muraidih Colliery, extraction of Seam-III & Seam-I by longwall method have already been awarded to Bidder/Contractor for 9 years for guaranteed production of minimum 2.0 Mty as per the agreement made between M/s Minop Consortium and BCCL.</p> <p>Since it is an approved project, hence, same mining strategy is considered in this amalgamated mining plan as it is considered by the Contractor in the approved DPR/ Supplementary Note submitted in January 2015.</p> <p>In Phularitand, Seam-III is presently being extracted by B&P with SDL-Haulage combination. In this amalgamated mining plan, it has been proposed to extract coal from Seam-III and Seam-I/II(Comb.) & its split section Seam-I by Bord & Pillar method of mining. It has been proposed to operate total two panels with SDL- Belt combination and one Panel with Continuous Miner Package initially in Seam-III property and after extraction of Seam-III, similar number of panels will be also be opened for extraction of underlying Seam-I to sustain the target production from the Colliery.</p> <p>Both development & depillaring of panels (CM & SDL) proposed in Seam-III and Seam-I/II & its split Seam-I have been proposed keeping in mind that land on surface will be acquired.</p>
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b) The peak capacity as well in addition to targeted capacity in mtpa when the colliery is fully developed and the year which proposed to be achieved- By underground: By opencast :	Proposed Production from Amalgamated Project area of Muraidih-Phularitand(Part) Colliery-
Total:	Underground - Normative - 2.60 Mty Peak Capacity - 3.38 Mty (i.e +30% of Normative) Opencast- Normative - 7.30 Mty Peak Capacity - 9.49 Mty (i.e +30% of Normative) Normative - 9.90 Mty Peak Capacity - 12.87 Mty (i.e +30% of Normative)
c) Life of the Colliery -Underground workings: - Opencast workings: Total:	For Underground mining - 31 Years (During preparation of underground mining schedule, it has been considered that Contractor will commence its work within the year 2019-20 after settling disputes otherwise the above mentioned life will differ from the figure as proposed in mining plan). The work is suspended since 01.06.2016 due to financial dispute with BCCL. Banning of business imposed by BCCL on M/s Minop has been recently quashed by Honorable High Court, Jharkhand. It is expected that work is likely to be restart / commenced soon. (Mine Schedule Plan has been prepared considering the above) For Opencast mining - 11 Years (Seam-V/VI/VII OCP + Seam-III OCP) 31 Years (Both OCPs proposed to be excavated within this life period)

Indicate quantum of production and expected grade: Details given below-

Year	Underground	Opencast			ROM coal (Mt)	Saleable coal (Mt)	Washery rejects (Mt)
	UG Coal production Mt	OC Coal Production Mt	OB (M.Cum)	Overall Stripping ratio (Cum/Te)			
Year wise till targeted production is reached	2019-2020	0.045	4.63	9.30	4.675	4.675	
	2020-2021	0.06	6.0	12.04	6.06	6.06	
	2021-2022	0.38	7.3	14.66	7.68	7.68	
	2022-2023	0.89	7.3	14.66	8.19	8.19	
	2023-2024	0.89	7.3	14.66	8.19	8.19	
	2024-2025	2.81	7.3	14.66	10.11	10.11	
Total for full life (As per extraction Schedule)	41.16	65.48	131.48		106.64	106.64	

The details of year wise and seam wise coal production Schedule for proposed amalgamated Muraidih-Phularitand(Part) Colliery has been given in Chapter V

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e) Whether the proposed external OB dump site is coal/ lignite bearing: - If so, whether coal/lignite below waste disposal area is extractable.	No
f) Whether negative proving for coal / lignite in the proposed site for OB dump / infrastructure has been done.	No
g) Proposed configuration of HEMM for OC (Coal & OB)	Opencast-Shovel-Dumper Combination
h) Mode of entry for underground Collieries	<p>Existing- Phularitand UG - Two Inclines (one act as Main Intake and another act as Main Return)</p> <p>Muraidih UG - Two Inclines/Drift drivages (Intakes) have already been made up to Seam-III. Sinking of Air Shaft (Return) has been done partly. Fan drift Completed.</p> <p>Proposed- Phularitand UG - Sinking of one Air Shaft (up to Seam-I) is proposed to act as Main return in future. To approach Seam-I/II & Seam-I, two drifts from floor of Seam-III has to be proposed.</p> <p>Muraidih UG- Sinking of rest part of the air shaft is to be done. No additional entries are proposed to be made.</p>
i) Operations that are proposed to be outsource-	<p>Underground- Presently Longwall operation of Muraidih Global bid project for extraction of Seam-III & Seam-I has already been awarded to successful Bidder through Global Bidding and it is an on-going project of BCCL. For Phularitand underground mine, one panel is proposed with Continuous Miner operation which may be done by Global Bidding or departmentally depends on BCCL. SDL panels will be operated departmentally</p> <p>Opencast- Operations of Opencast in proposed amalgamated area to be decided by BCCL</p>

j) Proposed coal evacuation facilities-	
a) Face to surface -	In Phularitand UG- Proposed- SDL-Belt Conveyor
b) Surface to end use plants-	Muraidih UG- Proposed- Belt Conveyor By Dumpers/Tipping Trucks to KKC Link Railway Siding. By Rail to end users as per linkage (mainly to different Power Sectors). As per the data submitted by mine authority, Supply of coal to MPL is presently being done partly by road & partly by rail.

H. END USE OF COAL	
a) Capacity of the approved end use plants	As per existing linkage of BCCL
b) Coal/ lignite requirement for end use plant with grade / quality	(As per agreement between BCCL & End Users)
c) % age of end use requirement to be met from this colliery	Depends on end users requirement
d) If washing / beneficiation of the coal / lignite is planned to be conducted on site or adjacent to the extraction area, briefly describe the nature of the beneficiation and recovery rate with consumption of water etc.	Presently, no beneficiation of coal produced from existing OCP is being done. It has not yet been decided by BCCL
e) Proposed Use of Rejects/Middlings	Not Applicable
I. ENVIRONMENTAL MANAGEMENT	
a) Existing land use pattern	Given in Chapter-IX
b) Land area indicating the area likely to be degraded due to mining, dumping, roads, workshop, washery, township etc.	Internal OB dump is being done within the excavated area of OC and also proposed to be made in future. Land reclamation like plantation etc is being made and proposed in future to arrest land degradation in the area.
c) Surface features over the block area/Colliery	Villages, Basti, High Tension Lines, D B Road, Village road, and other infra structures like, Office Buildings, Substation, BCCL Colony, Hospital/ Dispensary, Temples etc

d) No. of villages/ houses to be shifted (Colliery)	A total number of 2146 PAFs (Project Affected Families) are residing within Project Boundary of 887.75 Ha. Out of which, 853 PAFs will be rehabilitated and resettled within identified JRDA sites and rest 1293 PAFs will be rehabilitated and resettled at outside of JRDA sites which is identified by Mine Authority. (Details is given in Chapter-X)
e) Population to be affected by	Not available
f) Year wise proposal for reclamation of land affected by mining activities	Year-wise reclamation/plantations are given in Chapter-X
g) Monitoring schedules for different environmental components after the commencement of mining and other related activities.	Air and Water quality is monitored on regular basis by RI-II, CMPDIL

J. PROGRESSIVE AND FINAL COLLIERY CLOSURE PLAN	
a) Estimated total capital expenditure for colliery closure activities	As per Colliery Closure Plan (Details given in Chapter XII)
b) Major closure activities with proposed Capital expenditure	
i. Dismantling of Structures	
ii. Permanent Sealing of colliery entries (incline mouth and air shaft)	
iii. Subsidence Management	As per Colliery Closure Plan (Details given in Chapter XII)
iv. Landscaping	
v. Plantation	
vi. Monitoring/Testing of parameters for three years	
vii. Entrepreneurship Development(Vocational/skill development training for sustainable income of affected people	
viii. Miscellaneous and other mitigative measures	
ix. Manpower Cost for Supervision	

K. OTHERS	
a) Base date of Mining Plan	Dec 2018
b) Calendar year from which the production will start	Muraidih and Phularitand Collieries are two existing Colliery and presently producing coal
c) Results of any investigation carried out for scientific mining conservation of minerals and protection of environment, future proposals.	NA

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