

APPLICANT

PATRATU VIDYUT UTPADAN NIGAM LIMITED
Patratu, P.O.-PTPS Patratu District, Ramgarh, Jharkhand-829119



Mining Plan and Mine Closure Plan

For

Banhardih Coal Mine

Project area 1467.42 ha

(Geological Block area 1818.10 ha)

Auranga Coalfield, Latehar District, Jharkhand

Rated Capacity 12.00 MTPA

Peak Rated Capacity 18.00 MTPA

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
A Subsidiary of NTPCL Ltd. in Joint Venture with BIRLA
Patratu, Dist.-Ramgarh-829119

Prepared by
A. K. Sinha

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VOLUME I-TEXT & ANNEXURE

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LIST OF ABBREVIATIONS USED

AMSL	Above Mean Sea Level
AMC	Annual Maintenance Contract
ANFO	Ammonium Nitrate; Fuel Oil
Avg.	Average
BCM	Bank Cubic Meter
CBA Act	Coal Bearing Areas (Acquisition and Development) Act
CCO	Coal Controller Office
CJBJ	Chota Jungle Bara Jungle
CGWA	Central Ground Water Authority
Cum	Cubic Meter
Cum/hr	Cubic Meter per Hour
CHP	Coal handling Plant
CPCB	Central Pollution Control Board
CSR	Corporate social responsibility
DGPS	Differential Global Positioning System
DGMS	Directorate General Of Mines Safety
DMP	Disaster Management Plan
EC	Environment Clearance
EDM	Electronic Distance Measurement
ET	Effective Thickness
EUP	End Use Plant
EOT	Electric overhead traveling
ETP	Effluent Treatment Plant
FEL-RDT	Front End Loader- Rear Dump Trucks.
ISP	Indian Standard Procedure
Govt.	Government
GOI	Government of India
GCV	Gross Calorific Value
GSI	Geological Survey of India
ha	Hectare
HT	High tension
HEMM	Heavy Earth-Moving Machinery
HFL	Highest Flood Level
hz	hertz
Hp	horsepower

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Kcal	kilocalorie
Kg	Kilogram
Kwhr	kilowatt hour
KV	Kilovolt
Kl.	Kiloliter
KML	Keyhole Markup Language
LMV	Light Motor Vehicle
Lr.	Lower
LS	Lumsum
LAN	local area network
MBCM	Million Bench Cubic Meter
MDO	Mine developer-cum-operator
MOC	Ministry of Coal
MOEF & CC	Ministry of Environment, Forests and Climate Change
MVA	Mega Volt Ampere
MW	megawatt
MTPA	Metric tonnes per annum
m	Meter
mm	Millimeter
Ma	Million Years
Min	Minimum
Max	Maximum
Mt	Million tons
MMDR	Mines and Minerals Development and Regulation Act
MM ³	Million Cubic Meter
MLD	millions of liter per day
M ³	Meter Cube
MIS	Management Information System
MSR	Mine Slope Stability Radar
NAAQ Standards	National Ambient Air Quality Standards
NRSC	National Remote Sensing Centre
OMS	Output Per Man-Shift
ONGC	Oil and Natural Gas Corporation
OB	Over Burden
OC	Open caste
PAF	Project affected families
PAP	Project Affected Person

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PMT	Physico-Mechanical Test
PRC	Peak Rated Capacity
QTY	Quantity
RD	Relative Density
RDT	Rear Dump Trucks
RLS	Rapid Loading System
RPM	Respirable Particulate Matter
ROM	Run Of Mine
RQP	Recognised Qualified Person
RL	Reduced Level
SH	State Highway
SIA	Social Impact Assessment
SPM	Suspended Particulate Matter
SPCB	State Pollution Control Board
Sq. Km.	Square kilometer
SSR	Slope Stability Report
TDS	Total dissolved solids
TPH	Tonnes per Hour
Up.	Upper
UG	Under Ground
UNEC	United Nations Framework Classification
VT Center	Vocational Training Center
WAN	Wide Area Network
WTP	Water Treatment Plant

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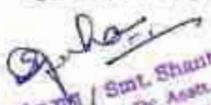
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MAIN TEXT

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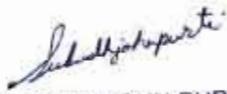
Mining Plan and Mine Closure Plan
Banhardih Coal Mine
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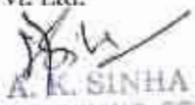


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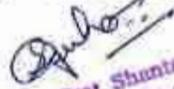

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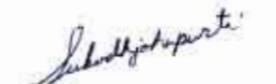
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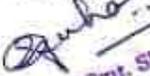

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LIST OF FIGURES

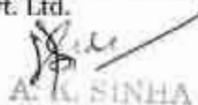
SL. NO.	Figure No.	Subject
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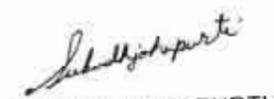


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LIST OF ANNEXURES

SL. NO.	ANNEXURE NO	SUBJECT
1	Annexure-IA	Allotment Agreement between Nominated Authority and JUUNL, dated 30 th of March, 2015.
2	Annexure-IB	The first and second amendment to the Allotment agreement, dated 30 th June, 2015 and 16 th January, 2017 respectively.
3	Annexure-IC	Deed of adherence between Nominated Authority (MOC, Government of India), Jharkhand Urja Utpadan Nigam Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL), dated 2nd of June, 2017
4	Annexure-ID	Deed of Assignment between Jharkhand Urja Utpadan Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL) towards amendment of the Allotment order in favour of PVUNL, dated 18 th of May, 2018.
5	Annexure-IE	Corrigendum to the Allotment order No. 103/18/2015/NA dt. 30 th June, 2015 and allotment order in favour of M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) vide allotment order No. 103/18/2015 NA dt. 25 th of June, 2018.
6	Annexure-IF	Letter regarding modification of bounding coordinate mentioned in the Allotment Agreement of Banhardih Coal Mine
7	Annexure-IG	Corrigendum No. 3 to the Allotment order no. 103/18/2015/NA dated June 30, 2015 in favour of Patratu Vidyut Utpadan Nigam Limited (PVUNL) dated 30 th June, 2021.
8	Annexure-IIA	Certification letter of Geological Block Boundary by CMPDIL of Banhardih Coal Mine, dated 13.10.2017
9	Annexure-IIB	Certificate of qualified person/accredited mining plan preparing agency (MPPA) as the project area is confined within the vested/ allotted boundary / existing mining lease
10	Annexure-IIC	Notification with under section 7(1) respect to 1042.73 ha under CBA Act
11	Annexure-IID	Notification under section 4(1) of Coal Bearing Act, 1957
12	Annexure-III	Approvals of Mining plan including mine closure plan from Board of the company

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



SL. NO.	ANNEXURE NO	SUBJECT
13	Annexure-IV	Copy of Earlier approval of mining plan
14	Annexure-V	Plan showing schedule of Implementation of Mine Closure activities (Progressive and Final closure) with duration of important activities
15	Annexure-VI	Proof of the payment
16	Annexure-VII	Expert Review Report
17	Annexure-VIII A	Reference of WPI, April 2021.
18	Annexure-VIII B	Summary of R & R policy
19	Annexure-VIII C	Declaration by allottee for Road diversion
20	Annexure-VIII D	Letter regarding Revision in efficiency parameter of Banhardih Coal Mine
21	Annexure-VIII E	Exploration Scheme
22	Annexure-VIII F	Letter regarding certification of Block Boundary of Banhardih Coal Mine by CMPDIL
23	Annexure-VIII G	Certified Boundary of Banhardih Coal Mine by CMPDIL under notification Section 7 (1)

Agency: United Exploration India Pvt, Ltd.

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LIST OF PLATES

Plate No.	Description	Scale
Plate No. I	Location plan	Not to scale
Plate No. II	Plan with Block Boundary certified by QP	1:10000
Plate No. III	KML file of the Proposed lease area, Project area and Geological Block	1:10000
Plate No. IV	Cadastral Plan showing approved block boundary vis-à-vis proposed/existing mining lease & mine boundary superimposed in landuse and infrastructure etc.	1:10000
Plate No. V	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area	1:10000
Plate No. VIA1-VIA12	Graphic Lithologs	1:500
Plate No. VIB1-VIB39	Seam Structures	1:50
Plate No. VII	Surface Plan showing drainage system, Contour, at minimum 3m interval, location of BH	1:10000
Plate No. VIII	Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc.	1:10000
Plate No. IX	Tentative Land use plan showing Govt, forest and Tenancy land	1:10000
Plate No. XA1-XA18	Floor contour plan	1:10000
Plate No. XB1-XB17	Seam folio plan	1:10000
Plate No. XI	Geological Cross-sections	1:5000
Plate No. XIIA	Plan showing existing surface layout	1:10000
Plate No. XIIB	Plan showing proposed surface layout	1:10000

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Compliance

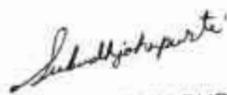
**Compliance to the Observation
Vide MOC's Letter No. F. No. MPS-
55/1/2020-CPIAM; 31st May, 2021
Mining Plan (Including Mine Closure Plan)
Banhardih Coal Mine
Patratu Vidyut Utpadan Nigam Limited**

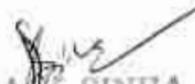
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SL. No.	Ref. No.	Observations	Compliance
1	2.a	Observation no. 5 (The toe of spoil bank shall not be extended to any point within 100m of any mine opening, railway or other public works, public road or other permanent structure not belonging to owner): - has not been complied. The related plates are to be corrected.	Complied with. Related Plates are Corrected and furnished in the Mining Plan.
2	2.b	Compliance of regulation number 119 of CMR-2017 is not being adhered with respect to public road for defining pit boundary at the Northern side.	Complied with. Orientation of the diverted road has been changed and all the relevant plates are modified accordingly.
3	2.c	Sl. No. 5, Ref. No. 5e- Partially complied. The distance of the toe of the internal dump (the deck of internal dump which is above the ground level) has not been kept at a distance of 100m away from the block boundary/ diverted road and the quarry is not proposed in accordance with the provisions of Reg. 119, CMR-2017 in the north.	Complied with. The lower deck of the Internal Dump above surface level has been shifted more than 100 meter from the block boundary. Orientation of the diverted road has been changed and plates are corrected accordingly.
4	2.d	Sl. No. 6, Ref. No. 5f. Not complied. Modified Allotment Agreement in support of the binding co-ordinates used in the Mining Plan is yet to be furnished.	The Block Boundary Coordinates and the bounding coordinates utilized in the formulation of the Mining Plan of Banhardih Coal Mine are as per the Certification of CMPDI during Notification of Section 4 (1), Section 7 (1) , Section 9 (1) under CBA Act, 1957 and also as per the "Certificate from CMPDI regarding use of the Geological Block coordinates in accordance to the Vesting Order and preparation of Mining Plan do not encroach into any/ adjacent Coal Block (Banhardih Coal Mine) - Reg. Submission of Certificate, vide letter No. CMPDI/B.D./C (886-A)/ e -

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Compliance_Page 1 of 2


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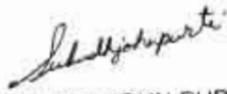

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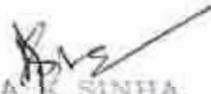
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Banhardih Coal Mine
Patratu Vidyut Utpadan Nigam Limited

Sl. No.	Ref. No.	Observations	Compliance
			196556 / I-8719; dt. 17.03.2020. However, as per the requirement stated in Ministry's letter No. F. No. MPS-55/1/2020-CPAM; dt. 31 st May, 2021, PVUNL has already submitted a letter to the GM Exploration, CMPDI HQ requesting modification in the Bounding Coordinates stated in the Allotment Agreement. The Submission copy is furnished in Annexure-1F .
5	2.e	A Revised Mining Plan detailing underground workings shall be prepared and submitted by the project proponent for approval within five years of commencement of mining operations (refer Para 3.1.2 of the Mining Plan).	Shall be complied with.
6	2.f	The proposed temporary external dump area shall be explored in detail before commencement of any mining activity (refer Para 3.1.10).	Shall be complied with.

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Compliance Page 2 of 2


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55/1/2020-CPIAM; 20th May, 2021
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Compliance to the Observation
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Mining Plan (Including Mine Closure Plan)
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Patratu Vidyut Utpadan Nigam Limited

SL. No.	Ref. No.	Observations	Compliance
2	5 b	Approval of this mining plan may not have any impact on the milestones and efficiency parameters signed under terms and conditions of CBDPA.	Patratu Vidyut Utpadan Nigam Limited (PVUNL) will follow the instructions of Ministry of Coal, GoI.
3	5 c	The mine closure cost should be updated and be given for April'2021.	Complied with. WPI for the Month of April is published in the Month of May, 2021. The same rate has been considered for estimation of the Financial Assurance. Please refer to Annexure VIII A.
4	5 d	80% of the OB volume has been backfilled internally which seems to be on the higher side in view of steeply dipping deposit. This may be reviewed.	Complied with. The matter was reviewed and efforts were made to accommodate more on the Surface Dump by increasing a tier of 30 meter. Instead of previously planned 232.22 Mcum of Overburden in the external dump, the capacity enhanced to 322.76 Mcum. This will give an operational flexibility to restrict the concurrent internal backfilling of the Overburden in a tune of about 71 %. Relevant sections of the Chapters are modified accordingly.
5	5 e	The toe of spoil -bank shall not be extended to any point within 100m of a mine opening, railway or other public works, public road or other permanent structure not belonging to the owner.	Complied with. Related plates are corrected in accordance with the observation.
6	5 f	Copy of Modified Allotment Agreement in support of the binding co-ordinates used in the Mining Plan shall be attached.	The Block Boundary Coordinates were issued by CMPDIL vide their letter No. CMPDI/DG/Captive/24/677 dt. 28.7.2017 (Please refer to Annexure VIII F) and Bounding coordinates certified by CMPDI during the Section 7 (1) notification (Please

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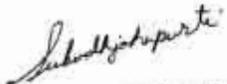
SL. No.	Ref. No.	Observations	Compliance
			refer to Annexure VIII G) are utilized all throughout this Mining Plan including Mine Closure Plan of Banhardih Coal Mine of PVUNL, Latehar District, Jharkhand.

Note:

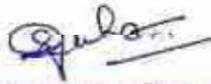
Point No. 5 (b) to 5 (f) has been replied compliant to Ministry of Coal's letter no. F. No. MPS-55/1/2020-CPIAM; 20th May, 2021.

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Compliance Page 2 of 2


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**Compliance to the Observation
Vide MOC's Letter No. F. No. MPS-
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Patratu Vidyut Utpadan Nigam Limited**

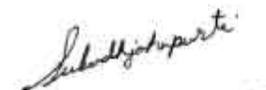
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SL. No.	Ref. No.	Observations	Compliance
1	Mining Plan 1	In Appendix 2.3, sequence of coal seams with parting thickness range may be provided in the table.	Complied with. Furnished in Appendix 2.3 of Chapter 2.
2	Mining Plan 2	No excavator is provided in the list of HEMM for coal production through drilling and blasting.	Complied with. Corrections made in line with the observations and 2 Nos. of 5.5 Cum Electrical/Hyd. Shovel has been included in the configuration.
3	Mining Plan 3	Detailed exploration may be done in the unexplored area of 418.42 Ha on the western side before surface OB dumping.	Shall be complied with.
4	Mining Plan 4	The final dump profile of backfilled internal dump shown in the conceptual plan (plate-VIII) is not matching with dump profile in final year stage plan (plate-XXIE). This may be corrected.	About 232.33 Mcum of Overburden will be rehandled during the closure period. The surface dump area attained a height of 60 m from the average ground level will be back to its original level at the conceptual stage. Similarly, the mined-out voids of the final stage will be backfilled and the area will be completely reclaimed. These changes are reflected in the conceptual Stage Plan (Plate No.VIII) and Final Year Stage Plan (Plate No. XXIE).
5	Mining Plan 5	The seams are dipping at 20° to 45°. Use of Surface miner at such inclination may be reviewed.	Coal Production through Surface Miner has been planned in this mine considering the steep angle of the seams. Both coal and interburden will be excavated through surface miners, while major partings will be excavated through drilling &

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Compliance Page 1 of 4

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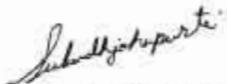
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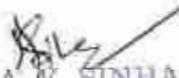
SL. No.	Ref. No.	Observations	Compliance
			blasting. A ripper dozer is also provisioned for removing the smaller partings. Horizontal slicing method will be adopted for coal excavation through surface miner. Both coal and associated dirt will be excavated to maintain the pit floor gradient flat as much as possible. Long and wide coal faces (> 200 m x 200 m) will be chosen for coal production through surface miner at any sequence of the mining operations.
6	Mining Plan 6	Scheme for extracting coal reserve beyond 300m depth may be incorporated in report.	The present Mining Plan is restricted within the Quarriable limit of 300 meter from the ground level. There are considerable coal resources beyond the quarriable depth. The planning for Underground coal extraction shall be planned once the Mine is Opened and Geo-Mining Characteristics are well established. The comprehensive coal extraction program through underground method shall be submitted within 5 years from the date of commencement of the Mining Operation.
7	Mine Closure Plan 3.1	Pre-Mining, Present & Post Mining Land Use Plan-Provided but needs modification-Separate Pre/Post - Mining Plan shall be provided.	Complied with. A pre mining Land use Plan added in the document. Please refer to Plate No XXA for Pre-

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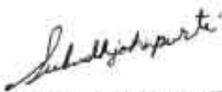
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SL. No.	Ref. No.	Observations	Compliance
			Mining Land use Plan and refer to Plate No XXB for Post Mining Land Use Plan.
8	(i)	The efficacy of using Surface Miner in this mine, with Seam gradient varying from 20° to 45°, should be looked into.	Coal Production through Surface Miner has been planned in this mine considering the steep angle of the seams but having greater thicknesses. Horizontal slicing method will be adopted for coal excavation through surface miner. Both coal and associated Shaly materials will be excavated in order to maintain the pit floor gradient flat as much as possible. Long and wide coal faces (> 200 m x 200 m) will be chosen for coal production through surface miner at any given point of time.
9	(ii)	For steep Seam gradient, Horizontal and not Incline Slicing shall be the method of work and the Plans, as shown, need to be corrected.	All faces are considered to be horizontal with multiple seam and parting exposures. Since horizontal slicing methodology has been adopted, multiple coal seam exposures are likely to be present at any given sequence of mining operation. The seam exposures at different stages of Mining is thus reflected in the respective stage Plans (Plate No XXIA-XXIE).
10	Compliance	The Compliance, in general, is in	All the working faces for Surface

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SL. No.	Ref. No.	Observations	Compliance
		order. However, the proposal to keep the Face dimension for Surface Miner, of at least 200m X 200m in context of the Observation in Sl. No. 29 may be examined.	Miner have been considered more than 200 m x 200 m. The face dimensions are marked in each of the stage Plans (Plate Nos. XXIA-XXIE).

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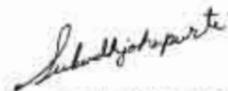
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Patratu, Dist.-Rangarh-829119

**Compliance to the Observation
Vide MOC's Letter No. MPS-55/1/2020-
CPAM; 9th July, 2020
Mining Plan (Including Mine Closure Plan)
Banhardih Coal Mine
Patratu Vidyut Utpadan Nigam Limited**

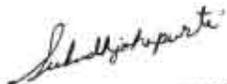
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Patratu Vidyut Utpadan Nigam Limited

S.L. No.	Ref. No.	Observations	Compliance
1		The proposed Mining plan document needs to be formulated and documented in line with the guideline for formulation of Mining Plan issued on 29.05.2020.	Complied with. All text chapters, Plates and Annexure are in line with the MOC's guideline for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining plan for the coal and lignite blocks issued on 29.05.2020.
2		Proof of the payment of Application fee for processing and approval of Mining Plan needs to be attached.	Complied with. Please refer Annexure-VI.
3	1.3.1	The copy of the Vesting order attached at Annexure IA envisages the name of the allottee as "Patratu Vidyut Utpadan Nigam Limited" only. This needs to be reconciled.	The Block was initially allotted to Jharkhand Urja Utpadan Nigam Limited (JUUNL) and allotment agreement between Nominated Authority and JUUNL in this regard was executed on 30 th of March, 2015. Please Refer to Annexure-1A . The first and second amendment to the Allotment agreement was executed on 30 th June, 2015 and 16 th January, 2017 respectively and is furnished in Annexure-1B . Subsequent to the formation of the JV company between Jharkhand Bijli Vitran Nigam Limited and NTPC, the block was assigned to M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) and a tripartite deed of adherence was executed between Nominated Authority (MOC, Government of India), Jharkhand Urja Utpadan Nigam Limited (JUUNL) and Patratu Vidyut Utpadan Nigam

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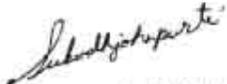
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S.L. No.	Ref. No.	Observations	Compliance
			<p>Limited (PVUNL) on 2nd of June, 2017. The deed of adherence is furnished in Annexure-IC.</p> <p>A deed of Assignment has been executed between Jharkhand UrjaUtpadan Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL) towards amendment of the Allotment order in favour of PVUNL on 18th of May, 2018. Please refer to Annexure-1D.</p> <p>Pursuant to the execution of deed of Assignment between JUUNL and PVUNL, Nominated Authority issued a corrigendum no.2 to the Allotment order No. 103/18/2015/NA dt. 30th June, 2015 and allotment order issued in favour of M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) vide allotment order No. 103/18/2015 NA dt. 25th of June, 2018. Please refer to Annexure-IE.</p>
4	1.3.3	Annexure 1 as referred at the para under reference is missing in the document. However, the Annexure IA attached with the document is corrigendum to the Allotment/vesting order. Entire set of allotment/Vesting order should be attached.	<p>Complied with.</p> <p>All documents related to Allotment agreement are furnished in Annexure-IA to IE.</p>
5	1.3.7	The para under reference requires Starting date of the Mine as per CMDPA, however in this case reference has been made with	<ul style="list-style-type: none"> Banhardih mine was assigned to PVUNL from previous allottee Jharkhand Urja Utpdan Nigam (JUUNL) vide MoC corrigendum-2 dated

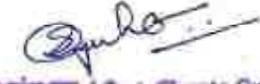
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Compliance to the Observation
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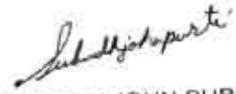
S.L. No.	Ref. No.	Observations	Compliance
		respect to GR. This needs to be reconciled. Further, as per CMDPA the starting date of the mine is December 2020. However, starting of the mine has been shown from 22-23. As such, project proponent is advised to, either schedule the operation of the mine in line with the CMDPA else suitable permission obtained in this regard from Nominated Authority must be attached.	<p>25.06.2018. Before the transfer of mines to PVUNL, a Deed of adherence was signed on 02.06.2017 between PVUNL, JUUNL & MoC after fulfilling the condition precedents mentioned in the allotment agreement.</p> <ul style="list-style-type: none"> After receiving Prior Consent from the Nominated Authority (MoC) on 21.06.2017, PVUNL approached JUUNL to get the Geological Report (GR) duly complete in all respect. However, JUUNL & its assignee department of Mines & Geology (DOMG) could not get the GR completed by the agencies till then. PVUNL raised the issue of non-receipt of GR in almost every State level Secretarial meeting, monitoring committee meeting held under the chairmanship of Secretary(Coal), review meeting held in Ministry of Power (MoP), and this issue has been apprised to the office of Nominated Authority, MoC, through all the monthly Pre-Commencement Reports. After lot of persuasion and

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Compliance to the Observation
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S.L. No.	Ref. No.	Observations	Compliance
			<p>follow up at all levels, PVUNL managed to get GR from JUUNL on 27.07.2019.</p> <ul style="list-style-type: none"> • Consequent to the non-compliance of milestone schedule due to non-availability of GR, forced by circumstances which were totally beyond the control of PVUNL, appropriation has already been done by MoC from the Bank Guarantee (performance security) of PVUNL. • Several representations has been given to the Nominated Authority (Ministry of Coal) by Government of Jharkhand, Ministry of Power (GoI) and also fervent appeals were made by PVUNL for the immediate revision of milestone schedule reckoning actual receipt of GR date (i.e.27.07.2019) as the Zero Date for all subsequent milestones which are in series and non-compliance of one has a cascading effect on subsequent milestones. (relevant letters are attached as Annexure)

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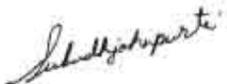
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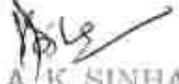
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S.L. No.	Ref. No.	Observations	Compliance
			<ul style="list-style-type: none"> The issue of revision of milestone schedule is still pending with MoC. In the last monitoring committee meeting held on 03.12.2020, Secretary (Coal) assured that decision on this matter shall be taken soon. Duly submitted mine plan approval is also kept in abeyance by MOC for want of the above revision of milestone schedule which is to be done by MOC only. <p>PVUNL has already progressed in the following mine development activities for start of mine operations:</p> <ol style="list-style-type: none"> Application for Stage I Forest submitted online on 22.06.2020. Application for Environment clearance submitted online on 26.06.2020 Approval of ToR from MoEF for EIA Studies on 02.10.2020 Grant of section-9 under CBA Act by MoC on 31.12.2020 In principle approval for coal evacuation to nearest station (FR approved by railways.)

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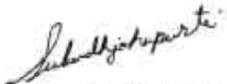

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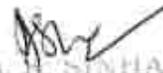
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S.L. No.	Ref. No.	Observations	Compliance
			<p>6. Appointment of agency for Forest clearance & EIA study which are under progress.</p> <p>In light of the above facts and long awaited non resolution of issues which has pushed the project for further delays and also due to sudden outbreak of Covid-19 pandemic situation, PVUNL hereby is submitting the Mine Plan & Mine closure plan with realistic and feasible year 2024-2025 (April'2024) for commencement of production of coal for specific end use.</p> <p>Relevant documents are attached in Annexure – VIIIID.</p>
6	1.5.3	As per the conceptual plan the lease area and the para 6.2.6 & 6.2.5, the project and lease area appears to be same, however at the para under reference the lease area has been shown as zero. This needs to be reconciled.	Rectified and complied with.
7	1.5.24 (4)	495 Ha of land is proposed to be used for External Dump. But it is not clear whether the area under reference is coal bearing or not. If coal bearing, what is the action plan	The area utilized under external dumping is part of the Geological Coal Block area. However, this part is yet to be explored and exploration scheme is furnished in Annexure

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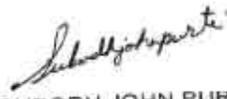

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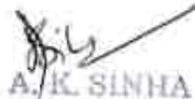
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S.L. No.	Ref. No.	Observations	Compliance
		for liquidation of coal reserve below the external OB dump.	VIII.E. The area will be explored in detail before commencement of the Mining Operation and <u>liquidation plan will be submitted in the first review period of this mining plan.</u> The dumping plan is temporary in nature and this complete dump comprising a volume of 232.33 Mcum shall be re-handled in the post closure period. Re-handle schedule is furnished in Table 3.7 of Chapter-3 of this Mining Plan (Including Mine Closure Plan).
8	2.2.9	Out of the total block area of 18.18 sq.km, 10.49 sq.km has been explored and 7.69 sq.km is to be explored in next five years. Further, the project/lease area as per this mining plan extends to 14.82 sq.km balance 3.36 sq.km area is required to be projectized. This needs to be reconciled and details action plan for exploration of the balance area needs to be furnished.	Out of the total 18.18 Sq. Km area, about 10.49 Sq. km is covered under detailed exploration and Liquidation plan for the same has been considered under this Mining Plan (Including Mine Closure Plan). About 4.33 Sq. km of unexplored area has been planned for utilizing towards Temporary external dump which shall be completely rehandled at the end of the mine life. The remaining 7.69 Sq. km of the Block area will be explored in detail before commencement of the mining operation and liquidation plan will be submitted to MOC during the first

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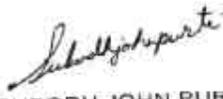

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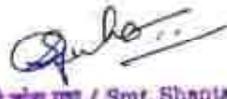
S.L. No.	Ref. No.	Observations	Compliance
			<p>review of this mining plan.</p> <p>Total area projectised is 14.67 sq. km and remaining 3.51 sq. km has not been projectised in this plan as the area comprising of considerable forest land. This area will be projectised after completion of the detailed exploration.</p> <p>Detail exploration scheme for the whole project area has been furnished in Annexure VIII E. This Mining Plan is projectised for 14.67 sq. km out of 18.18 sq. km area for a period of 30 years. The balance area will be explored within a period of 5 years from the date of approval of this mining plan and Geological Reports will be prepared accordingly. The conceptual liquidation plan for the additional areas will be submitted to Ministry during the first review of this mining plan.</p>
9	2.2.14	The table envisaging seam-wise reserve is not legible. This needs to be looked into.	<p>Complied with.</p> <p>Seam wise Geological Reserve for the quarriable section upto 300 meter depth is furnished in Appendix 2.4, chapter-2 of the Mining Plan (Including Mine Closure Plan).</p>
10	2.2.15	Brief details of the methodology of reserve assessment, assumptions	Complied with. Please refer to Para 2.2.15 chapter-2 of the Mining

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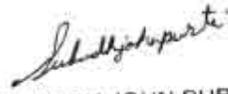

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		made, and software used needs to be furnished.	plan including Mine Closure Plan.
11	3.1.7, 3.1.9, 8.4 & 8.5	The Confirmation needs to be given that the calendar plan shown at the para under reference is in line with the CMDPA signed by the project proponent. Further, the guideline for preparation of mining plan doesn't permit provision for Project Construction period. The Year 1 Starts for the date on which any activity over the proposed land is initiated. Accordingly, the life of the mine needs to be reconciled.	Please refer S.No.-5 Complied with. Necessary corrections made in the relevant sections of the Mining Plan including Mine Closure Plan.
12	4.1	At the para under reference the guideline requires that a brief detail of the major risks and uncertainties to project and its remedial measures to be furnished at the para under reference. This needs to be furnished in line with the guideline dated 16th Dec 2019, for formulation of Mining plan.	Complied with. Please refer 4.1.1 of chapter-4 of the Mining Plan (Including Mine Closure Plan).
13	6.1.1	The guideline requires source of data to be indicated. This needs to be furnished.	Complied with. Sources are mentioned in the relevant sections. All land information are based on the Record of Rights collected from the Revenue department of the State and District.
14	6.2.10	About 3.36 sq. km of the block is yet	Complied with.

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S.L. No.	Ref. No.	Observations	Compliance
		to be projectized, however at the para under reference "NA" has been mentioned. This needs to be reconciled.	Necessary corrections made in the relevant sections of chapter 6.
15	8.1.1 & 8.1.2	The guideline requires tentative action plan for technical and biological reclamation. This needs to be furnished in line with the guideline.	Complied with. Quantification and cost provisions are provided in Table No. 8.5.
16	8.10.1	Against the progressive mine closure activities shown at para under reference, Technical and biological reclamation of mined out land and OB dump has been shown, while para 2.3 of the guideline dated 16th Dec 2019 prohibits any provisioning of technical and biological reclamation of mined out and OB dump, which is part of concurrent mining activity. This needs to be reconciled with respect to para 2.3 referred above. A Certificate in this behalf to be attached by the QP/MPPA.	The closure cost components are modified. Part of the Re-handling cost is provisioned under Closure activities. Concurrent mining activities are not provisioned under closure component.
17	8.10.2	The Life of the mine needs to be reconciled with respect to the observation given for 3.1.7, 3.1.9, 8.4 & 8.5 above. Further, WPI as on April 2020 may be taken for calculation of Escrow account.	Complied. Reference document for WPI calculation attached in Annexure VIII A.

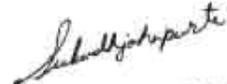
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Compliance to the Observation
Vide MOC's Letter No. MPS-55/1/2020-CPAM; 9th July, 2020
Mining Plan (Including Mine Closure Plan)
Banhardih Coal Mine
Patratu Vidyut Utpadan Nigam Limited

S.L. No.	Ref. No.	Observations	Compliance
		Reference document where from the WPI has been taken needs to be attached.	
18		Life of the mine needs to be reconciled.	Complied with. Life of the mine reconciled as per new guidelines dated 29.05.2020 and kept as 30 years.
19		The format of the mining plan should be strictly in line with the guideline circulated vide OM dated 16th Dec 2019.	As per the vetting comments No. 1, this mining plan has been modified as per the MOC Guideline dated 29 th May, 2020.
20	Annexure II	Requires Certification of RQP that the project area is confined within the allotted block boundary. This needs to be reconciled.	Complied with. Necessary certificate attached in Annexure-IIB.
21	Plate 02	The attached CMPDIL certified plan needs to be obtained on conceptual plan showing geo-reference co-ordinates of the vested geological block boundary, project and lease boundary. This needs to be corrected.	As per MOC guideline dated, 29 th May, 2020, the conceptual plan certified by QP is attached in Plate No. -02. Since the project area is restricted well within the Geological Block boundary, certification of the competent person is attached.
22	Plates	The evacuation arrangement beyond the vested block boundary cannot be part of the mining plan. As such this needs to be reconciled.	Complied with. Evacuation arrangement beyond project area has been eliminated from the document and drawings.
23		The Geological Block area is 1818.10. Out of which detailed exploration of only 1049 Ha has	Detail exploration plan for the unexplored area has been furnished in Annexure-VIII E.

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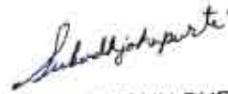
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		been done. External OB dump has been proposed on area within the Geological Block where detailed exploration is yet to be made. This may be reconciled.	The temporary Surface OB dump will be completely Rehandled at the end of mine life. Details of re-handling schedule is furnished in table no. 3.7, chapter-3 of the Mining Plan (Including Mine Closure Plan).
24		The borehole density is 7.86 BH/sq.km which is on the lower side.	The block is already explored and reserves are established. After detailed exploration it has been observed that about 1.21 Sq Km area is covered under metamorphics and five boreholes are drilled in this part of the block. Barring the metamorphic zone, borehole density comes to about 8.35 BH/Sq. Km. As recommended in the Geological Report, about 15 boreholes are planned for In-crop proving and structural conformities and will be undertaken during the upcoming exploration phase. This will increase the BH density to 9.21 BH/Sq. Km. The locations of these boreholes are furnished in the exploration scheme attached as Annexure-VIII E.
25	Page 10 of 161	Total forest area in the block written in text and that given in the corresponding table (Table No.13) is not matching. This may be checked.	Complied with. Necessary corrections made in the report.

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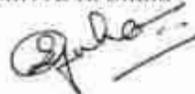
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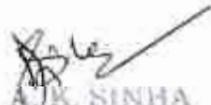
S.I. No.	Ref. No.	Observations	Compliance
26	Page 13 of 161	What reduction percentage has been taken to derive at Net Geological Reserves from Gross Geological Reserves? On Page 59 of 161 it is stated that "A deduction of 10% is made from Gross Reserves to arrive at Net Reserves." However, it is not matching here. This may be checked.	Checked and corrected. Complied with. Necessary corrections were made in chapter-2, section 2.2.17.
27	Page 61 of 161	a. Seam-wise Net Proved & Indicated Reserve of Banhardih Coal Mine up to 300 meter depth. Total geological reserves in the block may be given. The break-up of reserves under proved and indicated category may be given. b. Instead of depth range of the seams, depth-wise, seam-wise reserves may be given (Table 2.25).	Complied with. Please refer to Appendix 2.6 chapter-2 for Seam Wise Proved and Indicated Reserve of the Block upto 1200 meter depth range. Appendix- 2.4 & Appendix 2.5 are provided as per the table format provided in the Guideline for Preparation of Mining Plan (Including Mine Closure Plan).
		Considering the geo-mining conditions of the block, the peak rated capacity of the block may be enhanced.	Two aspects has been considered while finalizing the Rated Capacity of this Mine. 1. Coal Requirement at end Use Plant. 2. Exposure percentage of Lower Packet of seams in the sequence of Mining. In the proposed Mining Plan, the mine has been considered to produce only 8 years with peak rated capacity as it has been linked with the

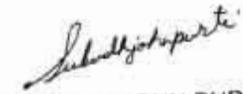
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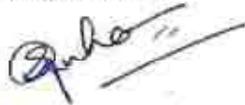
Compliance to the Observation
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			<p>exposure percentage of the Lower Packet of coal seams. The steep angle of the coal seams and poor thickness range of the younger seams has restricted the feasibility of higher production capacity.</p> <p>Once the block is fully explored and during the 1st revision of Mining Plan, enhancement of the rated capacity shall be explored.</p> <p>However, as per the Guideline of Ministry of Coal DT. 29.5.2020, the peak rated capacity of the Mine has been provisioned as 18 MTPA which 150% of the rated capacity.</p>
28		Regulation 106(2) of the CMR, 2017 mandates that before starting a mechanized opencast working, the owner and agent of the mine have to ensure that the mine, including its method of working, ultimate pit slope, dump slope and monitoring of slope stability, has been planned, designed and worked as determined by a scientific study. This may be taken into consideration during mining.	<p>Shall be complied with.</p> <p>A pit and Dump Slope stability study will be conducted beforehand of Mining Operation.</p>
29		The seam is inclined. About 78% of the coal excavation is proposed through surface miner. The bench	<p>Complied with.</p> <p>Exposures of coal seams are shown in the year wise stage plans. Face dimension for surface miner will be</p>

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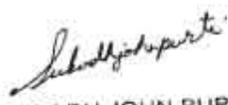
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		dimension for Surface Miners proposed to be deployed may be mentioned and in which part of the excavation they will be deployed may be mentioned in the report.	at least 200 meter x 200 meter. The same has been mentioned in chapter-3, Section 3.1.2.
30		The width of working OB benches proposed in Page 71 of 161 differs from that proposed in Page 94 of 161. This may be checked.	Complied with. Necessary corrections made in the report.
31		A safety barrier of 7.5m has been kept all along the boundary. Surface Plan (Plate-VII) does not show features beyond the block boundary. So the adequacy of safety barrier kept against the external dump and the pit cannot be evaluated. The proposed external dump is located very close to the lease boundary. Reg. 107 (5), CMR 2017 stipulates that the toe of a spoil bank shall not be extended to any point within 100m of a mine opening, railway or other public works, public road or building or other permanent structure not belonging to the owner. This may be looked in to.	Necessary corrections are made in the relevant plates. As seen from the Toposheets and satellite imageries, no habitations are found adjacent to the Block boundary wherein surface dumping is planned. However, provision of 50 meter safety barrier has been planned all along the surface dumps towards the block boundary.
32	Page 77 of 161	Maximum depth of mining at the 5th year of operation will be about 150m. This may be reflected in the	Complied with.

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S.L. No.	Ref. No.	Observations	Compliance
		5th Year Stage Plan (Plate-XXC).	
33	Table 8.5, Page 148;	In line with the para 2.3 of the Mining Plan Guideline, Backfilling of the mine void is being carried out as part of regular mining operation, it shall not be included in the list of progressive mine closure activities. However, in case, where the backfilling of mine void is to be carried out specifically for closure of the mine, quantum of such overburden and the mine closure fund earmarked for the purpose must be included in the list of activities to be taken up for mine closure. Internal Backfilling (Cumulative) in Y-30 is 795.00 Mcum while at the end of Y-33 is 998.0 Mcum. So about 203.0 Mcum OB is proposed to be backfilled. However, in Table 8.8, Page 154 of 161 (Estimated fund requirement for closure activities) under "OB re-handling for backfilling" neither this quantity nor any fund allocated for this head has been proposed. This may be checked.	Checked and corrected. Closure cost considered only for the part of rehandling quantity. Concurrent backfilling is the part of regular mining operations and no closure cost has been provisioned.
34		Road passing through the block has been proposed to be diverted and a	The alignment of the proposed diverted road provisioned within the

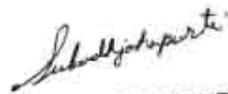
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		diverted route has been shown in Plate No. XXII. However, the land proposed for the diverted road has not been kept in the Project Area and no detailing has been done. Also, it has been stated in the report that on the south of the Coal Block another block namely Jagaddal Coal Block is there. Whether the proposed road diversion is passing through the block? These may be checked.	project area. Necessary corrections have been made in the stage plans and conceptual plans.
35	Plates	a. The floor contours of the seams exposed at the pit bottom may be shown. b. The surface contours may be shown. c. RLs may be marked on the benches of the pit as well as dumps. d. Final Year Stage Plan (Plate-XXE). The maximum depth of the mine is 300m, however, only three internal OB benches have been shown? e. Important features outside the Coal Block may be shown so that the different proposals in the Mining Plan like with of barriers kept against the external dump and pit, route for road diversion, etc. may be explained and justified.	Complied with. Necessary corrections made in the stage plans. Please refer to Plate No. XXIA, XXIB, XXIC, XXID & XXIE.
36		Number of PAFs may be mentioned	Complied with. Number of PAFs as

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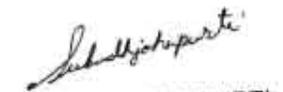
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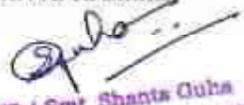
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		in the Mining Plan.	per SIA study report comes to about 963 where homestead losers are 135, land losers are 659 and both land and homestead losers are 169.
37		Page 158 of 161. WPI as on April 2020 may be taken for calculation of Escrow account. The money to be deposited in the Escrow A/c Fund should be calculated using Construction period as well. Reference document wherefrom the WPI has been taken needs to be attached. Life of the mine needs to be reconciled.	Complied with. Life of mine is 30 year.
38	Check list	Checklist should be modified in line with the guideline for preparation of Mining Plan issued on 29.05.2020.	Complied with.
39		The Post Mining Land Use Plan should not be given using Google Earth Image (Plate No. XIX).	Satellite Imagery data utilised for Land Use Plan preparation. Source: Bhuvan, NRSC.
40		It is requested that Mine Plan (Text and Plates) after incorporating the compliance to the observation cited above may be submitted to this Ministry (in line with the procedure defined in the guidelines for Preparation, Formulation, Submission, Processing, Scrutiny, Approval and Revision of Mining	Complied with.

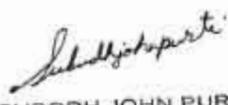
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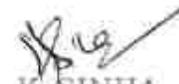
S.L. No.	Ref. No.	Observations	Compliance
		plan for the coal and lignite blocks issued on 29.05.2020), within 15 days of the issue of this letter. The point-wise compliance in a tabular form (with proper cross referencing) to the observations should also be enclosed in Mining Plan and the .pdf file of the same should also be emailed to hitlar.singh85@nic.in and members of the internal committee. The front page of the Mine Closure Plan should indicate the Month and year in which it will be submitted.	

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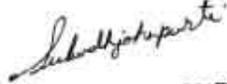
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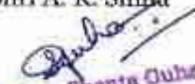
Checklist

CHECKLIST

Details		(√/ X)
	Expert Review Report	NA
Text	Project Information	√
Text	Exploration, Geology, Seam Sequences, Coal Quality and Reserve	√
Text	Mining	√
Text	Safety Management	√
Text	Infrastructure Facilities proposed and their Location	√
Text	Land Requirement	√
Text	Environment Management	√
Text	Progressive & Final Mine Closure Plan	√
Annexure		
Annexure	Copy of Allotment order/ Vesting Order	√
Annexure	Certificate of qualified person/accredited mining plan preparing agency (MPPA) if the project area is confined within the vested/ allotted boundary / existing mining lease and where the project area extends beyond the block boundary, a certificate of qualified person/accredited mining plan preparing agency (MPPA) should be supported with a certificate of State Government Mines and Geology Department must be attached, which should specify (a) intent of the State Government for grant of lease beyond the vested Geological Block Boundary / existing mining lease; (b) non-existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary / existing mining lease to rule out the issue of encroachment and use of coal bearing area (beyond the vested/ allotted block boundary/ existing mining lease) in the mining plan.	√
Annexure	Approval of the Company Board.	√
Annexure	Copy of earlier approval of Mining Plan.	NA
Annexure	Plan/ Chart showing schedule of Implementation of Mine Closure activities (progressive and final closure) with duration of important activities.	√
	Expert Review Report carried out by an accredited Mining plan Preparing Agency (MPPA)	NA
Annexure	Other Documents if any.	√
Plates		
Plate	Location Plan.	√
Plate	Plan certified by qualified person/accredited mining plan preparing agency (MPPA) if the project area is confined within the vested/ allotted block boundary / existing mining lease and where the project area extends beyond the block boundary, a plan certified by qualified person/accredited mining plan preparing agency (MPPA) should be supported with a plan with geo-reference co-ordinates duly certified by the Mines & Geology Department of the Concerned State Government. Plan in support of Annexure-II.	√

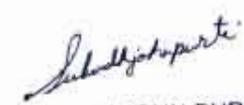
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*Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand*



Plate	Printed Copy of the KML superimposed in the recent (not older than one year from the base date) dated satellite Image duly certified by Accredited Agency should also be attached. Note: The soft copy of the KML file shall also be part of the soft copy of the mining plan.	✓
Plate	Cadastral Plan showing approved block boundary vis-a-vis proposed/existing mining lease & mine boundary superimposed over it in distinct colour, showing landuse and infrastructure etc.	✓
Plate	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area.	✓
Plate	Representative Graphic Litholog & Seam Structures.	✓
Plate	Surface Plan showing drainage system, contour, preferably at 3 m interval, location of BH (borehole).	✓
Plate	Conceptual Plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc.	✓
Plate	Tentative land use plan showing land type (Govt., Forest and tenancy land) with its data source.	✓
Plate	Floor contour plan and seam folio plan, iso grade plan	✓
Plate	Cross section showing coal/lignite seam (s)	✓
Plate	Plan showing existing and proposed surface layout(s)	✓
Plate	Plan showing total coal thickness and overburden thickness and stripping ratio (in case of opencast (OC) mines).	✓
Plate	Final stage quarry plan showing haul road alignment (in case of OC Mines).	✓
Plate	Layout of pillar extraction (in case of UG Mines)	NA
Plate	Plan showing mode and location of entries and surface layouts (in case of underground (UG) Mines).	NA
Plate	Layout of the panel for each system (like longwall, Continuous Miner, Board & Pillar, road header etc.) should be given (in case of UG Mines).	NA
Plate	Support System (in case of UG Mines).	NA
Plate	Haulage and transport system (in case of UG Mines).	NA
Plate	Post Mining Land Use Plan.	✓
Plate	Progressive Mine Closure Plan/ Stage Plans.	✓
Plate	Reclamation plan.	✓

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Project Information



Chapter-1: Project Information

1.1 Introduction

	Parameters	Details										
1.1.1	Name of the Coal/Lignite Block	Banhardih Coal Mine										
1.1.2	Name of the Coalfield/Lignite Field.	Auranga Coalfield										
1.1.3	Base date of Mining Plan/Mine Closure Plan.	March, 2021										
1.1.4	Linked End Use Plant.	<p>Patratu Thermal Power Plant.</p> <p style="text-align: center;">Table No. 1.1:</p> <p>Detail configuration and Plant Capacities of the thermal power station.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>S.I. No.</th> <th>Name of Specified End Use Plants</th> <th>Address</th> <th>Capacity</th> <th>Existing or Proposed</th> </tr> </thead> <tbody> <tr> <td></td> <td>Patratu Thermal Power Plant</td> <td>P.O.-PTPS Patratu Dist. Rangarh, Jharkhand- 829119.</td> <td>2400 MW</td> <td>Proposed</td> </tr> </tbody> </table>	S.I. No.	Name of Specified End Use Plants	Address	Capacity	Existing or Proposed		Patratu Thermal Power Plant	P.O.-PTPS Patratu Dist. Rangarh, Jharkhand- 829119.	2400 MW	Proposed
S.I. No.	Name of Specified End Use Plants	Address	Capacity	Existing or Proposed								
	Patratu Thermal Power Plant	P.O.-PTPS Patratu Dist. Rangarh, Jharkhand- 829119.	2400 MW	Proposed								
1.1.5	Distance of End Use Plant from the pit head of the project in "km".	Patratu Power Plant is situated at a distance (by road) of 120 km in the eastern direction from the project area. A Map showing the respective locations of the Mine Site and End Use Plants are depicted in figure no. 1.1.										
1.1.6	Mode of Coal Transport.	Coal transportation is planned through railway and loading will be done through Rapid Loading System (RLS) to be installed in the south eastern part of the Block. Rail distance from Block to the Power Plant is about 95 km via. Latehar and Tori.										

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1.2 Location, Topography & Communication:

1.2.1	Location of coal deposit (District and State)	<p>Banhardih Coal Mine is a part of Auranga Coal Field. The Coalfield is located in the easternmost part of the Koel Valley Group of Coalfields situated in Latehar district of Jharkhand State. The block is located in the East Central part of Auranga Coalfield.</p> <p>The Block falls in the Survey of India toposheet no. F45A9 & F45A10 and bounded by Latitude 23°43'23.09" to 23°45'53.08" N & Longitude 84°34'35.084" to 84°39'55.045" E. The existing Sikni Colliery of Jharkhand State Mineral Development Corporation, a State-Owned Subsidiary is located south of this block.</p> <p>A map showing the location of Banhardih Coal deposit superimposed in the combined Survey of India Toposheets F45A9 & F45A10 is furnished in figure no. 1.2 & also in Plate I.</p>
1.2.2	Communication: PWD roads, railway lines Air.	<p>The block is accessible from Latehar, Ranchi and Daltonganj through NH-75. The southern boundary of the coal block is nearest to Village Tota which is about 2 km from the National Highway.</p> <p>The approach of the southern block boundary from NH-75 is accessible from Brahmani through Bari in the east, through Tota in the center and from Jagaldagga in the west. Nearest railway station is Chetar that is about 10km from the block. The area is situated to the north of Gomoh-Barkakana- Dehri-on-Sone loop of the eastern Railways. Nearest airport is Birsa Munda Airport.</p> <p>A transportation map in a radius of 5 km from the outer periphery of the project area showing the direction and distance of the nearest railway station is depicted in figure no. 1.3.</p>
1.2.3	Availability of power supply, water etc.	<p>Power requirement of this mine is approximately 40MVA at 132 kV level. An application has already been made by the project proponent in this regard to get the required power from the proposed 132/33kV GSS at Chandwa and also requested for the provision of additional 132 kV bay for power supply to the Banhardih Coal Mine.</p> <p>Accumulated water in the mine pit will be utilized for the plantation, water sprinkling and other workshop usage while water for domestic need will be catered through sinking of tube wells in the mine site. Necessary permissions from the competent authority will be obtained for withdrawal of Ground water beforehand of well sinking.</p>

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



1.2.4	Prominent physiographic features, drainage pattern, natural water courses, rainfall data, highest flood level.	<p>The Banhardih Coal Mine falls in the Auranga coalfield surrounded by the older metamorphics of the Chhotanagpur Gneissic Complex represented by the Palamau Plateau. The general topography of the block characterizes with rolling terrain with low ridges and depressions. Elevation level of boreholes reveals that the minimum of 423.17m in borehole no 2W and maximum of 459.90m in borehole no 20E. Around 25% of the block is covered with Protected Forest located in the western part. Partly the villages like Udayapura, Jagaldagga, Banhardih, and Sabano are falling within the forest area. Rest of the area within the block is covered with cultivated land and residential hutments.</p> <p>The Bagdagga nala and Rajdaha nalas and their tributaries forms the main drainage system of the sector. The courses of nalas have been developed into cultivated lands and some gully head bands have been constructed across the nalas for storage of water for irrigation. A canal passes across the area from north to south at the Centre and parallel to main connecting road passes through Surli, Huchlu and Bari villages. Due to undulating nature of the land, a number of natural ponds have been formed and these ponds are aligned in a definite line indicating a possible presence of fault. Water level varies from 1 m to 5m. Nearly 10 boreholes drilled in the block are showing the artesian condition.</p> <p>The area is characterized by Sub-Tropical climate. April to June is the summer season with temperature rises up to 45° C or even more. It is very cold during the month of December and January when temperature lowers down to as low as 40 C. The monsoon starts from the middle of June and continues up to mid-September. There is heavy rainfall during the rainy season. The average annual rainfall of the district is less than 1200 mm. In 2009 it was recorded maximum i.e. 1425 mm. whereas, in 2012 it was 750 mm.</p> <p>A drainage plan of the block area with respect to the nearby prominent water bodies are depicted in figure no. 1.4.</p> <p>Please refer to Plate No. VII for present Surface condition of Banhardih Coal Mine.</p>
1.2.5	Important surface features within the project area and major diversion or shifting involved.	<p>A village road, passing through the central part of the block needs to be shifted beforehand of mining operation. The detail engineering of the road shall be made with due consultation with the Public Works Department, Government of Jharkhand. A diversion layout has been proposed in this Mining Plan and shown in Plate No. XXIII. Declaration from the PVUNL in this regard is also attached as Annexure VIII C.</p>

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1.3 Details of the Allotment Agreement:

1.3.1	Name of the Allottee	Name of the allottee is Patratu Vidyut Utpadan Nigam Limited (A Joint Venture of NTPC Limited and Jharkhand Bijli Vitaran Nigam Limited).
1.3.2	Details of allotment/ vesting Order.	The Block was initially allotted to Jharkhand Urja Utpadan Nigam Limited (JUUNL) and allotment agreement between Nominated Authority and JUUNL in this regard was executed on 30 th of March, 2015. Please Refer to Annexure-1A . The first and second amendment to the Allotment agreement was executed on 30 th June, 2015 and 16 th January, 2017 respectively and is furnished in Annexure-1B . Subsequent to the formation of the JV company between Jharkhand Bijli Vitaran Nigam Limited and NTPC, the block was assigned to M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) and a tripartite deed of adherence was executed between Nominated Authority (MOC, Government of India), Jharkhand UrjaUtpadan Nigam Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL) on 2 nd of June, 2017. The deed of adherence is furnished in Annexure-1C . A deed of Assignment has been executed between Jharkhand Urja Utpadan Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL) towards amendment of the Allotment order in favour of PVUNL on 18 th of May, 2018. Please refer to Annexure-1D . Pursuant to the execution of deed of Assignment between JUUNL and PVUNL, Nominated Authority issued a corrigendum no.2 to the Allotment order No. 103/18/2015/NA dt. 30 th June, 2015 and allotment order issued in favour of M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) vide allotment order No. 103/18/2015 NA dt. 25 th of June, 2018. Please refer to Annexure-1E .
1.3.3	Name and address of the Applicant	Patratu Vidyut Utpadan Nigam Ltd. P.O.-PTPS Patratu; Dist: Ramgarh, Jharkhand- 829119.
1.3.4	Name of the previous Allottee of the Block.	Jharkhand Urja Utpadan Nigam Limited (JUUNL) is the previous allottee of the Block.

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



1.3.5	Starting date of the Mine as per CMDPA/CBDPA	As per the deed of Adherence (furnished in Annexure-IA) executed between Nominated Authority, and JUUNL commencement of mining operation is scheduled on 66 th Month from the date of signing of the Agreement. The date of commencement thus comes to December, 2020. However, with reference to the receipt of the Geological Report on July, 2019 and with substantial delay due to COVID -19, the production commencement has been kept as 2024-25.
1.3.6	Rated capacity as per CMDPA/CBDPA	The rated capacity of the mine has been firmed based on coal requirement of the end Use Plant at its full installed capacity. As per the allotment order, the, capacity of the Power Plant is 2400 MW (3 X 800 MW) and the normative coal requirement has been assessed to 12 MTPA at 85% PLF. The peak rated capacity of the Mine is 18 MTPA as per the guidelines of Ministry of Coal, dt. 29th May, 2020.
1.3.7	Production Schedule as per opening permission (meeting provisions of CMDPA if any).	As per CMDPA, coal production schedule was December, 2020.
1.3.8	End Use of Coal/ Lignite as per allotment order if any	The coal produced from Banhardih Coal Mine will be utilized in the Patratu Thermal Power Station.
1.3.9	Cardinal points co-ordinates of the Block Boundary	The coordinates are furnished in Appendix-1.1

1.4 Details of the Previous Approval of Mining Plan:

1.4.1	Date of approval	Not applicable. This is the first mining plan for Banhardih Coal Mine, Latehar district, Jharkhand which is being submitted to Ministry of Coal for approval.
1.4.2	Conditions if any	NA
1.4.3	Scheduled year of start of production.	NA
1.4.4	Proposed year of achieving the targeted production.	NA
1.4.5	Date of actual commencement of mining operations, if operations already started.	NA

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



1.4.6	Likely date of mining operations, if operations not yet started & reasons for non-commencement of operations.	NA
1.4.7	Planned production and actual levels achieved in last 3 years (Coal in Mte, OB in MM ³ , SR in M ³ /te).	NA
1.4.8	Statutory obligations vis-à-vis compliance status in a tabular form.	NA
1.4.9	Reasons for difference between the planned and actual production levels.	NA

1.5 Parameters of Approved Mining Plan vis-à-vis Proposed Mining Plan:

		Approved Mining Plan	Proposed Mining Plan
1.5.1	Block area in "ha"	NA	1818.10 ha
1.5.2	Block area projectised "ha"	NA	1467.42 ha
1.5.3	Lease area "ha"	NA	Proposed project area 1467.42 ha
1.5.4	Project area "ha"	NA	1467.42 ha
1.5.5	Life of the project "yrs"	NA	Life of Mine is 30 years
1.5.6	Minimum and Maximum Depth of working "m".	NA	15 m and 300 m respectively.
1.5.7	Net Geological Block "ha".	NA	1818.10 ha
1.5.8	Production Target "MTPA"	NA	Rated Capacity 12 MTPA; Peak rated capacity is 18 MTPA.
1.5.9	Seams available "As per GR".	NA	1B, 1T, 2, 3, 4B, 4M, 4T, 5B, 5M, 5T, 6B, 6M, 6T, R1B, R1M, R1T, R2 & R3.
1.5.10	Seams not considered for Mining with reasons.	NA	R3 – Inconsistent and Scanty data.
1.5.11	Gross Geological Reserve "MT".	NA	Gross Geological Reserves upto a depth of 1200 meter is 1372.21 Million Tons.

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



		Approved Mining Plan	Proposed Mining Plan
			Gross Geological Reserves upto 300 meter depth is 446.18 Million tons.
1.5.12	Net Geological Reserve "MT".	NA	Net Geological Reserves upto a depth of 1200 meter is 1234.98 Million Tons. Net Geological Reserves upto 300 meter depth is 401.56 Million tons.
1.5.13	Blocked Reserve "Mt"	NA	130.73 Million Tons. (Blocked reserve estimated for the quarriable sector upto a depth range of 300 meter only).
1.5.14	Mineable Reserve "Mt"	NA	270.81 Million Tons (Mineable reserve estimated for the quarriable sector upto a depth range of 300 meter only). <u>Liquidation Plan for the UG sector will be assessed once the Mine commence its production through Opencast methodology and Geomining Characteristics of the Block is established through mining and completion of detailed exploration in the balance area.</u>
1.5.15	Extractable Reserve "MT"	NA	250.50 Million Tons (Extractable reserve estimated for the quarriable sector upto a depth range of 300 meter only).
1.5.16	% of Extraction/ Recovery.	NA	62.38 % - Up to a depth range of 300 m depth.
1.5.17	Reserves depleted (till base date)- Reserves Mt	NA	Nil.
1.5.18	Balance Extractable reserves " Mt"	NA	250.50
1.5.19	Average Grade	NA	G11 (4000 – 4300 Kcal/Kg)
1.5.20	OB in MM ³	NA	1173 Mcum
1.5.21	SR in M ³ /te	NA	4.68
1.5.22	Mining Technology	NA	Opencast Mining Methodology with Coal extraction through Surface Miner and conventional Drilling and Blasting. Coal produced by surface miner shall be despatched to Power Plant directly while Coal produced through Drilling and Blasting will be subjected to primary

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



		Approved Mining Plan	Proposed Mining Plan
			crushing to reduce the size less than 100 mm. Overburden excavation through Drilling & Blasting while removal through Shovel Dumper combination.
1.5.23	Coal Beneficiation envisaged.	NA	No.
1.5.24	Handling of Rejects	NA	Not Applicable.
1.5.25	Landuse Pattern "Ha":		
1	Excavation area	NA	727.24
2	Top Soil Dump	NA	12.24
3	External Dump	NA	440.7
4	Safety Zone	NA	7.85
5	Other Use	NA	24.01
6	Infrastructure area	NA	35.7
7	Green Belt	NA	0
8	Undisturbed area	NA	219.68
	Total	NA	1467.42
1.5.26	Reasons for Revision	Not Applicable	

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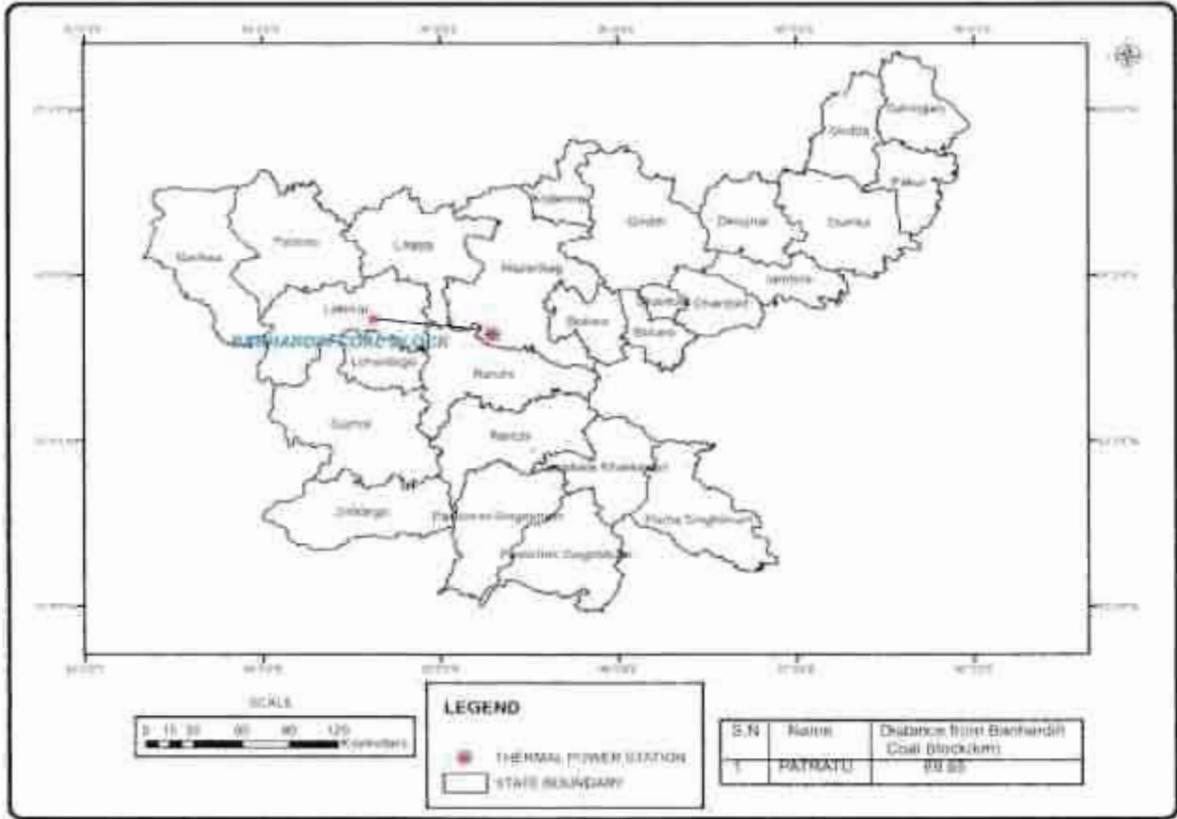


Figure No 1.1: Plan showing aerial distance between Patratu Thermal Power Station and Banhardih Coal Mine, Latehar District, Jharkhand.

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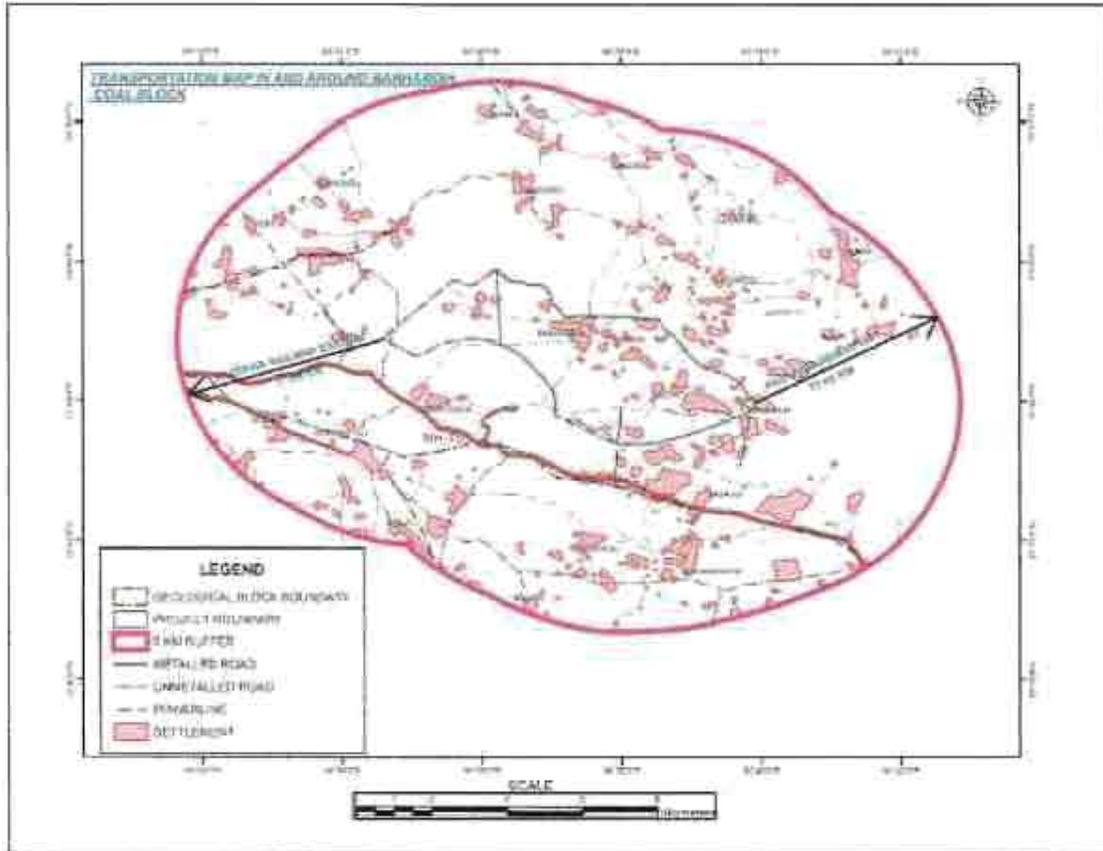


Figure No 1.3: Map showing the transportation routes in and around Banhardih Coal Mine within a radius of 5 km.

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Mining Plan and Mine Closure Plan
 Banhardih Coal Block
 Auranga Coalfield, Latehar District, Jharkhand

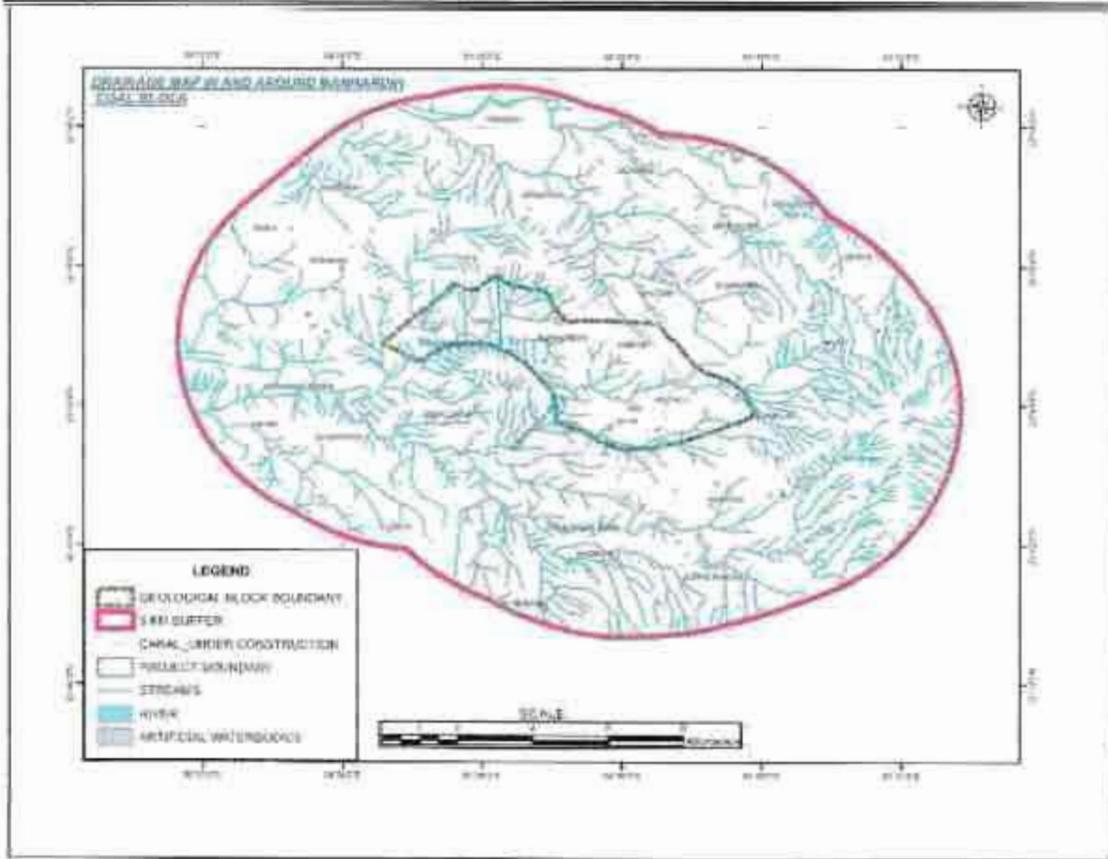


Figure No 1.4: Map showing the drainage system in and around Banhardih Coal Mine in a radius of 5 km, Latehar District, Jharkhand.

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Mining Plan and Mine Closure Plan
 Banhardih Coal Block
 Auranga Coalfield, Latehar District, Jharkhand

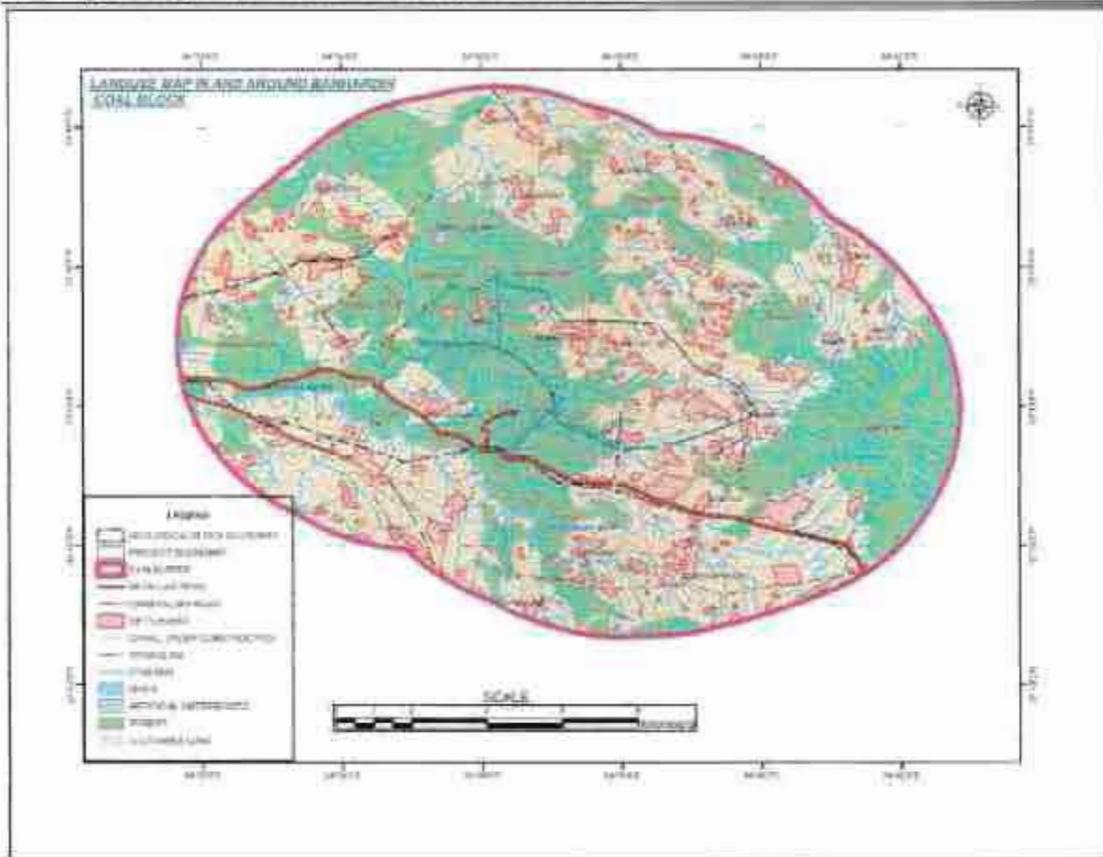


Figure No 1.5: Plan showing the landuse pattern in and around of Banhardih Coal Mine, Latehar District, Jharkhand within a radius of 5 km.

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Geo-referenced Coordinates of Banhardih Coal Mine.
(Certified Block Boundary Coordinates, vide CMPDI Letter No.
CMPDI/DG/Captive/24/677 dt. 28.7.2017)

POINT ID	LONGITUDE	LATITUDE	POINT ID	LONGITUDE	LATITUDE
0	84°34'35.146"E	23°44'53.675"N	61	84°39'1.177"E	23°44'36.863"N
1	84°34'35.247"E	23°44'53.851"N	62	84°39'4.081"E	23°44'34.235"N
2	84°35'4.223"E	23°45'18.641"N	63	84°39'7.658"E	23°44'31.811"N
3	84°35'8.792"E	23°45'21.421"N	64	84°39'12.282"E	23°44'29.245"N
4	84°35'36.825"E	23°45'45.087"N	65	84°39'16.090"E	23°44'28.060"N
5	84°35'41.488"E	23°45'42.488"N	66	84°39'21.317"E	23°44'26.386"N
6	84°35'46.621"E	23°45'40.426"N	67	84°39'26.244"E	23°44'24.782"N
7	84°35'50.824"E	23°45'39.549"N	68	84°39'30.572"E	23°44'22.837"N
8	84°35'55.622"E	23°45'41.037"N	69	84°39'34.600"E	23°44'20.686"N
9	84°35'59.491"E	23°45'44.034"N	70	84°39'38.550"E	23°44'17.985"N
10	84°36'4.299"E	23°45'47.781"N	71	84°39'42.571"E	23°44'14.527"N
11	84°36'7.933"E	23°45'50.133"N	72	84°39'45.100"E	23°44'11.763"N
12	84°36'10.864"E	23°45'52.273"N	73	84°39'46.657"E	23°44'9.140"N
13	84°36'12.267"E	23°45'52.376"N	74	84°39'47.916"E	23°44'6.657"N
14	84°36'13.901"E	23°45'51.939"N	75	84°39'49.248"E	23°44'3.898"N
15	84°36'21.239"E	23°45'46.641"N	76	84°39'51.256"E	23°44'1.618"N
16	84°36'25.084"E	23°45'44.045"N	77	84°39'52.968"E	23°44'0.028"N
17	84°36'28.468"E	23°45'42.956"N	78	84°39'54.757"E	23°43'58.781"N
18	84°36'31.039"E	23°45'42.839"N	79	84°39'54.554"E	23°43'58.164"N
19	84°36'34.545"E	23°45'43.041"N	80	84°39'54.267"E	23°43'57.081"N
20	84°36'36.180"E	23°45'42.712"N	81	84°39'50.980"E	23°43'51.156"N
21	84°36'37.929"E	23°45'41.845"N	82	84°39'48.805"E	23°43'49.719"N
22	84°36'39.084"E	23°45'40.894"N	83	84°39'45.807"E	23°43'48.424"N
23	84°36'40.876"E	23°45'40.336"N	84	84°39'33.971"E	23°43'43.930"N
24	84°36'42.221"E	23°45'40.056"N	85	84°39'25.358"E	23°43'40.936"N
25	84°36'44.914"E	23°45'40.114"N	86	84°39'14.197"E	23°43'36.783"N
26	84°36'48.804"E	23°45'40.375"N	87	84°39'8.205"E	23°43'34.811"N
27	84°36'51.122"E	23°45'40.297"N	88	84°38'58.321"E	23°43'31.685"N
28	84°36'52.840"E	23°45'39.671"N	89	84°38'53.378"E	23°43'30.053"N
29	84°36'54.705"E	23°45'38.631"N	90	84°38'41.476"E	23°43'27.279"N
30	84°36'56.639"E	23°45'36.421"N	91	84°38'31.817"E	23°43'24.496"N
31	84°36'58.126"E	23°45'34.419"N	92	84°38'23.739"E	23°43'23.771"N
32	84°36'59.982"E	23°45'31.451"N	93	84°38'14.971"E	23°43'23.431"N

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Mining Plan and Mine Closure Plan
Banhardih Coal Block
Auranga Coalfield, Latehar District, Jharkhand



POINT ID	LONGITUDE	LATITUDE	POINT ID	LONGITUDE	LATITUDE
33	84°37'0.122"E	23°45'29.386"N	94	84°37'58.023"E	23°43'23.348"N
34	84°37'0.263"E	23°45'27.458"N	95	84°37'56.330"E	23°43'23.904"N
35	84°36'59.957"E	23°45'25.944"N	96	84°37'51.521"E	23°43'25.483"N
36	84°37'0.403"E	23°45'25.323"N	97	84°37'41.222"E	23°43'29.654"N
37	84°37'1.295"E	23°45'24.081"N	98	84°37'29.662"E	23°43'35.895"N
38	84°37'3.009"E	23°45'22.904"N	99	84°37'22.276"E	23°43'39.572"N
39	84°37'5.395"E	23°45'21.174"N	100	84°37'10.555"E	23°43'43.542"N
40	84°37'6.659"E	23°45'19.723"N	101	84°37'3.321"E	23°43'47.562"N
41	84°37'7.699"E	23°45'18.136"N	102	84°37'3.498"E	23°43'53.619"N
42	84°37'8.291"E	23°45'16.688"N	103	84°37'3.154"E	23°44'0.092"N
43	84°37'9.705"E	23°45'15.168"N	104	84°37'2.354"E	23°44'4.982"N
44	84°37'10.898"E	23°45'14.337"N	105	84°37'1.031"E	23°44'10.150"N
45	84°37'13.062"E	23°45'13.365"N	106	84°36'56.796"E	23°44'16.018"N
46	84°37'16.052"E	23°45'13.078"N	107	84°36'53.002"E	23°44'20.438"N
47	84°37'17.622"E	23°45'12.866"N	108	84°36'45.485"E	23°44'28.177"N
48	84°37'19.791"E	23°45'12.995"N	109	84°36'35.212"E	23°44'38.542"N
49	84°37'21.964"E	23°45'13.881"N	110	84°36'30.813"E	23°44'41.381"N
50	84°37'45.520"E	23°45'13.444"N	111	84°36'22.834"E	23°44'46.368"N
51	84°38'2.868"E	23°45'12.963"N	112	84°36'14.177"E	23°44'50.462"N
52	84°38'31.802"E	23°45'11.263"N	113	84°36'6.560"E	23°44'52.900"N
53	84°38'38.856"E	23°45'0.703"N	114	84°36'59.534"E	23°44'53.684"N
54	84°38'40.940"E	23°44'58.492"N	115	84°35'48.990"E	23°44'53.792"N
55	84°38'42.582"E	23°44'57.934"N	116	84°35'37.616"E	23°44'52.252"N
56	84°38'44.898"E	23°44'57.305"N	117	84°35'28.709"E	23°44'50.357"N
57	84°38'47.275"E	23°44'53.991"N	118	84°35'22.715"E	23°44'47.833"N
58	84°38'51.884"E	23°44'48.190"N	119	84°35'10.572"E	23°44'41.338"N
59	84°38'55.302"E	23°44'43.702"N	120	84°35'5.024"E	23°44'38.054"N
60	84°38'58.424"E	23°44'39.765"N	121	84°34'35.264"E	23°44'53.536"N

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**Exploration, Geology, Seam Sequences,
Coal Quality and Reserve**



Chapter-2: Exploration, Geology, Seam Sequence, Coal Quality and Reserve.

2.1 Details of the Block:

Parameters		Details	
2.1.1	Particulars of adjacent blocks: North, South, East, West.	North: No block	East: No block
		South: Jagaddal Coal Block.	West: No block
2.1.2	Location of the Block (District/State)	Banhardih Coal Mine is situated at Latehar District, Jharkhand. It falls in the Survey of India toposheet no. F45A9 & F45A10 between Latitude 23°43'23.09" to 23°45'53.08" N & Longitude 84°34'35.084" to 84°39'55.045" E.	
2.1.3	Area of the Block "Ha"	1818.10 Ha.	
2.1.4	Area of the geological block projectized "in Ha" (Area of the geological block considered for liquidation of coal/lignite reserve).	Total area projectised in this mining plan is 1467.42 ha. Out of the total project area liquidation plan has been conceptualised in an area of 1049 ha which is covered under detailed exploration, while another 418.42 ha has been projectised towards fulfilling the need of temporary external dump. This additional area will be subjected to detailed exploration before the commencement of mining operation and liquidation plan for this area will be submitted to Ministry of Coal before commencement of the Mining Operation.	
2.1.5	Balance area yet to be projectised "Ha".	350.68 Ha. This area will be covered under detailed exploration in the planned period.	
2.1.6	Likely Reserve in the area yet to be projectized "Mte".	To be Explored.	
2.1.7	Cardinal Point Co-ordinates of the non-coal/lignite bearing area/existing mining lease outside the allotted geological Coal/Lignite Block (Duly certified in line with para 1.9 of the Guideline, if fresh mining lease required)	Involvement of outside block area is not envisaged in this mining plan.	

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2.1.8	Certificate of qualified person/ accredited mining Plan preparing agency (MPPA) if the project area is confined within the vested/allotted block boundary/ existing mining lease and Where the project area extends beyond the block boundary, a certificate of qualified person/ accredited mining Plan preparing agency (MPPA) should be supported with a certificate of State Government mines and Geology department must be attached, which should specify (a) intent of the state government for grant of lease beyond the vested geological boundary; (b) non-existence of Coal/ Lignite in the area beyond the vested/ allotted geological block boundary /existing mining lease to rule out the issue of encroachment and use of coal bearing area (beyond the vested/allotted block boundary/ existing mining lease) in the mining plan. The Project area, Lease	The Geo-reference Coordinates of the Project Boundary is furnished below in Table No. 2.1. The total project area falling well within the Certified Geological Block boundary. Thus certification from State Government in this regard is not required as per the Guideline for preparation of Mining Plan and Mine Closure Plan, dt. 29.5.2020. A certificate from QP in this regard has been furnished in Annexure-II B.					
		Table No. 2.1 Geo-referenced Coordinates of project boundary of Banhardih Coal Mine.					
PROJECT BOUNDARY COORDINATES							
Sl	LATITUDE	LONGITUDE	Sl	LATITUDE	LONGITUDE		
1	23° 45' 52.121" N	84° 36' 13.222" E	51	23° 44' 31.811" N	84° 39' 1.058" E		
2	23° 45' 51.939" N	84° 36' 13.991" E	52	23° 44' 29.245" N	84° 39' 12.282" E		
3	23° 45' 46.641" N	84° 36' 21.239" E	53	23° 44' 28.060" N	84° 39' 16.090" E		
4	23° 45' 44.945" N	84° 36' 25.684" E	54	23° 44' 26.386" N	84° 39' 21.319" E		
5	23° 45' 42.956" N	84° 36' 29.468" E	55	23° 44' 24.780" N	84° 39' 26.244" E		
6	23° 45' 41.839" N	84° 36' 31.039" E	56	23° 44' 23.893" N	84° 39' 30.672" E		
7	23° 45' 43.941" N	84° 36' 34.545" E	57	23° 44' 22.686" N	84° 39' 34.600" E		
8	23° 45' 42.712" N	84° 36' 36.180" E	58	23° 44' 17.985" N	84° 39' 38.551" E		
9	23° 45' 41.645" N	84° 36' 37.929" E	59	23° 44' 14.527" N	84° 39' 42.571" E		
10	23° 45' 40.994" N	84° 36' 39.084" E	60	23° 44' 11.763" N	84° 39' 46.101" E		
11	23° 45' 40.336" N	84° 36' 40.876" E	61	23° 44' 9.140" N	84° 39' 49.067" E		
12	23° 45' 40.059" N	84° 36' 42.021" E	62	23° 44' 6.659" N	84° 39' 49.036" E		
13	23° 45' 40.114" N	84° 36' 44.914" E	63	23° 44' 5.898" N	84° 39' 49.248" E		
14	23° 45' 40.375" N	84° 36' 48.804" E	64	23° 44' 1.618" N	84° 39' 51.259" E		
15	23° 45' 40.297" N	84° 36' 51.122" E	65	23° 44' 0.028" N	84° 39' 52.968" E		
16	23° 45' 39.671" N	84° 36' 52.849" E	66	23° 43' 58.781" N	84° 39' 54.757" E		
17	23° 45' 38.631" N	84° 36' 54.793" E	67	23° 43' 58.194" N	84° 39' 54.554" E		
18	23° 45' 36.421" N	84° 36' 56.639" E	68	23° 43' 57.081" N	84° 39' 54.969" E		
19	23° 45' 34.419" N	84° 36' 58.196" E	69	23° 43' 51.156" N	84° 39' 55.989" E		
20	23° 45' 31.431" N	84° 36' 59.989" E	70	23° 43' 49.719" N	84° 39' 48.805" E		
21	23° 45' 30.386" N	84° 37' 0.120" E	71	23° 43' 48.424" N	84° 39' 45.807" E		
22	23° 45' 27.458" N	84° 37' 0.293" E	72	23° 43' 43.836" N	84° 39' 33.473" E		
23	23° 45' 26.944" N	84° 36' 59.967" E	73	23° 43' 40.937" N	84° 39' 26.358" E		
24	23° 45' 25.323" N	84° 37' 0.403" E	74	23° 43' 36.783" N	84° 39' 14.197" E		
25	23° 45' 24.081" N	84° 37' 1.295" E	75	23° 43' 34.811" N	84° 39' 8.205" E		

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area and geological block area in "Ha" shall also be envisaged.	26	23° 45' 22.904" N	84° 37' 3.009" E	76	23° 43' 31.689" N	84° 38' 58.321" E	
	27	23° 45' 21.374" N	84° 37' 5.295" E	77	23° 43' 30.053" N	84° 38' 53.978" E	
	28	23° 45' 19.725" N	84° 37' 6.690" E	78	23° 43' 27.979" N	84° 38' 41.467" E	
	29	23° 45' 18.126" N	84° 37' 7.679" E	79	23° 43' 24.496" N	84° 38' 31.807" E	
	30	23° 45' 16.688" N	84° 37' 8.291" E	80	23° 43' 23.771" N	84° 38' 23.739" E	
	31	23° 45' 15.168" N	84° 37' 9.705" E	81	23° 43' 23.431" N	84° 38' 14.971" E	
	32	23° 45' 14.337" N	84° 37' 10.898" E	82	23° 43' 23.348" N	84° 37' 58.023" E	
	33	23° 45' 13.095" N	84° 37' 11.060" E	83	23° 43' 24.778" N	84° 37' 53.668" E	
	34	23° 45' 13.076" N	84° 37' 16.052" E	84	23° 43' 23.975" N	84° 37' 55.439" E	
	35	23° 45' 12.866" N	84° 37' 17.622" E	85	23° 43' 23.339" N	84° 37' 41.146" E	
	36	23° 45' 12.995" N	84° 37' 19.791" E	86	23° 43' 24.435" N	84° 37' 38.417" E	
	37	23° 45' 13.881" N	84° 37' 21.964" E	87	23° 43' 25.445" N	84° 37' 18.976" E	
	38	23° 45' 13.444" N	84° 37' 23.320" E	88	23° 43' 24.278" N	84° 37' 17.292" E	
	39	23° 45' 12.963" N	84° 38' 2.868" E	89	23° 43' 25.141" N	84° 37' 11.699" E	
	40	23° 45' 11.293" N	84° 38' 31.802" E	90	23° 43' 23.928" N	84° 37' 0.860" E	
	41	23° 45' 0.703" N	84° 38' 38.856" E	91	23° 43' 23.582" N	84° 37' 5.331" E	
	42	23° 44' 58.492" N	84° 38' 40.940" E	92	23° 44' 0.092" N	84° 37' 3.354" E	
	43	23° 44' 57.634" N	84° 38' 42.582" E	93	23° 44' 10.150" N	84° 37' 1.031" E	
	44	23° 44' 57.103" N	84° 38' 44.898" E	94	23° 44' 16.118" N	84° 36' 56.796" E	
	45	23° 44' 53.991" N	84° 38' 42.275" E	95	23° 44' 20.438" N	84° 36' 53.000" E	
	46	23° 44' 48.190" N	84° 38' 51.884" E	96	23° 44' 28.177" N	84° 36' 45.485" E	
	47	23° 44' 43.702" N	84° 38' 55.302" E	97	23° 44' 38.342" N	84° 36' 35.011" E	
	48	23° 44' 39.765" N	84° 38' 58.424" E	98	23° 44' 41.381" N	84° 36' 30.813" E	
	49	23° 44' 35.863" N	84° 39' 1.177" E	99	23° 44' 46.368" N	84° 36' 22.834" E	
	50	23° 44' 34.833" N	84° 39' 4.681" E	100	23° 44' 49.882" N	84° 36' 16.884" E	
				101	23° 44' 53.596" N	84° 34' 35.964" E	
	<p>The Conceptual Plan of Banhardih Coal Project showing the Block Boundary, Project Boundary and extent of the Block has been certified by Qualified Person and is furnished in Plate II.</p>						
	2.1.9	KML file of the Proposed lease area and geological block.	A KML file has been prepared and superimposed in satellite Imagery furnished in Plate No. III . A softcopy of the KML file also provided along with the softcopy documents.				
	2.1.10	Whether the proposed project area is confined within the allotted block boundary/ existing mining lease, if	Yes. The proposed project area is confined within the allotted block boundary.				

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	not, the reason for deviation from allotted block boundary may be given.	A Cadastral Plan showing approved block boundary vis-à-vis proposed/existing mining lease & mine boundary superimposed in landuse and infrastructure etc. is furnished in Plate IV .
2.1.11	If the project area extends outside the allotted block boundary/existing mining lease, confirmation about non- occurrence of coal/lignite in the area under reference needs to be furnished.	Not applicable.
2.1.12	Type of the Project (operating / under implementation) and year of starting.	This project is under implementation. At present the project is obtaining necessary Statutory clearances. Production is planned from the year 2024-25.

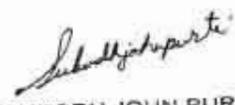
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2.2 EXPLORATION, GEOLOGY AND ASSESSMENT OF RESERVE

<p>2.2.1</p>	<p>Regional geological set up of the area, local geology, structure, stratigraphic sequence, characteristics of the litho-logical units (Coal Seams/partings/overburden).</p>	<p>Auranga Coalfield is the easternmost coal field of the North Koel Valley Gondwana Basin. Banhardih Coal Mine is a part of Auranga Coal Field and is situated in the eastern part of the Auranga Coalfield in Latehar district of Jharkhand. The regional geological exploration carried out by the Geological Survey of India has revealed five promising coal bearing sectors in Auranga Coal Field. These sectors are Jagaldagga (10sq.km), Gowa (15 sq.km), Rajbar (50 sq.km), Sabano (10 sq.km) and Banhardih (10 sq.km). Banhardih occupies 18 sq km area in the south eastern part of the coal field. The block is having Formations of Lower Gondwana Group unconformably overlying the Pre-Cambrians rock. The potential coal horizons are mainly confined in the Barakar and Raniganj Formations. Metamorphics present in the block have been mapped. On the basis of data accrued through drilling and geological mapping of the block, it is interpreted that the Talchir, the Barakar, the Barren Measures and the Raniganj Formations of the Lower Gondwana Group lie unconformably over the Pre Cambrian Metamorphics.</p>
<p>2.2.2</p>	<p>Local geology, Structure, Stratigraphic sequence, Characteristics of the litho-logical units (coal seams /partings/ overburden).</p>	<p>In the Banhardih sector, Gondwana - Precambrian boundary in the east is marked by NW- SE trending border fault as evidenced from the occurrence of extensive quartz reef zone near Daria. This border fault is offset by two cross faults. The southern boundary of the sector is also marked by a boundary fault separating the Gondwana sedimentaries and Precambrian basement. Barakar Formations in the southern most part lies in juxtaposition to Metamorphics may be due to influence & cumulative effect of fault F1-F1 and other sympathetic faults. However, logging of the drilled cores were done by outsourced agencies hence on the basis of documented</p>

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		<p>data as the only source of information this inference has been drawn. The northern boundary of the sector is marked by an E-W trending fault. All the cross-faults developed in this sector are intra basinal normal faults. The generalized stratigraphic sequence based on the data generated from boreholes drilled within the block is furnished in Appendix 2.1.</p> <p>Occurrence of 5 nos. of faults has been interpreted from the sub surface information and is depicted in Appendix-2.2.</p> <p>The sequence of coal seam along with their thickness range and depth of occurrence is shown in Appendix-2.3.</p> <p>A Geological Plan & Geological Cross Sections are furnished in Plate V & Plate XI respectively. Graphic Lithologs of drilled boreholes and Seam structures of seams considered for mining in Banhardih Coal Mine are furnished in Plate VIA1-VIA12 & Plate VIB1-VIB39 respectively.</p>
2.2.3	Geological Block Area " Ha"	1818.10 Ha.
2.2.4	Status of Exploration of the block	<p>The allocated Banhardih Coal Mine comprises of 18.18 sq km which was decided to be explored in two phases. In the first phase, an area of 10.49 sq km was taken up for detailed exploration which lies in the eastern part of the block. Banhardih, Rampur, Surli Barwadih, Ate, Tota, Udayapura, Sabano, Jagaldagga and Bari villages are falling within the block. As per Regional Geological Report of GSI (Geological Survey of India) total resource of non-coking coal of 920.39 million tonnes of C-G grade has been estimated in this block for seven regionally persisted coal seam zones (II-VIII) over 18 sq km area. Based on the regionally explored data, detailed exploration has been conducted comprising topographic survey, geological mapping, drilling (on 400X400 grid interval), core logging, geophysical</p>

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		survey, sampling, chemical analysis and reserve estimation for the preparation of Geological Model as per ISP. Altogether, 82 boreholes have been drilled for exploration purpose in Banhardih Coal Mine. GSI had drilled 15 boreholes comprising 6432.60 meters in the block. Another 67 boreholes were drilled by Department of Mines & Geology, Government of Jharkhand comprising 35299 meters.
2.2.5	Area covered by 'detailed' exploration within the block.	Total block area is 1818.10 Ha. Out of which 1049 Ha is covered under detailed exploration.
2.2.6	Whether entire lease area has been covered by 'detailed' exploration.	Total block area 1818.10 Ha out of which 1049 ha is covered under detailed exploration. The lease area conceptualized is 1467.42 ha out of which 418.42 ha will be covered under detail exploration during the planned period. Detail exploration of the remaining area will be completed before commencement of mining operation and details of proposed boreholes are furnished in Annexure-VIII E . A detail exploration scheme has prepared following the guidelines of the ISP-2017. The scheme comprise of Coring Drilling, Non-Coring Drilling, Geophysical Logging, Geotechnical Drilling, Physico-Mechanical Test, Chemical Analysis, hydrogeological study and other requisite studies.
2.2.7	No. of boreholes drilled within the block	82 boreholes.
2.2.8	Whether any further exploration/study is required or suggested and time frame which it is to be completed.	Further exploration is envisaged/required. An Exploration Scheme is being furnished in Annexure-VIII E . Detail exploration of the remaining area will be completed before commencement of mining operation.
2.2.9	Year wise future programme of exploration	The total Geological Block area is 18.18 sq.km out of which only 10.49 Sq. km has been explored in the first phase and Mining Plan has been prepared based on the partially explored area. Detail exploration of the remaining area will be completed before commencement of mining operation. Details of phase wise distribution are depicted in the exploration

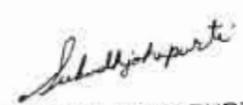
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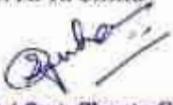



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		scheme furnished in Annexure-VIII.E.
2.2.10	Overall borehole density within the block (no./ sq. km) approx.	Block area-7.82 BH/Sq. km. within the explored area.
2.2.11	No of Seams available as per GR (Geological Report).	18 no. of major seams.
2.2.12	Seams not considered for Mining with Reasons.	Seam R3 is not considered due to inconsistent and scanty occurrence and local seams are not considered because of its erratic occurrence and non-correlateable nature.
2.2.13	Dip of the Seam	20° to 45° towards westerly and SW.
2.2.14	Seam wise, thickness, depth and reserve: Estimation of Blocked Geological Reserves and Extractable Reserves are depicted in Appendix-2.4 and Appendix-2.5 respectively. Estimation of seam wise year wise extractable reserve is furnished as Appendix-2.7.	
2.2.15	Methodology of reserves estimation (also mention if any software package has been used).	Basic assumptions/considerations followed for estimation of Coal Reserve of Banhardih Coal Mine are as per the Geological Report is as follows: I. Reserve has been estimated in an area of 10.49 sq.km (Explored area). II. Shaly coal and Carbonaceous shale Low (having ash and moisture more than 40% and up to 65%) occurring at the roof and/or floor of a coal seam has been considered as part of the seam while arriving at the effective thickness for estimating the Reserve. III. Reserves have been calculated based on the in-band thickness (I-100) of seams. IV. The areas of heave zones of faults have been excluded from the estimation of Reserve. V. Depth line: Depth wise reserves are estimated in every 300 m interval from the surface upto a depth of 1200 m. VI. Specific Gravity has been considered as given in the Table No. 2.2 below as per ISP.

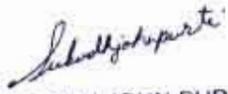
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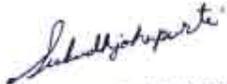
		<p>VILA deduction of 10% is made from Gross Reserves to arrive at Net Reserves.</p> <p>VIII. The average thickness of seam has been computed from the Iso-chore plan by taking the average of two consecutive Iso-chore values and influence of the nearest boreholes.</p> <p>IX. Sector-wise, depth-wise, grade wise and thickness-wise, in-situ geological reserves of the various coal seams of the block have been estimated with the "Detailed Resources Menu" of the MINEX.</p> <p style="text-align: center;">Table No. 2.2</p> <p>GCV Range and RD values with respect to different Grade of Non Coking Coal (Ref.: ISP 2017)</p> <table border="1"> <thead> <tr> <th>Grade Based on GCV</th> <th>Range of GCV(kcal/kg)</th> <th>Average Relative density (RD)</th> </tr> </thead> <tbody> <tr><td>G1</td><td>>7000</td><td>1.36</td></tr> <tr><td>G2</td><td>>6700 to ≤7000</td><td>1.40</td></tr> <tr><td>G3</td><td>> 6400 to ≤6700</td><td>1.43</td></tr> <tr><td>G4</td><td>>6100 to≤ 6400</td><td>1.44</td></tr> <tr><td>G5</td><td>>5800 to≤ 6100</td><td>1.47</td></tr> <tr><td>G6</td><td>>5500 to≤ 5800</td><td>1.50</td></tr> <tr><td>G7</td><td>>5200 to ≤5500</td><td>1.53</td></tr> <tr><td>G8</td><td>>4900to ≤5200</td><td>1.56</td></tr> <tr><td>G9</td><td>>4600 to ≤4900</td><td>1.58</td></tr> <tr><td>G10</td><td>>4300 to ≤4600</td><td>1.61</td></tr> <tr><td>G11</td><td>>4000 to ≤4300</td><td>1.65</td></tr> <tr><td>G12</td><td>>3700 to ≤4000</td><td>1.69</td></tr> <tr><td>G13</td><td>>3400 to ≤3700</td><td>1.73</td></tr> <tr><td>G14</td><td>>3100 to ≤3400</td><td>1.78</td></tr> <tr><td>G15</td><td>>2800 to ≤3100</td><td>1.81</td></tr> <tr><td>G16</td><td>>2500 to ≤ 2800</td><td>1.84</td></tr> <tr><td>G17</td><td>>2200 to ≤2500</td><td>1.87</td></tr> <tr><td>Ungraded</td><td>≤2200</td><td>1.90</td></tr> </tbody> </table>	Grade Based on GCV	Range of GCV(kcal/kg)	Average Relative density (RD)	G1	>7000	1.36	G2	>6700 to ≤7000	1.40	G3	> 6400 to ≤6700	1.43	G4	>6100 to≤ 6400	1.44	G5	>5800 to≤ 6100	1.47	G6	>5500 to≤ 5800	1.50	G7	>5200 to ≤5500	1.53	G8	>4900to ≤5200	1.56	G9	>4600 to ≤4900	1.58	G10	>4300 to ≤4600	1.61	G11	>4000 to ≤4300	1.65	G12	>3700 to ≤4000	1.69	G13	>3400 to ≤3700	1.73	G14	>3100 to ≤3400	1.78	G15	>2800 to ≤3100	1.81	G16	>2500 to ≤ 2800	1.84	G17	>2200 to ≤2500	1.87	Ungraded	≤2200	1.90
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2.2.16	Average GCV in Kcal/Kg	Grade G11 /GCV (4000 – 4300) Kcal/Kg																																																									

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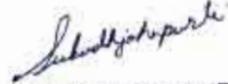

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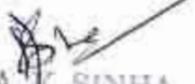
2.2.17	Gross Geological Reserve of the block "Mte"	Gross Geological Reserves upto a depth of 1200 meter is 1372.21 Million Tons. Gross Geological Reserves upto 300-meter depth is 446.18 Million tons.
2.2.18	Net Geological Reserve of the block "Mte"	Net Geological Reserves upto a depth of 1200 meter is 1234.98 Million Tons. Net Geological Reserves upto 300 meter depth is 401.56 Million tons.
2.2.19	Mineable Reserve of the block "Mte"	270.81 Million Tons (Mineable reserve estimated for the quarriable sector upto a depth range of 300 meter only).
2.2.20	Blocked Reserve "Mte"	130.73 Million Tons. (Blocked reserve estimated for the quarriable sector upto a depth range of 300 meter only).
2.2.21	Corresponding extractable Reserve of the block "Mte"	250.50 Million Tons (Extractable reserve estimated for the quarriable sector upto a depth range of 300 meter only).
2.2.22	Percentage of Extraction	62.38 % Upto a depth range of 300 meter depth only.
2.2.23	Reserve already depleted (Base date of Mining Plan)	0
2.2.24	Balance Reserve (as on Base Date)	250.50 Million Tons.


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Appendix –2.1

The general stratigraphic sequence of Banhardih Coal Mine.

Group	Formation	Lithology	Thickness(m)
Lower Gondwana	Raniganj	Greenish to yellowish green, often micaceous and calcareous, fine to medium grained sandstone, siltstone and thin coal bands	1.46(9W)- 581.56(17W)
	Barren Measures	Greenish, medium to coarse grained feldspathic sandstone with predominant black shale and cross bedded sandstone.	19.83(9W)- 265.40(AB13)
	Barakar	Grey to grayish white fine to coarse grained cross bedded and laminated arkosic sandstone, pebble beds, conglomerate and grey to carbonaceous shale, coal seams and fireclay	16.91(24E)- 801.28(B00)
	Talchir	Greenish siltstone, sandstone with shale and laminated sandstone.	0.45(AB02)- 27.85(11E)
-----UNCONFORMITY-----			
Pre-Cambrian		Granite, granite gneiss with patches of mica schist, quartzite and pegmatite veins.	0.47(A3)- 11.00(27E)


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Appendix-2.2

Details of the Faults Interpreted in Banhardih Coal Mine.

Sl. No.	No of Fault	Direction	Position of Fault	Type of Fault	Throw (in m) and direction of Fault	Evidence of Fault
1	F1-F1	Almost E-W	This fault running almost east to west from eastern to western boundary, and occurring in the southern extremity of the block as boundary fault	Normal strike-fault	110-500 and dipping northerly	Floor difference revealed from sub surface data and depression in the surface
2	F2-F2	E-SW	It is running parallel to fault F1-F1 starting from eastern block boundary, swinging to south west in the central portion and abut at fault F1F1.		360-480 with northerly to north westerly dip	Floor difference in the boreholes
3	F3-F3	Westerly in the western block boundary & Swinging towards south in the central portion and abuts at fault F2-F2	Running from the western block boundary towards central portion and swinging to south and dipping south westerly. This fault abuts at fault F2-F2 in the south dividing the block into two parts where western part encountered Raniganj Formation from the surface and the eastern sector consisting of Barakar Formation.		100-560 and dipping south westerly	Floor level difference and encountering Raniganj & Barakar Formations
4	F4-F4	North westerly to southerly	Starting from the northern block boundary and running upto the central portion which abuts at fault F2-F2		100-160 and dipping easterly	Floor level differences in the borehole
5	F5-F5	NNW-SSE	Starts from the northern block boundary and abuts at fault F2-F2 in the central part of the block		40-50 and dips north easterly	Floor level difference evident from the borehole data

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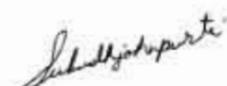
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Appendix-2.3

Sequence of Coal seams along with their thickness range and depth of occurrence.

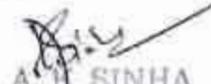
Coal seams	Thickness of coal seam (in m)				Coal seam intersected in Total number of Boreholes	Average Thickness of Coal Seam (in m)
	Minimum	Borehole	Maximum	Borehole		
R3	1.08	16W	3.88	3W	4	2.2
Parting	243.19	1W	302.36	2W		
R2	0.58	18W	8.5	20W	10	4.23
Parting	138.57	1W	294.35	AB13		
R1 T	0.62	2W	14.68	1S	14	4.74
Parting	3.14	2W	28.29	B00		
R1 M	0.61	2W	7.5	AB15	15	2.74
Parting	1.71	7W	13.56	AB01		
R1 B	0.67	1S	8.5	AB13	15	3.04
Parting	123.95	AB01	255	1W		
6 T	0.88	8W	17.41	1N	13	5.81
Parting	1.12	1N	17.74	AB01		
6 M	0.74	17W	14.02	A8	13	4.74
Parting	0.97	AB01	21.73	17W		
6 B	1.18	17W	11.05	AB05	15	5.61
Parting	9.9	AB05	90.41	1S		
5 T	0.68	7W	10.09	A7	18	4.53
Parting	0.35	A7	18.09	1S		
5 M	0.7	1W	7.51	18W	12	2.74
Parting	1.03	1E	17.92	A8		
5 B	0.7	1S	10.85	13W	15	3.59
Parting	2.75	2N	58.17	AB01		
4 T	0.5	2W	15.35	17W	22	3.18
Parting	0.9	15W	20.5	17W		
4 M	0.53	7W	8.01	A7	20	2.53
Parting	1.58	1E	27	1N		
4 B	0.62	1S	13.94	15W	20	3.39
Parting	11.69	1M	58.92	A7		
3	0.76	1N	33.55	AB14	21	7.14
Parting	2.35	B00	124.11	5W		
2	3.83	18E	57.2	A7	37	26.82

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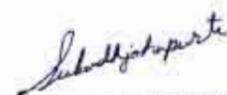
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Coal seams	Thickness of coal seam (in m)				Coal seam intersected in Total number of Boreholes	Average Thickness of Coal Seam (in m)
	Minimum	Borehole	Maximum	Borehole		
Parting	81.2	1M	338.4	AB12		
I T	3.23	4E	49.06	A2	47	23.94
Parting	14.29	19E	137.8	12E		
I B	9.05	17E	68.4	4E	44	37.86

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Mining Plan and Mine Closure Plan
 Banhardih Coal Mine
 Auranga Coalfield, Latchar District, Sharkhand

Appendix-2.4

Estimation of Blocked Geological Reserves.
 (This section estimated only upto a depth range of 300 meter)

Scan name	Thickness Range (m)		Depth Range (m)	Net Geological Reserve Mte	Blocked Reserve Below (in Million Tons)					Mineable Reserve Mte		Mining Losses in Mte
	Min. Thickness (m)	Max. Thickness (m)			Highwall / batter	Nala / River /Road	Barrier	Uneco nomic	Total Blocked	UG	DC	
R3	1.08	3.88	20.34-343.18	0.00								
R2	0.58	8.5	26.35-489.00	5.38	1.08	-	-	0.84	1.92	-	3.46	0.26
R1T	0.62	14.68	25.25-643.32	4.35	0.78	-	-	0.61	1.40	-	2.95	0.22
R1M	0.61	7.5	38.75-647.07	5.73	1.15	-	-	0.43	1.58	-	4.15	0.31
R1B	0.67	8.5	51.95-650.86	5.87	1.17	-	-	0.44	1.61	-	4.26	0.32
6T	0.88	17.41	42.70-744.91	13.00	2.60	-	-	1.22	3.82	-	9.18	0.69
6M	0.74	14.02	59.14-761.05	11.99	2.40	-	-	0.39	2.79	-	9.20	0.69
6B	1.18	11.05	23.76-783.96	10.99	2.20	-	-	0.92	3.12	-	7.88	0.59
5T	0.68	10.09	66.00-911.73	11.54	2.31	-	-	1.18	3.49	-	8.05	0.60
5M	0.7	7.51	74.36-927.00	5.24	1.05	-	-	0.42	1.47	-	3.77	0.28
5B	0.7	10.89	68.07-941.73	7.50	1.50	-	-	0.78	2.28	-	5.22	0.39
4T	0.5	15.35	38.74-979.62	7.66	1.53	-	-	0.45	1.98	-	5.68	0.43
4M	0.53	8.01	58.50-991.66	8.48	1.70	-	-	0.76	2.46	-	6.02	0.45
4B	0.62	13.94	24.82-996.74	14.09	2.82	-	-	0.69	3.51	-	10.58	0.79
3	0.76	33.55	59.03-851.54	29.92	3.36	-	-	0.00	8.36	-	21.56	1.62
2	3.83	57.2	21.35-931.94	83.94	25.32	-	-	0.00	25.32	-	58.62	4.40
1T	3.23	49.06	42.40-991.52	82.81	27.17	-	-	0.00	27.17	-	55.64	4.17
1B	9.05	68.4	30.13-981.09	93.05	38.46	-	-	0.00	38.46	-	54.59	4.09
				401.56	121.59	-	-	9.14	130.73	-	270.81	20.31

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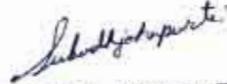


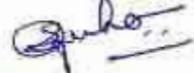
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Appendix – 2.6

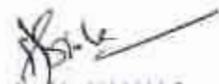
SEAMWISE CATEGORY WISE NET INSITU RESERVES (Upto 1200-meter depth range) in Million Tons Banhardih Coal Mine.				
SEAM	PROVED	INDICATED	INFERRED	TOTAL
R2	5.9818	0.0260		6.0078
R1T	8.3457	3.1646		11.5103
R1M	12.6741	2.0827		14.7569
R1B	12.2293	2.6445		14.8739
8T	23.0885	1.1571		24.2456
6M	19.6641	1.0952		20.7593
6B	18.8729	3.3620		22.2348
5T	29.2530	8.2691		37.5221
5M	18.7543	2.4222		21.1765
5B	31.5698	5.1731		36.7429
4T	32.7488	10.8743		43.6231
4M	11.4773	6.3407		17.8180
4B	20.1837	0.1132		20.2968
3	94.4801	21.1535		115.6336
2	211.7956	42.5138		254.3093
1T	234.2435	48.1432		282.3867
1B	272.2919	18.7999		291.0918
TOTAL	1057.6543	177.3352		1234.9895


SUBODH JOHN PURTI
Sr. Manager (Civ. Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with BVMCL)
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श्रीमती शांता गुहा / Smt. Shanta Guha
उप सहायक कोयला निर्यातक / Dy. Asstt. Coal Expt.
भारत सरकार / Govt. of India
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**Mining Plan and Mine Closure Plan
Benhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand**

Appendix - 2.7

Seam Wise-Year wise Extractable Coal Reserve

Seam Name	Y-3	Y-4	Y-5	Y-6	Y-7	Y-8	Y-9	Y-10	Y-11	Y-12	Y-13	Y-14	Y-15	Y-16	Y-17	Y-18	Y-19	Y-20	Y-21	Y-22	Y-23	Y-24	Y-25	Y-26	Y-27	Y-28	Y-29	Y-30	Y-31	Y-32	Y-33	Y-34	Y-35	Y-36	Y-37	Y-38	Y-39	Y-40	Y-41	Y-42	Y-43	Y-44	Y-45	Y-46	Y-47	Y-48	Y-49	Y-50	Y-51	Y-52	Y-53	Y-54	Y-55	Y-56	Y-57	Y-58	Y-59	Y-60	Y-61	Y-62	Y-63	Y-64	Y-65	Y-66	Y-67	Y-68	Y-69	Y-70	Y-71	Y-72	Y-73	Y-74	Y-75	Y-76	Y-77	Y-78	Y-79	Y-80	Y-81	Y-82	Y-83	Y-84	Y-85	Y-86	Y-87	Y-88	Y-89	Y-90	Y-91	Y-92	Y-93	Y-94	Y-95	Y-96	Y-97	Y-98	Y-99	Y-100	Y-101	Y-102	Y-103	Y-104	Y-105	Y-106	Y-107	Y-108	Y-109	Y-110	Y-111	Y-112	Y-113	Y-114	Y-115	Y-116	Y-117	Y-118	Y-119	Y-120	Y-121	Y-122	Y-123	Y-124	Y-125	Y-126	Y-127	Y-128	Y-129	Y-130	Y-131	Y-132	Y-133	Y-134	Y-135	Y-136	Y-137	Y-138	Y-139	Y-140	Y-141	Y-142	Y-143	Y-144	Y-145	Y-146	Y-147	Y-148	Y-149	Y-150	Y-151	Y-152	Y-153	Y-154	Y-155	Y-156	Y-157	Y-158	Y-159	Y-160	Y-161	Y-162	Y-163	Y-164	Y-165	Y-166	Y-167	Y-168	Y-169	Y-170	Y-171	Y-172	Y-173	Y-174	Y-175	Y-176	Y-177	Y-178	Y-179	Y-180	Y-181	Y-182	Y-183	Y-184	Y-185	Y-186	Y-187	Y-188	Y-189	Y-190	Y-191	Y-192	Y-193	Y-194	Y-195	Y-196	Y-197	Y-198	Y-199	Y-200	Y-201	Y-202	Y-203	Y-204	Y-205	Y-206	Y-207	Y-208	Y-209	Y-210	Y-211	Y-212	Y-213	Y-214	Y-215	Y-216	Y-217	Y-218	Y-219	Y-220	Y-221	Y-222	Y-223	Y-224	Y-225	Y-226	Y-227	Y-228	Y-229	Y-230	Y-231	Y-232	Y-233	Y-234	Y-235	Y-236	Y-237	Y-238	Y-239	Y-240	Y-241	Y-242	Y-243	Y-244	Y-245	Y-246	Y-247	Y-248	Y-249	Y-250	Y-251	Y-252	Y-253	Y-254	Y-255	Y-256	Y-257	Y-258	Y-259	Y-260	Y-261	Y-262	Y-263	Y-264	Y-265	Y-266	Y-267	Y-268	Y-269	Y-270	Y-271	Y-272	Y-273	Y-274	Y-275	Y-276	Y-277	Y-278	Y-279	Y-280	Y-281	Y-282	Y-283	Y-284	Y-285	Y-286	Y-287	Y-288	Y-289	Y-290	Y-291	Y-292	Y-293	Y-294	Y-295	Y-296	Y-297	Y-298	Y-299	Y-300	Y-301	Y-302	Y-303	Y-304	Y-305	Y-306	Y-307	Y-308	Y-309	Y-310	Y-311	Y-312	Y-313	Y-314	Y-315	Y-316	Y-317	Y-318	Y-319	Y-320	Y-321	Y-322	Y-323	Y-324	Y-325	Y-326	Y-327	Y-328	Y-329	Y-330	Y-331	Y-332	Y-333	Y-334	Y-335	Y-336	Y-337	Y-338	Y-339	Y-340	Y-341	Y-342	Y-343	Y-344	Y-345	Y-346	Y-347	Y-348	Y-349	Y-350	Y-351	Y-352	Y-353	Y-354	Y-355	Y-356	Y-357	Y-358	Y-359	Y-360	Y-361	Y-362	Y-363	Y-364	Y-365	Y-366	Y-367	Y-368	Y-369	Y-370	Y-371	Y-372	Y-373	Y-374	Y-375	Y-376	Y-377	Y-378	Y-379	Y-380	Y-381	Y-382	Y-383	Y-384	Y-385	Y-386	Y-387	Y-388	Y-389	Y-390	Y-391	Y-392	Y-393	Y-394	Y-395	Y-396	Y-397	Y-398	Y-399	Y-400	Y-401	Y-402	Y-403	Y-404	Y-405	Y-406	Y-407	Y-408	Y-409	Y-410	Y-411	Y-412	Y-413	Y-414	Y-415	Y-416	Y-417	Y-418	Y-419	Y-420	Y-421	Y-422	Y-423	Y-424	Y-425	Y-426	Y-427	Y-428	Y-429	Y-430	Y-431	Y-432	Y-433	Y-434	Y-435	Y-436	Y-437	Y-438	Y-439	Y-440	Y-441	Y-442	Y-443	Y-444	Y-445	Y-446	Y-447	Y-448	Y-449	Y-450	Y-451	Y-452	Y-453	Y-454	Y-455	Y-456	Y-457	Y-458	Y-459	Y-460	Y-461	Y-462	Y-463	Y-464	Y-465	Y-466	Y-467	Y-468	Y-469	Y-470	Y-471	Y-472	Y-473	Y-474	Y-475	Y-476	Y-477	Y-478	Y-479	Y-480	Y-481	Y-482	Y-483	Y-484	Y-485	Y-486	Y-487	Y-488	Y-489	Y-490	Y-491	Y-492	Y-493	Y-494	Y-495	Y-496	Y-497	Y-498	Y-499	Y-500	Y-501	Y-502	Y-503	Y-504	Y-505	Y-506	Y-507	Y-508	Y-509	Y-510	Y-511	Y-512	Y-513	Y-514	Y-515	Y-516	Y-517	Y-518	Y-519	Y-520	Y-521	Y-522	Y-523	Y-524	Y-525	Y-526	Y-527	Y-528	Y-529	Y-530	Y-531	Y-532	Y-533	Y-534	Y-535	Y-536	Y-537	Y-538	Y-539	Y-540	Y-541	Y-542	Y-543	Y-544	Y-545	Y-546	Y-547	Y-548	Y-549	Y-550	Y-551	Y-552	Y-553	Y-554	Y-555	Y-556	Y-557	Y-558	Y-559	Y-560	Y-561	Y-562	Y-563	Y-564	Y-565	Y-566	Y-567	Y-568	Y-569	Y-570	Y-571	Y-572	Y-573	Y-574	Y-575	Y-576	Y-577	Y-578	Y-579	Y-580	Y-581	Y-582	Y-583	Y-584	Y-585	Y-586	Y-587	Y-588	Y-589	Y-590	Y-591	Y-592	Y-593	Y-594	Y-595	Y-596	Y-597	Y-598	Y-599	Y-600	Y-601	Y-602	Y-603	Y-604	Y-605	Y-606	Y-607	Y-608	Y-609	Y-610	Y-611	Y-612	Y-613	Y-614	Y-615	Y-616	Y-617	Y-618	Y-619	Y-620	Y-621	Y-622	Y-623	Y-624	Y-625	Y-626	Y-627	Y-628	Y-629	Y-630	Y-631	Y-632	Y-633	Y-634	Y-635	Y-636	Y-637	Y-638	Y-639	Y-640	Y-641	Y-642	Y-643	Y-644	Y-645	Y-646	Y-647	Y-648	Y-649	Y-650	Y-651	Y-652	Y-653	Y-654	Y-655	Y-656	Y-657	Y-658	Y-659	Y-660	Y-661	Y-662	Y-663	Y-664	Y-665	Y-666	Y-667	Y-668	Y-669	Y-670	Y-671	Y-672	Y-673	Y-674	Y-675	Y-676	Y-677	Y-678	Y-679	Y-680	Y-681	Y-682	Y-683	Y-684	Y-685	Y-686	Y-687	Y-688	Y-689	Y-690	Y-691	Y-692	Y-693	Y-694	Y-695	Y-696	Y-697	Y-698	Y-699	Y-700	Y-701	Y-702	Y-703	Y-704	Y-705	Y-706	Y-707	Y-708	Y-709	Y-710	Y-711	Y-712	Y-713	Y-714	Y-715	Y-716	Y-717	Y-718	Y-719	Y-720	Y-721	Y-722	Y-723	Y-724	Y-725	Y-726	Y-727	Y-728	Y-729	Y-730	Y-731	Y-732	Y-733	Y-734	Y-735	Y-736	Y-737	Y-738	Y-739	Y-740	Y-741	Y-742	Y-743	Y-744	Y-745	Y-746	Y-747	Y-748	Y-749	Y-750	Y-751	Y-752	Y-753	Y-754	Y-755	Y-756	Y-757	Y-758	Y-759	Y-760	Y-761	Y-762	Y-763	Y-764	Y-765	Y-766	Y-767	Y-768	Y-769	Y-770	Y-771	Y-772	Y-773	Y-774	Y-775	Y-776	Y-777	Y-778	Y-779	Y-780	Y-781	Y-782	Y-783	Y-784	Y-785	Y-786	Y-787	Y-788	Y-789	Y-790	Y-791	Y-792	Y-793	Y-794	Y-795	Y-796	Y-797	Y-798	Y-799	Y-800	Y-801	Y-802	Y-803	Y-804	Y-805	Y-806	Y-807	Y-808	Y-809	Y-810	Y-811	Y-812	Y-813	Y-814	Y-815	Y-816	Y-817	Y-818	Y-819	Y-820	Y-821	Y-822	Y-823	Y-824	Y-825	Y-826	Y-827	Y-828	Y-829	Y-830	Y-831	Y-832	Y-833	Y-834	Y-835	Y-836	Y-837	Y-838	Y-839	Y-840	Y-841	Y-842	Y-843	Y-844	Y-845	Y-846	Y-847	Y-848	Y-849	Y-850	Y-851	Y-852	Y-853	Y-854	Y-855	Y-856	Y-857	Y-858	Y-859	Y-860	Y-861	Y-862	Y-863	Y-864	Y-865	Y-866	Y-867	Y-868	Y-869	Y-870	Y-871	Y-872	Y-873	Y-874	Y-875	Y-876	Y-877	Y-878	Y-879	Y-880	Y-881	Y-882	Y-883	Y-884	Y-885	Y-886	Y-887	Y-888	Y-889	Y-890	Y-891	Y-892	Y-893	Y-894	Y-895	Y-896	Y-897	Y-898	Y-899	Y-900	Y-901	Y-902	Y-903	Y-904	Y-905	Y-906	Y-907	Y-908	Y-909	Y-910	Y-911	Y-912	Y-913	Y-914	Y-915	Y-916	Y-917	Y-918	Y-919	Y-920	Y-921	Y-922	Y-923	Y-924	Y-925	Y-926	Y-927	Y-928	Y-929	Y-930	Y-931	Y-932	Y-933	Y-934	Y-935	Y-936	Y-937	Y-938	Y-939	Y-940	Y-941	Y-942	Y-943	Y-944	Y-945	Y-946	Y-947	Y-948	Y-949	Y-950	Y-951	Y-952	Y-953	Y-954	Y-955	Y-956	Y-957	Y-958	Y-959	Y-960	Y-961	Y-962	Y-963	Y-964	Y-965	Y-966	Y-967	Y-968	Y-969	Y-970	Y-971	Y-972	Y-973	Y-974	Y-975	Y-976	Y-977	Y-978	Y-979	Y-980	Y-981	Y-982	Y-983	Y-984	Y-985	Y-986	Y-987	Y-988	Y-989	Y-990	Y-991	Y-992	Y-993	Y-994	Y-995	Y-996	Y-997	Y-998	Y-999	Y-1000
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शुभो

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शुभो नमो भगवते वासुदेवाय / Dr. Asst. Coal Controller
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Mining

Chapter-3: Mining

3.1 Mining Method:

	Parameters	Details
3.1.1	Existing method of mining if the mine is under operation.	The block is virgin and shall commence its production on receipt of all requisite Statutory Permits/clearances.
3.1.2	Proposed method of mining with justification on suitability of method of mining.	<p>The occurrence of Coal seams has been established in the part of the Block covering an area of 1049 Ha upto a depth of 1200 meter through detail exploration with a borehole density of 7.82 BH/Sq. Km. The depth of occurrence of the Coal seam suggests coal winning through both opencast and Underground methods. The nature of coal seams with numerous faults and steep seam gradient requires further technical study before planning of Underground coal mine feasibility. However, this Mining Plan is envisaged coal mining through opencast methodology upto a depth of 300 meter from the surface level. Liquidation plan for the UG sector will be assessed at later phase when the mine parameters and other Geomining Characteristics will be assessed through due course of mining and detailed exploration in the unexplored part. The comprehensive coal extraction program through underground method shall be submitted within 5 years from the date of commencement of the Mining Operation.</p> <p>Key planning considerations for winning of coal from Banardih Coal Block are described below:</p> <ol style="list-style-type: none"> 1. All coal reserves of more than 1 meter thickness have been considered for mining; 2. Seam R-3, having only four intersections have not considered for mining; 3. All faces are considered to be horizontal with multiple seam and parting exposures. 4. A village road passing through the central part of the Block need to be diverted and a proposed layout has been shown in this mining plan. 5. A box cut has been planned from the northern boundary of the block, from Incrop zone of Seam IT and IB. Influence zones of boreholes 15E, 16E, 26E, 13 E & 4 N are considered for initial planning. 6. Bench configuration of 10 m x 10 m has been planned. Working bench widths are planned to be 30 meter. Individual bench

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 QP: Shri A. K. Sinha

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श्रीमती शान्ता गुहा / Smt. Shanta Guha
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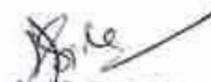


		<p>slopes are planned to 70°.</p> <ol style="list-style-type: none"> 7. A -40 m wide haul road has been planned to maintain 1 in 16 gradient. 8. An unexplored area of around 418.42 ha in the western part of the block has been identified for temporary surface dump. This dump will accommodate about 322.76 Mcum of overburden. 9. Whole of the Overburden generated till 5th year will be dumped in the temporary external dump. Dumping in the external dump will continue till 10th Year. 10. Concurrent backfilling will commence from 6th year onwards. 11. Re-handling of the temporary surface Dump will be done in the post closure period of 3 years. <p>Choice of Opencast Mining: Before selection of Mining technology, following methods of Opencast Mining were compared.</p> <ol style="list-style-type: none"> i. Bucket Wheel Mining. ii. Dragline Mining. iii. Shovel Dumper Combination; and, iv. Continuous Surface Mining. <p>Out of the four methods mentioned above, Overburden removal has been planned with Shovel-Dumper Combination due to its operational flexibility. Considering development of 17 number of coal seams, multi seam working is inevitable at Banhardih Coal Mine. Shovel/Excavators of varying sizes are thus considered commensurate with the parting variations as depicted in the Geological Report (GR). Selections of size of equipment are based on the thickness range of parting & OB. Based on the wide variation of parting thickness range, shovels of varying size – 5.5 cum bucket capacity to 12 cum bucket capacity has been proposed in this mining plan. Combination of 60- 100 T RDT also considered for obtaining the optimum productivity of the excavators.</p> <p>The average workable coal seam thickness are found to be 4.23 meter (seam R2) to 37.86 meters (Seam 1B), however the seam gradients are found to be on much higher side upto 45°. Considering the Geo-mining parameters of the block, coal production has been planned both through Drilling and Blasting and deployment of Surface Miner. There will be no drilling and blasting till 7th year of mining operation. It is envisaged that the lower packet of coal seams which is thick in nature will be exposed in the mining benches. More the mine progresses towards south and south west, probability of occurrence of Seam 1 and Seam 2 will be restricted and parting</p>
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thickness will be increased. Thus from 8th year onward, coal production will be done through drilling and blasting in addition to the Surface Miner. Geo-mining parameters considered for this block is given in Table 3.1. A detail schedule of year wise coal production through Surface Miner and Drilling and Blasting is furnished in **Table no. 3.7.**

Table No. 3.1

Geo-Mining Parameters for the planned period till the Final stage of Excavation.

Parameters	Specifications
Area of the block	1818.10 ha
Explored Area of the block	1049.00 ha
Quarriable area	727.24 ha
Bench configuration	10 m x 10 m.
Non-working bench widths	10 meter
Bench Slope	70° individual, overall 45°.
OB	Loosening through Drilling and Blasting. Removal through Shovel-Dumper combination.
Coal	Shall be worked through Surface Miner and drilling and blasting. Removal through Front end loader/Shovel and Dumper combination.

Drilling and Blasting:

Drilling and blasting require to excavate both the hard OB and part of the coal seams to meet the production requirement. The whole of Overburden except the Top OB and Weathered mantle zones, and coal in a tune of maximum 5.40 Million Tons will be excavated through drilling and Blasting. Drilling for OB will be done for the full bench upto 10 meter depth whereas Coal Benches will be limited to 3 meter considering high dipping of the coal seams and possible mixing of dirt materials during blasting operation. Estimation for requirement of Drilling and Blasting on per

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day basis are furnished below in table No. 3.2 and 3.3.

Table No. 3.2

Drilling Estimation For OB Excavation.

OB	Cum
Annual OB production	52000000
Annual Working Day	330
Per Day OB removal	157575.8
Drill Spacing	10 m
Burden	10 m
Depth of each drilling	10 m
Per Hole volume	1000
Number of Holes per day	158

Table No. 3.3

Drilling Estimation For Coal Excavation.

Coal	Tons
Annual Coal Production by D & B	5400000
Annual Working Day	330
Per Day Coal Production	16363.64
Drill Spacing	5
Burden	5
Depth of each drilling	3
Per Hole volume	75
Tonnage	116.25
Number of Holes per day	141

Considering powder factor for OB as 0.30 Kg/Cum, total explosive requirement per week will be 330 tons while considering powder factor for coal as .26 kg/Ton, total explosive requirement per week will be 29.78 Tons. Considering the sensitivity of the project area, no planning for Magazine is provisioned. Authorized agencies will be engaged for supply and conduct blasting operation at site.

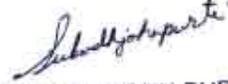
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		<p>Mine Ventilation Banhardih Coal Mine is envisaged to be mined by opencast mining method. The maximum depth envisaged during proposed planned period of 30 years is 300 m. No artificial ventilation system will be required to establish for this depth. Natural ventilation will drive out the toxic gases generated from the HEMM operation.</p> <p>Mine Drainage The planning of de-watering of the mine has been done in such a way that as far as possible the working faces and haul roads shall remain dry. The layout of the quarry provides suitable gradient along the quarry floors and the benches to facilitate self-drainage of water to the lowest level of the quarry. The sump water will be collected through pumps and shall be utilized for Plantation, Sprinkling and Workshop use in the dry season. While the storm water will be channelized to the adjacent streams after treatment in the monsoon period.</p> <p>Excavation of Overburden: As it is well known, the combination of Shovel and Dumper technology offers convenient mining operations, to deal with sudden occurrence of unworkable and poor quality zones and offers flexibility for easy up gradation. During the initial year of quarry operation a temporary road will be developed near the access trench by dressing the top soil and some leveling of the undulating surfaces. The overburden from lower benches will be connected by ramps to the western dump road, during the first 3 years from the commencement of mining operation. By then central flank road will be developed gradually along with the mine advancement. Internal dumping will be continued from the 6th year from the commencement of mining operation. Though equipment is provided separately under overburden and coal, the same shovel working in coal or OB may excavate</p>
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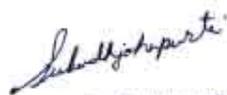
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		<p>the parting or coal seam below and above a particular horizon depending on workload and location.</p> <p>Coal Winning: It is envisaged to deploy surface miner for coal excavation for nearly about 66% of the total production throughout the life of the mine. In this technology blasting is not required for excavation of coal. Surface miner will be provided for production of coal of uniform size. The inseam bands of +30 cm size can also be removed separately. Due to implementation of selective mining the grade of the coal could be improved. In this technology the coal face will be clean and wear & tear of dump trucks will also get reduced. Surface Miner will be operated with a minimum face dimension of 200 meter x 200 meter. The Geo-mining condition of the Block suggests to adopt combination of both Drilling and Blasting along with the deployment of Surface Miner for Coal Production. The steeply dipping seam, confinement of the bulk reserves within the lower horizons, relatively thin seam in the upper packet and the production demand – all suggested to adopt drilling and blasting in coal production along with the Surface Miner deployment. The blasted coal will be subjected to crushing and screening units (2 X 500 TPH) to be installed within the project area. Drilling and blasting is suggested tentatively from 8th year onward.</p> <p>Transportation: Coal production is proposed through both Surface Miner Deployment and Conventional drilling & blasting. The blasted coal will be subjected to primary crushing at mine mouth to reduce the size to (-) 100 mm, while surface miner coal will be directly loaded to the rakes through Rapid Loading System (RLS). Primary crusher of 1000 TPH is proposed for crushing of coal before it is despatched from the project site. All coal transportation is conceptualized to be through railway (MGR system) and loading will be done through Rapid Loading</p>
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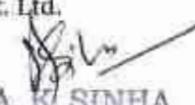




		<p>system to be installed just south of the Block area. MGR system with SILO is connected to the Indian railways at Chetar station.</p> <p>Top soil Storage: The process of mining starts from scrapping of top soil. Average topsoil in the proposed area of excavation found to be around 3.1 meter. Top soil will be scrapped and stored in the designated place as shown in the respective stage plans. Top Soil will be utilized in the Embankment in the initial years, however, will be spread over the reclaimed area in later phases during the progressive and final closure of the mine. Stage wise top soil generation and spreading schedule is furnished in table no. 3.4.</p> <p>Waste Management: The overburden generated in the initial 5 years from the commencement of mining operation shall be dumped on the surface in the central part of the Block. Concurrent backfilling will commence from the 6th year of production commencement. Re-handling of the surface dump will commence after final year of the production commencement and proposed to be completed by end of post closure period. The temporary surface dump will be utilized for active dumping till 10th Year from the commencement of mining operation. Schedule of internal dumping, external dumping and rehandling schedule is furnished in Table no. 3.7.</p> <p>Year wise OB and top soil generation is furnished below in Table No. 3.4.</p> <p style="text-align: center;">Table No. 3.4 Year wise Tentative Top soil and OB generation.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2" rowspan="2">Stage</th> <th colspan="3">Waste Management (Figures in MM³)</th> </tr> <tr> <th colspan="3">Cumulative OB Removal</th> </tr> <tr> <th></th> <th></th> <th>Top Soil</th> <th>OB</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Y-1</td> <td>2024-25</td> <td>0.36</td> <td>11.64</td> <td>12.00</td> </tr> <tr> <td>Y-3</td> <td>2026-27</td> <td>1.72</td> <td>82.28</td> <td>84.00</td> </tr> </tbody> </table>	Stage		Waste Management (Figures in MM ³)			Cumulative OB Removal					Top Soil	OB	Total	Y-1	2024-25	0.36	11.64	12.00	Y-3	2026-27	1.72	82.28	84.00
Stage		Waste Management (Figures in MM ³)																							
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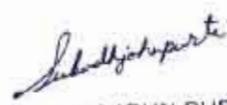
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Y-5	2028-29	3.72	182.28	186.00
Y-7	2030-31	5.8	284.20	290.00
Y-10	2033-34	8.92	437.08	446.00
Y-15	2038-39	13.89	680.61	694.50
Y-20	2043-44	17.94	879.06	897.00
Y-25	2048-49	17.94	1055.06	1073.00
Y-30	2053-54	17.94	1155.06	1173.00
Post Closure				
Y33	2056-57	17.94	1155.06	1173.00

Year wise re-handling Schedule is furnished below in table no.

3.5-

Table No. 3.5

Re-handling schedule

Year	OB in Mcum
Y-31	82.76
Y-32	120.00
Y-33	120.00
Total =	322.76

Re-handling of the temporary external dump will be done in the closure period. Efforts will be made to complete the rehandling job in all respect within the proposed period of three years span. However, in case it is observed that due to technical challenges, the operation is found to be more time consuming, extension of closure period will be sought from Ministry of Coal in order to complete the reclamation and restoration job.

Coal Evacuation:

The coal from conveyor will be transported to transfer house. From TP-1 coal will be transported to transfer house-2 via conveyor for direction change. From Transfer House-2 coal will transported via conveyor with capacity 500 TPH to tripper conveyor having capacity 500 TPH. From tripper conveyor, coal will be discharged in an over ground bunker of capacity

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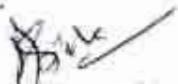


		21,000 tons. From over ground bunker coal will be reclaimed through plough feeders with capacity 1,000 TPH and fed to conveyor having capacity 1,000 TPH. Conveyor will be equipped with automatic sampler to draw the quality sample and will also be equipped with metal detector, magnetic separator and belt weigher. The Coal will be fed to rapid loading system to load coal from Silo to railway wagons with the help of two hydraulic operated gates. The flow sheet of the conveyor system is depicted in Figure no.5.1 . A Conceptual plan showing infrastructure facility including colony, boundary of mining area, mine entries, roads including road diversion alignment etc. is furnished in Plate VIII. Stage plans indicating stages at 1st year, 3rd year, 5th year, 7th year and Final year are furnished in Plate XXIA, XXIB, XXIC, XXID & XXIE respectively.																								
3.1.3	Coal production capacity proposed "Mtpa";	Rated Capacity –12 MTPA (Normative). Peak Rated Capacity – 18 MTPA.																								
3.1.4	Justification for Optimization Coal production capacity.	Coal production capacity synchronized with the coal requirement of Patratu Thermal Power Plant.																								
3.1.5	Calendar year from which the production will start;	Coal Production: 2024-2025.																								
3.1.6	Year of Achieving rated production;	2030-2031.																								
3.1.7	<p>Tentative Coal production Plan "MT"</p> <p>Year wise production schedule is given below in Table no. 3.6.</p> <p style="text-align: center;">Table No. 3.6 Tentative Production Calendar of Banhardih Coal Mine.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">Year of operation</th> <th rowspan="2">Calendar Year</th> <th colspan="3">Coal Production</th> <th rowspan="2">OB "MM3"</th> <th rowspan="2">SR</th> </tr> <tr> <th>UG</th> <th>OC</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Year-1</td> <td>2024-25</td> <td>-</td> <td>1.00</td> <td>1.00</td> <td>12.00</td> <td>12.00</td> </tr> <tr> <td>Year-2</td> <td>2025-26</td> <td>-</td> <td>6.50</td> <td>6.50</td> <td>28.00</td> <td>4.31</td> </tr> </tbody> </table>		Year of operation	Calendar Year	Coal Production			OB "MM3"	SR	UG	OC	Total	Year-1	2024-25	-	1.00	1.00	12.00	12.00	Year-2	2025-26	-	6.50	6.50	28.00	4.31
Year of operation	Calendar Year	Coal Production			OB "MM3"	SR																				
		UG	OC	Total																						
Year-1	2024-25	-	1.00	1.00	12.00	12.00																				
Year-2	2025-26	-	6.50	6.50	28.00	4.31																				

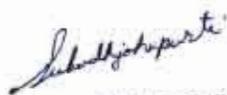
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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



Year-3	2026-27	-	7.50	7.50	44.00	5.87
Year-4	2027-28	-	9.00	9.00	50.00	5.56
Year-5	2028-29	-	10.50	10.50	52.00	4.95
Year-6	2029-30	-	11.00	11.00	52.00	4.73
Year-7	2030-31	*	12.00	12.00	52.00	4.33
Year-8	2031-32	-	12.00	12.00	52.00	4.33
Year-9	2032-33	-	12.00	12.00	52.00	4.33
Year-10	2033-34	-	12.00	12.00	52.00	4.33
Year-11	2034-35	-	12.00	12.00	52.00	4.33
Year-12	2035-36	-	12.00	12.00	52.00	4.33
Year-13	2036-37	-	12.00	12.00	52.00	4.33
Year-14	2037-38	-	12.00	12.00	52.00	4.33
Year-15	2038-39	-	10.00	10.00	40.50	4.05
Year-16	2039-40	-	8.00	8.00	40.50	5.06
Year-17	2040-41	-	8.00	8.00	40.50	5.06
Year-18	2041-42	-	8.00	8.00	40.50	5.06
Year-19	2042-43	-	8.00	8.00	40.50	5.06
Year-20	2043-44	-	8.00	8.00	40.50	5.06
Year-21	2044-45	-	8.00	8.00	40.50	5.06
Year-22	2045-46	-	8.00	8.00	40.50	5.06
Year-23	2046-47	-	6.50	6.50	40.00	6.15
Year-24	2047-48	-	6.50	6.50	35.00	5.38
Year-25	2048-49	-	6.50	6.50	20.00	3.08
Year-26	2049-50	-	6.50	6.50	18.00	2.77
Year-27	2050-51	-	5.50	5.50	19.00	3.45
Year-28	2051-52	-	4.50	4.50	20.00	4.44
Year-29	2052-53	-	4.50	4.50	21.00	4.67
Year-30	2053-54	-	2.50	2.50	22.00	8.80
Total		-	250.50	250.50	1173.00	4.68

Note: Calendar Plan/ Production Plan for the entire life of the mine.

Year Wise Cumulative OB & Coal Production and Dumping Schedule is provided in below table No. 3.7.

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Table No. 3.7

Tentative Production Calendar and cumulative OB generation of Banhardih Coal Mine.

Cumulative Coal, OB & Top Soil Generation and dumping schedule (Tentative)							
S.L. Year	Calendar Yr.	Coal (MT)	OB (Meum)	Int. Dump. (Meum)	Top soil Dump. (Meum)	External OB Dump. Meum	Re-handling. Meum
Year-1	2024-25	1.00	12.00	0.00	0.36	11.64	0
Year-2	2025-26	7.50	40.00	0.00	0.88	39.12	0
Year-3	2026-27	15.00	84.00	0.00	1.72	82.28	0
Year-4	2027-28	24.00	134.00	0.00	2.68	131.32	0
Year-5	2028-29	34.50	186.00	0.00	3.72	182.28	0
Year-6	2029-30	45.50	238.00	17.99	4.76	215.25	0
Year-7	2030-31	57.50	290.00	36.55	5.80	247.65	0
Year-8	2031-32	69.50	342.00	56.93	6.84	278.23	0
Year-9	2032-33	81.50	394.00	83.07	7.88	303.05	0
Year-10	2033-34	93.50	446.00	114.32	8.92	322.76	0
Year-11	2034-35	105.50	498.00	165.28	9.96	322.76	0
Year-12	2035-36	117.50	550.00	216.24	11.00	322.76	0
Year-13	2036-37	129.50	602.00	267.20	12.04	322.76	0
Year-14	2037-38	141.50	654.00	318.16	13.08	322.76	0
Year-15	2038-39	151.50	694.50	357.85	13.80	322.76	0
Year-16	2039-40	159.50	735.00	397.54	14.70	322.76	0
Year-17	2040-41	167.50	775.50	437.23	15.51	322.76	0
Year-18	2041-42	175.50	816.00	476.92	16.32	322.76	0
Year-19	2042-43	183.50	856.50	516.61	17.13	322.76	0
Year-20	2043-44	191.50	897.00	556.30	17.94	322.76	0
Year-21	2044-45	199.50	937.50	596.80	17.94	322.76	0
Year-22	2045-46	207.50	978.00	637.30	17.94	322.76	0
Year-23	2046-47	214.00	1018.00	677.30	17.94	322.76	0
Year-24	2047-48	220.50	1053.00	712.30	17.94	322.76	0
Year-25	2048-49	227.00	1073.00	732.30	17.94	322.76	0
Year-26	2049-50	233.50	1091.00	750.30	17.94	322.76	0
Year-27	2050-51	239.00	1110.00	769.30	17.94	322.76	0

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Year-28	2051-52	243.50	1130.00	789.30	17.94	322.76	0
Year-29	2052-53	248.00	1151.00	810.30	17.94	322.76	0
Year-30	2053-54	250.50	1173.00	832.30	17.94	322.76	0
Post Closure Waste Management							
Year-31	2054-55	-	-	832.30	17.94	240	82.76
Year-32	2055-56	-	-	832.30	17.94	120	202.76
Year-33	2056-57	-	-	832.30	17.94	0	322.76

Year wise coal production schedule through Surface Miner and Drilling & Blasting is furnished in table No. 3.8.

Table No. 3.8

Tentative Coal production schedule through Surface Miner and Drilling & Blasting.

Sl. Year	Calendar Year	Coal Production through Surface Miner (MT)	Coal Production through -Drilling and Blasting (MT)	Total (MT)
Year-1	2024-25	1.00	0.00	1.00
Year-2	2025-26	6.50	0.00	6.50
Year-3	2026-27	7.50	0.00	7.50
Year-4	2027-28	9.00	0.00	9.00
Year-5	2028-29	10.50	0.00	10.50
Year-6	2029-30	11.00	0.00	11.00
Year-7	2030-31	12.00	0.00	12.00
Year-8	2031-32	10.50	1.50	12.00
Year-9	2032-33	9.30	2.70	12.00
Year-10	2033-34	9.30	2.70	12.00
Year-11	2034-35	9.30	2.70	12.00
Year-12	2035-36	9.30	2.70	12.00
Year-13	2036-37	9.30	2.70	12.00
Year-14	2037-38	9.30	2.70	12.00
Year-15	2038-39	7.30	2.70	10.00
Year-16	2039-40	5.30	2.70	8.00
Year-17	2040-41	5.30	2.70	8.00
Year-18	2041-42	2.60	5.40	8.00
Year-19	2042-43	2.60	5.40	8.00
Year-20	2043-44	2.60	5.40	8.00
Year-21	2044-45	2.60	5.40	8.00
Year-22	2045-46	2.60	5.40	8.00

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



		Year-23	2046-47	1.10	5.40	6.50
		Year-24	2047-48	1.10	5.40	6.50
		Year-25	2048-49	1.10	5.40	6.50
		Year-26	2049-50	1.10	5.40	6.50
		Year-27	2050-51	2.80	2.70	5.50
		Year-28	2051-52	1.80	2.70	4.50
		Year-29	2052-53	1.80	2.70	4.50
		Year-30	2053-54	1.00	1.50	2.50
		Total		166.50	84.00	250.50
3.1.8	Peak/Rated Capacity					
	-	By OC	Rated Capacity –12 MTPA (Normative). Peak Rated Capacity – 18.00 MTPA.			
	-	By UG	Nil			
	-	Overall	Rated Capacity –12 MTPA (Normative). Peak Rated Capacity – 18.00 MTPA.			
3.1.9	Life of the mine:					
	-	By OC	30 years.			
	-	By UG	Not applicable.			
	-	Overall	30 years.			
3.1.10	Whether the proposed external OB dump site is coal/ lignite bearing; If so, whether coal/lignite below waste disposal area is extractable.	An area of around 418.42 Ha of land has been identified within the block area for temporary external dumping in the planned period. The area is yet to be covered under detailed exploration however, known to be coal bearing from the existing Geological information. This dump will be completely re-handled at the end of the planned period and made available for future mining if found potential subsequent to the detailed exploration. The area will be explored in detail before commencement of mining operation. Exploration scheme in this regard has been furnished in Annexure-VIII .				
3.1.11	Whether negative proving for coal / lignite in the proposed site for OB dump/infrastructure has been done.	The area is yet to be covered under detailed exploration.				
3.1.12	Result of any investigation carried	The Geological Report covering an area of 1049 Ha is in place. Excavation plan is restricted within such area.				

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	out for scientific mining, conservation of minerals and protection of environment; future proposals.																																																																																	
3.1.13	Type of Equipment/ HEMM proposed	<p>Selection of equipment has been largely guided by the volume and type of rocks including their physical characters. Planned HEMM configuration for production of OB, Coal, Re-handling of OB and reclamation including common pool are given below in table no. 3.9. The equipment mentioned in the common pool will be extended for the closure activities.</p> <p style="text-align: center;">Table No. 3.9 Proposed HEMM Configuration of Banhardih Coal Mine.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" style="text-align: center;">Likely List of HEMM & Other Equipment</th> </tr> <tr> <th colspan="4" style="text-align: center;">For OB Handling</th> </tr> <tr> <th style="text-align: center;">Specification</th> <th style="text-align: center;">Unit</th> <th style="text-align: center;">Capacity</th> <th style="text-align: center;">Maximum Numbers</th> </tr> </thead> <tbody> <tr> <td>Diesel/ Electrical Hyd. Shovel</td> <td>Cum</td> <td>12</td> <td>11</td> </tr> <tr> <td>Diesel/ Electrical Hyd. Shovel</td> <td>Cum</td> <td>5.5</td> <td>8</td> </tr> <tr> <td>Rear Dump Truck</td> <td>Tons</td> <td>100</td> <td>63</td> </tr> <tr> <td>Rear Dump Truck</td> <td>Tons</td> <td>60</td> <td>27</td> </tr> <tr> <td>Electrical Drill</td> <td>mm</td> <td>250</td> <td>9</td> </tr> <tr> <td>Diesel Drill</td> <td>mm</td> <td>160</td> <td>6</td> </tr> <tr> <td>Dozer</td> <td>HP</td> <td>320</td> <td>12</td> </tr> <tr> <td>Ripper Dozer</td> <td>HP</td> <td>460</td> <td>6</td> </tr> <tr> <td>Dozer with Ripper</td> <td>HP</td> <td>850</td> <td>2</td> </tr> <tr> <td>Grader 145hp</td> <td>HP</td> <td>145</td> <td>6</td> </tr> <tr> <td>Water Sprinkler (Mist type)</td> <td>KL</td> <td>28</td> <td>5</td> </tr> <tr> <td>Fuel Truck</td> <td>KL</td> <td>-</td> <td>6</td> </tr> <tr> <td>Fire Truck</td> <td>-</td> <td>-</td> <td>2</td> </tr> <tr> <td>Maintenance Van</td> <td>-</td> <td>-</td> <td>4</td> </tr> <tr> <td>Light Motor Vehicle</td> <td>-</td> <td>-</td> <td>15</td> </tr> <tr> <td>Vibrator Compactor</td> <td>HP</td> <td>145</td> <td>4</td> </tr> <tr> <th colspan="4" style="text-align: center;">For Coal Handling</th> </tr> </tbody> </table>	Likely List of HEMM & Other Equipment				For OB Handling				Specification	Unit	Capacity	Maximum Numbers	Diesel/ Electrical Hyd. Shovel	Cum	12	11	Diesel/ Electrical Hyd. Shovel	Cum	5.5	8	Rear Dump Truck	Tons	100	63	Rear Dump Truck	Tons	60	27	Electrical Drill	mm	250	9	Diesel Drill	mm	160	6	Dozer	HP	320	12	Ripper Dozer	HP	460	6	Dozer with Ripper	HP	850	2	Grader 145hp	HP	145	6	Water Sprinkler (Mist type)	KL	28	5	Fuel Truck	KL	-	6	Fire Truck	-	-	2	Maintenance Van	-	-	4	Light Motor Vehicle	-	-	15	Vibrator Compactor	HP	145	4	For Coal Handling			
Likely List of HEMM & Other Equipment																																																																																		
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Surface Miner	mm	2200	2
Surface Miner	mm	3800	1
Diesel/ Electrical Hyd. Shovel	Cum	5-5	2
Front End Loader	Cum	5	3
Dump Trucks	T	60	27
Dozer With Ripper	HP	475	2
Dozer	HP	320	3
Grader	HP	145	2
Fuel Truck	-	2	2
Fire Truck	-	2	2
Maintenance Van	-	2	2
Water Sprinkler (Mist type)	KL	28	2
For Common Services			
Drill	mm	160mm	1
Dozer	hp	165 & 320 hp	4
Grader	hp	120 - 150 hp	3
Crane	T	20T- 40T	2
Crane	T	8-10T	1
Diesel Backhoe	cum	1 cum	1
FE Loader	cum	4-6 cum	2
Dozer	hp	165 hp	1
Ripper Dozer	HP	300 - 450 HP	1
Diesel Browser			2
Fire Tender			1
Boom Truck			2
Heavy Duty Toe Truck			1
Fork Lift Truck	T	5T	1
Tipping Truck			5
Vibratory Compactor			1
Water Sprinkler (Mist type)	KL	12 KL	5
For OB Re-handling Services			
Diesel/ Electrical Hyd. Shovel	Cum	12	12

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Diesel/ Shovel	Electrical	Hyd.	Cum	6	5
RDT			Ton	100	60
RDT			Ton	60	36
Dozer			HP	320	5

Man power requirements are assessed on the basic design criteria for a production of 12.0 MTPA of Coal. Break-up of total manpower requirement for Banhardih Coal Mine is given in below table no. 3.10.

Table No. 3.10
 Details of total manpower requirement at PRC.

Category	Nos.
Management Staff	32
Mine Operations	945
Maintenance	123
Environmental	4
Safety	26
Training	3
Support	80
Coal Handling Plant	93
Total =	1306

The overall OMS as envisaged comes to about 27.84t.

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Safety Management



	Parameters	Details
		<p>MSR will be evaluated during operational stage besides manual monitoring through EDM, crackmeters etc. Any chances of slope failure identified by the monitoring system will be attended with highest priority and appropriate measures based on the type of failure will be followed. Based on nature of failure, grouting, ground anchoring, retaining walls, wire netting etc. methods shall be adopted. Fault zones and other weak zones will be monitored with added frequency. A pre-monsoon audit will takes place at least one month prior to the onset of monsoon. Based on the audit report, a monsoon planning will be prepared and implemented.</p>
	Failure of Dump Slopes	<p>The surface dump has been benched at 30 m height. The overall slope has been considered to 27° by leaving a 30 meter wide berm between two successive benches. This reduces the chances of OB slope failure and subsequent damages. At any point of time, reverse sloping on the top of the dumps will be followed. Toe drains and weep holes will be provided to drain out the water from the loose overburdens. Terracing will be done as much as possible in the dump slopes before plantation/ slopes will be covered through grass turfing. In few strategic areas, covering through Geo-textiles will be evaluated and if found suitable shall be implemented. Guard wall and retention walls of appropriate size shall be provided in the toe of the dump. Backfilled dumps once stabilized shall be technically and</p>

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	Parameters	Details
		<p>biologically reclaimed. Thus failure of backfilled dumps in post closure phase is not envisaged, except otherwise near the left out void area. The exposed dump surface facing towards the temporary water body will be covered through wire netting, and proper terracing will be done to prevent such failure. Regular dump slope monitoring will be done through real time slope monitoring system and appropriate preventive measures will be taken if such chances of failures are identified.</p> <p>At the conceptual stage, there will be no remaining mined-out voids. The external dump within the block boundary will be completely rehandled to fill up the voids. The backfilled dump will be kept in the surface level.</p> <p>The distance between the spoil banks and the public road has been provisioned more than 100 meter as a measure of safety.</p>
	Flooding of the Mine	<p>The mining operation will be restricted to 300 m depth from the surface level. Ground water accumulated during mining will be pumped and stored for plantation, workshop and sprinkling usage.</p> <p>Necessary pumping arrangements need to be done considering the worst-case scenario of the rainfall on a single day basis and ground water assessment through detail hydrogeological study.</p> <p>A berm of 3 meter all along the pit crest is planned to prevent entry of storm water within the pit. This water will be channelised along the pit which will then</p>

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	Parameters	Details	
			<p>follow the natural course. A garland drain of 5-7 meter width and about 4-5 m deep has been planned along the lease boundary to channelize the storm water from the catchment area. In the initial years, this garland drain will connect the natural drainage through the central part of the block.</p> <p>Pumping arrangement on year to year basis will be followed as per Monsoon Planning to drain put the storm water.</p>
		<p>Blasting in Opencast Mines.</p>	<p>In general drilling and blasting has been envisaged as a mining process. Necessary study will be conducted when the mine becomes operationalized.</p> <p>Vibrations due to blasting may cause damage to the nearby structures if appropriate control measures are not adopted.</p> <p>Flyrock is another possible damage causing outcome of blasting. There are many factors which influence flyrocks. These are like long explosive columns with inadequate stemming column, improper burden, loose material or pebbles near holes and long water columns in the holes. The following control measures have been envisaged to reduce ground vibration within statutory limits:</p> <ol style="list-style-type: none"> The peak particle velocity (PPV) of ground vibration will be kept below 10mm/s for 8-25 hz frequency range through optimally controlled blasting techniques, after necessary field trials. Drilling and charging pattern will be formulated, with less explosives charge etc, after field trials. Use of suitable initiating sequence and millisecond detonators. Reduction of amount of explosives charged per day optimally.

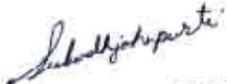
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	Parameters	Details
		<p>e. To contain fly rocks, stemming column will not be less than burden of the hole. Blasting area will also be muffled, if necessary, to stop fly rocks propagation.</p> <p>f. Blasting will not be carried out when strong winds are blowing towards habitation areas. Blasting will be done during midday time and never at night.</p> <p>g. Surrounding villages within 1 km radius of blasting will be regularly inspected for any visual cracks on walls and feedbacks will be gathered to investigate the reasons for these and for reassessing the charge per delay from time to time.</p> <p>h. Vibration study will also be carried out at appropriate times to firm up most ideal and optimal blasting parameters.</p> <p>i. Controlled blasting to avoid tension cracks which may endanger the stability of bench slopes in the mine.</p> <p>j. Short delay detonators to be used in preference to detonating fuse.</p> <p>k. In case of using detonating fuse, it should be covered with 750 mm thick cover of sand or drill cuttings.</p> <p>l. Proper care and supervision during blasting by a competent and experienced person.</p>
	Fire in Coal Benches/Coal Stack Yard	Spontaneous heating of Coal may cause fire in its Coal benches, Coal yards etc. Extraction of coals will made maximum possible from the coal benches and spillage coals will be removed before moving to another bench. This will reduce the chances of fire. Never the less, if any Coal benches are to remain idle for a period more than 15 days, the same shall be properly dressed and cleaned from loose Coal or fines at the time of stoppage. Heights of coal stack yard will be less than 10 meters to avoid spontaneous combustion at the stack yard. Fixed type sprinkler and fire fighting arrangements

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	Parameters	Details
		<p>will be installed at the coal stock yards.</p> <p>Accidents due to lack of proper space in movement in Mine.</p> <p>Workers around shovel, dumper, dozer, drill and cranes must be warned to keep out of blind area so that operator may be able to see them clearly. Audiovisual alarms are used for pre warning person around this machine. To overcome shortage of space, strict discipline will have to be inculcated in workmen and supervisors. Haul roads are planned with sufficient widths to prevent accidents in the mines. CC TV cameras will be installed in the strategic location of the mine to supervise the mine activities more closely and for operational improvement to increase safety levels.</p> <p>Automation at all level will be envisaged with the help of AI and IoT.</p>
	Disaster management Plan.	<p>The mine will prepare a DMP as per guideline. This plan is to be vetted by DGMS and is governed by the provision of the Mines Act, 1952. This is to be prepared and submitted for approval to DGMS just after opening a mine. It is to be stated that, in case of any disaster, DGMS is the organization which is first to be informed. The emergency plan for disaster management is executed under guidance of best grade of the industry and senior officers of the regulator, the Directorate General of Mines Safety, GOI.</p>
	Crusher Operation	<p>Coal Crushers will be fitted with mist type sprinklers to avoid dust dispersions generated from the coal crushers. All transfer points shall be covered with hoods for dust collection. This will keep the good visibility in the operating areas.</p>

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Parameters		Details	
		Operation of Conveyors and RLS	The part of the MGR has been planned within the project area and RLS will be operational throughout the year. Since wagon movement has been planned within the project area, manning in the railway crossings will be of utmost importance. Besides manning, sirens will be blown beforehand of rail movements. Every time the conveyor resumes after stoppages – proper signaling will be provided. A comprehensive safety guideline will be issued for coal crushing and loading arrangements.
4.1.2	A Commitment from the Company Board that entire mining operation will be carried out as per the Statutory provision given under Mines Act 1952, Coal Mine Regulation 2017 and & wherever specific permission will be required the company will approach the concerned authorities.	A commitment from the Board of Director has been furnished in Annexure-III .	

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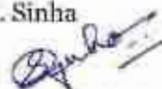
**Infrastructure Facilities proposed and their
Location**



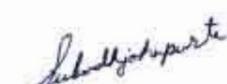
Chapter-5 : Infrastructure Facilities

Parameters	Details																														
5.1 Mine infrastructure required e.g., Equipment maintenance planning, Office buildings, Workshop, Power supply arrangement, Water supply etc.	<p>Following Mine Infrastructures have been planned to be located within the Mining Lease area:</p> <ol style="list-style-type: none"> 1. E & M Workshop 2. Excavation Workshop 3. Conveyor from Mine Face to ground bunker. 4. Conveyor from ground bunker to Silo connecting to MGR system of the Railway Siding. 5. Coal Yard including Feeder-Hopper. 6. Mine Office, VT Centers and Common Facilities. 7. HEMM Parking yard; 8. Security office; 9. Car parking areas for staffs and officers; <p>The details of the infrastructure to be retained at the end of mine life are furnished below in Table No. 5.1.</p> <p style="text-align: center;">Table No. 5.1 Details of the Mine Infrastructure to be retained at the end of Mine Life.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>S.L. No.</th> <th>Infrastructure</th> <th>Status on Closure</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>E & M Workshop</td> <td>To be retained.</td> </tr> <tr> <td>2.</td> <td>Excavation Workshop</td> <td>To be retained.</td> </tr> <tr> <td>3.</td> <td>Conveyor from Mine Face to ground bunker.</td> <td>To be dismantled.</td> </tr> <tr> <td>4.</td> <td>Conveyor from ground bunker to Silo connecting to MGR system of the Railway Siding.</td> <td>To be dismantled.</td> </tr> <tr> <td>5.</td> <td>Coal Yard including Feeder-Hopper.</td> <td>To be dismantled.</td> </tr> <tr> <td>6.</td> <td>Mine Office, VT Centers and Common Facilities.</td> <td>To be dismantled.</td> </tr> <tr> <td>7.</td> <td>HEMM Parking yard</td> <td>To be dismantled.</td> </tr> <tr> <td>8.</td> <td>Security office</td> <td>To be dismantled.</td> </tr> <tr> <td>9.</td> <td>Car parking areas for staffs and officers</td> <td>To be dismantled.</td> </tr> </tbody> </table>	S.L. No.	Infrastructure	Status on Closure	1.	E & M Workshop	To be retained.	2.	Excavation Workshop	To be retained.	3.	Conveyor from Mine Face to ground bunker.	To be dismantled.	4.	Conveyor from ground bunker to Silo connecting to MGR system of the Railway Siding.	To be dismantled.	5.	Coal Yard including Feeder-Hopper.	To be dismantled.	6.	Mine Office, VT Centers and Common Facilities.	To be dismantled.	7.	HEMM Parking yard	To be dismantled.	8.	Security office	To be dismantled.	9.	Car parking areas for staffs and officers	To be dismantled.
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Tentative areas for each of the facilities are provided in below table no. 5.2.

Table No. 5.2

Layout dimensions of Excavation workshop, E&M workshop cum project Store and Mine Office.

Particular	Size (m x m)	Area (m ²)
A. Excavation workshop-including open area, Washing Bay's etc.	200 x 75	15000
B. E&M Workshop cum project store.	150 x 50	7500
C. Mine office and common Facilities.	75 x 75	5625
D. Conveyor from Mine Face to Ground Bunker.	About 2450 meter.	-
E. Conveyor from ground bunker to Silo connecting to Railway Siding	250 Meter	-

Location of the office and other infrastructures are shown in respective Stage Plans and Conceptual Plan.

The Scope of Excavation workshop is listed below:

- Preventive maintenance.
 - a) Daily maintenance, routine lubrication and bi-weekly washing of equipment.
 - b) Technical inspection and running repair of transport equipment and checking of tyres.
 - c) Daily and fast filling of diesel at fuel delivery station for transport equipment and at site for field equipment.
 - d) Dismantling, opening and refitting of tyres.
 - e) Incidental minor repairs of assemblies and sub-assemblies of mining and mechanical equipment, i.e dumper, dozer, shovel, drill etc.
- Scheduled Maintenance.
- Medium repair and replacement of assemblies and sub-assemblies.

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	<ul style="list-style-type: none"> • Mobile repair team with crew and facilities to cater the maintenance of minor repair needs of field equipment at site. <p>The Scope of E & M Workshop are listed below:</p> <ul style="list-style-type: none"> • Minor repair, medium repair and replacement of components, assemblies and sub-assemblies of pumps and electrical equipment. • Bi-weekly washing of LMVs and washing of equipment assemblies and sub-assemblies as and when required. • Periodical lubrication. • Repairs and replacement of components/ assemblies for LMV. • Minor and medium repair of switchgears, motors, self-starters and other electrical equipment. • Battery charges facilities and re-conditioning of batteries. <p>Following facilities have been provided in the excavation workshop and E & M workshop for maintenance and repair of equipment as envisaged in the scope of work:</p> <ul style="list-style-type: none"> • Mechanized washing on specially constructed platform for dumpers and dozers. • Daily maintenance bays for dumpers and dozers. • Schedule inspection and lubrication bays for dumpers and dozers. • Schedule maintenance, medium repair and minor repair facilities for dumpers and dozers. • Minor repair and replacement of sub-assemblies and assemblies of shovels, drills and other field equipment at site by mobile repair team. • Medium repair of overhauling of sub-assemblies and assemblies of field equipment. • Machining section. • Electrical and auto repair section. • Engine section.
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		<ul style="list-style-type: none"> • Repair of hydraulics especially Surface miner. • Radiator repair section. • Welding and structural section. • Tyre section. • Condition monitoring section. • Shovel repair section. • Drill repair section. • Dozer repair shop. • Pavements for dumper and dozer parking. • Overhead and u/g water reservoirs. • Supporting facilities like computer room, electronics room, charge stores, tool room, offices, pump room, cycle stand, canteen, security post, firefighting facilities, ventilation system etc. • Material handling facilities • Machine tools, general and special purpose tools, diagnostic tools, master tool kits etc. • Refueling station with pump and other necessary accessories. • Mobile repair and servicing unit.
5-2	Power supply & illumination.	<p>Power requirement of this mine is approximately 40MVA at 132 kV level. An application has been already made by the project proponent in this regard to get the required power from the proposed 132/33kV GSS at Chandwa and PVUNL has also requested for the provision of additional 132 kV bay for power supply to the Banhardih Coal Mine.</p> <p>The details of sub-station capacities, distribution network, system of power supply and power factor improvement are as follows:</p> <p>Distribution and Utilisation Voltages:</p> <ul style="list-style-type: none"> • Incoming power supply for the project - 11 kV • Pumps 265 kW & 180 KW - 3.3 kV • Pumps 94 kW, 30 KW & Face pumps - 415 V • Workshop/Colony water supply equipment - 415 V • Lighting - 230 V

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		<ul style="list-style-type: none"> ➤ 2 nos. of 33/3.3 kV, 1.6 MVA Capacity Transformers feed power to various loads. The sub-station will be established near the entry of the quarry. ➤ From the Sub-station, 3.3 kV overhead transmission line will be laid along the edge of the quarry to feed power to equipment inside the quarry. The surface loads of workshop, Office, stores etc., will be fed by distribution transformers. ➤ The system of power supply at all the voltages in the project i.e., 3.3 KV, 415 V and 230 V will be by earthing neutral as per statutory regulations. ➤ Due to inductive loads of pumps etc., it is proposed to improve overall power factor of the system above 0.9 by manually operated capacitor banks. No automatic power factor correction is proposed as the connected loads are less. ➤ The working areas of the quarry and haul road etc. will be illuminated with energy efficient Sodium Vapour lamps mounted on 15-meter-high towers, installed along the edge of the quarry. 2 Nos of 50 KVA transformers shall be provided for meeting the lighting loads of the quarry. <p>The power for lighting loads of roads, stores, workshop, Office etc., will be drawn from 315 KVA, 3.3 KV/440 V transformers installed at the Sub-station.</p>
5-3	Drainage & Pumping Assessment of volume of Water for Pumping, Pumping Capacity and Pump Selection.	<p>The planning of de-watering of the mine has been done in such a way that as far as possible the working faces and haul roads remain dry. The layout of the quarry provides suitable gradient along the quarry floors and the benches to facilitate self-drainage of water to the lowest level of the quarry towards the eastern side.</p> <p>The maximum rain water intake will be during the period of about four months (June to September) in a year. During dry season, say October to May, seepage from strata is expected to be moderate and the same can be dealt by running a few numbers of pumps provided for monsoon pumping. During this period repair & overhauling of the pumps will be done by rotation.</p> <p>Sump will be planned in the lowermost part of the mining face at any given point of time.</p> <p>The western section of the quarry face is proposed to act as the mine sump. The rain water inflow into the quarry workings will</p>

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		<p>gravitate into this sump by natural drainage. The quantity of water inflow during a day of peak rainfall in monsoon in excess of sump capacity will be handled by the main pumps. Although there is a fair variation from year to year, the average annual rainfall is around 1300 mm per annum as per data collected from Hazaribagh.</p> <p>The following considerations have been made for calculating the pumping requirement and selection of pump for this interim period.</p> <ul style="list-style-type: none"> • Excavated mine area and its depth. • Geographical location of the project. • General climatic conditions, surface features of the terrain beyond the boundary of the mine. • Calendar plan of excavation of quarry. • Geological characteristics of OB and Coal seams. • Meteorological data of nearest rain-gauge stations. • Catchment areas, mined out areas beyond excavation, spoil dump area etc., maximum depth of the quarry during this interim period. • Water garland drains shall be developed in advance for each stage of mine working so that rain water is collected by the garland drains and get diverted to the adjoining nallah. • Desired location at surface where quarry water can be discharged after due settlement and considering the surface drainage system. • Maximum rainfall per day (170mm continuous rainfall for 24 hours). • Pumping requirement has been assessed on the basis that the make of water on the day of maximum rainfall will be pumped out in subsequent seven days. • Within the quarry, the faces shall be so laid that water from the working areas shall flow into the sump by gravity. From the sump, the water would be pumped out to the surface and will flow into the surface drainage system. • Concurrent backfilling will be done in the de-coaled areas of the quarries. • For the purpose of pumping calculation, effective pumping
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	<p>hours per day has been adopted as 18.</p> <p>Adequate reserve pumping capacity has been provided.</p> <p>Geo-morphologically the area varies with a very little to no undulation except in the central part of the blocks. The elevation difference within the block is only about 30 meter. As such, the physiography of the block doesn't have much control over the surface run off neither on the water accumulation within the block.</p> <p>Assessment for dewatering has been done based on both Surface and Ground water conditions. Surface water assessment has been done based on the average annual rainfall and rainfall over a period of 24 hours while ground water has been assessed through detail hydrogeological study of the block.</p> <p>The average annual rainfall in the area is about 1300mm of which 90% precipitation is during rainy season from June to September. Maximum rainfall in day found to be around 170 mm. For pumping of rainwater, a high of 170 mm of rainfall in a day has been considered. The volume of rain water entering to the mine and accumulating in the quarry has been estimated on the basis of direct catchment area, maximum daily precipitation and the run-off coefficient.</p> <p>Volume of rain water entering to the mine and accumulating in the quarry (make of water) has been assessed on the basis of the following formula:</p> $Q = A \times H \times \theta \text{ m}^3/\text{day};$ <p>Where, A - Catchment area in m² H - Maximum daily precipitation in mm; θ - Run-off co-efficient;</p> <p>The run-off co-efficient (θ) has been considered as below:</p> <table style="margin-left: 40px;"> <tr> <td>For mined out area</td> <td>:</td> <td>0.60</td> </tr> <tr> <td>For area beyond excavation</td> <td>:</td> <td>0.15</td> </tr> <tr> <td>For internal dumped area</td> <td>:</td> <td>0.10</td> </tr> </table> <p>The maximum broken area within the planned period is envisaged in the 9th year from the commencement of mining operation and estimation for make of water done on the quarry parameters for fifth year only.</p>	For mined out area	:	0.60	For area beyond excavation	:	0.15	For internal dumped area	:	0.10
For mined out area	:	0.60								
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	<p>Following parameters were considered: Maximum broken area: 361.99 ha; Backfilled area : 146.00 ha; Other catchment area: Nil. Net area calculated for make of water in pit -361.99 ha – 146.00 ha = 215.99 ha; Make of water within pit = 215.99 x 10000 x 0.17 x 0.60= 220309.80 Cum. In absence of detailed Hydrogeological report for this coal block, it has been considered that about 15% of the surface water accumulation will be seeped to the pit and will be accumulated as a ground water. The total quantum of seeped water to be accumulated will be in a tune of 33046.47 cum. Thus total quantum of water to be evacuated through pumping is about 253356.27 Cum. Assuming the water to be pumped out in seven days, considering 20 hours operation, per hour pumping requirement will be 1809.682 Cum/hr. The pumping capacity has been designed in such a way that the maximum water can be pumped out in 7 days with 20 hours of pumping per day.</p> <p style="text-align: center;">Table No. 5.3 Requirement of pumps</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Year</th> <th>Total required pumping capacity</th> <th>Depth of excavation from surface</th> <th rowspan="2">Specification of Pump</th> <th>Basic Strength</th> </tr> <tr> <th>(cum/ hr)</th> <th>(m)</th> <th>(No.)</th> </tr> </thead> <tbody> <tr> <td>Till End of Mine Closure</td> <td>1809.682</td> <td>300</td> <td>600 cum/hr cap. 300 m head, around 500 HP electrically operated pumps will be fitted.</td> <td>3</td> </tr> </tbody> </table> <p>Requisite accessories will be fitted with these pumps to make it operational. Enough quantity of accessories will be maintained as inventory to deal with worst case scenario not only to continue the production but also to avoid happenings of disasters.</p>	Year	Total required pumping capacity	Depth of excavation from surface	Specification of Pump	Basic Strength	(cum/ hr)	(m)	(No.)	Till End of Mine Closure	1809.682	300	600 cum/hr cap. 300 m head, around 500 HP electrically operated pumps will be fitted.	3
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		<p>Regular water monitoring will be done for the accumulated water. Except increase in the TDS level for the storm water, water quality is believed to be maintained within the prescribed limits of CPCB.</p> <p>In usual condition of the mining, this mine will operate in a "Zero Discharge" Scenario. The mine pit accumulated water will be pumped and stored in the central sump for workshop, sprinkling and plantation use. Water discharge may happen only in the rainy season due to sudden inrush of storm water.</p> <p>This mine can be converted to "Water Positive" mines and surplus water can be supplied for irrigation after being treated properly.</p>
5-4	<p>Coal Handling Arrangement: Brief detail of the CHP/ Mode of Despatch, Coal quality and Coal stacking and handling arrangement.</p>	<p>Coal production in Banhardih Coal Mine has been envisaged both through Surface Miner and Conventional Drilling & Blasting. Coal production in the initial 7 years from the commencement of production will be done exclusively through Surface Miner. From 8th year onwards the commencement of production there will be adoption of Drilling and Blasting for coal production. Quantum of Coal production through Drilling and Blasting will vary on year to year basis depending on the geo mining conditions. A detail schedule of coal production through Surface Miner and Drilling & Blasting is provided in chapter-3. Two number of crushing units each of 500 tph has been envisaged. Peak rated crushing requirement is envisaged in 17th year from the commencement of production.</p> <p>CHP has been designed and selected based on the Development and operation of Banhardih Coal Mine.</p> <ol style="list-style-type: none"> 1. Sizer will be used for primary crushing application to produce product of defined size, and also avoid oversize in downstream operation. For secondary crushing application toothed double roll crusher will be used to get 100mm to avoid recirculation of coal and to get coal size -100 mm. 2. Annual operating hours will be 5400 hrs. 3. Since Coal produced through Surface Miner will also be a part of the final product, CHP should have designed module to feed the surface miner coal directly in the plough feeder to be

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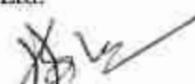
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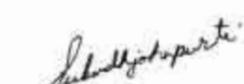
		<p>connected with the RLS.</p> <p>4. The Over Ground Bunker with 4 sections can be planned to store different quality of coal and with help of plough feeder, coal will be discharged to conveyor and blending can be done accordingly.</p> <p>In monsoon there is a possibility of decrease in production which can be compensated by increasing the operating hours in the dry season.</p> <p>B.1 Feeding and crushing circuit</p> <p>ROM Coal after mining will report to the receiving hopper. This will be the "feed point" for the CHP through Dumpers of the defined capacity. This will discharge the material on a fixed grizzly to recover over size material. The oversize coal more than 1,200 mm will be crushed through hydraulic rock breaker. The undersize from grizzly goes to a hopper from where coal will be reclaimed by apron feeder and feed to sizer of capacity 500 tph to crush the coal to 200 mm. Crushed coal will be conveyed through conveyor with capacity of 500 TPH to secondary crusher house.</p> <p>Coal from both the conveyor will be fed to roll crusher of capacity 500 TPH to reduce coal size from 200 mm to (-) 100 mm NTS. Product of roll crusher will be fed to conveyor with capacity of 500 TPH to transfer house. The crusher will be selected in such a way that they will produce the product at defined hence will not require further screening or scalping.</p> <p>B.2 Coal transportation</p> <p>The coal from conveyor will be transported to transfer house. From TP-1 coal will be transported to transfer house-2 via conveyor for direction change. From Transfer House-2 coal will be transported via conveyor with capacity of 500 TPH to tripper conveyor having capacity 500 TPH. From tripper conveyor, coal will be discharged in an over ground bunker of capacity 21,000 tons. From over ground bunker coal will be reclaimed through plough feeders with capacity 1,000 TPH and fed to conveyor having capacity 1,000 TPH. Conveyor is equipped with automatic sampler to draw the quality sample and is also equipped with metal detector, magnetic separator and belt weigher. The Coal will be fed to rapid loading system to load coal</p>
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		<p>from silo to railway wagons with the help of two hydraulic operated gates.</p> <p>Other arrangements:</p> <p>Each circuit will be integrated with the help of PLC system to have the state of art operation facility. Other utilities are also considered in the plant like, firefighting system, dust suppression and extraction system, Plant lighting, plant water system, etc. has been considered for safe plant practices.</p> <p>Sufficient maintenance space has been considered in the plant and required infrastructure is also considered like EOT cranes, hoist, CP block, etc.</p> <p>The project would require carrying out detail engineering for the CHP before implementation.</p> <p>Surface Miner coal will be visually inspected and send to the designated stack yard. Blasted coal will be sorted manually to pick undesired material before it is subjected to crushing. Seam wise average grade of coal is given in Table 5.3</p> <p style="text-align: center;">Table No. 5.4 Average Grade of Coal Seams in Banhardih Coal Mine</p> <table border="1"> <thead> <tr> <th>Coal seam</th> <th>Average Range of coal Grade</th> </tr> </thead> <tbody> <tr><td>R2</td><td>G11-G16</td></tr> <tr><td>R1T</td><td>G10-G15</td></tr> <tr><td>R1M</td><td>G11-G16</td></tr> <tr><td>R1B</td><td>G9-G17</td></tr> <tr><td>6T</td><td>G7-G10</td></tr> <tr><td>6M</td><td>G5-G17</td></tr> <tr><td>6B</td><td>G7-G15</td></tr> <tr><td>5T</td><td>G7-G16</td></tr> <tr><td>5M</td><td>G8-G15</td></tr> <tr><td>5B</td><td>G9-G14</td></tr> <tr><td>4T</td><td>G4-G15</td></tr> <tr><td>4M</td><td>G4-G16</td></tr> <tr><td>4B</td><td>G11-G17</td></tr> <tr><td>3</td><td>G9-G15</td></tr> <tr><td>2</td><td>G8-G15</td></tr> <tr><td>1T</td><td>G7-G14</td></tr> <tr><td>1B</td><td>G7-G12</td></tr> </tbody> </table>	Coal seam	Average Range of coal Grade	R2	G11-G16	R1T	G10-G15	R1M	G11-G16	R1B	G9-G17	6T	G7-G10	6M	G5-G17	6B	G7-G15	5T	G7-G16	5M	G8-G15	5B	G9-G14	4T	G4-G15	4M	G4-G16	4B	G11-G17	3	G9-G15	2	G8-G15	1T	G7-G14	1B	G7-G12
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5-5	Coal washing and the proposed handling/disposal of rejects.	Washing of Coal has not been envisaged in this project.																																				

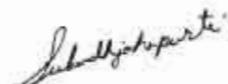
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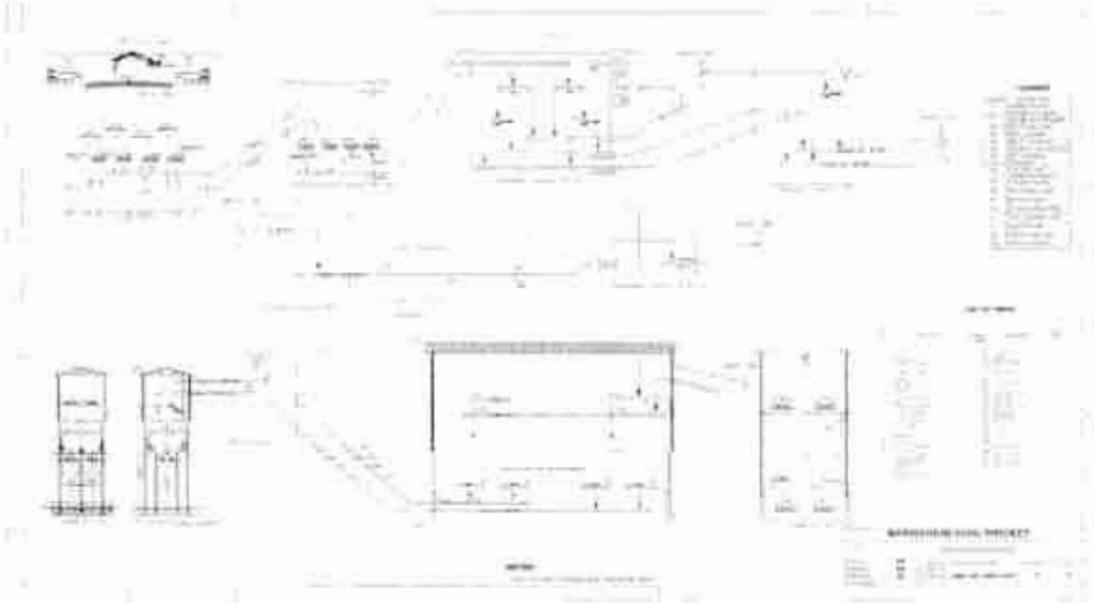


Figure: 5.1 – Schematic Diagram of the Crusher and RLS at Banhardih Coal Project.

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Land Requirement



Chapter-6: Land Requirement

6.1 Land Requirement:

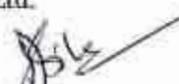
Parameters	Details																																														
6.1.1 Total Land requirement for the mine in "Ha"	<p><i>Break up of pre-mining land type (indicative) and source of data.</i> The Banhardih Coal Mine comprises of about 18.18 Sq. km area distributed over 10 nos. of villages. It administratively falls under the Latehar district, Jharkhand state. At this planned period, 14.67 sq. km of area has been conceptualized to be worked including a surface dump to be re-handled at a later stage of the project. Notification under Section 9 (1) has already been served as per CBA Act, 1957 for an area of 10.42 Sq. km while notification for the remaining area will be issued shortly. The land distribution as per the Land records obtained from the State Government is furnished in Table No. 6.1 below.</p> <p style="text-align: center;">Table No. 6.1 Pre-Mining Land Distribution.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3">Pre-Mining Land Use "ha"</th> </tr> </thead> <tbody> <tr> <td rowspan="8" style="text-align: center;">Tenancy</td> <td>Agricultural</td> <td style="text-align: right;">324.45</td> </tr> <tr> <td>Township</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Grazing</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Barren</td> <td style="text-align: right;">208.33</td> </tr> <tr> <td>Water Bodies</td> <td style="text-align: right;">8.00</td> </tr> <tr> <td>Road</td> <td style="text-align: right;">0.81</td> </tr> <tr> <td>Community</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Others</td> <td style="text-align: right;">35.78</td> </tr> <tr> <td rowspan="7" style="text-align: center;">Govt. Non-Forest</td> <td>Agricultural</td> <td style="text-align: right;">132.70</td> </tr> <tr> <td>Township</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Grazing</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Barren</td> <td style="text-align: right;">151.40</td> </tr> <tr> <td>Water Bodies</td> <td style="text-align: right;">33.44</td> </tr> <tr> <td>Road</td> <td style="text-align: right;">27.61</td> </tr> <tr> <td>Others</td> <td style="text-align: right;">25.95</td> </tr> <tr> <td rowspan="3" style="text-align: center;">Forest</td> <td>Reserve</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td>Protected</td> <td style="text-align: right;">474.25</td> </tr> <tr> <td>CJBJ</td> <td style="text-align: right;">43.70</td> </tr> <tr> <td style="text-align: center;">Free-Hold</td> <td style="text-align: right;">0.00</td> </tr> <tr> <td style="text-align: center;">Total =</td> <td style="text-align: right;">1467.42</td> </tr> </tbody> </table>	Pre-Mining Land Use "ha"			Tenancy	Agricultural	324.45	Township	0.00	Grazing	0.00	Barren	208.33	Water Bodies	8.00	Road	0.81	Community	0.00	Others	35.78	Govt. Non-Forest	Agricultural	132.70	Township	0.00	Grazing	0.00	Barren	151.40	Water Bodies	33.44	Road	27.61	Others	25.95	Forest	Reserve	0.00	Protected	474.25	CJBJ	43.70	Free-Hold	0.00	Total =	1467.42
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6.1.2 **During mining Land use details:**
Land use pattern in proposed and end of life are given below in table No. 6.2.

Table No. 6.2
Land Use Pattern of Banhardih Coal Mine in proposed and end of life.

Type	Land Use (proposed)	Land use (End of Life)	Land Use (Post Closure)						
			Agricultural Land	Plantation	Water Body	Public/Company Use	Forest Land (Returned)	Undisturbed	Total
Excavation Area	727.44								
Backfilled Area		727.24	74.9	545.35			106.99		727.24
Excavated Void									
Top Soil Dump	12.24	12.24		12.24					12.24
External Dump /surface dump (Temporary)	440.7	440.7				91.35	349.35		440.7
Safety Zone	7.85	7.85		7.85					7.85
Haul road between quarries	10.21	10.21		9.22			0.99		10.21
Road Diversion	5.58	5.58				5.58			5.58
Diversion// Nala / Canal Below River									
Settling Pond	0.64	0.64					0.64		0.64
Road & Infrastructure area	35.7	35.7				33.24	2.46		35.7
Rationalisation Area									
Garland Drains	7.58	7.58				4.83	2.75		7.58
Embankment									
Green Belt									
Water Reservoir Near Pit									
UG Entry									
Undisturbed / Mining Rights for UG	219.68	219.68					54.77	164.91	219.68
Resettlement									
Pit Head Power Plant									

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Water Harvesting									
Agricultural Land									
Total	1467.42	1467.42	74.90	574.66	0.00	135.00	517.95	164.91	1467.42

An unexplored area of 418.42 Ha within the Project Boundary has been considered for temporary surface dumping which will be completely rehandled at the end of mine life. The above-mentioned land will be explored in detail before commencement of the Mining Operation.
A pre & post mining Landuse Plan & Proposed surface layout plan is furnished in **Plate XXA, XXB & Plate XIIB** respectively.

6.1.3 Surface features over the block area
A village road, passing through the central part of the block needs to be shifted beforehand of mining operation. The detail engineering of the road shall be made with due consultation with the Public Works Department, Government of Jharkhand. A diversion layout has been proposed in this Mining Plan and shown in Plate No. XXIII. Declaration from the project proponent is attached as **Annexure VIII C**.
A Tentative Pre-mining Land use plan showing Govt, forest and Tenancy land & present surface layout plan is furnished in **Plate IX & Plate XIA** respectively.
A village wise break up of 1467.42 ha of project area is being given below in table no. 6.3.

Table No. 6.3
Village wise break up of lease area.
(Source: Detailed Land schedule collected from the Revenue department)

VILLAGE NAME	GOVERNMENT (Ha)	FOREST (Ha)	PRIVATE (Ha)	TOTAL AREA IN HA.
BANIARDIH	98.53	195.97	209.19	503.69
BARI	211.20	241.84	312.02	765.06
SABANO	8.57	45.23	7.66	61.46
SURLI	1.61	13.43	6.83	21.87
RAMPUR	1.14	0.00	0.66	1.80
ATE	48.10	4.18	39.06	91.34
TOTA	0.66	8.94	0.00	9.60
JAGALDAGA	0.06	8.36	0.14	8.56
BARWADIH	2.23	0.00	1.81	4.04
TOTAL	372.10	517.95	577.37	1467.42

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6.1.4	No. of villages/Houses to be shifted.	Number of PAFs as per SIA study report comes to about 963 where homestead losers are 135, land losers are 659 and both land and homestead losers are 169. Numbers of affected villages are 10 in numbers. R & R Plan preparation under the guidance of the State Government is under progress and implementation will be done in as per the approved R & R Plan.																																																																											
6.1.5	Population to be affected by the project.	Details of the Population of the affected villages as per Socio-economic Survey conducted are given below in Table No. 6.4.																																																																											
Table No. 6.4 Details of Population to be affected for Banhardih Coal Project.																																																																													
		<table border="1"> <thead> <tr> <th rowspan="2">Sl. No</th> <th rowspan="2">Village</th> <th colspan="3">PAFs</th> <th rowspan="2">Total</th> </tr> <tr> <th>Home Oustee</th> <th>Land Oustee</th> <th>Home + Land Oustee</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Udaipura</td> <td>0</td> <td>34</td> <td>0</td> <td>34</td> </tr> <tr> <td>2</td> <td>Tota</td> <td>9</td> <td>0</td> <td>0</td> <td>9</td> </tr> <tr> <td>3</td> <td>Banhardi</td> <td>126</td> <td>82</td> <td>0</td> <td>208</td> </tr> <tr> <td>4</td> <td>Ete</td> <td>0</td> <td>30</td> <td>6</td> <td>36</td> </tr> <tr> <td>5</td> <td>Barwadih</td> <td>0</td> <td>26</td> <td>26</td> <td>52</td> </tr> <tr> <td>6</td> <td>Sabano</td> <td>0</td> <td>80</td> <td>29</td> <td>109</td> </tr> <tr> <td>7</td> <td>Jagaldaga</td> <td>0</td> <td>55</td> <td>0</td> <td>55</td> </tr> <tr> <td>8</td> <td>Rampur</td> <td>0</td> <td>22</td> <td>32</td> <td>54</td> </tr> <tr> <td>9</td> <td>Surli</td> <td>0</td> <td>49</td> <td>1</td> <td>50</td> </tr> <tr> <td>10</td> <td>Bari</td> <td>0</td> <td>281</td> <td>75</td> <td>356</td> </tr> <tr> <td></td> <td>Total</td> <td>135(14.02%)</td> <td>659 (68.43%)</td> <td>169 (17.55%)</td> <td>963 (100%)</td> </tr> </tbody> </table>	Sl. No	Village	PAFs			Total	Home Oustee	Land Oustee	Home + Land Oustee	1	Udaipura	0	34	0	34	2	Tota	9	0	0	9	3	Banhardi	126	82	0	208	4	Ete	0	30	6	36	5	Barwadih	0	26	26	52	6	Sabano	0	80	29	109	7	Jagaldaga	0	55	0	55	8	Rampur	0	22	32	54	9	Surli	0	49	1	50	10	Bari	0	281	75	356		Total	135(14.02%)	659 (68.43%)	169 (17.55%)	963 (100%)
Sl. No	Village	PAFs			Total																																																																								
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	Total	135(14.02%)	659 (68.43%)	169 (17.55%)	963 (100%)																																																																								
6.1.6	Proposed Rehabilitation Programme.	Preparation of R & R Plan in due consultation with the State Government is in progress. The Socio-economic study conducted in the block is Furnished in Annexure VIII B .																																																																											

6.2 Details of the Lease:

6.2.1	Status of Lease	The Banhardih Coal Mine comprises of about 18.18 Sq. km area distributed over 10 nos. of villages. It administratively falls under the Latehar district, Jharkhand state. At this planned period, 14.67 sq. km of area has been conceptualized to be worked including a temporary surface dump to be re-handled at a later stage of the project. Notification under Section 9 (1) has already been served as per CBA Act, 1957 for an area of 10.42 Sq km in the first phase while notification for the remaining is under process.
6.2.2	Existing Lease Area "Ha"	The proposed project area is 1467.42 ha.
6.2.3	Period for which Mining Lease has been granted/is to be renewed/ is to be applied for.	Vesting order will be issued in favour of PVUNL for extraction of coal.

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Environment Management

Chapter-7: Environmental Management

7. Environmental Management:

	Parameters	Details
7.1	Commitment from the project proponent that the company will comply Environment and Forest Condition stipulated in the respective clearances.	A commitment from the Board of Director regarding compliance of the Conditions as will be stipulated in the Forest Clearance as per FC Act, 1980 and Environmental Clearance as per EP Act, 1986 or any other permission related to Environment is furnished in Annexure-III .


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Progressive & Final Mine Closure Plan



Chapter-8: Progressive & Final Mine Closure Plan

	Parameters	Details
8.1	Land Degradation and restoration Schedule	
8.1.1	Tentative Land Degradation and Technical Reclamation (Commutative Area "Ha"): Stage wise Land degradation and technical reclamation details are furnished in table no. 8.1 below.	

Table No. 8.1
 Stage Wise Details of Tentative Land Degradation and Technical Reclamation in ha.

Stage/ Year		Land Degraded (ha) - Cumulative				Technically Reclaimed Area (ha) - Cumulative			
		Excavation	Dump (Surface+Top Soil)	Infra/ Others	Total	Backfill	Dump (Surface + Top Soil)	Others	Total
Y-1	2024-25	142.93	22.52	67.56	233.11	-	-	-	-
Y-3	2026-27	201.61	85.40	67.56	354.57	-	-	-	-
Y-5	2028-29	295.7	164.31	67.56	527.57	-	-	-	-
Y-7	2030-31	361.99	391.53	67.56	821.08	145.95	-	-	145.95
Y-10	2033-34	423.55	452.94	67.56	944.05	201.00	-	-	201.00
Y-15	2038-39	509.04	452.94	67.56	1029.54	320.00	-	-	320.00
Y-20	2043-44	578.47	452.94	67.56	1098.97	390.00	-	-	390.00
Y-25	2048-49	727.24	452.94	67.56	1247.74	458.89	-	-	458.89
Y-30	2053-54	727.24	452.94	67.56	1247.74	598.00	-	-	598.00
Post Closure									
Year -33	2056-57	727.24	452.94	67.56	1247.74	727.24	452.94	67.56	1247.74

An unexplored area of 418.42 Ha within the Project Boundary has been considered for temporary surface dumping and which will be reclaimed further at the end of mine life. The above said land will be covered under detail exploration before the commencement of the mining operation.

The details of the activities to be undertaken at various stages of closure activities are furnished in table number 8.5. Separate set of equipment has been provisioned for progressive closure and post closure Rehandling jobs. A final mine closure plan will be submitted to Ministry of Coal as per prevailing norms and guidelines.

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8.1.2 Tentative Biological Reclamation (Cumulative in "Ha")
 Stage wise details of Biological Reclamation are furnished in table no. 8.2 below.

Table No. 8.2
 Stage wise details of Tentative Biological Reclamation.

Stage/ Year	Biologically Reclaimed Area (ha) - Cumulative					Forest Land (Return)		Undisturbed / To be left for Public/ Community Use	Total
	Agricultur- e	Plantatio- n	Water Body	Public / Compan y Use	Total	Utilise d	Undisturbe d		
Y-1 2024-25	-	-	-	-	-	-	-	-	-
Y-3 2026-27	-	-	-	-	-	-	-	-	-
Y-5 2028-29	-	-	-	-	-	-	-	-	-
Y-7 2030-31	-	-	-	-	-	-	-	-	-
Y-10 2033-34	-	-	-	-	-	-	-	-	-
Y-15 2038-39	-	-	-	-	-	-	-	-	-
Y-20 2043-44	-	35.75	-	-	-	-	-	-	-
Y-25 2048-49	-	123.89	-	-	-	-	-	-	-
Y-30 2053-54	-	339.27	-	-	-	-	-	-	-
Post Closure									
Year 33	2056-57	74.90	374.66	0	135.00	784.56	463.18	54.77	1467.42

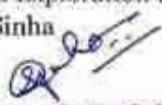
About 463.18 ha biologically reclaimed land shall be handed over to the Forest department. Thus the total biologically reclaimed area shall be 1247.74 ha for all considerations.

8.2 Post Closure Water Quality management:

The proposed mining area is not dissecting any natural streams. The storm water and ground water intersected during the mining operation will be the source of water accumulation within the active mining pit. Accumulated mine pit water during the active mining period will be pumped while post mining operation, there will be no accumulated water in the left out voids. In post closure phase the water shall be quarterly sampled and analysed to monitor development of any acidity or toxicity in the

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		<p>accumulated water. As post mine period, all of the broken areas will be backfilled and development of toxic water is not anticipated. The accumulated water will be utilised for the local community for agriculture and other usage. Regular monitoring of the water quality will be carried out as per the CPCB norms. Once the mine is closed, outside water shall be prevented to enter into the mined out pits which in turn will reduce the TDS and other solvents.</p> <p>The pit water will be utilized for agricultural use, supply as drinking water after treatment, and for pisciculture.</p> <p>Water quality analysis shall be carried out as per CPCB guidelines 2009.</p>
<p>8.3</p>	<p>Post Closure Air Quality Management:</p>	<p>The post closure activities will be restricted to limited operation only in the following areas:</p> <ol style="list-style-type: none"> 1. Dismantling of temporary infrastructures. 2. Dismantling of conveyor systems. 3. Dismantling of electrical infrastructures. 4. Regular maintenance works in the dumping ground. 5. Regular maintenance job in the embankment. 6. Post plantation care. 7. Maintenance of the main haul road. 8. Cleaning of suture drains and garland drains. <p>Most of the activities does not involve any regular dust generation, except the dismantling works which will be restricted to a limited zones compared to the whole project area. Water sprinkling will be continued before the vehicle movement.</p>

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Occasionally dust may be generated from the uncovered areas of the dump. Regular sprinkling arrangements will be done till the areas are stabilized.
 Quarterly Air Quality Monitoring will be done as per NAAQ standard (CPCB guidelines, 2009).

8.4 Tentative Waste Management (Figures in MM³):

Table No. 8.3

Details of Waste Management.

Tentative Waste Management Schedule (Figures in MM ³)										
Stage		Cumulative OB Removal			Surface Dump (Cumulative)		Internal Backfilling (Cumulative)		Embankment	
		Top Soil	OB	Total	OB	Top Soil	OB	Top Soil	OB	Top Soil
Y-1	2024-25	0.36	11.64	12.00	11.64	0.36	0	-	-	-
Y-3	2026-27	1.72	82.28	84.00	82.28	1.72	0	-	-	-
Y-5	2028-29	3.72	182.28	186.00	182.28	3.72	0	-	-	-
Y-7	2030-31	5.8	284.20	290.00	284.45	5.8	79.75	-	-	-
Y-10	2033-34	8.92	437.08	446.00	322.76	8.92	114.32	-	-	-
Y-15	2038-39	13.89	680.61	694.50	322.76	13.15	356.85	0.73	-	-
Y-20	2043-44	17.94	879.06	897.00	322.76	13.82	556.30	4.12	-	-
Y-25	2048-49	17.94	1055.06	1073.00	322.76	8.30	732.30	9.55	-	-
Y-30	2053-54	17.94	1155.06	1173.00	322.76	6.01	832.30	11.93	-	-
Post Closure										
Y-33	2056-57	17.94	1155.06	1173.00	0	0	1155.06	17.94	-	-

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8.5	Tentative Top Soil Management - (Including Action plan for Top Soil management):																																																																																									
	Table No. 8.4 Details of Top Soil Management Top Soil Management-(Including Action Plan for Top Soil Management) (All figures are Cumulative and in MM ³)																																																																																									
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Stage</th> <th rowspan="2">Top Soil removal plan "MM³"</th> <th colspan="4">Top Soil Used "MM³"</th> <th rowspan="2">Total Utilised</th> </tr> <tr> <th>Spreading over Embankment</th> <th>Spreading over the Backfill Area</th> <th>Spreading over the OB Dump Area</th> <th>Used in Green Belt Area</th> </tr> </thead> <tbody> <tr> <td>Y-1</td> <td>2024-25</td> <td>0.36</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y-3</td> <td>2026-27</td> <td>1.72</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y-5</td> <td>2028-29</td> <td>3.72</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y-7</td> <td>2030-31</td> <td>5.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y-10</td> <td>2033-34</td> <td>8.92</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Y-15</td> <td>2038-39</td> <td>13.89</td> <td>-</td> <td>0.73</td> <td>-</td> <td>0.73</td> </tr> <tr> <td>Y-20</td> <td>2043-44</td> <td>17.94</td> <td>-</td> <td>4.12</td> <td>-</td> <td>4.12</td> </tr> <tr> <td>Y-25</td> <td>2048-49</td> <td>17.94</td> <td>-</td> <td>9.55</td> <td>-</td> <td>9.55</td> </tr> <tr> <td>Y-30</td> <td>2053-54</td> <td>17.94</td> <td>-</td> <td>11.93</td> <td>-</td> <td>11.93</td> </tr> <tr> <td colspan="7" style="text-align: center;">POST CLOSURE</td> </tr> <tr> <td>Y-33</td> <td>2056-57</td> <td>17.94</td> <td>-</td> <td>17.94</td> <td>-</td> <td>17.94</td> </tr> </tbody> </table>		Stage	Top Soil removal plan "MM ³ "	Top Soil Used "MM ³ "				Total Utilised	Spreading over Embankment	Spreading over the Backfill Area	Spreading over the OB Dump Area	Used in Green Belt Area	Y-1	2024-25	0.36	-	-	-	-	Y-3	2026-27	1.72	-	-	-	-	Y-5	2028-29	3.72	-	-	-	-	Y-7	2030-31	5.8	-	-	-	-	Y-10	2033-34	8.92	-	-	-	-	Y-15	2038-39	13.89	-	0.73	-	0.73	Y-20	2043-44	17.94	-	4.12	-	4.12	Y-25	2048-49	17.94	-	9.55	-	9.55	Y-30	2053-54	17.94	-	11.93	-	11.93	POST CLOSURE							Y-33	2056-57	17.94	-	17.94	-	17.94
Stage	Top Soil removal plan "MM ³ "	Top Soil Used "MM ³ "				Total Utilised																																																																																				
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Y-33	2056-57	17.94	-	17.94	-	17.94																																																																																				
8.6	Management of Coal Rejects.	Since the project doesn't envisage any washery, generation of rejects have not been envisaged.																																																																																								
8.7	Restoration of Land used for Infrastructure	Mining operation in the project is envisaged to be continued after completion of this part of the Block as shown in this Mining Plan including Mine Closure Plan. Since the mining operation will be shifted towards western side of the Block, infrastructures are conceptualized not to be retained beyond the closure period.																																																																																								
8.8	Disposal of Mining Machinery	Mining machineries will utilized in other projects. Scrapped machinery's will be auctioned to the authorized agencies.																																																																																								

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8.9	Safety & Security	<ul style="list-style-type: none"> ⬇ Thorough inspection of the mine and OB dump areas for assessing the left over closure jobs of already reclaimed internal dump areas. ⬇ Inspection of infrastructure and water body areas for their safe reclamation and abatement of any leftover dangers. ⬇ Action required making drainage and any fire areas safe for future period. ⬇ Making 2 meter high fencing wall against excavated void area to prevent inadvertent entry as per requirement. ⬇ Making safe approach road from surface to left out pit bottom for future uses, as void becomes a water body. ⬇ Completing the survey of total reclaimed areas like mined areas, internal dumps, mine faces, quarry fencing and other areas to complete and update the Mine Plans under Coal Mine Regulation.
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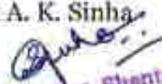
8.10 Abandonment Cost and Financial Assurance

8.10.1 Abandonment Cost: Cost of Activities to be taken up for closure of the mine:

Table No. 8.5
 Estimated Fund Requirement for Closure Activities
 (Without Escalation- Base Year 2021)

Head	Activities	Unit	Qty	Rate Rs. (Lakhs) /	Amount Rs. In Lakhs
Progressive Closure	Water Quality Management	LS	30	1.25	37.5
	Air Quality Management	LS	30	3.75	112.5
	Waste Management (Rehandling of dump)	MM ³	-	-	
	Ditch and Plant Fencing around dump	M	3750	0.0065	24.375

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	Biological fencing around the Lease Area	M	11483	0.004	45.932
	Filling of voids	MM ³	0.5	45	22.5
	Top Soil management	MM ³	-	-	
	Technical and Biological Reclamation of mined out of land and OB dump	ha	1303	3	3909
	Plantation over virgin area including green belt.	ha	172	2.5	430
	Manpower cost and supervision	PM	120	3	360
	Toe wall around the dump.	M	4850	0.05	242.5
	Garland Drain	M	7450	0.025	186.25
	Garland Drain around the dump.	M	4850	0.025	121.25
	Any Other Activities.				0
A.	Sub-Total =				5491.81
Dismantling of Infrastructure & Disposal or rehabilitation of Mining Machinery	Dismantling and Shifting of Workshop, Crusher, Conveyor.	LS			900
	Rehabilitation of the dismantled facility.	LS			180
	Dismantling of pumps and pipes / Other Facilities	LS			125
	Dismantling of Stowing bunkers/ provisioning of pumps for borewell pumping arrangement.	LS			0
	Dismantling of UG equipment				0
	Rearranging water pipeline to dump top park / Agricultural land	LS			65

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		Dismantling of power lines.	LS			350
B.		Sub-Total =				1620
Safety & Security		Net fencing around dumps	M	5000	0.02	100
		Biological fencing around the pit.	M	5000	0.01	50
		Net fencing with masonry pillars	M	1750	0.25	437.5
		Concrete wall with masonry pillar around the Water Harvesting area.	M	1500	0.35	525
		Securing air shaft and installation of borewell pump				0
		Securing of Incline				0
		Concrete wall fencing around the water body				0
		Boundary wall around the water body				0
		Stabilisation (Viz. Benching, Pitching) of side walls of the water body.	LS	-	-	75
		Toe wall around the dump.	M	1200	0.1	120
		Nala Diversion/ Road Diversion	KM	8.5	60	510
		Garland drain around the dump.	M	0	0.05	0
		Drainage channel from main OB dump.	M	0	0.04	0
C.		Sub-Total =				1817.5
Technical & Biological Reclamation of Mined out of land and OB Dump		Filling of void.	Ha			0
		Top Soil management	MM3	23.46	15	351.9
		OB rehandling for backfilling.	MM3			0
		Terracing, Blanketing with soil, and	Ha			0

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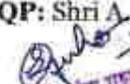
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	vegetation of External OB dump				
	Peripheral road, gates, view point, cemented steps on bank.	LS			247
	Expenditure on development of agricultural land.	Ha	112.59	0.75	84.4425
	Landscaping and plantation.	LS			0
D.	Sub-Total =				683.34
Post Closure Management and Supervision	Power Cost	Year	3	12	36
	Post mining water quality management	Year	3	2	6
	Post mining air quality management	Year	3	5.5	16.5
	Pit & dump slope / Subsidence monitoring for three years.	Year	3	20	60
	Waste Management (Rehandling of Surface Dump)	Mcum	50	425	21250
	Manpower cost and supervision.	Year	3	120	360
E.	Sub-Total =				21728.5
Others	Enterprenuership development (Vocational/Skill development/training for sustainable income of affected people)	Year	15	15	225
	Golden Handshake / Retrenchment benefits to OC employees.	Nos.	15	7.5	112.5
	Golden Handshake / Retrenchment benefits to UG employees.	Nos.	10	15	150

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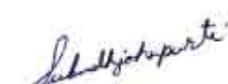
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	One time financial grant to societies / Institutions/ Organisations which is dependent upon the project.	15			0
	Provide Jobs in other mine of the company.				0
	Continuation of other services like running of schools etc.	Year	10	3	30
F.	Sub-Total =				517.5
Total Mine Closure Cost in Rs. Lakhs. (A+B+C+D+E+F)					31858.65

Time scheduling for Closure activities is furnished Appendix-8.1.

8.10.2 Financial Assurance: Amount to be deposited in Escrow account as a security against the mine activities to be carried out for the closure of the mine:

Table No. 8.6

Estimation of Financial Assurance for Mine Closure Activities with respect to Banhardih Coal Mines.

WPI As on	April, 2019		121.1
WPI as on April, 2020	April, 2021 (Provisional)	131.7	
Escalation rate of closure cost			1.09
		UG	OC
Base rate of closure cost "Rs. Crs./Ha"			0.090
Closure Cost "Rs. Crs/ Ha"			0.098
Project Area			1467.42
Amount to be deposited in ESCROW account "Rs. in Crs"			143.628
Amount already deposited into ESCROW account "Rs. in Crs"			0.000
Net amount to be deposited into ESCROW account "Rs. in Crs."			143.628

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Rate of compounding of Annual Closure Cost	5%
Balance life of the project "in yrs"	30
Annual Closure Cost	4.788
Amount to be deposited into Escrow Account after compounding @ of 5% "Rs in Crs"	318.08

WPI base rate is 131.70 (Provisional) as per release of EA, GOI for the Month of April, 2021. Date of Publication: 17th May, 2021. Please refer to Annexure-VIII A.

Table No. 8.7

Year wise Schedule of amount to deposited in Escrow Account (Rs. In Crores)

S.L. Year	Year	OC	Year	UG	Total
Year-1	2024-25	4.79	2024-25	-	4.79
Year-2	2025-26	5.03	2025-26	-	5.03
Year-3	2026-27	5.28	2026-27	-	5.28
Year-4	2027-28	5.54	2027-28	-	5.54
Year-5	2028-29	5.82	2028-29	-	5.82
Year-6	2029-30	6.11	2029-30	-	6.11
Year-7	2030-31	6.42	2030-31	-	6.42
Year-8	2031-32	6.74	2031-32	-	6.74
Year-9	2032-33	7.07	2032-33	-	7.07
Year-10	2033-34	7.43	2033-34	-	7.43
Year-11	2034-35	7.80	2034-35	-	7.80
Year-12	2035-36	8.19	2035-36	-	8.19
Year-13	2036-37	8.60	2036-37	-	8.60
Year-14	2037-38	9.03	2037-38	-	9.03
Year-15	2038-39	9.48	2038-39	-	9.48
Year-16	2039-40	9.95	2039-40	-	9.95
Year-17	2040-41	10.45	2040-41	-	10.45
Year-18	2041-42	10.97	2041-42	-	10.97
Year-19	2042-43	11.52	2042-43	-	11.52
Year-20	2043-44	12.10	2043-44	-	12.10
Year-21	2044-45	12.70	2044-45	-	12.70
Year-22	2045-46	13.34	2045-46	-	13.34
Year-23	2046-47	14.00	2046-47	-	14.00
Year-24	2047-48	14.71	2047-48	-	14.71

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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



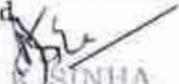
Year-25	2048-49	15.44	2048-49	-	15.44
Year-26	2049-50	16.21	2049-50	-	16.21
Year-27	2050-51	17.02	2050-51	-	17.02
Year-28	2051-52	17.87	2051-52	-	17.87
Year-29	2052-53	18.77	2052-53	-	18.77
Year-30	2053-54	19.71	2053-54	-	19.71
	Total =	318.08			318.08

**** Calculation of final Escrow amount and schedule of deposit shall be finalized during execution of the Escrow Agreement.**


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Appendix-8.1

Time scheduling for Closure activities

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Progressive Closure	Water Quality Management								
	Air Quality Management								
	Waste Management								
	Ditch and Plant Fencing around dump								
	Biological fencing around the Lease Area								
	Filling of voids								
	Top Soil management								
	Technical and Biological Reclamation of mined out of land and OB dump.								
	Plantation over virgin area including green belt.								
	Manpower cost and supervision								
	Toe wall around the dump.								
	Garland Drain								
	Garland Drain around the dump.								
Any Other Activities.									

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**Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latchar District, Jharkhand**

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Dismantling of Infrastructure & Disposal or rehabilitation of Mining Machinery	Shifting of Crusher and Conveyor.								
	Rehabilitation of the dismantled facility.								
	Dismantling of pumps and pipes/ Other Facilities								
	Dismantling of Stowing bunkers/ provisioning of pumps for borewell pumping arrangement.								
Safety & Security	Dismantling of DG equipment								
	Rearranging water pipeline to dump top park / Agricultural land								
	Dismantling of power lines.								
	Barbed wire fencing around dumps								
	Barbed wire fencing around the pit.								
	Barbed wire fencing with masonry pillars								

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Mining Plan and Mine Closure Plan
 Banhardih Coal Mine
 Aurangabad Coalfield, Latehar District, Jharkhand



Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
	Concrete wall with masonry pillar around the pit.								
	Securing air shaft and installation of borewell pump								
	Securing of incline								
	Concrete wall fencing around the water body								
	Boundary wall around the water body								
	Stabilisation (Via. Benching, Pitching) of side walls of the water body.								
	Toe wall around the dump.								
	Garland drain								
	Garland drain around the dump.								
	Drainage channel from main OB dump.								
Technical & Biological Reclamation of Mined out of	Filling of void.								
	Top Soil management								
	OB rehandling for backfilling.								

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**Mining Plan and Mine Closure Plan,
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand**

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
land and OB Dump	Terracing, Blanketing with soil, and vegetation of External OB dump								
	Peripheral road, gates, view point, cemented steps on bank.								
	Expenditure on development of agricultural land.								
	Landscaping and plantation.								
Post Closure Management and Supervision	Power Cost								
	Post mining water quality management								
	Post mining air quality management								
	Pit & dump slope/ Subsidence monitoring for three years.								
	Waste Management - Rehandling								
	Manpower cost and supervision.								

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Mining Plan and Mine Closure Plan
 Bahardih Coal Mine
 Auranga Coalfield, Latchar District, Jharkhand



Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Others	Enterpreneurship development (Vocational/Skill development/training for sustainable income of affected people).	Green	Green	Green	Green				
	Golden Handshake / Retrenchment benefits to OC employees.								
	Golden Handshake / Retrenchment benefits to UG employees.								
	One time financial grant to societies / Institutions / Organisations which is dependent upon the project.						Red		
	Provide Jobs in other mine of the company.								
	Continuation of other services like running of schools etc.	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange

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ANNEXURE			
	Parameters	Details	
I	Copy of allotment order vesting order.	Mandatory Document	Annexure – IA-IG
II	Certificate of qualified person/accredited mining plan preparing agency (MPPA) if the project area is confined within the vested/ allotted boundary / existing mining lease and where the project area extends beyond the block boundary, a certificate of qualified person/accredited mining plan preparing agency (MPPA) should be supported with a certificate of State Government Mines and Geology Department must be attached, which should specify (a) intent of the State Government for grant of lease beyond the vested Geological Block Boundary / existing mining lease; (b) non-existence of Coal/ Lignite in the area beyond the vested/allotted geological block boundary / existing mining lease to rule out the issue of encroachment and use of coal bearing area (beyond the vested/ allotted block boundary/ existing mining lease) in the mining plan.	<p>Mandatory Document</p> <p>Note: Certificate should be given on conceptual plan envisaged in the proposed mining plan depicting OB area, infrastructure locations and geo-reference co-ordinates of the lease area, blockarea, project area;</p> <p>In case the project boundary extends beyond the allotted geological block boundary certificate of non-occurrence of coal should be clearly shown.</p> <p>Certificate should envisage that the Geo- reference Co-ordinates considered for preparation of Mining plan is in line with Vesting /allotment order and does not encroach any other adjacent block, and non-coal bearing certificate of the area in case any proposed infrastructure or OB dump is outside the block area;</p> <p>The Project area, Lease area and geological block area in "Ha" shall also be envisaged.</p>	Annexure – IIA - IID

Agency: United Exploration India Pvt. Ltd.

QP: Shri A. K. Sinha

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III	Approval of the Company Board Approval:	Mandatory Document Board approval must Specify : <ul style="list-style-type: none"> • Approvals of Mining Plan form the Board of the company giving undertaking for correctness of data used in preparation of Mining Plan; • Details of the Qualified person(QP)/ Accredited Mining plan Preparing agency (MPPA); • Acceptance of the Mining Plan by the company board with recommendation for consideration of Standing committee for approval; • Undertaking that the mine will be developed as per the approval of the mining plan from Ministry of coal and all other approvals, as required will be obtained from relevant authorities • Commitment that entire mining operation will be carried out as per the Statutory provision given under Mines Act 1952, Coal Mine Regulation 2017, EP Act 1986 and FC Act 1980 and & wherever specific permission will be required the company will approach the concerned authorities. • Financial Assurance for implementation • Undertaking that the reclamation & rehabilitation work shall be carried out in accordance with the approved Mine Closure Plan and any modification /amendments which may be made 	Annexure – III
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Agency: United Exploration India Pvt. Ltd.
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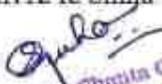
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		<p>in the mine Closure Plan by Ministry of Coal, from time to time.</p> <ul style="list-style-type: none"> • Undertaking that the protective measures contained in the mine closure plan including reclamation and rehabilitation works will be carried out in accordance with the approved mine closure plan and final mine closure plan and undertake to submit a yearly report before 1st July of every year to the Coal Controller setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plans (Progressive and Final Closure); • Undertaking that they will obtain a mine closure certificate from Coal Controller to the effect that the protective, reclamation and rehabilitation works carried out in accordance with the approved mine closure plan/final mine closure plan and will surrender the reclaimed land to the State Government concerned. 	
IV	Copy of earlier approval of mining plan.	Mandatory Document	NA
V	Plan / chart showing schedule of Implementation of Mine closure activities (progressive and final closure) with duration of important activities	Mandatory Document	Annexure- V

Agency: United Exploration India Pvt. Ltd.

QP: Shri A. K. Sinha


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Mining Plan and Mine Closure Plan
Banhardih Coal Mine
Auranga Coalfield, Latehar District, Jharkhand



VI	Non refundable Application Fee	Proof of the payment	Annexure- VI
VII	Expert Review Report	Carried out by Accredited Mining Plan Preparing Agency (MPPA)	NA
VIII	Other document (if any)		Annexure- VIIIA-VIIIG
PLANS/ PLATES			
I	Location plan		I
II	Plan certified by qualified person/accredited mining plan preparing agency (MPPA) if the project area is confined within the vested/ allotted block boundary / existing mining lease and where the project area extends beyond the block boundary, a plan certified by qualified person/accredited mining plan preparing agency (MPPA) should be supported with a plan with geo-reference co-ordinates duly certified by the Mines & Geology Department of the Concerned State Government. Plan in support of Annexure-II .		II
III	KML file of the Proposed lease are, project area and geological block.		III

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IV	Cadastral Plan showing approved block boundary vis-a-vis proposed/existing mining lease & mine boundary superimposed over it in distinct colour, showing landuse and infrastructure etc.	IV		
V	Geological plan showing all the boreholes drilled and proposed to be drilled showing allotted block boundary and required lease area	V		
VI	Graphic Litholog & Seam Structures	VIA1-VIA12 & VIB1-VIB39		
VII	Surface Plan showing drainage system, Contour, at minimum 3m interval, location of BH	VII		
VIII	Conceptual plan showing infrastructure facilities including colony, boundary of mining area, mine entries, roads including road diversion alignment etc	VIII		
IX	Tentative land use plan showing land type (Govt., Forest and tenancy land) with its data source.	IX		
X	Floor contour plan and seam folio plan, ISO-grade plan		Floor Contour	Seam Folio
			X1-X18	XB1-X17
XI	X-section showing coal/Lignite seams	XI		
XII	Plan showing existing and proposed surface layout	XIIA & XII B		
OPENCAST(OC)MINES				
XIII	Plan showing total coal thickness and overburden thickness and stripping ratio	XIII		
XIV	Final stage quarry plan showing haul road alignment	XIV		

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Mining Plan and Mine Closure Plan
 Banhardih Coal Mine
 Auranga Coalfield, Latehar District, Jharkhand



UNDER GROUND (UG) MINES		
XV	Plan showing mode and location of entries and surface layouts	NA
XVI	Layout of the panel for each system (like Longwall, Continuous Miner, Bord & Pillar, road header etc.)	NA
XVII	Layout of pillar extraction	NA
XVIII	Support system	NA
XIX	Haulage and transport system	NA
CLOSURE PLAN		
XX	Pre & Post mining land use plan	XXA & XXB
XXI	Progressive mine closure plan/ stage plan indicating stages at 1st, 3rd, 5th, year of achieving Peak rated capacity and end of life (showing area, volume, dump height etc for OC and seam-wise layout projects and ventilation system in UG)	1 ST YEAR-XXIA 3 RD YEAR-XXIB 5 TH YEAR-XXIC 7 TH YEAR-XXID FINAL YEAR-XXIE
XXII	Reclamation plan	XXII

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LIST OF ANNEXURES

SL. NO.	ANNEXURE NO	SUBJECT
1	Annexure-IA	Allotment Agreement between Nominated Authority and JUUNL, dated 30 th of March, 2015.
2	Annexure-IB	The first and second amendment to the Allotment agreement, dated 30 th June, 2015 and 16 th January, 2017 respectively.
3	Annexure-IC	Deed of adherence between Nominated Authority (MOC, Government of India), Jharkhand Urja Utpadan Nigam Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL), dated 2nd of June, 2017
4	Annexure-ID	Deed of Assignment between Jharkhand Urja Utpadan Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL) towards amendment of the Allotment order in favour of PVUNL, dated 18 th of May, 2018.
5	Annexure-IE	Corrigendum to the Allotment order No. 103/18/2015/NA dt. 30 th June, 2015 and allotment order in favour of M/S Patratu Vidyut Utpadan Nigam Limited (PVUNL) vide allotment order No. 103/18/2015 NA dt. 25 th of June, 2018.
6	Annexure-IF	Letter regarding modification of bounding coordinate mentioned in the Allotment Agreement of Banhardih Coal Mine
7	Annexure-IG	Corrigendum No. 3 to the Allotment order no. 103/18/2015/NA dated June 30, 2015 in favour of Patratu Vidyut Utpadan Nigam Limited (PVUNL) dated 30 th June, 2021.
8	Annexure-IIA	Certification letter of Geological Block Boundary by CMPDIL of Banhardih Coal Mine, dated 13.10.2017
9	Annexure-IIB	Certificate of qualified person/accredited mining plan preparing agency (MPPA) as the project area is confined within the vested/ allotted boundary / existing mining lease
10	Annexure-IIC	Notification with under section 7(1) respect to 1042.73 ha under CBA Act
11	Annexure-IID	Notification under section 4(1) of Coal Bearing Act, 1957
12	Annexure-III	Approvals of Mining plan including mine closure plan from Board of the company

Agency: United Exploration India Pvt. Ltd.

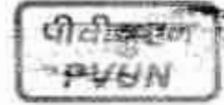
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Mining Plan and Mine Closure Plan
 Banhardih Coal Mine
 Auranga Coalfield, Latehar District, Jharkhand

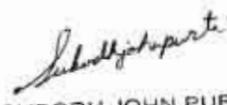


SL. NO.	ANNEXURE NO	SUBJECT
13	Annexure-IV	Copy of Earlier approval of mining plan
14	Annexure-V	Plan showing schedule of Implementation of Mine Closure activities (Progressive and Final closure) with duration of important activities
15	Annexure-VI	Proof of the payment
16	Annexure-VII	Expert Review Report
17	Annexure-VIII A	Reference of WPI, April 2021.
18	Annexure-VIII B	Summary of R & R policy
19	Annexure-VIII C	Declaration by allottee for Road diversion
20	Annexure-VIII D	Letter regarding Revision in efficiency parameter of Banhardih Coal Mine
21	Annexure-VIII E	Exploration Scheme
22	Annexure-VIII F	Letter regarding certification of Block Boundary of Banhardih Coal Mine by CMPDIL.
23	Annexure-VIII G	Certified Boundary of Banhardih Coal Mine by CMPDIL under notification Section 7 (1)

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Annexure-IA
**Allotment Agreement between Nominated
Authority and JUUNL, dated 30th of March,
2015**

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 Patna, Dist.-Rangam-629119

ANNEXURE- IA



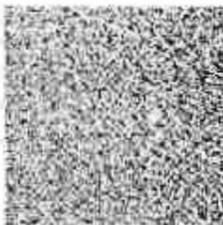
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INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

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Certificate No.	: IN-DL85073723326414N
Certificate Issued Date	: 27-Mar-2015 11:00 AM
Account Reference	: IMPACC (IVY d1775508/ DELHI/ DL-DLH
Unique Doc. Reference	: SUBIN-DL77550367010588860717N
Purchased by	: JHARKHAND URJA UTPADAN NIGAM LTD
Description of Document	: Article 5 General Agreement
Property Description	: RANCHI
Consideration Price (Rs.)	: 0 (Zero)
First Party	: JHARKHAND URJA UTPADAN NIGAM LTD
Second Party	: Not Applicable
Stamp Duty Paid By	: JHARKHAND URJA UTPADAN NIGAM LTD
Stamp Duty Amount (Rs.)	: 500 (Five Hundred only)



Please write or type below this line.

**THE ALLOTMENT AGREEMENT BY AND BETWEEN THE PRESIDENT OF INDIA
 AND JHARKHAND URJA UTPADAN NIGAM LIMITED IN RESPECT OF
 BANHARDIH COAL MINE**

This Stamp-paper forms an integral part of this deed of Allotment Agreement.

Page 1 of 58



Smt. Shanti Guha

Smt. Shanti Guha
 Coal Controller
 Jharkhand
 1, Council House Street
 Kolkata- 700 001

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Chief Engineer (Banhardih Coal Block)
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PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. in Joint Venture with JNMV)
Patratu, Dist. -Rangpur-829119

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Allotment Agreement for Baharshi Coal Mine

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Allotment Agreement for Bonhanāh Coal Mine

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Signature

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Signature

Page 4 of 18

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Allotment Agreement for Banherdih Coal Mine

This Allotment Agreement is made by and between following

PARTIES

1. The President of India, acting through the Central Government represented by the Nominated Authority appointed under Section 6 of the Coal Mines (Special Provisions) Ordinance, 2014 read with Coal Mines (Special Provisions) Second Ordinance, 2014 (the "Nominated Authority").
2. Jharkhand Urja Utpadan Nigam Limited incorporated in India under the Companies Act, 1956 with corporate identity number U40108JH2013SGC001703, whose registered office is at Engineering Building, H.E.C Dhurwa, P.S.-Hatia, Ranchi, Jharkhand-834004, India (the "Allottee").

BACKGROUND:

- A. The Supreme Court of India through its judgment dated August 25, 2014 read with its order dated September 24, 2014 (collectively the "Supreme Court Judgment") had cancelled allotment of 204 coal blocks.
- B. Subsequent to the Supreme Court Judgment, the Coal Mines (Special Provisions) Ordinance, 2014 read with Coal Mines (Special Provisions) Second Ordinance, 2014 (collectively the "Ordinance") were promulgated and the Coal Mines (Special Provisions) Rules, 2014 (the "Rules") were framed for auction and allotment of all blocks which were subject to cancellation pursuant to the Supreme Court Judgment.
- C. The Coal Mine (as defined in Clause 1.1.18) was included in the list of such 204 coal blocks and accordingly, its allotment to the Prior Allottee (as defined in Clause 1.1.40) was cancelled pursuant to the Supreme Court Judgment, with effect from the 'appointed date' (as defined in the Ordinance).
- D. Thereafter, the Central Government issued an order under Rule 6(2) of the Rules, dated December 18, 2014, as amended, to the Nominated Authority for allotment of the Coal Mine pursuant to Section 5 of the Ordinance. In such order, generation of power was the "Specified End Use" with respect to the Coal Mine.
- E. Pursuant to an allotment process conducted in accordance with the Ordinance, the Rules, the Allotment Document, dated February 18, 2015 and receipt of a direction from the Central Government under Rule 11(9) of the Rules, the Allottee has become entitled to enter into an agreement with the Nominated Authority pursuant to Rule 13(5) of the Rules with respect to allocation of the Coal Mine to the Allottee for use in the Specified End Use Plant (as defined in Clause 1.1.45).
- F. Accordingly, the Nominated Authority and the Allottee are entering into this Agreement.



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Chief Engineer
Chief Engineer (Banherdih Coal Block)
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Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
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Shanta Guha

शान्ता गुहा

श्री. एस. एस. गुहा

Shanta Guha
127, Avenue, Coal Controller
Govt. of India
O/o. The Coal Controller
32 / 1, Council House Street
Kolkata- 700 001

Allotment Agreement for Bankardih Coal Mine

with respect to matters related to allocation of the Coal Mine, including without limitation development of the Coal Mine and production and utilisation of coal from the Coal Mine.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understandings set forth in this Agreement, and other good and valuable consideration (the adequacy of which are hereby mutually acknowledged), the Parties with the intent to be legally bound hereby agree as follows:

L. DEFINITIONS AND INTERPRETATION

The definitions and rules of interpretation in this clause apply in this Agreement.

1.1. Definitions

- 1.1.1. "Acceptable Bank" shall mean a Scheduled Bank as listed in the Second Schedule of the Reserve Bank of India Act, 1934 excluding those listed under the headings of Gramin Banks, Urban Co-operative Banks and State Co-operative Banks.
- 1.1.2. "Agreement" means this Allotment Agreement and all attached annexure, schedules, exhibits and instruments supplemental to or amending, modifying or confirming this Agreement in accordance with the provisions of this Agreement.
- 1.1.3. "Agreement Date" shall mean the date on which execution of this Agreement by both the Allottee and the Nominated Authority is completed.
- 1.1.4. "Allotment Conditions" shall have the meaning given to such expression in Clause 3.1.
- 1.1.5. "Allotment Date" shall have the meaning given to such expression in Clause 4.3.
- 1.1.6. "Allotment Document" shall have the meaning given to it under the Rules and shall include the Allotment Document dated February 18, 2015 for allotment of the Coal Mine.
- 1.1.7. "Allotment Order" shall have the meaning given to such expression in the Ordinance and the Rules.
- 1.1.8. "Applicable Law" shall mean all applicable statutes, laws, by-laws, rules, regulations, orders, ordinances, protocols, codes, guidelines, policies, notices, directions, judgments, decrees or other requirements or official directive of any Governmental Authority or court or other law, rule or regulation approval from the relevant Governmental Authority, government resolution, directive, or other government restriction or any similar form of decision of, or determination by, or any interpretation or adjudication having the force of law in India.
- 1.1.9. "Appropriation Event" shall have the meaning given to such expression in Clause 6.2.1.



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श्रीमती ए
एच गुप्ता

Quho

राधा गुप्ता
Sr. Coal Controller
India

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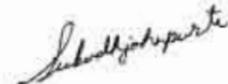
Allotment Agreement for Bahardih Coal Mine

- 1.1.10. "Arrangement" shall have the meaning given to such expression in Clause 8.3.1.
- 1.1.11. "Arrangement Application" shall have the meaning given to such expression in Clause 8.5.1.
- 1.1.12. "Authorised Representative" shall have the meaning given to such expression in Clause 4.4.
- 1.1.13. "Business Day" shall mean a day which is not a Saturday, Sunday or any other day declared as a public holiday by the Central Government.
- 1.1.14. "Central Government" shall mean the Government of India, acting through the Ministry of Coal.
- 1.1.15. "CIL" shall mean Coal India Limited (a Government of India undertaking).
- 1.1.16. "CIL Notified Price" shall mean the prevailing notified price of relevant grade(s) of coal by CIL or any of its subsidiaries, as may be territorially relevant to the Coal Mine, as on the date of sale of coal.
- 1.1.17. "Cists" shall have the meaning given to such expression in Clause 18.3.
- 1.1.18. "Coal Mine" shall mean the coal mine as more particularly described in SCHEDULE A.
- 1.1.19. "Companies Act" means the Companies Act, 1956 or the Companies Act, 2013, as applicable, as now enacted or as the same may from time to time be amended, re-enacted or replaced.
- 1.1.20. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions exercisable by a person or persons acting individually or in concert, directly or indirectly, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements or in any other manner.
- 1.1.21. "Commencement Plan" shall have the meaning given to such expression in Clause 5.1.
- 1.1.22. "Designated Bank Account" shall mean the following bank account of the Nominated Authority.
- Name of the bank: State Bank of India
Account number: 34823879210
Name of the account holder: Nominated Authority, Account -II (Allotment), Ministry of Coal, Government of India
IFSC Code: SBIN0003771
- 1.1.23. "Diversion Notice" shall have the meaning given to such expression in Clause 8.4.1.



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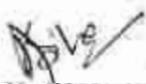

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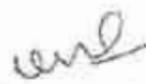

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(A Subsidiary of NTPCLtd. a Joint Venture with JEVN)
Patna, Dist.-Rangpur-829119

Allotment Agreement for Bahardih Coal Mine

- 1.1.24. "Efficiency Parameters" shall have the meaning given to such expression in Clause 10.1.
- 1.1.25. "Eligibility Conditions" shall mean the eligibility conditions specified in the Ordinance and the Rules including all the eligibility conditions listed in Clause 3.2 of the Allotment Document.
- 1.1.26. "Encumbrances" means any mortgage, pledge, equitable interest, assignment by way of security, conditional sales contract, hypothecation, right of other Persons, claim, security interest, encumbrance, title defect, title retention agreement, voting trust agreement, interest, option, lien, charge, commitment, restriction or limitation of any nature whatsoever, including restriction on use, voting rights, transfer, receipt of income or exercise of any other attribute of ownership, right of set-off, any arrangement (for the purpose of, or which has the effect of, granting security), or any other security interest of any kind whatsoever, or any agreement, whether conditional or otherwise, to create any of the same.
- 1.1.27. "Governmental Approval" means any authorization, approval, consent, licence or permit required from any Governmental Authority.
- 1.1.28. "Governmental Authority" means any government authority, statutory authority, government department, agency, commission, board, tribunal or court or other law, rule or regulation making entity having or purporting to have jurisdiction on behalf of the Republic of India or any state or other subdivision thereof or any municipality, district or other subdivision thereof.
- 1.1.29. "Event of Force Majeure" shall have the meaning given to such expression in Clause 23.1.
- 1.1.30. "Good Industry Practice" means, in relation to any undertaking and any circumstances, the exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced Person engaged in the same type of undertaking under the same or similar circumstances.
- 1.1.31. "Indemnified Party" shall have the meaning given to such expression in Clause 18.1.
- 1.1.32. "Mine Plan" shall mean a plan which has been approved in accordance with the Applicable Laws in relation to the Coal Mine.
- 1.1.33. "Mining Lease" shall have the meaning given to such expression in Clause 5.3.1.
- 1.1.34. "Monthly Payment" shall have the meaning given to such expression in Clause 9.1.1.
- 1.1.35. "Ordinance" shall have the meaning given to such expression in Clause 2 of the Background.




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Allotment Agreement for Bathoridih Coal Mine

- 1.1.36. "Other Plants" shall have the meaning given to such expression in Clause 8.4.1.
- 1.1.37. "Parties" means and refers to the Nominated Authority and the Allottee collectively and "Party" refers to any one of them.
- 1.1.38. "Performance Security" shall have the meaning given to such expression in Clause 6.1.1.
- 1.1.39. "Person" means any individual, sole proprietorship, unincorporated association, body corporate, corporation, company, partnership, limited liability company, joint venture, Governmental Authority or trust or any other entity or organization.
- 1.1.40. "Prior Allottee" shall have the meaning given to it in the Ordinance and for the purposes of the Coal Mine, the Prior Allottee shall be Jharkhand State Electricity Board created in India under the Electricity (Supply) Act, 1948, whose office is at Engineering Building, H.E.C Dburwa, P.S.-Hatia, Ranchi, Jharkhand-834004, India.
- 1.1.41. "Reference Index" shall have the meaning given to such expression in Clause 9.2.1.
- 1.1.42. "Reserve Price" shall mean INR 100/Tonne (Indian Rupees One hundred/Tonne).
- 1.1.43. "Rules" shall have the meaning given to such expression in Clause B of the Background.
- 1.1.44. "Selectee" shall have the meaning given to such expression in Clause 19.3.3(b).
- 1.1.45. "Specified End Use Plant" shall mean the plant (b) engaged in generation of power situated at Paratu, District - Ranchi, Jharkhand, India, as prescribed for the Coal Mine under Rule 8(2) of the Rules, as more particularly described in SCHEDULE B.
- 1.1.46. "State Government" shall mean the Government of the state where the Coal Mine is located.
- 1.1.47. "Substitution Notice" shall have the meaning given to such expression in Clause 19.3.3(b).
- 1.1.48. "Supreme Court Judgment" shall have the meaning given to such expression in Clause A of the Background.
- 1.1.49. "Taxation" (including with correlative meaning, the terms "Tax" and "Taxes") means (a) any and all taxes, assessments and other charges, duties, impositions and similar liabilities imposed by any Governmental Authority, including without limitation taxes based upon or measured by gross receipts, income, profits, sales and value added, withholding, payroll, excise and property taxes, together with all interest, penalties and additions imposed with respect to such amounts; (b) any liability for the payment of any taxes, assessments and other charges, duties, impositions and similar liabilities by the



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Chd Engineer (Jharkhand Coal Block)

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SUBODH JOHN PURTI
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Jashobdev NTPCL, N. Jeeb Vihar, Bonga
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Allotment Agreement for Ranbarth Coal Mine

Allottee as a result of being a member of an affiliated, consolidated, combined or unitary group for any period; and (c) any taxes, assessments and other charges, duties, impositions and similar liabilities for the payment of any amounts by the Allottee as a result of any express obligation to indemnify any other Person or as a result of any obligation under any agreement or arrangement with any other Person with respect to such amounts and including any liability for Taxes of a predecessor entity.

- 1.1.50. "Third Party" means any Person that is not a signatory to this Agreement.
- 1.1.51. "Term" shall have the meaning given to such expression in Clause 24.2.
- 1.1.52. "Termination Event" shall have the meaning given to such expression in Clause 24.3.1.
- 1.1.53. "Upfront Amount" shall mean an amount equal to INR 50,00,00,000 (Indian Rupees Fifty Crore) payable by the Allottee in terms of Clause 5.2. The amount of Upfront Amount mentioned herein is subject to revision pursuant to approval of the Mine Plan by the competent authority.
- 1.1.54. "Warranties" shall have the meaning given to such expression in Clause 17.1.

1.2. Interpretation

- 1.2.1. Any reference to any statute or statutory provision shall include:
- (i) all subordinate legislation made from time to time under that provision (whether or not amended, modified, re-enacted or consolidated);
 - (ii) such provision as from time to time amended, modified, re-enacted or consolidated (whether before or after the date of this Agreement) to the extent such amendment, modification, re-enactment or consolidation applies or is capable of applying to any transactions entered into under this Agreement prior to the Agreement Date and (to the extent liability there under may exist or can arise) shall include any past statutory provision (as from time to time amended, modified, re-enacted or consolidated) which the provision referred to has directly or indirectly replaced.
- 1.2.2. Unless the context otherwise requires, words in the singular shall include the plural and the plural shall include the singular.
- 1.2.3. References to the masculine, the feminine and the neuter shall include each other.
- 1.2.4. References to a "company" shall include a company, corporation or other body corporate, wherever and however incorporated or established.
- 1.2.5. The recitals and schedules to this Agreement and shall have the same force and



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Subodh
Page 19 of 58

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 डी. असिस्टेंट कोयला नियंत्रक / Dy. Asstt. Coal Controller
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Allocation Agreement for Bankardih Coal Mine

effect as if expressly set out in the body of this Agreement, and any reference to this Agreement shall include any recitals and schedules to it. Any references to clauses and schedules are to clauses and schedules to this Agreement. Any references to parts or paragraphs are, unless otherwise stated, references to parts or paragraphs of the schedule in which the reference appears.

- 1.2.5. A reference to **this Agreement** or any other document shall be construed as references to this Agreement or that other document as amended, varied, novated, supplemented or replaced from time to time.
- 1.2.7. A reference to **this Clause** shall, unless followed by reference to a specific provision, be deemed to refer to the whole Clause (not merely the sub-Clause, paragraph or other provision) in which the expression occurs.
- 1.2.8. A reference to a party shall include that party's representatives, successors and permitted assigns.
- 1.2.9. Each of the representations and warranties provided in this Agreement is independent of other representations and warranties and unless the contrary is expressly stated, no Clause in this Agreement limits the extent or application of another Clause.
- 1.2.10. Headings to Clauses, parts and paragraphs of schedules and schedules are for convenience only and do not affect the interpretation of this Agreement.
- 1.2.11. A reference to "in writing" includes any communication made by letter or fax but not e-mail (unless otherwise expressly provided in this Agreement).
- 1.2.12. Unless otherwise specified, any reference to a time of day is to Indian Standard Time.
- 1.2.13. Any words following the terms including, include, in particular, for example or any similar expression shall be construed as illustrative and shall not limit the sense of the words, description, definition, phrase or term preceding those terms.
- 1.2.14. Where the context permits, other and otherwise are illustrative and shall not limit the sense of the words preceding them.
- 1.2.15. References to a document in agreed form are to that document in the form agreed by the parties and initialed by them or on their behalf for identification.
- 1.2.16. Any obligation on a party not to do something includes an obligation not to allow that thing to be done.

2. ALLOCATION OF THE COAL MINE

2.1. The Allocator hereby represents and warrants to the Nominated Authority that it has



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Allocation Agreement for Banharath Coal Mine

complied with all the terms and conditions of the Ordinance, the Rules, the Allotment Document and other Applicable Laws, as were required to be complied with by the Allottee, with respect to allotment process for the Coal Mine and the Allottee is eligible in all respects to receive allocation of the Coal Mine. The Allottee also represents and warrants to the Nominated Authority that it is in compliance with all the Eligibility Conditions and would continue to be in compliance with all the Eligibility Conditions during the Term.

2.2. Relying on the representations and warranties of the Allottee and the information, documents and other undertaking provided by the Allottee, including the Warranties provided under Clause 17, the Nominated Authority is pleased to enter into this Agreement with the Allottee for allocation of the Coal Mine to the Allottee subject to terms and conditions specified in this Agreement.

3. CONDITIONS FOR ALLOTMENT

3.1. Allotment Conditions

The issuance of the Allotment Order in favour of the Allottee shall be subject to satisfaction of the following conditions (collectively the "Allotment Conditions"):

- (a) the Allottee continuing to be in compliance with all the Eligibility Conditions;
- (b) the Allottee having paid the first instalment of the Upfront Amount, in accordance with Clause 5.2.1 and having provided such undertaking as specified in SCHEDULE G;
- (c) the Allottee having furnished the Performance Security and having provided such undertaking as specified in SCHEDULE G;
- (d) the Allottee having deposited an amount equal to INR 0 (Indian Rupees Zero), being the Fixed Amount, in the Designated Bank Account;
- (e) only in the event that the Allottee is a Prior Allottee for the Coal Mine or any other Schedule I coal mine (as defined in the Ordinance), the Allottee having paid the Additional Levy within the due date for payment of such Additional Levy as specified in Rule 18 of the Rules; and
- (f) The Allottee having provided a written intimation to the Nominated Authority in substantially the same form as provided in SCHEDULE C regarding: (i) the movable property which the Allottee has not negotiated to own or utilise and which it intends to move and store under Section 10(4) of the Ordinance; (ii) the contracts which the Allottee is desirous of adopting under Section 11(1) of the Ordinance, including contracts with secured creditors; and matters incidental



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Allotment Agreement for Bahardih Coal Mine

therein.

3.2. Completion of Allotment Conditions and Notice

3.2.1. Upon satisfaction of each of the Allotment Conditions specified in Clause 3.1, the Allottee shall provide a written notice to the Nominated Authority in substantially the same format as provided in SCHEDULE D (the "Completion Notice")

3.2.2. In the event the Allottee does not provide a Completion Notice with respect to each of the Allotment Conditions listed in Clauses 3.1(a); 3.1(b); 3.1(c); 3.1(d); 3.1(e) (in cases where the Allottee is a Prior Allottee for the Coal Mine or any other Schedule I coal mine (as defined in the Ordinance)) and Clause 3.1(f), within 30 Days of the Agreement Date, then the Nominated Authority may terminate this Agreement without incurring any liability whatsoever by providing a written notice to the Allottee. It is clarified that in such event the Allottee shall not be entitled to receive the Allotment Order and the Nominated Authority shall be entitled to dispose the Coal Mine in the manner provided in the Ordinance and the Rules, including through re-auction/re-allotment or through appointment of a designated custodian.

3.2.3. If the Allottee does not provide a Completion Notice with respect to 3.1(f) and fails to provide a written intimation in substantially the same form as provided in SCHEDULE C within 30 Days of the Agreement Date, then it shall be deemed that the Allottee is not desirous of owning or utilizing any movable property or continuing any contract. In such cases, without prejudice to Clause 3.2.2, the Nominated Authority may elect to issue the Allotment Order without including aforementioned particulars in the Allotment Order; if all other Allotment Conditions have been satisfied by the Allottee and corresponding Completion Notice have been provided to the Nominated Authority.

4. THE ALLOTMENT ORDER

4.1. Upon receipt of the Completion Notice evidencing compliance with each of the applicable Allotment Conditions, the Nominated Authority may issue the Allotment Order, subject to the Ordinance, the Rules, the Allotment Document and other Applicable Laws, in the manner provided in this Clause 4.

4.2. The Allotment Order shall be issued by the Nominated Authority in substantially the same format as specified by the Central Government.

4.3. Prior to issuance of the Allotment Order, the Nominated Authority shall provide a written notice to the Allottee specifying the date of the Allotment Order (the "Allotment Date") and the date and time on which and place from where the Allotment Order may be collected by the Allottee.

4.4. The Allottee shall appoint a substantiated representative of the Allottee ("Authorised



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Allotment Agreement for Bishwarath Coal Mine

Representative") to receive the Allotment Order on behalf of the Allottee on the date, time and place specified by the Nominated Authority under Clause 4.3.

- 4.5. The Authorised Representative shall be provided the Allotment Order in duplicate and shall be required to acknowledge the receipt of the Allotment Order. In the event, the Authorised Representative is not present on the date and time specified by the Nominated Authority under Clause 4.3, then the Nominated Authority shall dispatch the Allotment Order by registered post with acknowledgment due, to the registered office of the Allottee.
- 4.6. The Allottee shall, within seven Business Days of the receipt of the Allotment Order through the Authorised Representative or through registered post, as the case may be, sign and return the duplicate copy of the Allotment Order in acknowledgement thereof. In the event the duplicate copy of the Allotment Order duly signed by the Allottee is not received by the aforementioned date, the Nominated Authority may, unless it consents to extension of time for submission thereof, appropriate the Performance Security and other payments made by such Allottee as damages and also terminate this Agreement and cancel and withdraw the Allotment Order.

5. POST ALLOTMENT OBLIGATIONS

5.1. Commencement Plan

5.1.1. Within 30 Business Days of the date of the Allotment Order, the Allottee shall be required to submit a detailed plan (the "Commencement Plan") towards commencement of mining operations at the Coal Mine. The Commencement Plan shall include all actions that the Allottee may be required to perform to commence mining operations at the Coal Mine and shall include such information as may be required by the Nominated Authority, including without limitation, information regarding the following:

- (a) the Governmental Approvals, including the Mining Lease which shall be required for commencement of mining operations at the Coal Mine and the time within which the Allottee would make applications for such Governmental Approvals; and
- (b) revisions to the Mine Plan if any, as may be proposed by the Allottee.

5.1.2. The Commencement Plan shall be prepared by the Allottee to ensure strict compliance with the Efficiency Parameters.

5.2. Payment of the Upfront Amount

5.2.1. *First Instalment of fifty per cent*

The first instalment of fifty per cent of the Upfront Amount being an amount



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Allotment Agreement for Banhardih Coal Mine

equal to INR 25,00,00,000 (Indian Rupees Twenty Five Crore), shall be deposited by the Allottee in the Designated Bank Account in the manner provided in Clause 3.1(b) as an Allotment Condition.

5.2.2. Second Instalment of twenty five per cent

The second instalment of twenty five per cent of the Upfront Amount being an amount equal to INR 12,50,00,000 (Indian Rupees Twelve Crore and Fifty Lakh), shall be deposited by the Allottee in the Designated Bank Account, on or prior to expiry of 15 Business Days from the date of execution of the Mining Lease by the relevant State Government.

5.2.3. Third Instalment of twenty five per cent

The third instalment of twenty five per cent of the Upfront Amount being an amount equal to INR 12,50,00,000 (Indian Rupees Twelve Crore and Fifty Lakh), shall be deposited by the Allottee in the Designated Bank Account, on or prior to expiry of 15 Business Days from the date of grant of mine opening permission from the state pollution control board of the relevant State where the Coal Mine is located.

5.2.4. Failure to pay the Upfront Amount

In the event the Allottee fails to pay the second instalment or the third instalment of the Upfront Amount within the time specified in Clause 5.2.2 or Clause 5.2.3, respectively, then the Nominated Authority shall be entitled to appropriate the Performance Security in the manner stipulated in Clause 6 (PERFORMANCE SECURITY) and such failure may also result in termination of this Agreement as provided in Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

5.2.5. Undertaking to pay revised Upfront Amount

The Allottee shall provide an undertaking to pay the revised Upfront Amount as required under Clause 3.1 (b) along with the first instalment of Upfront Amount as required under Clause 5.2.1, in substantially the same form as provided in SCHEDULE G. Submission of such revised Upfront Amount by the Allottee shall be essential; failing which the Allotment Order made to the Allottee shall stand terminated as per the provisions of Clause 24.3.1 of the Agreement.

5.3. The Mining Lease

5.3.1 Pursuant to Section 8(4)(b) and Section 8(8), read with Section 8(12) of the Ordinance, the Allottee shall become entitled to the mining lease with respect to the Coal Mine (the "Mining Lease") to be granted by the State Government upon issuance of the Allotment



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Allotment Agreement for Bankardih Coal Mine.

Order.

5.3.2. The Allottee shall promptly upon issuance of the Allotment Order make an application to the State Government for grant of a Mining Lease in the name of the Allottee.

6. PERFORMANCE SECURITY AND APPROPRIATION

6.1. Performance Security

6.1.1. The Allottee shall provide an irrevocable and unconditional guarantee from an Acceptable Bank payable at Delhi for an amount equal to INR 2,37,60,00,000 (Indian Rupees Two Hundred Thirty Seven Crore and Sixty Lakh) (the "Performance Security") in substantially the same form as provided in SCHEDULE F for the performance of its obligations within such time as specified in Clause 3.2.2. The amount of Performance Security mentioned herein is subject to revision pursuant to approval of the Mine Plan by the competent authority.

6.1.2. The Performance Security shall be an amount which is equal to aggregate of: (a) one year royalty calculated on the basis of peak rated capacity of the Coal Mine as per the approved Mine Plan, payable to respective State Government with respect to the Coal Mine; and (b) the annual peak rated capacity of the Coal Mine as per the approved Mine Plan multiplied by the Reserve Price.

6.1.3. In case of any revision in the Mine Plan in accordance with Clause 14, the amount of Performance Security shall be revised accordingly.

6.1.4. In such case, bank guarantee constituting the Performance Security shall be substituted with another bank guarantee of the enhanced value issued in accordance with this Clause 6, within a period of 15 Business Days of receipt of approval for revision to the Mine Plan.

6.1.5. The Performance Security should remain valid until such time when the Coal Mine achieves the annual peak rated capacity.

6.1.6. While submitting Performance Security as required under Clause 6.1.1, the Allottee shall also provide an undertaking to submit the revised Performance Security as required under Clause 3.1 (c), in substantially the same form as provided in SCHEDULE G. The revised Performance Security so submitted shall replace the Performance Security submitted previously. Submission of such revised Performance Security by the Allottee shall be essential; failing which the Allotment Order made to the Allottee shall stand terminated as per the provisions of Clause 24.3.1 of the Agreement.

6.2. Events for appropriation of the Performance Security

6.2.1. The Performance Security may be appropriated by the Nominated Authority upon



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Allotment Agreement for Bankardih Coal Mine

occurrence of any of the following events (the "Appropriation Event"), to be determined by the Nominated Authority in its sole discretion:

- (a) failure of the Allottee to provide the duly acknowledged duplicate copy of the Allotment Order as required under Clause 4.6;
- (b) failure of the Allottee to make payment of the first instalment, second instalment or the third instalment of the Upfront Amount within the time specified in Clause 3.1(b), Clause 5.2.2 or Clause 5.2.3, respectively;
- (c) failure of submission of Commencement Plan within the time specified in Clause 5.1.1;
- (d) failure of the Allottee to comply with the Efficiency Parameters as required under Clause 10;
- (e) any change in Control or transfer of right, title or interest in the Coal Mine which is not in conformity with Clause 13;
- (f) failure to make payment of the Monthly Payment in accordance with this Agreement;
- (g) any utilisation of coal which is not in conformity with Clause 8; or
- (h) any other breach or non-compliance of any of the provisions of this Agreement including in case of the Warranties being untrue or misleading or incorrect in any manner whatsoever.

6.2.2. Provided however that in the event an Appropriation Event has occurred solely on account of an event of Force Majeure as provided in Clause 23, which could not have been mitigated by the Allottee through Good Industry Practice, then the Performance Security shall not be appropriated for such specific Appropriation Event.

6.3. Manner of appropriation of the Performance Security

6.3.1. Upon occurrence of an Appropriation Event, to be determined by the Nominated Authority, the Nominated Authority shall have the unconditional right to appropriate the Performance Security by providing a written notice to the Allottee, in the following proportion:

#	Appropriation Event	Amount of the Performance Security to be appropriated
1.	Failure of the Allottee to provide the duly	Entire Performance Security.



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Allotment Agreement for Baharathi Coal Mine

#	Appropriation Event	Amount of the Performance Security to be appropriated
	acknowledged duplicate copy of the Allotment Order as required under Clause 4.6	
2.	Failure of the Allottee to make payment of the first instalment, second instalment or the third instalment of the Upfront Amount within the time specified in Clause 3.1(b), Clause 5.2.2 or Clause 5.2.3, respectively	An amount equal to the first instalment, and/or second instalment and/or third instalment of the Upfront Amount together with 12% per annum simple interest on such amount starting from the date on which such amount was due and until the date of appropriation of the Performance Security.
3.	Failure of submission of Commencement Plan within the time specified in Clause 5.1.1	An amount equal to 10% of the Performance Security
4.	Failure of the Allottee to comply with the Efficiency Parameters as required under Clause 10	Such per cent of the Performance Security for each failure to comply with the Efficiency Parameters as specified in SCHEDULE E.
5.	Any change in Control or transfer of right, title or interest in the Coal Mine which is not in conformity with Clause 13	Entire Performance Security.
6.	Any utilisation of coal which is not in conformity with Clause 8	Entire Performance Security.
7.	Failure of the Allottee to make payment of the Monthly Payment	The amount of Monthly Payment due and payable, along with a simple interest of twelve per cent per annum, starting from the date on which such amount was due and until the date of appropriation of the



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Allocation Agreement for Banhardih Coal Mine

#	Appropriation Event	Amount of the Performance Security to be appropriated
		Performance Security.
8.	Any other breach or non-compliance with any of the provisions of this Agreement, including in case of the Warranties being untrue or misleading or incorrect in any manner whatsoever.	Such proportion as may be determined by the Nominated Authority in its sole discretion.

6.3.2. Any Appropriation Event resulting in appropriation of the entire Performance Security shall be a Termination Event for the purposes of Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

6.3.3. In the event of a part appropriation of the Performance Security, the Allottee shall be required to: (i) rectify the Appropriation Event; and (ii) top-up the bank guarantee constituting the Performance Security within fifteen Business Days of receipt of a notice under Clause 6.3.1, failure to do so shall be a Termination Event for the purposes of Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION). Appropriation Event, except as mentioned in clause 6.2.1(d), shall be rectified within seven Business Days of receipt of a notice under Clause 6.3.1. Appropriation Event mentioned in clause 6.2.1 (d) shall be rectified within the time specified in SCHEDULE E.

6.3.4. In the event that on account of one or more Appropriation Events, an amount equal to hundred per cent of the Performance Security is appropriated in aggregate in one or more instances, the same shall be a Termination Event for the purposes of Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

7. INFORMATION

7.1. In addition to information that may be required to be provided in accordance with Applicable Laws, the Allottee shall provide periodic reports to the Nominated Authority (or such other Governmental Authority as may be specified by the Nominated Authority) regarding mining operations at the Coal Mine, including compliance with the Efficiency Parameters, in accordance with the following provisions:

(a) **Pre-Commencement Report**

Prior to commencement of mining operations at the Coal Mine, the Allottee shall provide a written intimation ("Pre-commencement Report") to the Nominated Authority and the Central Government once every thirty calendar days regarding the following:



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end

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Allotment Agreement for Banhardih Coal Mine

- (i) the actions taken by the Allottee towards commencement of the mining operations at the Coal Mine, including compliance with the Commencement Plan;
- (ii) any deviations from the Commencement Plan, the reasons for such deviations and the steps taken by the Allottee to rectify such deviation; and
- (iii) whether in the opinion of the Allottee, it shall be able to commence mining operations at the Coal Mine within the time mentioned in the Commencement Plan.

The Allottee shall also inform the Nominated Authority in writing within 3 Business Days of receipt of the mine opening permission from the state pollution control board of the relevant State where the Coal Mine is located.

(b) **Commencement Report**

Within three Business Days of the commencement of mining operations at the Coal Mine, the Allottee shall provide a written intimation to the Nominated Authority confirming commencement of mining operations at the Coal Mine (the "Commencement Report").

(c) **Monthly Report**

Subsequent to the Commencement Report, the Allottee shall provide a written intimation ("Monthly Report") to the Coal Controller's Organisation within seven Business Days of end of each calendar month comprising: (i) a declaration regarding compliance with the Efficiency Parameters in the immediately preceding calendar month. In the event of a non-compliance with the Efficiency Parameters, complete particulars of the same, including the reasons for such non-compliance, and the corrective steps proposed to be undertaken; and (ii) such other information as may be required to be provided by the Nominated Authority.

(d) **Yearly Report**

Within seven Business Days of conclusion of the annual general meeting of the Allottee, it shall provide the following information to the Coal Controller's Organisation:

- (i) two certified copies of its balance sheets, cash flow statement and profit and loss account, along with a report thereon by its statutory auditors; and
- (ii) such other information as may be required to be provided, by the Nominated Authority.



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(A Subsidiary of NTPC Ltd. a Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

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Allocation Agreement for Banharali Coal Mine

7.2. The Pre-Commencement Report, the Commencement Report, the Monthly Report and the Yearly Report shall be provided to the Nominated Authority or the Coal Controller's Organisation as attachments to an email addressed to the following e-mail address: (lnomauthority.moc@nic.in in case of the Nominated Authority; or (liccoalcont-wb@nic.in in case of the Coal Controller's Organisation. Such attachments must be digitally signed by the Allottee using a Class III digital signature certificate issued by a certifying authority in India.

7.3. The Nominated Authority shall have the right to seek such further information regarding the Pre-Commencement Report, the Commencement Report, the Monthly Report or the Yearly Report and also seek independent verification of the same.

8. UTILISATION OF COAL

8.1. Utilisation of Coal in the Specified End Use Plant

Except as otherwise provided in this Clause 8, the coal extracted from the Coal Mine shall be utilised by the Allottee strictly in the Specified End Use Plant; and shall not be utilised for any other purpose whatsoever, either directly or indirectly.

8.2. Middling or washery rejects

8.2.1. The Allottee shall adhere to Good Industry Practice with respect to mining of coal and make best efforts to reduce generation of middling or washery rejects and utilise the same in any captive power plant of the Allottee. In any case the middling or washery rejects generated from the Coal Mine shall not exceed normative limits.

8.2.2. Any middling or washery rejects generated from the Coal Mine may be sold by the Allottee and the Allottee shall maintain separate records for the middling or washery rejects generated, utilised and sold. However, the middling or washery rejects generated from the Coal Mine should in no event, exceed the normative limits.

8.3. Arrangements for optimal utilisation

8.3.1. In terms of Section 20 of the Ordinance and Rule 19 of the Rules, the Allottee shall be permitted to enter into arrangements for optimum utilisation of the Coal Mine (the "Arrangement"). In the event the Allottee is desirous of entering into an Arrangement, it shall make an application (the "Arrangement Application") to the Central Government in accordance with Rule 19 of the Rules.

8.3.2. The Arrangement Application shall be filed by the Allottee prior to undertaking any Arrangement and no Arrangement shall be given effect to until the Arrangement Application has been approved by the Central Government.

The Arrangement Application shall be made in writing and shall include complete



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Allotment Agreement for Bankhandi Coal Mine

requirement is being met; and the per cent of such requirement being proposed to be met from the Coal Mine; and the manner in which such diversion would affect the Specified End Use Plant originally associated with the Coal Mine.

8.4.5. In the event that coal extracted from the Coal Mine is being diverted to any Other Plant(s) pursuant to this Clause 8.4, then the Allottee or any of its subsidiary company owning such Other Plant(s) shall also be required to adhere to the stipulations under this Agreement with respect to the utilization of coal from the Coal Mine and the Specified End Use and any Applicable Law.

8.5. **Sale to CIL**

8.5.1. Any coal extracted from the Coal Mine which is in excess of the requirements of coal for the Specified End Use Plant and the Other Plant(s) shall be required to be supplied to CIL at the CIL Notified Price.

8.5.2. It is clarified that for the purposes of sale of coal to CIL, the determination of grade of coal shall be based on joint analysis of coal carried out by the Allottee and CIL. It is further clarified that the Allottee shall continue to make Monthly Payments with respect to the coal extracted from the Coal Mine as per Clause 9 including on the coal sold to CIL.

8.5.3. All Taxes applicable on such sale of coal shall be payable additionally.

9. **MONTHLY PAYMENTS AND ESCALATION**

9.1. **Monthly Payment**

9.1.1. The Allottee shall be required to make monthly payments (the "Monthly Payment") with respect to the coal extracted from the Coal Mine on the basis of the Reserve Price (as escalated in accordance with Clause 9.2).

9.1.2. The Monthly Payment is required to be made in the Designated Bank Account within 20 calendar days of expiry of each month with respect to coal extracted from the Coal Mine in such calendar month.

9.1.3. All payments required to be made by the Allottee shall be made net of all applicable Taxes. In the event, Taxes are payable, the Allottee shall gross-up the amount payable and make payment of the aggregate amount.

9.2. **Escalation**

9.2.1. For the purposes of computation of the Monthly Payment, the Reserve Price shall be subject to an escalation on a year-on-year basis every financial year on the basis of the pre-specified escalation formula that is prescribed in the relevant Standard Bidding



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Allotment Agreement for Banhardih Coal Mine

Document for Design, Build, Finance, Own and Operate (DBFOO) bidding as formulated by Ministry of Power for escalation of fuel cost from captive mines (the "Reference Index"), and the Reserve Price shall stand increased by the per cent increase of the Reference Index on a year-on-year basis. It is clarified that for the purposes of escalation in a subsequent financial year, the escalated Reserve Price of the immediately preceding year shall be considered. The last published Reference Index shall be used for computing the escalation. The subject escalation would be applicable after the issuance of the Allotment Order.

9.2.2. In the event that the failure of the Allottee to make payment of the Monthly Payment exceeds for more than three instances, such non-compliance may also result in termination of this Agreement as provided in Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

9.3. It is clarified that in addition to the aforementioned payments any royalty payable under Applicable Laws shall be payable additionally.

10. EFFICIENCY PARAMETERS

10.1. The conduct of mining operations at the Coal Mine shall be subject to the milestones listed in SCHEDULE E (the "Efficiency Parameters").

10.2. The Allottee would provide periodic information to the Nominated Authority and the Central Government regarding compliance with the Efficiency Parameters in the manner stipulated in Clause 7 (INFORMATION).

10.3. Any non-compliance with the Efficiency Parameters would result in appropriation of the Performance Security in the manner stipulated in Clause 6 (PERFORMANCE SECURITY) and in case where such non-compliance exceeds for more than five instances, such non-compliance may also result in termination of this Agreement as provided in Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

11. GENERAL RIGHTS AND OBLIGATIONS

11.1. Limited Mining Rights

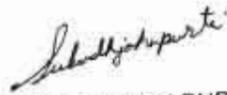
The Allottee shall be entitled to receive a Mining Lease for conduct of mining operations only in the Coal Mine and shall not be entitled to conduct the mining operations in any other area pursuant to this Agreement. The rights granted to the Allottee herein to conduct mining operations are exclusive within the Coal Mine. The Government undertakes not to grant any rights to mine coal in the Coal Mine to any Third Party during the Term.



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Allotment Agreement for Banihardih Coal Mine

- 11.4.4. The Allottee shall train employees engaged at the Coal Mine, including employees of any contractor or sub-contractor and of all other persons having legal access to the area covered by this Agreement, in accordance with the Good Industry Practice.
- 11.4.5. The Allottee shall construct, maintain, and operate health programs and facilities to serve the employees engaged at the Coal Mine, including employees of any contractor or sub-contractor and of all other persons having legal access to the area covered by this Agreement, which programs and facilities shall install, maintain and use modern health devices and equipment and shall practice modern health procedures and precautions in accordance with Good Industry Practice.
- 11.4.6. Without prejudice to the generality of the foregoing, in the event the Allottee provides housing, the same shall be built to a standard that provides suitable living environments adequate for health and well-being, and which meet applicable sanitation standards in terms of Good Industry Practice.

12. CONTRACTORS AND SUB-CONTRACTORS

- 12.1. In the event the Allottee enters into any agreement with any contractor in relation to the mining operations at the Coal Mine, then a duly certified copy of such agreement shall also be submitted to the Nominated Authority within fifteen Business Days of its execution.
- 12.2. Any Agreement between the Allottee and its contractors shall contain appropriate terms by which the contractor shall acknowledge and comply with the terms of this Agreement and the contractor shall also cause its sub-contractors to acknowledge and comply with the same.
- 12.3. Nothing in this Agreement shall exempt the Allottee from any and all obligations under this Agreement despite the delegation of such obligations to a contractor or its subcontractors.
- 12.4. Terms and Conditions for appointment of contractor(s) in relation to coal mining operations may be formulated in line with the terms and conditions specified in the Auction by Competitive Bidding of Coal Mines Rules, 2012 (as amended by notification dated 27.12.2012) framed under Sec. 11A of the MMDR Act. The terms and conditions may be as follows:
- 12.4.1. In case the Coal Mine is developed through contractor(s), the selection of the contractor(s) in relation to coal mining operation shall be through a competitive bidding process and the Allottee company shall inform the State Government concerned, the Central Government and the Nominated Authority about the engagement of such contractor(s) and the terms and conditions of such engagement, as soon as it is




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Allotment Agreement for Barharadh Coal Mine

finalised.

12.4.2. The Allottee shall ensure that the criteria of bidding for engagement of the contractor(s) are not linked to CIL Notified Price.

12.4.3. The contractor(s) shall maintain all records as required to be maintained and shall provide such records for the inspection by the Allottee, the State Government concerned, the Central Government and the Nominated Authority.

13. CHANGE IN CONTROL AND TRANSFER

13.1. Change in Control of the Allottee

13.1.1. Change in Control of the Allottee or any transfer of the Specified End Use Plant along with the rights in relation to the Coal Mine, shall be permissible with prior intimation to the Nominated Authority and the Central Government if:

- (a) such change in Control does not result in the Allottee becoming non-compliant with any of the Eligibility Conditions or the transferee is also compliant with the applicable Eligibility Conditions, as the case may be. It is clarified that no company other than a Government company or corporation shall be permitted to hold more than twenty-six per cent of the paid up share capital in the Allottee, either directly or through any of its subsidiary company or associate company; and
- (b) such change in Control or transfer does not require any prior consent, approval, no-objection certificate or the like under any Applicable Law.

13.1.2. In the event that any change in Control of the Allottee or any proposed transfer of the Specified End Use Plant along with the rights in relation to the Coal Mine requires prior Governmental Approval under any Applicable Laws, then such Governmental Approval shall be granted (in addition to any other requirement under Applicable Law) only if:

- (a) the transferee of such right, title or interest of the Allottee subsequent to change of Control, as the case may be, also meets all the applicable Eligibility Conditions; or
- (b) the Allottee continues to meet all the applicable Eligibility Conditions, as the case may be.

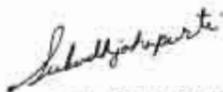
13.2. Change in Control in case of a joint venture

13.2.1. In the cases where allotment has been made to a joint venture of any two or more Government companies or corporations, such companies shall be prohibited from alienating or transferring any interest, except for taking of loans or advances from a bank



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Allotment Agreement for Baidardih Coal Mine

or financial institution, in the joint venture of whatsoever nature including ownership in favour of a Third Party.

13.3 Consequences of default

13.3.1. In the event of any change in Control or any transfer of right, title or interest in the Coal Mine which is not in conformity with this Agreement or any Applicable Law, then in addition to any rights, remedy or consequences as may be applicable under Applicable Laws, the Nominated Authority or the Central Government may, in its sole discretion, appropriate the Performance Security, disqualify the Allottee from participating in any further auction or allotment process conducted by the Nominated Authority, terminate this Agreement, and/or terminate and withdraw the Allotment Order as the case may be.

13.3.2. Any transfer of right, title or interest which is not in conformity with this Agreement or Applicable Laws shall be deemed to be void *ab-initio*.

14. MINE PLAN

14.1. The Mine Plan approved in relation to the Prior Allottee, if any shall also be applicable to the Allottee.

14.2. Upon allocation of Coal Mine, the Allottee may revise the Mine Plan for extraction of more coal as compared to the Mine Plan being subject to revision in accordance with the provisions of Applicable Law and the Agreement.

14.3. The Allottee may increase mine production to the maximum possible extent and utilise the coal in accordance with Clause 8. Subject to Applicable Laws, the Allottee may apply for coal linkages or participate in auction/ allotment for the Specified End Use Plan three years prior to the exhaustion of extractable reserves in the Coal Mine.

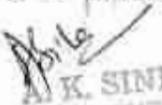
15. MINE CLOSURE

15.1. Upon exhaustion of the extractable coal reserves at the Coal Mine the Coal Mine shall be closed, in the manner provided in the mine closure plan and Applicable Laws.

16. COMPLIANCE AND RECORD KEEPING

16.1. The Allottee shall keep at its normal place of business detailed, accurate and up to date records and books of account showing all payments made by the Allottee in connection with this Agreement, the development of the Coal Mine, mining operations and matters incidental thereto and the steps taken by the Allottee to comply with Applicable Laws. Such records and books of accounts shall be required to be maintained for a period of six years. The Allottee shall ensure that such records and books of accounts are sufficient to enable verification of the Allottee's compliance with its obligations under this Agreement.




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Assignment Agreement for Burhadin Coal Mine

16.2. The Allottee shall permit the Nominated Authority and its representatives, to access and take copies of the Allottee's records and any other information held at the Allottee's premises and to meet with the Allottee's personnel to audit the Allottee's compliance with its obligations under this Agreement. Such audit rights shall continue for three years after termination of this Agreement. The Allottee shall give all necessary assistance to the conduct of such audits during the Term of this Agreement and for a period of three year after termination of this Agreement.

17. REPRESENTATIONS AND WARRANTIES

17.1. The Allottee represents and warrants to the Nominated Authority (save as otherwise disclosed to the Nominated Authority in writing), as of the Agreement Date, in the manner as detailed in SCHEDULE H ("Warranties");

17.2. None of the representations, warranties and/or statements contained in this Agreement shall be treated as qualified by any actual or constructive knowledge on the part of the Nominated Authority or the Central Government or any of its respective agents, representatives, officers, employees or advisers.

17.3. In the event that any of the representations or warranties made or given by the Allottee ceases to be true or stands changed, the Allottee shall promptly notify the Nominated Authority of the same. The Allottee hereby waive all its rights to invoke and shall not invoke the Nominated Authority's knowledge (actual, constructive or imputed) of a fact or circumstance that might make a statement untrue, inaccurate, incomplete or misleading as a defence to a claim for breach of Warranties or covenant or obligation of the Allottee.

18. INDEMNITIES

18.1. In this clause, a reference to the Nominated Authority shall include the Nominated Authority; the Government of India; any of the departments or ministries of Government of India; and of the officers, employees, staff, advisors, representatives or agents of the Government of India (collectively the "Indemnified Party") and the provisions of this Clause shall be for the benefit of the Indemnified Party, and shall be enforceable by each such Indemnified Party.

18.2. The Allottee shall indemnify the Indemnified Party against all liabilities, costs, expenses, damages and losses (including but not limited to any interest, penalties and legal costs (calculated on a full indemnity basis) and all other professional costs and expenses) suffered or incurred by the Indemnified Party arising out of or in connection with:

- (a) any breach of the Warranties
- (b) Allottee's breach or negligent performance or non-performance of this Agreement;



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Allotment Agreement for Bahardih Coal Mine

- (c) the enforcement of this Agreement;
- (d) any claim made against the Indemnified Party for actual or alleged infringement of a Third Party's rights arising out of or in connection with mining operations at the Coal Mine or performance or non performance of any of the obligations under this Agreement to the extent that such claim arises out of the breach, negligent performance or failure or delay in performance of this Agreement by the Allottee, its employees, agents or contractors;
- (e) any claim made against the Indemnified Party by a Third Party for death, personal injury or damage to property arising out of or in connection with mining operations at the Coal Mine or performance or non performance of any of the obligations under this Agreement;
- (f) any loss or damages caused on account of breach of any Applicable Law by the Allottee, including without limitation any costs incurred by the Nominated Authority in cleaning or rectifying of any environmental damages caused by the Allottee on account of, lack of Good Industry Practice; breach, negligent performance or failure or delay in performance of this Agreement; or non-compliance with Applicable Law.
- 18.3. If any Third Party makes a claim, or notifies an intention to make a claim, against the Indemnified Party which may reasonably be considered likely to give rise to a liability under this indemnity (a "Claim"), the Indemnified Party shall as soon as reasonably practicable, give written notice of the Claim to the Allottee, specifying the nature of the Claim in reasonable detail.
- 18.4. Subject to the Allottee providing security to the Indemnified Party, to the Indemnified Party's sole and absolute satisfaction against any claim, liability, costs, expenses, damages or losses which may be incurred, the Allottee may take such action as it may reasonably deem fit to avoid, dispute, compromise or defend the Claim.
- 18.5. Payments of the amount of Claim shall become due and payable within thirty Business Days of receipt of notice of Claim. If a payment due from the Allottee under this clause is subject to Tax (whether by way of direct assessment or withholding at its source), the Indemnified Party shall be entitled to receive from the Allottee such amounts as shall ensure that the net receipt, after Tax, to the Indemnified Party in respect of the payment is the same as it would have been were the payment not subject to Tax.

19. ASSIGNMENT, SECURITY FOR FINANCING

19.1. Prohibition on Assignment

19.1.1. Except as provided in this Clause 19, the Allottee shall not assign this Agreement, either



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Assignment Agreement for Banharathi Coal Mine

directly or indirectly, save and except with the prior consent in writing of the Nominated Authority, which consent the Nominated Authority shall be entitled to decline without assigning any reason.

19.1.2. Subject to compliance with provisions of Clause 19.2, this Agreement may be assigned by the Allottee in the following events:

- (a) upon occurrence of a change in Control or transfer which is permissible in terms of Clause 13, to the transferee; or
- (b) upon occurrence of an enforcement event, to a transferee as may be determined by a bank or financial institution in terms of Clause 19.3.

19.2. Assignment Conditions

Assignment of this Agreement shall also be subject to the following conditions precedent:

- (a) the proposed assignee must meet the applicable Eligibility Conditions;
- (b) the proposed assignee must agree to unconditionally and irrevocably adhere to the provisions of this Agreement and must enter into a deed of adherence in the manner as prescribed by the Nominated Authority;
- (c) the proposed assignee must have furnished the Performance Security, to substitute any subsisting Performance Security provided by the Allottee;
- (d) the proposed assignee must have paid any other amount due from the Allottee and agree to indemnify and hold the Nominated Authority harmless in all respects against any claims from any Third Party or the Allottee with respect to such assignment.

19.3. Security for financing, enforcement Event

19.3.1. Subject to Applicable Laws, the Allottee shall be entitled to create security over the Coal Mine through mortgage for the purposes of availing financing from a bank or financial institutions for the purposes of financing of the Specified End Use Plant or mining operations at the Coal Mine and such security creation shall not require prior approval by the Nominated Authority or the Central Government. It is clarified that the Allottee shall be permitted to enter into any agreement with bank or financial institutions with respect to assignment of this Agreement in terms of this Clause 19.3 and in such case the assignment conditions mentioned in Clause 19.2 shall not be applicable and the conditions specified in Clause 19.3 shall be applicable.

19.3.2. The Allottee shall keep the Nominated Authority promptly informed about: (i) any default in its obligation under any arrangement with any bank or financial institution; (ii)



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 Patratu, Dist. Rangoon-820119

Allocation Agreement for Bahardih Coal Mine

any security interest created over the Coal Mine; and (ii) any action initiated by the bank or financial institution regarding enforcement of security.

19.3.3. In the event of a default, the banks or financial institutions, as the case may be shall be entitled to enforce their security interest, provided that the conditions listed in Clause 19.2 are met, in the manner provided below:

- (a) the security interest shall be exercised in accordance with the provisions of Applicable Laws and any inter-se agreement between the secured creditors, if any;
- (b) the lead secured creditor (in case of consortium lending) or the secured creditor with the highest exposure (in case of multiple banking), shall be entitled to seek a substitution of the Allottee by providing a written notice (the "Substitution Notice") to the Nominated Authority;
- (c) the Substitution Notice shall contain complete particulars of the proposed transferee (the "Selectee"), particulars of compliance of the Selectee with all the Eligibility Conditions, particulars of the debt due and such data and information as would be necessary and relevant for the Nominated Authority to decide as to the acceptability of the Selectee;
- (d) the Nominated Authority may require such other information as it may deem fit regarding the suitability of the Selectee to receive rights and obligations with respect to the Coal Mine;
- (e) the Substitution Notice must be accompanied by an unconditional undertaking of the Selectee to the effect that it shall upon acceptance by the Nominated Authority observe, comply with, perform and fulfil the residual terms, conditions and covenants of this Agreement as if the Selectee had been the Allottee under this Agreement and to assume, discharge and pay the debt due on the terms and conditions agreed to by the Selectee with the secured creditors. The Selectee shall also undertake to enter into such documents and agreements with Nominated Authority as may be necessary or required to give effect to the substitution of the Allottee by the Selectee;
- (f) the Nominated Authority shall convey its acceptance or otherwise of the Selectee within sixty Business Days of (a) the date of receipt of the Substitution Notice; or (b) the date of receipt of the additional information and clarifications requested in respect of any data, particulars or information comprised in the Substitution Notice, whichever is later.
- (g) In the event that the Nominated Authority fails to communicate its acceptance or



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 Bahardih 11th Coal Block

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Allotment Agreement for Binhardih Coal Mine

otherwise or the objections if any it has to the acceptance of the Substitution Notice, within the time specified in sub-clause (f) above, the Nominated Authority shall be deemed to have accepted the Substitution Notice and the Selectee.

19.3.4 Upon acceptance of the Selectee by the Nominated Authority or the Nominated Authority having been deemed to have accepted the Substitution Notice, this Agreement shall be deemed to be assigned in favour of the Selectee without any further act or deed of the Allottee.

20. INSURANCE

20.1. At all times during the Term hereof, the Allottee will maintain, and cause its contractors and sub-contractors to maintain, with financially sound and reputable insurers, insurance against such casualties and contingencies, of such types, on such terms and in such amounts (including deductibles, co-insurance and self-insurance, if adequate reserves are maintained with respect thereto) as is consistent with Good Industry Practice.

21. ACCOUNTS AND AUDIT

21.1. Audited Accounts

The Allottee shall maintain books of accounts recording all its receipts, income, expenditure, payment, assets and liabilities in accordance with Good Industry Practice and Applicable Laws.

21.2. Appointment of Auditors

The Nominated Authority shall have the right, but not the obligation, to appoint at its cost, from time to time and at any time, an auditing firm or an auditor to audit and verify all those matters, expenses, costs, realizations and things with respect to the Coal Mine or which the statutory auditors are required to do, undertake or certify pursuant to this Agreement.

21.3. Certification of claims by Statutory Auditors

Any claim or document provided by the Allottee to the Nominated Authority in connection with or relating to receipts, income, payments, costs, expenses, accounts or audit, and any matter incidental thereto shall be valid and effective only if certified by its statutory auditors.

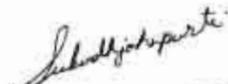
22. GOVERNMENT INSPECTION

22.1. The Nominated Authority, through its authorized representatives shall have the right to free ingress and egress within any part of the Coal Mine at any time to inspect works or



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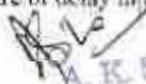

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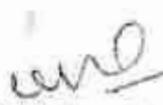

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Sr. Manager (Coal Mine)
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Allotment Agreement for Bannardih Coal Mine

- activities being undertaken or implemented by the Allottee in order to monitor and verify compliance with the terms of this Agreement and all Applicable Laws.
- 22.2. The Nominated Authority, through its authorized representatives, shall have access to the Allottee's financial and other records and transactions (relatable to any period) at any time upon reasonable advance notice, the right to copy therefrom, for the purpose of assessing the performance and compliance of the Allottee with the terms of this Agreement and all Applicable Laws, rules and regulations or to aid in the enforcement of the same.
- 22.3. The Nominated Authority shall have the right to conduct, either directly or indirectly through any Third Party, a performance audit to verify compliance by the Allottee, of its obligations hereunder.
- 23. EVENT OF FORCE MAJEURE**
- 23.1. Event of Force Majeure means any of the following events or circumstances or combination of the following events or circumstances which are beyond the reasonable control of the Allottee, which could not have been prevented by Good Industry Practice or by the exercise of reasonable skill and care and which or any consequences of which, have a material and adverse effect upon the performance by the Allottee of its obligations or enjoyment of its rights:
- (i) acts of God, flood, drought, earthquake or other natural disaster;
 - (ii) epidemic or pandemic;
 - (iii) terrorist attack, civil war, civil commotion or riots, war, threat of or preparation for war, armed conflict, imposition of sanctions, embargo, or breaking off of diplomatic relations;
 - (iv) nuclear, chemical or biological contamination or sonic boom;
 - (v) collapse of buildings, fire, explosion or accident;
 - (vi) any labour or trade dispute, strikes, industrial action or lockouts (other than those solely affecting Allottee claiming the same as an Event of Force Majeure and attributable to such Allottee's policies regarding labour, compensation or employment or labour related conditions).
- 23.2. Provided it has complied with Clause 23.3, if the Allottee is prevented, hindered or delayed in or from performing any of its obligations under this Agreement by an Event of Force Majeure, the Allottee shall not be in breach of this Agreement or otherwise liable for any such failure or delay in the performance of such obligations.




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Allocation Agreement for Bardighat Coal Mine

23.3. Upon occurrence of an Event of Force Majeure, the Allottee shall:

- (i) as soon as reasonably practicable after the start of the Event of Force Majeure but no later than thirty Business Days from its start, notify the Nominated Authority and the Central Government in writing of the Event of Force Majeure, the date on which it started, its likely or potential duration, and the effect of the Event of Force Majeure on its ability to perform any of its obligations under this Agreement; and
- (ii) use all reasonable endeavours to mitigate the effect of the Event of Force Majeure on the performance of its obligations including following of Good Industry Practice.

23.4. If an obligation is suspended by reason of an Event of Force Majeure for more than one month continuously, the Parties shall enter into good faith negotiations to revise the terms of this Agreement to reflect the changed circumstances, provided that this Agreement shall remain in effect during the period during which the Parties are negotiating the terms of any such revision.

23.5. Notwithstanding Clause 23.4, in the event that performance of obligations under this Agreement remain suspended for a period of (a) six months continuously; (b) or nine months over a period of one year, then the Nominated Authority may in its sole discretion terminate this Agreement in the manner provided in Clause 24 (EFFECTIVE DATE, TERM AND TERMINATION).

24. EFFECTIVE DATE, TERM AND TERMINATION

24.1. Effective Date

This Agreement shall come into effect on the Agreement Date. It is clarified that the provisions of this Agreement shall also be included in the Mining Lease.

24.2. Term

This Agreement shall commence on the dates mentioned in Clause 24.1 and shall continue for the period of validity of the Mining Lease granted to the Allottee ("Term"), unless agreed otherwise by the Parties and unless this Agreement is terminated earlier in accordance with its terms prior to the expiry of the Term.

24.3. Termination

24.3.1. This Agreement may be terminated upon occurrence of any of the following events (each a "Termination Event"):

- (a) Failure of the Allottee to make payment of the Upfront Amount in the manner



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SUBODH JOHN PARTI
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Allotment Agreement for Banharath Coal Mine

- provided in Clause 5.2;
- (b) failure of the Allottee to complete the Allotment Conditions within the time specified in Clause 3.2;
 - (c) failure of the Allottee to make payment of additional levy within the time specified under Rule 18 of the Rules, if required to be paid;
 - (d) occurrence of any Appropriation Event resulting in appropriation of the entire Performance Security or on account of one or more Appropriation Events, an amount equal to hundred per cent of the Performance Security being appropriated in aggregate (in one or more instances) as provided in Clause 6.3;
 - (e) failure of the Allottee to replenish the Performance Security within a period of 15 Business Days, in the event that a part of the Performance Security has been appropriated;
 - (f) non compliance of the Allottee with the Efficiency Parameters for more than five instances (in aggregate and not over a specified period) as provided in Clause 10.3;
 - (g) suspension of obligations on account of an Event of Force Majeure for a period longer than as specified in Clause 21.5;
 - (h) failure to make payment of the Monthly Payment for more than three instances (in aggregate and not over a specified period) in terms of Clause 9.2.2;
 - (i) failure to provide any information requested by the Nominated Authority in terms of this Agreement;
 - (j) failure of the Allottee to ensure continued compliance with the Eligibility Conditions;
 - (k) in case the Allottee is a joint venture company, alienation or transfer of any interest, except the taking of loans or advances from a bank or financial institution, in the joint venture of whatsoever nature including ownership in favour of a Third Party;
 - (l) a company other than a Government company or corporation holding more than twenty-six per cent of the paid up share capital of the Allottee, either directly or through any of its subsidiary company or associate company (such expressions having meaning ascribed under the Companies Act, 2013);
 - (m) the Allottee dissolves, liquidates, becomes insolvent, commits an act of bankruptcy, makes an assignment for the benefit of creditors, petitions or applies



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Subodh John Purti
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Allotment Agreement for Bankardih Coal Mine

to any tribunal for the appointment of a trustee or receiver for itself, or commence any proceedings concerning itself under a law concerning bankruptcy, or insolvency other than for the purposes of corporate reorganization;

- (n) any other breach of any of the provisions of this Agreement (including in case of the Warranties being untrue or misleading or incorrect in any manner whatsoever), which is not cured by the Allottee within thirty Business Days of becoming aware of the same, on its own accord or upon receipt of a notice from the Nominated Authority;
- (o) surrender of the Coal Mine by the Allottee;
- (p) cessation of coal mining operation exceeding a period of one year continuously, or 18 months over a period of two years without occurrence of any Event of Force Majeure;
- (q) termination of the Mining Lease granted to the Allottee; or
- (r) in the opinion of the Central Government, it is expedient in public interest to terminate this Agreement.

24.3.2. Upon occurrence of a Termination Event, the Nominated Authority may elect to terminate this Agreement by providing a 15 Business Days written notice to the Allottee. The determination of the Nominated Authority regarding occurrence of a Termination Event shall be final and binding on the Allottee.

24.3.3. In case the Nominated Authority elects to terminate this Agreement, then the Performance Security and all other payments made by the Allottee shall be forfeited and the Allottee shall not be entitled to any benefits under this Agreement but would continue to be liable towards any antecedent liability, all obligations accrued before the effective date of the surrender/ termination and also for the obligations that must be fulfilled after termination.

24.4. Retention of Books and Records

Upon termination of this Agreement, the Allottee shall retain all documents, books and records related to the Coal Mine for a period of three years or such longer period as may be specified under Applicable Law. It is clarified that the Allottee may also retain such books and records in electronic form if permitted under Applicable Laws.

25. GOVERNING LAW AND DISPUTE RESOLUTION

25.1. This Agreement and all questions of its interpretation shall be construed in accordance with the laws of India, without regard to its principles of conflicts of laws.

25.2. Any dispute, controversy or claim arising out of or relating to or in connection with the



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Allotment Agreement for Bahadurahi Coal Mine

Agreement including a dispute as to the validity or existence of this Agreement, or any breach or alleged breach thereof, shall be settled through mutual discussions between the Parties. In this regard, the Allottee shall nominate an officer not below the rank of a director to participate in the discussions on its behalf.

- 25.3. In the event that the Allottee fails to nominate an officer in the manner required under Clause 25.2; or the Parties are unable to resolve any dispute in accordance with Clause 25.2 within a period of 30 Business Days starting from the date on which the first notice of dispute was provided by either Party, such dispute shall be resolved in accordance with Section 27 of the Ordinance.
- 25.4. It is expressly agreed between the Parties, that any existence of a dispute shall not affect in any manner any of the rights of the Nominated Authority under this Agreement, including without limitation the right to appropriate Performance Security or terminate this Agreement, until a final determination in this regard is made.
- 25.5. The provisions contained in this Clause 25 shall survive the termination of this Agreement.

26. MISCELLANEOUS

26.1. Time of Essence

Each of the Parties hereby agrees that, with regard to all dates and time periods set forth or referred to in this Agreement, time is of the essence.

26.2. Publicity

The Allottee shall not issue any information, document or article for publication in any news or communications media or make any public statement in relation to this Agreement without the prior written consent of the Nominated Authority unless required to do so by Applicable Law, provided that prior to any disclosure of any such information required by Applicable Law, the Allottee must first notify the Nominated Authority, who shall then have the opportunity to respond to and/or dispute such intended disclosure.

26.3. Severability

26.3.1. If any term, provision, covenant or restriction of this Agreement or the application thereof to any Person or circumstance shall be held invalid, void or unenforceable by a court of competent jurisdiction or other Governmental Authority to any extent, the remainder of the terms, provisions, covenants and restrictions of this Agreement and the application thereof to Persons or circumstances (other than those as to which any portion of this Agreement is held invalid, void or unenforceable) shall not be affected thereby and shall remain in full force and effect to the fullest extent permitted by law, so long as



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Allotment Agreement for Banhardih Coal Mine

the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any Party.

26.3.2. Upon such a determination, the Parties shall negotiate in good faith to modify this Agreement so as to effect the original intent of the Parties as closely as possible in an acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the fullest extent possible.

26.4. **Costs and Expenses**

26.4.1. The Allottee shall bear its own costs in connection with the negotiation, preparation and execution of this Agreement.

26.4.2. The stamp duty payable for this Agreement shall be borne by the Allottee.

26.5. **Further Assurance**

The Allottee shall cooperate with the Nominated Authority and execute and deliver to the Nominated Authority such instruments and documents and take such other actions as may be requested from time to time in order to carry out, evidence and confirm their rights and the intended purpose of this Agreement.

26.6. **Legal And Prior Rights**

All rights and remedies of the Nominated Authority hereto shall be in addition to all other legal rights and remedies belonging to the Nominated Authority and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid and it is hereby expressly agreed and declared by and between the Parties hereto, that the determination of this Agreement for any cause whatsoever shall be without prejudice to any and all rights and claims of the Nominated Authority, which shall or may have accrued prior thereto.

26.7. **Waiver**

26.7.1. The waiver of any default or breach under this Agreement by the Nominated Authority shall not constitute a waiver of the right to terminate this Agreement for any substantial default of a similar nature or under any other terms and conditions of this Agreement.

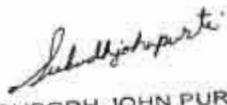
26.7.2. No failure or delay by the Nominated Authority in exercising any right or remedy provided by Applicable Law under or pursuant to this Agreement shall impair such right or remedy or operate or be construed as a waiver or variation of it or preclude its exercise at any subsequent time and no single or partial exercise of any such right or remedy shall preclude any other or further exercise of it or the exercise of any other right or remedy. The rights and remedies of the Nominated Authority under or pursuant to this Agreement are cumulative, may be exercised as often as it considers appropriate and are in addition



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Allotment Agreement for Baharhat Coal Mine

to its rights and remedies under Applicable Law.

26.7.3. Submission of any document, information, report or notice, which contains any information or reference to any default or breach under this Agreement or any Applicable Law, to the Nominated Authority shall not be construed to be a deemed approval of such breach or default and the Nominated Authority may exercise any rights or remedies with respect to such default at any time.

26.8. Amendments

No amendment of this Agreement (or of any of the documents referred to in this Agreement) shall be valid unless it is in writing and signed by or on behalf of each of the Parties to it. The expression "amendment" shall include any amendment, variation, supplement, deletion or replacement however effected. Unless expressly agreed, no amendment shall constitute a general waiver of any provisions of this Agreement, nor shall it affect any rights, obligations or liabilities under or pursuant to this Agreement which have already accrued up to the date of amendment, and the rights and obligations of the Parties under or pursuant to this Agreement shall remain in full force and effect, except and only to the extent that they are so amended.

26.9. Counterparts

This Agreement may be executed in two counterparts, each of which will be deemed an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, but all of which together will constitute one and the same instrument.

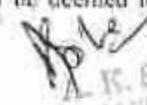
26.10. No Agency or partnership

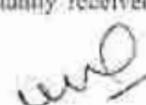
The Parties agree that nothing in this Agreement shall be in any manner interpreted to constitute an agency for and on behalf of any other Party. None of the provisions of this Agreement shall be deemed to constitute a partnership between the Parties hereto and no Party shall have any authority to bind the other Party or shall be deemed to be the agent of the other Party in any way.

26.11. Notices

All notices, requests, demands or other communication ("Notice") required or permitted to be given under this Agreement and the provisions contained herein shall be written in English and shall be deemed to be duly sent by registered post with acknowledgment due, or transmitted by facsimile transmission to the other Parties at the address indicated in SCHEDULE I hereof or at such other address as the Party to whom such notices, requests, demands or other communication is to be given shall have last notified to the Party giving the same in the manner provided in this Clause, but no such change of address shall be deemed to have been given until it is actually received by the Party




K. BINHA
B-Tech (Mech) MINING FCC (COAL)
DUAL IFO 1222011
MCELE : 0845831711
e-mail : binhaswdheab@gmail.com


Chief Engineer (Bha. Coal) Coal Block)
Baharhat (Dist. Patratu) - 829119

Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO YUJUT UTPADAN NIGAM LTD.
A Subsidiary of NTPC Ltd. & Joint Venture with JSWNL
Paratu, Dist.-Ranchi-829119

Shanta Gula
श्रीमती शान्ता गुला / Smt. Shanta Gula
उप महापंचायी नियंत्रक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Allotment Agreement for Bahardih Coal Mine

sought to be charged with the knowledge of its contents. Any notice, request, demand or other communication delivered to the Party to whom it is addressed as provided in this Clause 26.11 shall be deemed to have been given and received on the day of its receipt at such address.

A copy of the Notice sent by registered post with acknowledgment due, or transmitted by facsimile transmission may also be sent through email to the email addresses specified in SCHEDULE I solely for the information of the recipient and shall take effect only when the registered post is actually delivered or the fax is received by the recipient, as the case may be.

26.12 Entire Agreement

This Agreement (including all such deeds and documents issued or executed pursuant hereto or referred to herein) and the Allotment Document constitutes and represents the entire agreement between the Parties with regard to the rights and obligations of each of the Parties and cancels and supersedes all prior arrangements, agreements or understandings, if any, whether oral or in writing, between the Parties on the subject matter hereof or in respect of matters dealt with herein. In the event of a conflict between this Agreement and the Allotment Document, the provisions of this Agreement shall prevail to the extent of the conflict.

26.13 Specific Performance of Obligations

The Nominated Authority shall be entitled to an injunction or injunctions to prevent breaches of this Agreement or to seek or enforce specific performance of this Agreement, in addition to any other legal rights and remedies, without the necessity of demonstrating the inadequacy of monetary damages.

26.14 Power of the Central Government

The Allottee acknowledges that for the purposes of this Agreement, the Central Government is acting through the Nominated Authority pursuant to the Ordinance and the Rules. However, for the purposes of exercise of rights and obligations hereunder and any Applicable Law, the Central Government shall be entitled to act through any of its relevant departments, ministries or any Governmental Agencies and all such relevant departments, ministries or any Governmental Agencies shall be entitled to exercise rights and obligations under this Agreement as if such relevant departments, ministries or any Governmental Agencies were a Party hereto.

[Remaining part of this page intentionally left blank, schedules follow.]



A. K. Sinha
A. K. SINHA
B-Tech (Hons) MINING, FCC (COAL)
REGISTERED PERSON
MOBILE : 9842081711
e-mail : sinhsawdheek@gmail.com

Shanta Gula

SCHEDULE A - PARTICULARS OF THE COAL MINE

Name of Coal Mine	Bahardih
Latitude	23°43'21" N to 23°45'51" N
Longitude	84°34'43" E to 84°40'03" E
Coalfield	Auranga
Villages	Huchaborha, Jemantoli, Chattaserman, Purushottampur, Barwadih, Tawerahi, Surli, Rampur
District	Lanchur
State	Jharkhand

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATO VIDYUT UPADAN NIGAM LTD.
 (A Subsidiary of NTPCLtd. in Joint Venture with BIRLA)
 Patna, Dist.-Rangarh-829119

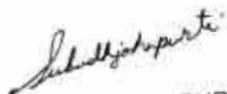


A. E. Sinha
A. E. SINHA
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 QUALIFIED PERSON
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 e-mail: sinhasawdesh@gmail.com

Shanta Guha
शोमती शंका गुहा / Smt. Shanta Guha
 Dy. Asstt. Commr. (Coal) / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला विभाग कार्यालय / O/o. The Coal Control
 1, फार्मिनाल हाउस स्ट्रीट / 1, Council House St
 कोलकाता-700 001 / Kolkata- 700 001

Coal Engineer
Coal Engineer (Bahardih Coal Block)
 Jharkhand (Coal) (Patna) (Dist. Rangarh) (Jharkhand)


श्रीमती शोभा गुहा / Smt. Shanta Guha
एन सीआर कोयला निरीक्षण / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001


SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATI VIDYUT UTPADAN NIGAM LTD.
A Subsidiary of NTPCL Ltd. in Joint Venture with JhVNL
Patnati, Dist.-Rangpur-829119

Allotment Agreement for Bankardih Coal Mine

SCHEDULE C - FORMAT OF INTIMATION TO THE NOMINATED AUTHORITY

To
The Nominated Authority
[address]

[date]

Sub: Intimation under Clause 3.1(f) of the Allotment Agreement (the "Agreement").

Dear Sir,

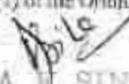
We write with reference to Clause 3.1(f) of the Agreement read with the Ordinance and the Rules, including Section 10 and Section 11 of the Ordinance in terms of which we intend to own and utilise certain movable property of the Prior Allottee and also adopt certain contracts as detailed below:

- (a) particulars of movable property along with the details of the current owner, the terms of negotiations, related documentation and other details, which we intend to own and use in terms of Section 10(1) of the Ordinance is enclosed as Annexure A;
- (b) particulars of movable property along with the details of the current owner, the terms of negotiations, related documentation and other details, which we do not intend to own and use and which we intend to move in terms of Section 10(4) of the Ordinance is enclosed as Annexure B;
- (c) the list of contracts (including contracts with secured creditors¹) which we intend to adopt and continue, along with complete particulars of such contracts is enclosed as Annexure C;
- (d) the list of contracts (including contracts with secured creditors) which we do not intend to adopt and continue, along with complete particulars of such contracts is enclosed as Annexure D.

Apart from the particulars of the movable property and the contracts listed in this letter, we do not intend to own, use, continue or adopt any other movable property or contracts, as the case may be and do hereby relinquish our rights with respect to the same. We acknowledge that any information not provided in this letter may not be included by the Nominated Authority in the Allotment Order.

¹ Not applicable if the Allottee is the Prior Allottee in which case the secured creditors shall have an option to continue in terms of Section 12(1) of the Ordinance.




A. R. SINHA
B-Tech (Hons) IIT KGP, FCC (COAL)
QUALIFIED PERSON
MOBILE: 9843009571
e-mail: sinharavhesh@gmail.com


Civil Engineer (Bankardih Coal Block)

Allotment Agreement for Bankardih Coal Mine

Yours Sincerely,

.....

(Authorised Signatory)

Name:

Designation:

Enclosed: As Above

Annexure A

Annexure B

Annexure C

Annexure D

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Chin Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. Joint Venture with BVM)
Patrao, Dist.-Ranchi-829119

Smt. Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
अप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, पत्रकारिता इमारत ब्लॉक / 1, Council House Street
कोलकाता - 700 001 / Kolkata - 700 001



A.K. Sinha
A. K. SINHA
B-Tech (Hons) MINING, FCC (COAL)
C.E. (SUPERVISOR)
S.O. No. 103-6323637 / Chief Engineer (Bankardih Coal Block)
e-mail : sinhasawdhas@gmail.com

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. Joint Venture with JGCPL)
Patna, Dist.-Rangach-629119

Allotment Agreement for Nonhardth Coal Mine

SCHEDULE D - FORMAT OF THE COMPLETION NOTICE

To
The Nominated Authority
[address]
[city]

Sub: Completion Notice under Clause 3.2.1 of the Allotment Agreement (the "Agreement").

Dear Sir,

We write with reference to Clause 3.2.1 of the Agreement. We have completed each of the Allotment Conditions specified in Clause 3.1 of the Agreement and the particulars of the same are provided below:

- (a) We continue to be in compliance with all the Eligibility Conditions;
- (b) we have paid the first instalment of the Upfront Amount, in accordance with Clause 5.2.1 through [particulars of payment to be mentioned];
- (c) we have furnished the Performance Security through [particulars of performance security and its manner of delivery to be mentioned];
- (d) we have paid the Fixed Amount through [particulars of payment to be mentioned];
- (e) Additional Levy as was required to be paid has been paid through [particulars of payment to be mentioned]; and
- (f) we have provided a written intimation as was required under Clause 3.1(f) of the Agreement through a letter dated [particulars to be mentioned].

Documentary evidence with respect to completion of each of the Allotment Conditions is enclosed.

Yours Sincerely,

.....
(Authorised Signatory)
Name:
Designation:

Enclosed: As Above

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला विवेकाचार्यालय / O/o, The Coal Controller
1, पंचनिला हाउस स्ट्रीट / 1, Council House Stn
कोलकाता-700 001 / Kolkata- 700 001



A. K. Sinha
A. K. SINHA
B-Tech (Mining) M.Tech. FCG (COAL)
COAL MINING ENGINEER
MOBILE: 9810031111
e-mail: a.k.sinha07@gmail.com

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCLM in Joint Venture with BHEL)
 Patna, Dist. -Rangpur-829119

Allotment Agreement for Barharuthi Coal Mine

SCHEDULE E - EFFICIENCY PARAMETERS

S. No.	Milestone	Time Limit in Months (From the date of the Allotment Order)
1	Prospecting License	4
2	Completion of Exploration and Preparation of Geological Report (GR)	22
	Events after preparation of GR	Time Limit in Months (From the date of preparation of GR)
3	Mining Lease Application	3
4	Submission of Mining Plan	6
5	Mining Plan Approval	11
6	Previous Approval Application	12
7	Previous Approval	13
8	Forest Clearance Application	11
9	Forest Clearance	21
10	Environment Clearance Application	11
11	Environment Clearance	21
12	Grant of Mining Lease	24
13	Land Acquisition (To reach rated capacity)	36/42(in case of forest land)
14	Opening of Escrow Account	37/43(in case of forest land)
15	Application for Opening Permission	37/43(in case of forest land)
16	Grant of Opening Permission	38/44(in case of forest land)
17	Schedule of Production/ Reaching Rated Capacity	As per approved Mining Plan
18	EUP Synchronisation	As per approved Mining Plan

(a) The percentage for appropriation of Performance Security shall be calculated in proportion to the failure/ delay in compliance with the timelines mentioned for achievement of Efficiency Parameters which shall be broadly based on the weightages prescribed in the recommendations of Inter-Ministerial Group.

(b) In case of non-compliance with the Efficiency Parameters mentioned above, the Successful Bidder shall be required to rectify the same within such time as may be prescribed.

Subodh
 श्रीमती शान्ता गुहा / Smt. Shanta Guha
 उप सहायक कोयला नियंत्रक / Asstt. Coal Controller
 भारत - India
 कोयला निधि - कोयला / Coal Controller
 1, कागजिबल (बंगल) स्ट्रीट / 1, Kageshwar Street
 कोलकाता-700 001 / Kolkata- 700 001



A.K. Sinha
A. K. SINHA
 B-Tech (Mining) / M. Sc. (Mining), FCC (COAL)
 CHIEF ENGINEER
 12, L. CASIERS ST
 e-mail: sinhasawdosh@gmail.com

Subodh
Chief Engineer (Barharuthi Coal Block)
 Patra Vidyut Utpadan Nigam Ltd.

श्रीमती शंता गुहा / Smt. Shanta Guha
उप महाप्रबंधक कोयला नियंत्रण / Dy. Asstt. Coal Controller
कारागार सचिवालय / Govt. of India
कोयला नियंत्रण कार्यालय / O/o. The Coal Controller
1, कारागार हाउस स्ट्रीट / 1, Council House Street
कोयला-700 001 / Kolkata- 700 001

Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Coal Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of IFCIL Ltd. Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Allotment Agreement for Baharukh Coal Mine

SCHEDULE F - FORMAT OF PERFORMANCE SECURITY

[~~Registration~~ number of the bank] [date]
To
The Nominated Authority
[address]

WHEREAS

- A. [Name of the Allottee] incorporated in India under the Companies Act, [1956/2013] with corporate identity number [CIN of the Allottee], whose registered office is at [address of registered office], India and principal place of business is at [address of principal place of business, if different from registered office] (the "Allottee") is required to provide an unconditional and irrevocable bank guarantee for an amount equal to INR [figures] (Indian Rupees [words]) as a performance security for a period of [period of performance bank guarantee].
- B. The Performance Security is required to be provided to The President of India, acting through the Central Government represented by the Nominated Authority appointed under Section 6 of the Coal Mines (Special Provisions) Ordinance, 2014 read with Coal Mines (Special Provisions) Second Ordinance, 2014 (the "Nominated Authority") for discharge of certain obligations under the Allotment Agreement dated [date] (the "Agreement").
- C. We, [name of the bank] (the "Bank") at the request of the Allottee do hereby undertake to pay to the Central Government an amount not exceeding INR [figures] (Indian Rupees [words]) to secure the obligations of the Allottee under the Agreement on demand from the Nominated Authority on the terms and conditions herein contained herein.

NOW THEREFORE, the Bank hereby issues in favour of the Nominated Authority this irrevocable and unconditional payment bank guarantee (the "Guarantee") on behalf of the Allottee in the amount INR [figures] (Indian Rupees [words]).

- 1. The Bank for the purpose hereof unconditionally and irrevocably undertakes to pay to the Nominated Authority without any demur, reservation, caveat, protest or recourse, immediately on receipt of first written demand from the Nominated Authority, a sum or sums (by way of one or more claims) not exceeding in the aggregate the amount of INR



Bank Sinha
BANK SINHA
B-Tech (Hons) MINING ENGINEERING
COALFIELD PATRATO
MOBILE : 9830251711
e-mail : sinhasankhesh@gmail.com

Subodh John Puri
Page 48 of 58

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATO VIDYUT NIPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JNMU)
Patratu, Dist.-Rangpur-829119

Shanta Guha
श्रीमती शांता गुहा / Smt. Shanta Guha
उप सहायक नियंत्रक / Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Attainment Agreement for Baharipur Coal Mine

[figures] (Indian Rupees [words]) without the Nominated Authority needing to prove or to show to the Bank grounds or reasons for such demand for the sum specified therein and notwithstanding any dispute or difference between the Nominated Authority and Allottee on any matter whatsoever. The Bank undertakes to pay to the Nominated Authority any money so demanded notwithstanding any dispute or disputes raised by the Allottee in any suit or proceeding pending before any court or tribunal relating thereto the Bank's liability under this present being absolute and unequivocal.

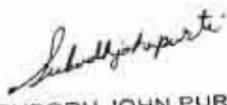
2. The Bank acknowledges that any such demand by the Nominated Authority of the amounts payable by the Bank to the Nominated Authority shall be final, binding and conclusive evidence in respect of the amounts payable by Allottee to the Nominated Authority under the Agreement.
3. The Bank hereby waives the necessity for the Nominated Authority from demanding the aforesaid amount or any part thereof from the Allottee and also waives any right that the Bank may have of first requiring the Nominated Authority to pursue its legal remedies against the Allottee, before presenting any written demand to the Bank for payment under this Guarantee.
4. The Bank further unconditionally agrees with the Nominated Authority that the Nominated Authority shall be at liberty, without the Bank's consent and without affecting in any manner the Bank's obligation under this Guarantee, from time to time to:
 - (i) vary and/or modify any of the terms and conditions of the Agreement;
 - (ii) extend and / or postpone the time for performance of the obligations of the Allottee under the Agreement; or
 - (iii) forbear or enforce any of the rights exercisable by the Nominated Authority against the Allottee under the terms and conditions of the Agreement;and the Bank shall not be relieved from its liability by reason of any such act or omission on the part of the Nominated Authority or any indulgence by the Nominated Authority to the Allottee or other thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of relieving the Bank of its obligations under this Guarantee.
5. Any payment made hereunder shall be made free and clear of and without deduction for, or on account of, any present or future taxes, levies, imposts, duties, charges, fees, commissions, deductions or withholdings of any nature whatsoever and by whom ever imposed; and where any withholding on a payment is required by law, the Bank shall comply with such withholding obligations and shall pay such additional amount in respect of such payment such that the Nominated Authority receives the full amount due hereunder as if no such withholding had occurred. It is clarified that even in such case the



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NTPC LTD. PATRATO
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e-mail : sinhaakp@nnp@gmail.com

Shanta Guha
Chief Engineer (Patratu Coal Block)
Patratu Uja Utpadan Nigam Ltd.


श्रीमती सीता गुला / Smt. Sittha Gulia
उप सहायक कोयला नियंत्रक / Dy. Asslt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/a. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata-700 001


SUBODH JOHN PURTI
Sr. Manager (Cinn Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. In Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Allotment Agreement for Banharidih Coal Mine

- obligation of the Bank shall not in any manner exceed in the aggregate the amount of INR. [figures] (Indian Rupees [words]).
6. The Bank agrees that Nominated Authority at its option shall be entitled to enforce this Guarantee against the Bank, as a principal debtor in the first instance without proceeding at the first instance against the Allottee.
 7. The Bank further agree that the guarantee herein contained shall remain in full force and effect during the period that specified in the Agreement and that it shall continue to be enforceable till all the obligations of the Allottee under or by virtue of the said Agreement with respect to the Performance Security have been fully paid and its claims satisfied or discharged or till the Nominated Authority certifies that the terms and conditions of the Agreement with respect to the Performance Security have been fully and properly carried out by the Allottee and accordingly discharges this guarantee. Notwithstanding anything contained herein, unless a demand or claim under this guarantee is made on the Bank in writing on or before the [date of expiry of bank guarantee] the Bank shall be discharged from all liability under this guarantee thereafter.
 8. The payment so made by the Bank under this Guarantee shall be a valid discharge of Bank's liability for payment thereunder and the Nominated Authority shall have no claim against the Bank for making such payment.
 9. This Guarantee is subject to the laws of India. Any suit, action, or other proceedings arising out of this Guarantee or the subject matter hereof shall be subject to the exclusive jurisdiction of courts at Delhi.
 10. The Bank has the power to issue this Guarantee in favour of the Nominated Authority. This guarantee will not be discharged due to the change in the constitution of the Bank.
 11. The Bank undertakes not to revoke this Guarantee during its currency except with the previous consent of the Nominated Authority in writing.
 12. The Nominated Authority may, with prior intimation to the Bank, assign the right under this Guarantee to any other departments, ministries or any governmental agencies, which may act in the name of the President of India. The Nominated Authority may also assign this Guarantee in favour of the Governor of a State, with prior intimation to the Bank. Save as provided in this Clause 12, this Guarantee shall not be assignable or transferable.

Dated the [day] day of [month] [year] for the Bank.




A. N. SINHA
B-Tech (Hons) MINING, FCC (COAL)
GOVT. ENGINEER
MOBILE : 9836257111
e-mail : sinhasawdhyesh@gmail.com



Attachment Agreement for Bankardih Coal Mine

In witness whereof the Bank, through its authorized officer, has set its hand and stamp.

(Signature)

(Name and Designation)

(Bank Stamp)

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. in Joint Venture with JNMVJ)
Patrao, Dist.-Ranchi-829119



A. K. Sinha
A. K. SINHA
B-Tech (Hons) Mining, FCC (COAL)
CHIEF ENGINEER
e-mail : sinhaak@nco.gov.in
Chief Engineer (Bankardih Coal Block)

Shanta Guha
श्रीमती शान्त गुहा / Smt. Shanta Guha
एन सी आर सी कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
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Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (C/O Coal Mine)
PATRATO YUDUT UTPADAN NIGAM LTD.
A Subsidiary of NTPC Ltd. at Jharkhand, Jharkhand
Patna, Dist. - Ramgarh-828119

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
रक्षक सहायक नियंत्रक, कोयला / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
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कोलकाता-700 001 / Kolkata- 700 001

Allotment Agreement for Bhandardi Coal Mine

SCHEDULE B - WARRANTIES

1. INFORMATION

- 1.1. The information, provided to the Nominated Authority during the allotment process and any time thereafter, including but not limited to the information contained in this Agreement, by the Allottee is true, accurate and not misleading in any manner whatsoever.
- 1.2. Neither this Agreement nor any of the information and documents provided during the allotment process exercise contains any untrue statement of fact, or omits to state a material fact necessary to make the statements herein or therein not misleading. The documents provided to the Nominated Authority and/or its advisors during the conduct of the allotment process, are true and complete copies of such documents and none of the information provided to the Nominated Authority and/or its advisors during the allotment process was incorrect, inaccurate or misleading in any manner whatsoever.

2. AUTHORITY

- 2.1. The Allottee has full legal capacity to enter into this Agreement and to perform its obligations under it and has taken all action necessary to authorize such execution and delivery and the performance of such obligations.
- 2.2. This Agreement has been duly executed and delivered by the Allottee, and (assuming due authorisation, execution and delivery and performance by the Parties), constitutes a legal, valid and binding obligation of the Allottee, enforceable against the Allottee in accordance with the terms of the Agreement.
- 2.3. The Allottee has obtained requisite corporate authorisation, including passing of all necessary resolutions to execute this Agreement and carry out all transactions and actions contemplated under this Agreement and do all necessary acts incidental to this Agreement.
- 2.4. The execution and delivery of this Agreement by the Allottee and the performance of the obligations under it do not and shall not:
 - (a) conflict with or violate any provision of the memorandum of association or articles of association of the Allottee;
 - (b) require on the part of the Allottee, any filing with, or permission, authorisation, consent or approval of, any Governmental Authority;
 - (c) conflict with, result in breach of, constitute (with or without due notice or lapse of time or both) a default under, result in the acceleration of obligations under, create in favour of any party any right to terminate, modify or cancel, or require any



A. K. Sinha
A. K. SINHA
B-Tech (Hons) MINING FCC (COAL)
C. P. JEE PERCENT
100
100
E-mail: sinhanawdheash@gmail.com

Shanta Guha
Shanta Guha
Chief Engineer (Bhandardi Coal Block)

श्रीमती शांता गुहा / Enst. Shanta Guha
अप सहायक कोयला नियंत्रक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/a. The Coal Controller
1, पारथिवील हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Subodh John Parti
SUBODH JOHN PARTI
Sr. Manager (Cust. Coal Mine)
PATRATH VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL, a Joint Venture with JNPL)
Paratu, Dist. Ramgarh-829119

Allotment Agreement for Bankardih Coal Mine

notice, consent or waiver under, any contract or instrument to which the Allottee is party or by which it is bound or to which its assets are subject;

- (d) violate, conflict with or constitute a default under any Applicable Law, lien, lease, judgement, award, ordinance, order, writ, injunction, decree, statute, rule or regulation or any other restriction of any kind or character applicable to the Allottee or its properties or assets;

2.5. No person is entitled to any brokerage, finder's, or other similar fee or commission in connection with the transactions contemplated by this Agreement.

3. **GENERAL**

The Allottee

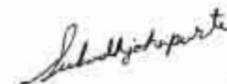
- (a) is a Government company duly organised, validly existing and in good standing under the laws of India;
- (b) meets all the Eligibility Conditions prescribed under the Ordinance read with the Rules and the Allotment Document;
- (c) has the financial standing and capacity to undertake mining operations at the Coal Mine in accordance with the Efficiency Parameters;
- (d) is subject to civil and commercial laws of India with respect to this Agreement and it hereby expressly and irrevocably waives any immunity in any jurisdiction in respect thereof;
- (e) there are no actions, suits, proceedings or investigations pending or to the Allottee's knowledge threatened against it at law or in equity before any court or before any other judicial, quasi judicial or other authority, the outcome of which may constitute an event of default hereunder;
- (f) has neither violated or defaulted nor has knowledge of any violation or default with respect to any order, writ, injunction or any decree of any court or any legally binding order of any Governmental Authority;
- (g) has complied with all Applicable Laws and has not been subject to any fines, penalties, injunctive relief or any other civil or criminal liabilities;
- (h) except as set forth in any Mining Lease, all rights and interests of the Allottee in and to the Coal Mine shall pass to and vest in the relevant Governmental Authority on the date of termination or expiry hereof, free and clear of all Encumbrances without any further act or deed on the part of the Allottee or the Central Government;



A. K. Sinha
A. K. SINHA
B-Tech (Hons) MINING, FCC (COAL)
QUALIFIED PERSON
MOBILE : 9943036471
e-mail : akhoshwadesh@gmail.com

Subodh John Parti
Page 33 of 38

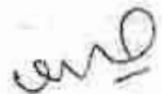
- (i) no bribe or illegal gratification or any other illegal amount has been paid or will be paid in cash or kind by or on behalf of the Allottee to any Person to procure the rights granted hereunder; and
- (ii) Without prejudice to any express provision contained in this Agreement, the Allottee acknowledges that prior to the execution of this Agreement, the Allottee has after a complete and careful examination made an independent evaluation of the Coal Mine and the information provided by the Nominated Authority, and has determined to its satisfaction the nature and extent of risks and hazards as are likely to arise or may be faced by the Allottee in the course of performance of its obligations hereunder. The Allottee also acknowledges and hereby accepts the risk of inadequacy, mistake or error in or relating to any of the matters set forth above and hereby confirms that the Nominated Authority and any Governmental Authority shall not be liable for the same in any manner whatsoever to the Allottee.


SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL & Joint Venture with BHEL)
Patna, Dist.-Rangach-823119


শীতলী শান্ত গুপ্ত / Smt. Shanta Ghosh
স্ব স্বাক্ষরকৃত সচিবালয় / Dy. Asstt. Coal Controller
ভারত সরকার / Govt. of India
কৌশল নিয়ন্ত্রক কার্যালয় / O/o. The Coal Controller
1, কলকাতা হাউস স্ট্রীট / 1, Council House Street
কলকাতা-700 001 / Kolkata- 700 001




A. S. SINHA
B-Tech (Hons) MINING, FDP (COAL) - Sr. Engineer (Bathardih Coal Block)
Coal Development Division, Patna and Udaipur, Jharkhand
MOBILE: 9350040174
e-mail: sinhaswdhesh@gmail.com



Subho
 शान्ती गुहा / Smt. Shanta Guha
 उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला विभाग कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Subhodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. Joint Venture with BHEL)
 Patrao, Dist.-Rangpur-829119

Allotment Agreement for Ranhardih Coal Mine

SCHEDULE I - ADDRESS FOR PROVIDING NOTICES

A. Notice to the Nominated Authority

Address	Nominated Authority, Ministry of Coal, World Trade Tower, Ground Floor, Barakhamba Lane, New Delhi - 110001
Telephone	011-23414136
Facsimile	011-23414136
E-mail only for information	nomauthority.moc@nic.in

With CC to the Central Government

Address	Ministry of Coal, Shanti Bhawan, New Delhi - 110001
Telephone	011-23073933
Facsimile	011-23381678
E-mail only for information	soca3.moc@nic.in

B. Notice to the Allottee

Address	Jharkhand Urea Utpadan Nigam Limited, Engineering Building, H.E.C Dharwa, P.S.-Halla, Ranchi, Jharkhand-834604, India
Telephone	0651-2400807
Facsimile	0651-2446045
E-mail only for information	vja1814@gmail.com



A.K. Sinha
A. K. SINHA
 B-Tech (Hons) Metallurgy, FCC (COAL)
 CHEMICAL ENGINEER
 MOBILE : 9432051711
 e-mail : sinhasvditesh@gmail.com

Subhodh John Purti
Subhodh John Purti
 Chief Engineer (Ranhardih Coal Block)
 Jharkhand Urea Utpadan Nigam Ltd.
 Ranchi, Jharkhand

Allotment Agreement for Banbardih Coal Mine

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized representatives on the date and year written below, at New Delhi:

Signatories

The Nominated Authority

Jharkhand Urja Utpadan Nigam Limited

Nivek Bhargava
Name: Vivek Bhargava
Date: March 30, 2015



V.K. Jha
Name: V.K. Jha
Designation: Chief Engineer
Date: March 30, 2015
Duly authorized to execute this Agreement pursuant to resolution passed by the board of directors of the Jharkhand Urja Utpadan Nigam Limited.

Chief Engineer (Banbardi Coal Block)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi-834004

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of Jharkhand Urja Utpadan Nigam Ltd.)
Patratu, Dist. - Ramgarh - 821119

Shanta Guha
श्रीमती शंति गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, कादम्बिनी इलाहा स्ट्रीट / 1, Council House Street
कोलकाता - 700 001 / Kolkata - 700 001

A. R. Sinha
A. R. SINHA
B-Tech (Mining) MINSO, FCC (COAL)
QUAL. PERSON
MOBILE : 9836357777
e-mail : arsinha2011@gmail.com

Annexure-IB

The first and second amendment to the Allotment agreement, dated 30th June, 2015 and 16th January, 2017 respectively.

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NCTCL in Joint Venture with JVVNL)
 Patratu, Dist. -Rangpurh-829119

ANNEXURE- IB



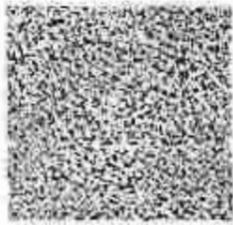
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INDIA NON JUDICIAL

Government of National Capital Territory of Delhi

e-Stamp

Certificate No.:	: IN-DL21852140195856N
Certificate Issued Date:	: 30-Jun-2015 11:27 AM
Account Reference:	: IMPACC (IV) 01838903/ DELHI/ DL-DLH
Unique Doc. Reference:	: SUB/IV-DL/01838903/40846957697984N
Purchased by:	: JHARKHAND URJA UTPADAN NIGAM LTD
Description of Document:	: Article 5 General Agreement
Property Description:	: Not Applicable
Consideration Price (Rs.):	: 0 (Zero)
First Party:	: JHARKHAND URJA UTPADAN NIGAM LTD
Second Party:	: KOYLA MANTRALAYA GOVT OF INDIA
Stamp Duty Paid By:	: JHARKHAND URJA UTPADAN NIGAM LTD
Stamp Duty Amount(Rs.):	: 500 (Five Hundred only)



Shanta Guha
 श्रीमती शंता गुहा / Smt. Shanta Guha
 उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
 1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Please write in type below this line.....

THE DEED OF FIRST AMENDMENT TO THE ALLOTMENT AGREEMENT BY AND BETWEEN THE PRESIDENT OF INDIA AND JHARKHAND URJA UTPADAN NIGAM LIMITED IN RESPECT OF BANHARDIH COAL MINE

This Stamp-paper forms an integral part of this deed of first amendment to Allotment Agreement.

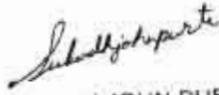
Vijay Kumar Singh

A.K. Sinha
A. K. SINHA
 B-Tech (Mech) MINING, FCC (COAL)
 COMPUTED GRAPHIC
 MOBILE : 98430351711
 e-mail : sinhatwadesh@gmail.com

Page 1 of 6




श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, हाइविल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NIPCL Ltd. Joint Venture with BHEL)
Paratu, Dist.-Rangarh-829119

Amendment Agreement for Banhardih Coal Mine

This first Amendment to the Allotment Agreement ("Amendment Agreement") is made by and between following;

PARTIES:

1. The President of India, acting through the Central Government represented by the Nominated Authority appointed under Section 6 of the Coal Mines (Special Provisions) Act, 2015 (the "Nominated Authority").
2. Jharkhand Urja Utpadan Nigam Limited incorporated in India under the Companies Act, 1956 with corporate identity number U40109JH2013SGC001703, whose registered office is at Engineering Building, H.E.C. Dhanwa, P.S.-Hajula, Ranchi, Jharkhand-834004, India (the "Allottee").

BACKGROUND:

- A. The Allotment Agreement dated March 30, 2015 (the "Original Agreement") was entered into between the Nominated Authority and the Allottee in respect of Banhardih Coal Mine.
- B. The Nominated Authority is pleased to permit amendment of the Original Agreement.
- C. Accordingly, in terms of Clause 26.8 of the Original Agreement, the Nominated Authority and the Allottee are entering into this Amendment Agreement to record certain amendments to the Original Agreement.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understandings set forth in this Amendment Agreement and the Original Agreement, and other good and valuable consideration (the adequacy of which are hereby mutually acknowledged), the Parties with the intent to be legally bound hereby agree as follows:

1. DEFINITIONS AND INTERPRETATION

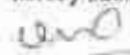
The definitions and rules of interpretation as specified in the Original Agreement shall apply to this Amendment Agreement.

2. AMENDMENTS

- 2.1. The following definition be and is hereby added prior to Clause 1.1.1 of the Original Agreement:

"1.1.0. "Act" shall mean the Coal Mines (Special Provisions) Act, 2015"

- 2.2. All references to the expression "the Ordinance" in the Original Agreement be and are hereby substituted by the expression "the Act".





A. K. SINHA
B-Tech (Hon) Mining FCC (COAL)
CHIEF ENGINEER
ANDELE, URJANIGAM LTD.
e-mail: sinhaawdesh@gmail.com



Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निषेचक कार्यालय / O/s. The Coal Controller
1, बरदमिता हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Amendment Agreement for Bathuaibidi Coal Mine

- 2.3 Schedule E of the Original Agreement is hereby substituted with the revised Schedule E as provided in the Schedule to this Amendment Agreement.
- 2.4 Clause 3.1 (d) of the Original Agreement is hereby substituted with the revised Clause 3.1 (d) as provided below:

"The Allottee having deposited an amount equal to INR 0 (Indian Rupees Zero), being the Fixed Amount, to the Designated Bank Account, It is clarified that any upward revision in the Fixed Amount on a subsequent date by the Government or the Nominated Authority consequent to any process or on the orders of any competent court of law, shall also be payable by the Allottee on receipt of any notice to that effect from the Nominated Authority."

- 2.5 Clause 3.2.2 of the Original Agreement is hereby substituted with the revised Clause 3.2.2 as provided below:

"In the event the Allottee does not provide a Completion Notice with respect to each of the Allotment Conditions listed in Clauses 3.1(a), 3.1(b), 3.1(c), 3.1(d), 3.1(e) in cases where the Allottee is a Prior Allottee for the Coal Mine or any other Schedule I coal mine (as defined in the Ordinance) and Clause 3.1(f), within 154 Days of the Agreement Date, then the Nominated Authority may terminate this Agreement without incurring any liability whatsoever by providing a written notice to the Allottee. It is clarified that in such event the Allottee shall not be entitled to receive the Allotment Order and the Nominated Authority shall be entitled to dispose the Coal Mine in the manner provided in the Ordinance and the Rules, including through re-auction/re-allotment or through appointment of a designated custodian."

- 2.6 Clause 3.2.3 of the Original Agreement is hereby substituted with the revised Clause 3.2.3 as provided below:

"If the Allottee does not provide a Completion Notice with respect to 3.1(f) and fails to provide a written intimation in substantially the same form as provided in SCHEDULE C within 154 Days of the Agreement Date, then it shall be deemed that the Allottee is not desirous of owning or utilising any movable property or continuing any contract. In such cases, without prejudice to Clause 3.2.2, the Nominated Authority may elect to issue the Allotment Order without including aforementioned particulars in the Allotment Order; if all other Allotment Conditions have been satisfied by the Allottee and corresponding Completion Notice have been provided to the Nominated Authority."

3. CONTINUING OBLIGATIONS

The Original Agreement and all terms and conditions of the Original Agreement shall continue to remain valid, operative, binding, subsisting, enforceable and in full force and

and

A. R. Sinha

A. R. SINHA
B-Tech (Hons.) MINING ENGINEERING (COAL)
QUALIFIED PERSON
MOBILE: 9240867111
e-mail: sinhasw@rediffmail.com



effect save and except to the extent amended by this Amendment Agreement, and the Original Agreement shall always be read in conjunction with this Amendment Agreement.

4. MISCELLANEOUS

- 4.1. The provisions of Clause 25 of the Original Agreement (*Governing Law and Dispute Resolution*), and Clause 26 of the Original Agreement (*Miscellaneous*), shall *mutatis mutandis* apply to this Amendment Agreement and shall be deemed to be incorporated by reference.
- 4.2. This Amendment Agreement shall become effective on the date on which execution of this Amendment Agreement by both the *Allotee* and the *Nominated Authority* is completed.

Handwritten signature/initials



Handwritten signature: Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. a Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Handwritten signature: Gulo
श्रीमती डॉ.
बस साहयक कोषिका
कोषिका नं.
1, बंगल
/ Sr. Shanta Guha
Dy. Asstt. Coal Controller,
Govt. of India
Off. The Coal Controller
Cuttack House Street
Cuttack-700 001

Handwritten signature: A.K. Sinha
A. K. SINHA
B-Tech (Metallurgical Engg) COAL)
MOBILE : 9826011111
e-mail : sinhawadash@gnail.com

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Cinn Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL Ltd. in Joint Venture with BVMJ)
 Patratu, Dist. -Rangpur-829119

Sh. S. Guha
 श्रीमती शंता गुहा / Shri. Shanta Guha
 Dy. सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निदेशक कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Amendment Agreement for Bandharah Coal Mine

SCHEDULE E - EFFICIENCY PARAMETERS

S. No.	Milestone	Time Limit in Months (From the date of the Allotment Order/ zero date)	Weightage for calculating deduction of Performance Security (in case of failure/ delay in achieving milestone)
1	Prospecting License	4	5
2	Completion of Exploration and Preparation of Geological Report (GR)	22	
	Events after preparation of GR	Time Limit in Months (From the date of preparation of GR)	
3	Mining Lease Application	3	7
4	Submission of Mining Plan	6	8
5	Mining Plan Approval	11	8
6	Previous Approval Application	12	6
7	Previous Approval	13	5
8	Forest Clearance Application	11	8
9	Forest Clearance	21	5
10	Environment Clearance Application	11	8
11	Environment Clearance	21	5
12	Grant of Mining Lease	24	8
13	Land Acquisition (To reach rated capacity)	36/42(in case of forest land)	5
14	Opening of Escrow Account	37/43(in case of forest land)	8
15	Application for Opening Permission	37/43(in case of forest land)	2
16	Grant of Opening Permission	38/44(in case of forest land)	2
17	Schedule of Production Reaching Rated Capacity	As per approved Mining Plan	8
18	EUP Synchronisation	As per approved Mining Plan	5

(a) The percentage for appropriation of Performance Security shall be calculated in proportion to the failure/ delay in compliance with the timelines mentioned for achievement of Efficiency Parameters which shall be broadly based on the abovementioned weightages.

(b) In case of non-compliance with the Efficiency Parameters mentioned above, the Allottee shall be required to rectify the same within such time as may be prescribed by the competent authority after examination on a case to case basis.

Handwritten signature

Handwritten signature
A. K. SINHA

B-Tech (Mining) IITKGP, ICG (CGAL)
 CO-ORDINATOR
 PHONE NO: 2643004711
 e-mail : sinhaawd@iitkgp.com



IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorised representatives on the date and year written below, at New Delhi:

The Nominated Authority

Bahadurganj Coalfields Development Corporation Limited

Vivek Bhattacharya
Name: Vivek Bhattacharya
Date: June 30, 2015



V. K. Jha

Name: V. K. Jha
Designation: Chief Engineer
Date: June 30, 2015
Duly authorized to execute this Agreement pursuant to resolution passed by the Board of Directors of the Bahadurganj Coalfields Development Corporation Limited.

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL in Joint Venture with BVMU)
Patna, Dist. Ramgarh-820119

A. K. Sinha
A. K. SINHA
B-Tech (Hons) MINING IITG (COAL)
MANAGER (TECHNICAL)
MOBILE: 9243035173
e-mail: sinhasawdesh@gmail.com

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
असिस्टेंट कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / C/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL in joint venture with BIRU)
 Patratu, Dist-Rangpur-823119

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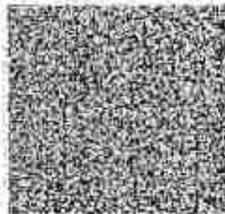
Government of National Capital Territory of Delhi



सत्यमेव जयते

e-Stamp

Certificate No.	: IN-DL36486259760880P
Certificate Issued Date	: 16-Jan-2017 11:25 AM
Account Reference	: IMPACC (V)/dl737933/ DELHI/ DL-DLH
Unique Doc. Reference	: SUBIN-DL/DL737933/7411316144394P
Purchased by	: JHARKHAND URJA UTPADAN NIGAM LTD RANCHI
Description of Document	: Article 5 General Agreement
Property Description	: BANHARDI COAL MINE DISTT LATEHAR JHARKHAND
Consideration Price (Rs.)	: 0 (Zero)
First Party	: JHARKHAND URJA UTPADAN NIGAM LTD RANCHI
Second Party	: MINISTRY OF COAL GOVERNMENT OF INDIA
Stamp Duty Paid By	: JHARKHAND URJA UTPADAN NIGAM LTD RANCHI
Stamp Duty Amount(Rs.)	: 500 (Five Hundred only)



Please write or type below this line

THE DEED OF SECOND AMENDMENT TO THE ALLOTMENT AGREEMENT BY AND BETWEEN THE PRESIDENT OF INDIA AND JHARKHAND URJA UTPADAN NIGAM LIMITED IN RESPECT OF BANHARDI COAL MINE

This Stamp paper forms an integral part of this deed of second amendment to Allotment Agreement.



Page 1 of 10

Vijay Kumar Jha
Chief Engineer (Banhardi Coal Block)
 Jharkhand Urja Utpadan Nigam Ltd
 Ranchi- 834004

Statutory Alert:

1. The authenticity of this Stamp Certificate should be verified at "www.e-stampsonline.com". Any discrepancy in the details on this Certificate should be reported to the website mentioned above.
2. The area of checking the legitimacy is on the reverse side of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

Sinhaswari
 B-Tech (Electrical Engineering) (COAL)
 COMPETENT PERSON
 MOBILE: 9910381111
 e-mail: sinhaswari@rediffmail.com

Shanti Guha
श्रीमती शांति गुहा / Smt. Shanti Guha
 वर सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 क्षेत्रीय निदेशक कार्यालय / O/o. The Coal Controller
 1, काठमिना / 2/1, Central House Street
 कोलकाता / Kolkata- 700 001

Shanta
श्रीमती शान्ता गुप्त / Smt. Shanta Gupta
उप कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o, The Coal Controller
1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Subodh
SUBODH JOHN PURTI
Sr. Manager (Crew Coal Mine)
PATRAU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NLC Ltd. in Joint Venture with BVM)
Patrau, Dist.-Ranchi-834119

Second Amendment to Allotment Agreement for Barchardi Coal Block

This second Amendment to the Allotment Agreement ("Amendment Agreement") is made by and between following:

PARTIES:

1. The President of India acting through the Central Government represented by the Nominated Authority appointed under Section 6 of the Coal Mines (Special Provisions) Act, 2015 (the "Nominated Authority").
2. Jharkhand Urja Utpadan Nigam Limited incorporated in India under the Companies Act, 1956 with corporate identity number U46108JH2013SGC001703, whose registered office is at Engineering Building, I.E.C Dhanua, P.S-Hatia, Ranchi, Jharkhand-834004, India (the "Allottee").

BACKGROUND:

- A. The Allotment Agreement dated March 30, 2015 as amended by First Amendment Agreement dated June 30, 2015 (the "Original Agreement") was entered into between the Nominated Authority and the Allottee.
- B. Subsequent to the execution of the Original Agreement, it is noted that Mining Lease is not required to be executed once notification under Section 11(1) of the CMA Act, 1957 is issued. Further, it has been observed that mine opening permission is granted by Coal Controller's Organization instead of State Pollution Control Board. Accordingly, certain clauses of the Original Agreement are required to be amended.
- C. Further, the Nominated Authority has noted that for even for minor changes in the Original Agreement, such as particulars of bank accounts and e-mail addresses, etc., an amendment agreement is required to be executed. Thus, for operational convenience Nominated Authority considered to provide a mechanism for amendment of certain provisions of the Original Agreement through a written notice, without requiring execution of an amendment agreement to the Original Agreement.
- D. The Nominated Authority is pleased to permit certain other amendments of the Original Agreement.
- E. Accordingly, in terms of Clause 26.8 of the Original Agreement, the Nominated Authority and the Allottee are entering into this Amendment Agreement to record certain amendments to the Original Agreement.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understandings set forth in this Amendment Agreement and the Original Agreement, and other good and valuable consideration (the adequacy of which are hereby mutually acknowledged), the parties with the intent to be legally bound hereby agree as follows:



Page 2 of 10

Subodh
Chief Engineer (Barchardi Coal Block)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi-834004

A. K. BISHIA
A. K. BISHIA
B-Tech (Metallurgical Engineering) (COAL)

e-mail: anshuwardishia@gmail.com

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL, a Joint Venture with JVVNL)
Patratu, Dist.-Rangpur-829119

Second Amendment to Allotment Agreement for Banhardih Coal Mine

1. DEFINITIONS AND INTERPRETATION

The definitions and rules of interpretation as specified in the Original Agreement shall apply to this Amendment Agreement.

2. AMENDMENTS

2.1. Clause 1.1.22 of the Original Agreement is hereby substituted with the revised Clause 1.1.22 as provided below:

"Designated Bank Account" shall mean the following bank account of the Nominated Authority:

*Name of the bank: United Bank of India
Account number: 0276056414586
Name of the account holder: PAO, Mo Coal
IFSC Code: UTBI0CON702*

2.2. Clause 3.2.2 of the Original Agreement is hereby substituted with the revised Clause 3.2.2 as provided below.

"In the event the Allottee does not provide a Completion Notice with respect to each of the Allotment Conditions listed in Clauses 3.1(a); 3.1(b); 3.1(c); 3.1(d); 3.1(e) (in cases where the Allottee is a Prior Allottee for the Coal Mine or any other Schedule I coal mine (as defined in the Ordinance)) and Clause 3.1(f), within 184 Days of the Agreement Date, then the Nominated Authority may terminate this Agreement without incurring any liability whatsoever by providing a written notice to the Allottee. It is clarified that in such event the Allottee shall not be entitled to receive the Allotment Order and the Nominated Authority shall be entitled to dispose the Coal Mine in the manner provided in the Ordinance and the Rules, including through re-auction/re-allotment or through appointment of a designated custodian."

2.3. Clause 3.2.3 of the Original Agreement is hereby substituted with the revised Clause 3.2.3 as provided below:

"If the Allottee does not provide a Completion Notice with respect to 3.1(f) and fails to provide a written intimation in substantially the same form as provided in SCHEDULE C within 184 Days of the Agreement Date, then it shall be deemed that the Allottee is not desirous of owning or utilizing any movable property or continuing any contract. In such cases, without prejudice to Clause 3.2.2, the Nominated Authority may elect to issue the Allotment Order without including aforementioned particulars in the Allotment Order. If all other Allotment Conditions have been satisfied by the Allottee and corresponding Completion Notice have been provided to the Nominated Authority."

Clause 5.1.1(x) of the Original Agreement is hereby substituted with the revised Clause



श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला विभाग / Uja - The Coal Controller
कक्षा सं-22 / 1, Council House Street
7-700 001, Kolkata- 700 001

AK SINHA
DIRECTOR, MINING, FCC (COAL)
MOBILE: 9836301111
e-mail: sinhaswdhsh@gmail.com

*Chief Engineer (Banhardih Coal Block)
Jharkhand Uja Utpadan Nigam Ltd.
Ranchi- 834004*

~~1000001 / Kanchi - 709 001
1, Council House Street
C/o. The Coal Controller
Dept. of Iron
Dist. Assst. Coal Controller
Smt. Shanti Gupta~~

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of PCL & a Joint Venture with BSNL)
Patalu, Dist. - Rangaiah - 529119

Second Amendment to Allotment Agreement for Bankhorithi Coal Mine

5.1.1 as provided below:

"the Governmental Approvals, including the Mining Lease, or notification under Section 11 (1) of the CBA Act, 1957, as the case may be, which shall be required for commencement of mining operations at the Coal Mine and the time within which the Allottee would make applications for such Governmental Approvals;"

2.5. Clause 5.2.2 of the Original Agreement is hereby substituted with the revised Clause 5.2.2 as provided below:

"The second installment of twenty five per cent of the Upfront Amount being an amount equal to INR 12,50,00,000 (Indian Rupees Twelve Crore and Fifty Lakh), shall be deposited by the Allottee in the Designated Bank Account, on or before 15 Business Days from the date of notification under Section 11(1) of the CBA Act, 1957 OR on or prior to expiry of 15 Business Days from the date of execution of the Mining Lease by the relevant State Government."

2.6. Clause 5.2.3 of the Original Agreement is hereby substituted with the revised Clause 5.2.3 as provided below:

"The third installment of twenty five per cent of the Upfront Amount being an amount equal to INR 12,50,00,000 (Indian Rupees Twelve Crore and Fifty Lakh), shall be deposited by the Allottee in the Designated Bank Account, on or prior to expiry of 15 Business Days from the date of grant of mine opening permission from the Coal Controller's Organization."

2.7. Clause 5.3.1 of the Original Agreement is hereby substituted with the revised Clause 5.3.1 as provided below:

"Pursuant to Section 8(4)(b) and Section 8(8), read with Section 8(12) of the Act, the Allottee shall become entitled to the mining lease with respect to the Coal Mine (the "Mining Lease") to be granted by the State Government or notification under Section 11 (1) of the CBA Act, 1957, as the case may be, upon issuance of the Allotment Order."

2.8. Clause 5.3.2 of the Original Agreement is hereby substituted with the revised Clause 5.3.2 as provided below:

"The Allottee shall promptly upon issuance of the Allotment Order make an application to the State Government for grant of a Mining Lease or take steps for notification under Section 11 (1) of the CBA Act, 1957, as the case may be, in the name of the Allottee."



Clause 7.1 (a) of the Original Agreement is hereby substituted with the revised Clause 7.1 (a) as provided below:

e 4 of 10

A. K. Sinha
B-Tech (Mining Engineering) FOC (COAL)
e-mail: sinhakarant@gmail.com

and
Chief Engineer (Sanhadi Coal Block)
Jharkhand Uja Utpadan Nigam Ltd
Ranchi - 834004

Subodh John Purti
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
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Patalu, Dist. - Rangaiah - 529119

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL in Joint Venture with JNMV)
Patratu, Dist.-Rangpur-829119

Second Amendment to Allotment Agreement for Banhardih Coal Mine

"(a) Pre-Commencement Report

Prior to commencement of mining operations at the Coal Mine, the Allottee shall provide a written intimation ("Pre-commencement Report") to the Nominated Authority and the Central Government once every thirty calendar days regarding the following:

- (i) the actions taken by the Allottee towards commencement of the mining operations at the Coal Mine, including compliance with the Commencement Plan;
- (ii) any deviations from the Commencement Plan, the reasons for such deviations and the steps taken by the Allottee to rectify such deviation; and
- (iii) whether in the opinion of the Allottee, it shall be able to commence mining operations at the Coal Mine within the time mentioned in the Commencement Plan.

The Allottee shall also inform the Nominated Authority in writing within 3 Business Days of receipt of the mine opening permission from the Coal Controller's Organization."

- 2.10. Clause 8.2.2 of the Original Agreement is hereby substituted with the revised Clause 8.2.2 as provided below:

"Any middling or washery rejects generated from the Coal Mine may be sold by the Allottee only with the prior approval of the Coal Controller's Organisation and the Allottee shall maintain separate records for the middling or washery rejects generated, utilised and sold. However, the middling or washery rejects generated from the Coal Mine should in no event, exceed the normative limits."

- 2.11. Clause 9.1.2 of the Original Agreement is hereby substituted with the revised Clause 9.1.2 as provided below:

"The Monthly Payment is required to be made to the State Government where the Coal Mine is located i.e. the State Government of Jharkhand, within 20 calendar days of expiry of each month with respect to coal extracted from the Coal Mine in such calendar month, in the manner as may be prescribed by the State Government, with an intimation to the Nominated Authority."

- 2.12. Clause 11.1 of the Original Agreement is hereby substituted with the revised Clause 11.1 as provided below:

"Clause 11.1. Limited Mining Rights



ent
Chief Engineer (Banhardih Coal Block)
Jharkhand Usha Utpadan Nigam Ltd.
Patratu, 829004

ASL S of 10
A. K. SINHA
B-Tech (Hons) MINING, FDS (COAL)
CONTACT NO: 9833051111
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Quha
श्रीमती शान्त गूहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला विभाग, कलकत्ता / The Coal Controller
1, 700 001 / Kolkatta- 700 001

श्रीमती शशी गुप्ता / Smt. Shashi Gupta
 वन मूलक नोबल निवेशक / Dy. Asst. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निधिक न्यायलय / Office of the Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / Council House Street
 कोयला - 700 001 / Kolkata - 700 001

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATHI VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL & Joint Venture with BHEL)
 Patratu, Dist. -Rangpur-829119

Second Amendment to Allotment Agreement for Banhardi Coal Mine

The Allottee shall be entitled to receive a Mining Lease or notification under Section 11 (1) of the CBA Act, 1957, as the case may be, for conduct of mining operations only in the Coal Mine and shall not be entitled to conduct the mining operations in any other area pursuant to this Agreement. The rights granted to the Allottee herein to conduct mining operations are exclusive within the Coal Mine. The Government undertakes not to grant any rights to mine coal in the Coal Mine to any Third Party during the Term."

2.13. Clause 11.3 of the Original Agreement is hereby substituted with the revised Clause 11.3 as provided below:

"It is expressly agreed that other than rights to mine for coal (as may be granted under any Mining Lease or notification under Section 11 (1) of the CBA Act, 1957, as the case may be, pursuant hereto), geological or archaeological rights do not form part of the rights granted to the Allottee under this Agreement and the Allottee hereby acknowledges that except in relation to coal (as may be granted under any Mining Lease or notification under Section 11 (1) of the CBA Act, 1957, as the case may be, pursuant hereto), it shall not have any mining rights or interest in the underlying minerals, metals (including gold, silver etc.), gas, oil, fossils, antiquities, structures or other remnants or things either of particular geological or archeological interest and that such rights, interest and property on or under the Coal Mine shall vest in and belong to the relevant Central/ State Government or the concerned Governmental Authority. The Allottee shall take all reasonable precautions to prevent its workmen or any other person from removing or damaging such interest or property and shall inform the relevant Central/ State Government forthwith of the discovery thereof and comply with such instructions as the concerned Governmental Authority may reasonably give for the removal of such property."

2.14. In Clause 18.2, Sub-clause (g) is hereby added after Sub-clause (f) as provided below:

"(g) Any claim made to or against the Indemnified Party hereinafter for any amount admissible as Fixed Amount in terms of the Allotment Document and the Act."

2.15. Clause 24.1 of the Original Agreement is hereby substituted with the revised Clause 24.1 as provided below:

"This Agreement shall come into effect on the Agreement Date. It is clarified that the provisions of this Agreement shall also be included in the Mining Lease or in the notification under Section 11 (1) of the CBA Act, 1957, as the case may be."

2.16. Clause 24.2 of the Original Agreement is hereby substituted with the revised Clause 24.2 as provided below:

"This Agreement shall commence on the dates mentioned in Clause 24.1 and



WJD
 Chief Engineer (Banhardi Coal Block)
 Jharkhand Uja Utpadan Nigam Ltd.
 Ranchi - 834004

A. R. SINHA
 B-Tech (Metallurgical Engg. (COAL))
 Coal Controller, Govt. of India
 1, Council House Street
 Kolkata - 700 001
 e-mail : sinhaawdesh@gmail.com

Subodh
 Sr. Manager (Coal Mine)
 PATRATHI VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL & Joint Venture with BHEL)
 Patratu, Dist. -Rangpur-829119

Subj: part 1
SUBODH JOHN PURTI
Sr. Manager (Cris Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL in Joint Venture with JSENL)
Patratu, Dist.-Rangpur-829119

Second Amendment to Allotment Agreement for Banhardih Coal Mine

shall continue for the period of validity of the Mining Lease granted to the Allottee or the notification under Section 11 (1) of the CBA Act, 1957, as the case may be ("Term"), unless agreed otherwise by the Parties and unless this Agreement is terminated earlier in accordance with its terms prior to the expiry of the Term."

- 2.17. Clause 24.3.1(q) of the Original Agreement is hereby substituted with the revised Clause 24.3.1(q) as provided below:

"This Agreement may be terminated upon termination of the Mining Lease granted to the Allottee or notification under Section 11 (1) of the CBA Act, 1957, as the case may be; or"

- 2.18. After Clause 26.14 of the Original Agreement a new Clause 26.15, as provided below, shall be inserted:

"26.15. Change Notice

Notwithstanding anything contained herein, the Nominated Authority may issue a change notice ("Change Notice") for change in particulars of:

- (a) the Designated Bank Account;
- (b) the number of days within which the Completion Notice is required to be provided in terms of Clauses 3.2.2 and 3.2.3 of the Original Agreement, by extending the time period provided in Clauses 3.2.2 and 3.2.3 of the Original Agreement, prior to the expiry of such periods; or
- (c) the e-mail address for submission of the Pre-Commencement Report, the Commencement Report, the Monthly Report and the Yearly Report, as specified in Clause 7.2 of the Original Agreement

The change notice shall be issued in writing by the Nominated Authority and shall be sent by registered post with acknowledgment due, or transmitted by facsimile transmission at the address of the Allottee as specified in Clause 26.11 for providing Notices. A copy of the Change Notice sent by registered post with acknowledgment due, or transmitted by facsimile transmission may also be sent through email to the email addresses specified pursuant to Clause 26.11 solely for the information of the Allottee and shall be deemed to be delivered when the registered post is actually delivered or the fax is received by the Allottee, as the case may be.

Within 5 Business Days of receipt of the Change Notice, the Allottee shall provide a written acknowledgment of its receipt to the Nominated Authority through email. The Change Notice shall take effect from: (a) the date specified in the Change Notice - if such date has been specified in the Change Notice, or (b) the date of its receipt - if no effective date has been specified in the Change Notice."



ASL
Page 7 of 10

Wend
Chief Engineer (Banhardih Coal Block)
Patratu

A. K. SINHA
B-Tech (Mechanical Engg), FCC (COAL)

e-mail: sinhawahesh@gmail.com

Shanta
श्रीमती शंता गुप्ता / Smt. Shanta Gupta
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राज्य कोयला / Govt. of India
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Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Cinn Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. Joint Venture with JNMV)
 Patrao, Dist.-Ramgarh-829119

Second Amendment to Allotment Agreement for Banhardih Coal Mine

2.19. Schedule A (titled Particulars of the Coal Mine) of the Original Agreement is hereby substituted with the revised Schedule A as provided below:

Name of Coal Mine	Banhardih
Latitude	23°43'21" N to 23°45'51" N
Longitude	84°34'43" E to 84°40'03" E
Coalfield	Auranga
Villages	Block - Chandwa, Mouzas- Banhardi, Bari, Surli, Tom, Ate, Rinch, Barwadhi, Rampor and Block- Latchar, Mouzas-Sabaru, Jagaldaga and Udayapura, District - Latchar
District	Latchar
State	Jharkhand

2.20. Milestones under Sl. No. 1, Sl. No. 3 and Sl. No. 12 of Schedule E (titled Efficiency Parameters) of the Original Agreement is hereby substituted with the revised Milestones provided below:

- "Sl. No. 1: Prospecting License or notification under Section 4 of the CRA Act, 1957, as applicable
- Sl. No. 3: Mining lease Application or notification under Section 7 of the CRA Act, 1957, as applicable
- Sl. No. 12: Grant of Mining Lease or notification under Section 11 of the CRA Act, 1957, as applicable"

2.21. Clause 3(h) of Schedule H (titled Warranties) of the Original Agreement is hereby substituted with the revised Clause 3(h) as provided below:

"except as set forth in any Mining Lease or in the notification under Section 11 (1) of the CRA Act, 1957, as the case may be, all rights and interests of the Allottee in and to the Coal Mine shall pass to and vest in the relevant Governmental Authority on the date of termination or expiry hereof, free and clear of all Encumbrances without any further act or deed on the part of the Allottee or the Central Government;"

3. CONTINUING OBLIGATIONS

The Original Agreement and all terms and conditions of the Original Agreement shall continue to remain valid, operative, binding, subsisting, enforceable and in full force and effect save and except to the extent amended by this Amendment Agreement, and the Original Agreement shall always be read in conjunction with this Amendment Agreement.



A. K. Sinha
A. K. SINHA
 B-Tech (Mining) / IIT Kharagpur
 e-mail : sinhaawd@rediffmail.com

Chief Engineer
Chief Engineer (Banhardi Coal Block)
 Jharkhand Urja Utpadan Nigam Ltd.
 Ranchi- 834004

Smt. Shanta Guha
Smt. Shanta Guha
 Dy. Asst. Coal Controller
 Govt. of India
 Office: The Coal Controller
 1, Council House Street
 Kolkata- 700 001

4. MISCELLANEOUS

- 4.1. The provisions of Clause 25 of the Original Agreement (*Governing Law and Dispute Resolution*), and Clause 26 of the Original Agreement (*Miscellaneous*), shall *mutatis mutandis* apply to this Amendment Agreement and shall be deemed to be incorporated by reference.
- 4.2. This Amendment Agreement shall become effective on the date on which execution of this Amendment Agreement by both the Allottee and the Nominated Authority is completed.

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATI VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. Joint Venture with JNMV)
Patrao, Dist. Raurkela-829119

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
असिस्टेंट कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
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कोलकाता-700 001 / Kolkata-700 001



Page 9 of 10

R. Sinha
R. SINHA
B-Tech (Electrical) IIT Bombay, FCC (COAL)
SR. ENGINEER
e-mail : sinhasawdihash@gmail.com

Chief Engineer
Chief Engineer (Banhardi Coal Block)
Jharkhand Urja Utpadan Nigam Ltd
Ranchi, Jharkhand

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized representatives on the date and year written below, at New Delhi:

The Nominated Authority

Jharkhand Urja Utpadan Nigam Limited



Vivek Bhandari

Name: Vivek Bhandari
Date: January 17, 2017

Vijay Kumar Singh

Name: V. K. Singh
Designation: Chief Engineer (Bantardih Coal Block)
Jharkhand Urja Utpadan Nigam Ltd
Date: January 17, 2017

Duly authorized to execute this Agreement pursuant to resolution passed by the Board of Directors of the Jharkhand Urja Utpadan Nigam Limited.

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of JH PCL Ltd. in Joint Venture with BSNL)
Patratu, Dist.-Ranchi-829119

Shanta Guha
श्रीमती शान्त गुहा / Smt. Shanta Guha
उप सहायक चीफ़ नियंत्रक / Dy. Asst. Chief Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, बंगाली हाउस स्ट्रीट / 1, Bangali House Street
कोलकाता-700 001 / Kolkata-700 001

A. K. Sinha
A. K. SINHA
B-Tech (Mechanical Engg) (COAL)

Annexure-IC

Deed of adherence between Nominated Authority (MOC, Government of India), Jharkhand Urja Utpadan Nigam Limited (JUUNL) and Patratu Vidyut Utpadan Nigam Limited (PVUNL), dated 2nd of June, 2017



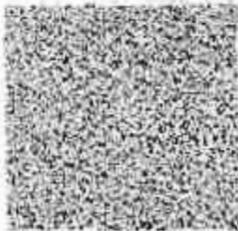
सत्यमेव जयते

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 Certificate Issued Date : 01-Jun-2017 03:40 PM
 Account Reference : IMPACC (IV) 81776103/ DELHI/ DL-DLH
 Unique Doc. Reference : SUBIN-DL DL77610378541105817267P
 Purchased by : PATRATU VIDYUT UTPADAN NIGAM LIMITED
 Description of Document : Article 5 General Agreement
 Property Description : Not Applicable
 Consideration Price (Rs.) : 0
 (Zero)
 First Party : NOMINATED AUTHORITY MINISTRY OF COAL
 Second Party : PVUN LIMITED AND JUUN LIMITED
 Stamp Duty Paid By : PVUN LIMITED AND JUUN LIMITED
 Stamp Duty Amount (Rs.) : 500
 (Five Hundred only)



Subodh John Parti
 SUBODH JOHN PARTI
 Sr. Manager (Cinn-Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL in Joint Venture with JVVNL)
 Patna, Dist. -Rangpur-823119

Shanta Guba
 श्रीमती शांता गुबा / Smt. Shanta Guba
 जन कक्षक कोयला नियंत्रक / Dy. Acstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
 1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

A.K. Sinha

A. K. SINHA
 B-Tech (Mech) NITRR, FCQ (COAL)
 CUM: 75192-2011
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 e-mail: sinhaswadesh@gmail.com

**THE DEED OF ADHERENCE BY AND BETWEEN THE PRESIDENT OF INDIA,
 M/S JHARKHAND URJA UTPADAN NIGAM LIMITED AND M/S. PATRATU
 VIDYUT UTPADAN NIGAM LIMITED IN RESPECT OF BANHARDIH COAL MINE
 ALLOTTED UNDER COAL MINES (SPECIAL PROVISIONS) ACT, 2015.**

This Stamp-paper forms an integral part of this Deed of Adherence.

SKP

Manoj
 Manoj Coal Block
 Id.

Divakaradray

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप महापंक कोयला निरीक्षक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
राजभवन हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Subodh Jaiswal

Deed of Adherence for Bahardih Coal Mine

This **DEED OF ADHERENCE** ("DEED") is made by and between the following:

PARTIES

1. **The President of India**, acting through the Central Government represented by the Nominated Authority appointed under Section 6 of the Coal Mines (Special Provisions) Act, 2015 (the "**Nominated Authority**").
2. **M/s Jharkhand Urja Utpadan Nigam Limited**, incorporated in India under the Companies Act, 1956 with the corporate identity number **U40108JH2013SGC001703**, whose registered office is at Engineering Building, H.E.C Dhurwa, P.S.- Hatia, Ranchi, Jharkhand-834044, India (the "**Allottee**").

AND

3. **M/s Patratu Vidyut Utpadan Nigam Limited** (A joint venture of **NTPC Limited** and **Jharkhand Bijli Vitaran Nigam Limited**), incorporated in India under the Companies Act, 2013 with corporate identity number **U40300DL2015GOI286533**, whose registered office is at **NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110003**, India and principal place of business is at **Patratu Vidyut Utpadan Nigam Limited, Patratu, P.O.-PTPS Pataratu, District Ramgarh, Jharkhand-829119**, India (the "**Assignee**").

The Nominated Authority and the Allottee and the Assignee are hereinafter collectively referred to as the "**Parties**" and individually as the "**Party**".

BALAKRISHNAN

The Nominated Authority and the Allottee had entered into a Coal Mine Development and Production Agreement on **30th March 2015** (the "**Agreement**") with respect to the Coal Mine (as defined in the Agreement), annexed hereto as **Annexure I**.

- B. The Allottee has obtained requisite approvals under Clause 13 of the Agreement for transfer of the Coal Mine from the Allottee to the Assignee, and a copy of such approvals are annexed as **Annexure II** to this deed.
- C. Additionally, the Allottee and/or the Assignee have completed the following conditions specified in Clause 19.2 of the Agreement

(i) the Assignee hereby represents that it meets the applicable Eligibility Conditions.



[Signature]
A. K. SINHA
Joint Mining, FCC (COAL)
COAL DEVELOPMENT
e-mail : statewdrch@...

[Handwritten initials]

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civ. Coal Mine)
PATRABU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. Joint Venture with BVMCL)
Patnau, Dist.-Rangpur-829119

शान्ति गुहा / Smt. Shanti Guha
उप निदेशक - कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
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कोलकाता-700 001 / Kolkata- 700 001

Deed of Adherence for Benhardin Coal Mine

- (ii) the Assignee hereby agrees to unconditionally and irrevocably adhere to the provisions of the Agreement is accordingly entering into this deed of adherence;
- (iii) the Assignee has furnished the Performance Security through Bank Guarantee No. 16090100005689, dated 01.02.2017, to substitute the subsisting, Performance Security provided by the Allottee through Bank Guarantee No 4902IPEBG150029, dated 29.04.2015 and as extended on 26.10.2016 and
- (iv) the Assignee has paid any other amount due from the Allottee, the particulars of which are set in Schedule I, and hereby agrees to indemnify and hold the Nominated Authority harmless in all respects against any claims from any Third Party or the Allottee with respect to such assignment.

D. Accordingly, the Nominated Authority, the Allottee and the Assignee have agreed to execute this Deed.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understanding set forth in this deed, and other good and valuable consideration (the adequacy of which are hereby mutually acknowledged), the Parties with the intent to be legally bound hereby agree as follows:

1. DEFINITIONS AND INTERPRETATIONS

- 1.1. Capitalized terms used but not defined in this deed shall, unless the context otherwise requires, have the respective meaning ascribed thereto in the Agreement.
- 1.2. Clause 1.2 (*Interpretation*) of the Agreement shall apply *mutatis mutandis* to this Agreement.

2. EFFECTIVE DATE

Upon its execution, this Deed shall be submitted to the Nominated Authority. Based on the documents and information submitted by the Assignee and/or the Allottee, if the Nominated Authority is satisfied that the requirements under Clause 19.2 of the Agreement have been satisfied, the Nominated Authority shall grant written prior consent under Clause 19.1.1 of the Agreement. The effective date for the assignment of the Agreement pursuant to this deed shall be the date on which the aforementioned written consent is granted by the Nominated Authority ("Effective Date").

3. UNDERTAKING

- 3.1. The Assignee confirms that it has been provided a copy of the Agreement and that it has read and understood the provisions, terms and conditions of the

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Sr. Manager (Civ. Coal Mine), ECG (COAL)
Benhardin Coal Block
Patnau, Dist.-Rangpur-829119
e-mail: sinhasawdheesh@gmail.com

Shanti Guha
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भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
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श्रीमती शान्ता गुहा / Smt. Shanta Guha
 उप सहायक कोयला निबंधक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निबंधक कार्यालय / O/o The Coal Controller
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 कोलकाता-700 001 / Kolkata-700 001

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL Ltd. Joint Venture with JORIL)
 Patrao, Dist.-Rangpur-820119

Deed of Adherence for Banhardih Coal Mine

Agreement and other incidental documents related to grant of mineral concession for the Coal Mine.

3.2. The Assignee hereby covenants with and undertakes to the Nominated Authority and the Allottee that, by its execution of this Deed on and from the Effective Date.

- (a) the Assignee shall become a party to the Agreement and that it will abide by, observe, perform duly and be bound by all of the provisions, obligations, covenants and undertakings set forth in the Agreement, as applicable to the Allottee;
- (b) the Assignee shall be bound by, and be liable to perform, observe and conform and be subject to all provisions of all the covenants, stipulations and conditions contained in the Agreement and any other document related to grant of mineral concession over the Coal Mine in the same manner in all respects as if the Coal Mine had been granted to the Assignee as the allottee thereunder, and the Assignee had originally executed the Agreement and any other documents as such;
- (c) any reference to the expression "Allottee" in the Agreement or any other incidental document shall be construed to be reference to the Assignee;
- (d) the Assignee shall be solely responsible towards the Nominated Authority and any other Government Authority, with respect to any obligations under the Agreement, or with respect to the Coal Mine, including regarding any obligation which pertains to any period prior to the Effective Date but not prior to the date of allotment of the Coal Mine, which is discovered or accrued subsequent to the Effective Date. However, the Assignee and the Allottee may enter into mutual agreement with respect to apportionment of such obligations amongst themselves.

3.3. The Assignee hereby confirms that all provisions relating to its rights, duties and obligations of any nature whatsoever under the Agreement are incorporated by reference herein and deemed to be part of this Deed to the same extent as if such provisions has been set forth in their entirety herein.

3.4. The Assignee hereby undertakes to indemnify and hold the Nominated Authority harmless in all respects against any claims from any Third Party or the Allottee with respect to the assignment of the Agreement.

श्रीमती शान्ता गुहा / Smt. Shanta Guha
 उप सहायक कोयला निबंधक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निबंधक कार्यालय / O/o The Coal Controller
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 कोलकाता-700 001 / Kolkata-700 001



S.K.P.
A. K. SINHA
 Sr. Manager (Civil Coal Mine)
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 (A Subsidiary of NTPCL Ltd. Joint Venture with JORIL)
 Patrao, Dist.-Rangpur-820119
 e-mail : sinhasubodhesh@gmail.com



Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCLM in Joint Venture with JVVNL)
 Patratu, Dist.-Ramgarh-829119

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
 ज्वलंत उद्योग निदेशक / Dy. Asstt. Com. ...
 भारत सरकार / Govt. of India
 कोयला निदेशक कार्यालय / O/o. The Coal Controller
 1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Deed of Adherence for Banhardih Coal Mine

3.5. The Nominated Authority and the Allottee further agree and the Assignee confirms that it shall not have any additional rights than those are available to the Allottee in accordance with the Agreement.

4. REPRESENTATIONS AND WARRANTIES

4.1. The Assignee represents and warrants to the Nominated Authority and the Allottee that;

- (i) The Assignee has full legal right, capacity, and the power and authority to execute, deliver and perform this Deed and its obligations under the Agreement;
- (ii) The Assignee meets the applicable Eligibility Conditions in terms of the Agreement;
- (iii) The Assignee has paid all amounts due from the Allottee;
- (iv) This Deed has been duly executed and delivered by the Assignee and constitutes a legal, valid and binding obligation of the Assignee, enforceable against it in accordance with its terms;
- (v) Neither the execution and delivery of this Deed by the Assignee, nor the performance of its obligations hereunder, will require any approval or action of, or any filing with or any notice to, any other Government Authorities or any other Person pursuant to any instrument, contract or other agreement to which he is bound; and

Neither the execution and delivery of this Deed by the Assignee, nor the performance of its obligations hereunder, will violate or otherwise conflict with any Applicable Laws or any agreement, contract or court order to which it is a party.

5. NOTICES

The details of the Assignee for the purpose of Clause 26.11 and SCHEDULE H of the Agreement are:

Address	Patratu Vidyut Utpadan Nigam Limited, Patratu, P.O.-PTPS Patratu, District Ramgarh, Jharkhand- 829119, India.
Telephone	06553-286031
Fax	06553-286030
E-mail (only for information)	skpatnaik@ntpc.co.in

181
A. K. SINHA
 B-Tech (Mech) ENGINEERING, FCC (ODAL)
 QUALIFIED PERSONNEL
 JVVNL - 0581435171
 e-mail: sinhaaworeshi@gmail.com



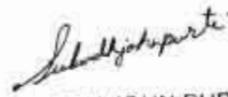
6. GOVERNING LAW AND OTHER PROVISIONS

This Deed and all questions of its interpretation shall be construed in accordance with the laws of India, without regard to its principle of conflict of laws.

Clauses 25 (*Governing Law and Dispute Resolution*) and Clause 26 (*Miscellaneous*) shall be deemed to be incorporated, *mutatis mutandis*, in this Deed by reference.

7. Counterparts

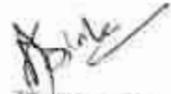
This Deed may be executed in two counterparts, each of which will be deemed an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, but all of which together will constitute one and the same instrument.



SUBODH JOHN PURTI
Sr. Manager (Cinn Coal Mine)
PATRATI VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. a Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119



श्रीमती शंता च्छा / Smt. Shanta Chha
आ सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला विपणन समिति / O/o. The Coal Controller
1, चाउकहाउस स्ट्रीट / 1, Chaudhury House Street
कोलकाता-700 001 / Kolkata-700 001



A. K. SINHA
B-Tech (Mech) MSc (M), FCC (COAL)



Engineer (Banharoli Coal Block)
Patratu Utpadan Nigam Ltd



Annexure-ID

**Deed of Assignment between Jharkhand
Urja Utpadan Limited (JUUNL) and Patratu
Vidyut Utapadan Nigam Limited (PVUNL)
towards amendment of the Allotment order
in favour of PVUNL, dated 18th of May,
2018.**



सत्यमेव जयते

INDIA NON JUDICIAL
Government of Jharkhand
e-Stamp

Certificate No.	: IN-JH09538693614861Q
Certificate Issued Date	: 15-May-2018 01:03 PM
Account Reference	: NONACC (BK)/ jhcantbk02/ THARPAKHANA/ JH-RNC
Unique Doc. Reference	: SUBIN-JHJHCANBK0213360591652381Q
Purchased by	: JUUNL
Description of Document	: Article 5 Agreement or memorandum of an Agreement
Property Description	: AGREEMENT
Consideration Price (Rs.)	: 0 (Zero)
First Party	: JUUNL
Second Party	: PVUNL
Stamp Duty Paid By	: JUUNL
Stamp Duty Amount(Rs.)	: 100 (One Hundred only)



Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal/Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. incorporated with JVVNL)
Paratu, Dist.-Ranchi-829119

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
असिस्टेंट कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
L, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

Please write or type below this line

The Deed of Assignment ("Deed") by and between M/s Jharkhand Urja Utpadan Nigam Limited(JUUNL) and M/s Patratu Vidyut Utpadan Nigam Limited(PVUNL) in respect of Banhardih Coal Mine allotted under Coal Mines (Special Provisions) Act 2015.

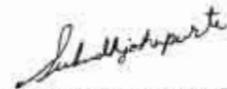
This Stamp paper forms an integral part of this Deed of Assignment.



A. S. Sinha
A. S. SINHA
B-Tech (Mining) Post Graduate (PG) (COAL)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi-834004
e-mail ; sinhasowdhashi@gmail.com

A. S. Sinha
18/05/18
0002615690
Chief Engineer (Banhardih Coal Mine)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi- 834004


श्रीमती शान्ता गुला / Smt. Shanta Gulia
उप महासचिव कोयला विभाग / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
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1, जवाहरलाल नेहरू स्टीट / 1, Council House Street
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SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Joint Venture of NTPCLtd. & Joint Venture with JBVNL)
Patratu, Dist.-Rangbarh-829119

This Deed of Assignment ("Deed") is made on the 18th day of May, 2018

BETWEEN

1. M/s Jharkhand Urja Utpadan Nigam Limited, incorporated in India under the Companies Act 1956 by virtue of 'The Jharkhand State Electricity Reforms Transfer Scheme 2013' under the Electricity Act 2003, a power generating utility of the Government of Jharkhand, having its Head Office at Engineering Building, HEC Dhurwa, Ranchi-834004 in the State of Jharkhand (hereinafter referred to as the "Allottee") of the first part.

AND

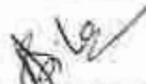
2. M/s Patratu Vidyut Utpadan Nigam Limited (A Joint venture of NTPC Limited and Jharkhand Bijli Vitaran Nigam Limited (JBVNL) incorporated in India under the Companies Act 2013 having its registered office at NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110003, India and principal place of business is at Patratu Vidyut Utpadan Nigam Limited, Patratu, District Rangbarh, Jharkhand - 829119, India (hereinafter referred to as the "Assignee") of the second part.

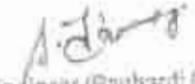
The Allottee and the Assignee are hereinafter collectively referred to as the "Parties" and individually as the "Party".

WHEREAS

- I. Joint Venture Agreement has been signed between NTPC Limited and M/s Jharkhand Bijli Vitaran Nigam Limited (JBVNL) as parties and Govt of Jharkhand, Jharkhand UrjaVikas Nigam Limited and Allottee as the confirming parties to form a Joint Venture Company of NTPC Limited and M/s JBVNL with 74:26 equity participation respectively, for expansion of Patratu Thermal Power Station, Phase I (3x800 MW) and phase II (2x800 MW) respectively.
- II. Joint Venture Company of NTPC Limited and M/s JBVNL has been jointly incorporated as M/s Patratu Vidyut Utpadan Nigam Limited (Assignee) in terms of clause 2.1 of Joint Venture Agreement dated 29.07.2015.
- III. Coal Block Allotment (Coal Mine Development and Production) Agreement of Banhardih Coal Block (District Lohardih) was executed on 30.03.2015 between Nominated Authority appointed under Section 9 of the Coal Mines (Special Provisions) Ordinance 2014 read with Coal Mines (Special Provisions) Second Ordinance 2014 and the Allottee for the development of coal mines and production and utilisation of coal from the coal mine.




A. K. SINHA
Tech (HEAD) LHMNO, FCC (COAL)
EMPLOYED PERSON
MOBILE : 9540051711
e-mail : akmh@wafresh@gmail.com


Chief Engineer (Banhardih Coal Block)
Jharkhand Urja Utpadan Nigam Ltd
Ranchi- 834004

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Cust. Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
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अप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
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IV. The Allottee has decided to assign its rights in the Banhardih Coal Block to the Assignee after seeking the in-principle approval from ministry of Coal, Govt of India vide letter bearing F. No. 13016/43/2015 dated 11/09/2015.

V. Office of Nominated Authority vide letter bearing no. 103/18/2015/NA dt. 05.04.16 communicated the approval of Ministry to execute the Deed of Adherence on 18.04.2016 at the office of Nominated Authority. Authorized representative of Allottee (JUUNL) and Assignee (PVUNL) were directed to present at the aforementioned time along with compliances mentioned in letter bearing no. 103/18/2015/NA dt. 05.04.16.

VI. The Allottee has obtained requisite approvals under clause 13 of the Allotment Agreement for assignment of the coal mine from the Allottee to the Assignee. Further, Assignee has fulfilled the following conditions specified under section 19 of the Allotment Agreement for assignment of the coal mine:

- Fresh Performance Bank Guarantee of Rs 237.6 Cr had been established by the Assignee to the Nominated Authority vide BG No 16090100005689 dated 01.02.2017.
- A provisional amount of Rs 70.19 Cr has been paid to the Allottee by the Assignee towards the liabilities incurred on account of development of Banhardih Coal Block. Any amount payable and/or receivable by JUUNL and PVUNL will be mutually settled in due course by both the parties.
- A joint statement was furnished by the Allottee and the Assignee, indemnifying the Nominated Authority harmless in all respects against any claims from any third party or the Allottee with respect to such Assignment.

VII. The Assignee and Allottee have entered into a Deed of Adherence with the Nominated Authority on 2nd June 2017 for the transfer of the Banhardih Coal Block.

VIII. Finally, Nominated Authority vide letter bearing F.No- 103/18/201/NA dated 21st June 2017, has given its prior consent for Assignment of Allotment Agreement in respect of Banhardih Coal Mine from Allottee to Assignee.

IX. Accordingly, the Allottee and Assignee have agreed to execute this Deed.

NOW THEREFORE, in consideration of the mutual covenants, terms and conditions and understanding set forth in this Deed, the parties with the intent to be legally bound hereby agree as follows:

1. This Deed of assignment of the Allotment Agreement in respect of Banhardih coal mine from Allottee to the Assignee shall come into force from the effective date mentioned in



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A. H. SINHA
B-Tech (Mech) MINING, FCC (COAL)
QUALIFIED PERSON
PHONE: 0660287111
e-mail: sinhasawdusth@gmail.com
Civil Engineer (Banned) in
Bharhadih Uda Utpadan Nigam Ltd.
Ranchi- 834004

Subodh
श्रीमती सुबोध पुरी / Ms. Subodh Puria
बन सहायक खेपरा विभाग / Sr. Asstt. Coal Controller
भारत सरकार / Govt. of India
खेपरा निपेक्षक कार्यालय / O/o. The Coal Controller
1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
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Subodh Puria
SUBODH JOHN PURTI
Sr. Manager (Cinn Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of IITCL Ltd. Joint Venture with JNMCL)
Patratu, Dist.-Rangpur-829119

the Deed of Adherence mutually signed by PVUNL & JUUNL with MoC on 2nd of June 2017.

- JUUNL (the Allottee) undertakes to meet all the liabilities arising out of non-performance, if any, as per the efficiency parameters stipulated in the Allotment Agreement prior to dt. 18.04.2016 and PVUNL (the Assignee) undertakes to meet all the liabilities arising out of non-performance, if any, as per the efficiency parameters stipulated in the Allotment Agreement after dt. 18.04.2016.

For avoidance of any doubt, it is clarified that any liability on account of non-performance determined after the dt. 18.04.2016, shall be in the part of the Assignee whatever the effective date be notified by the office of Nominated Authority, Ministry of Coal, Govt. of India.

- The Assignee undertakes to comply with and abide by all the clauses expressed or implied as contained in the Allotment Agreement dated 30.03.2015 from the day when this assignment of Banhardih Coal Block becomes effective, as applicable to the Allottee.
- The Assignee shall be bound by all the provisions of the Allotment Agreement and any other document related to grant of mineral concession over the coal mine in the same manner in all respects as if the coal mine had been granted to the Assignee as the allottee hereunder, and the Assignee had originally executed the Agreement and any other documents as such.
- Any reference to the expression 'Allottee' in the Agreement or any other incidental document shall be construed to be reference to the 'Assignee'.
- The Assignee also undertakes to address and resolve any dispute arising under the Allotment Agreement of Banhardih coal block after the effective date.
- The Allottee confirms that no dispute in respect of Allotment Agreement dated 30.03.2015 is pending in any court of law.
- The Allottee undertakes to close all the contracts awarded by the Allottee to different parties pertaining to development of Banhardih coal block within reasonable time which may not exceed 60 days subject to any case pending in any Court of Law.
- The Assignee hereby undertakes to indemnify and hold the Nominated Authority harmless in all respects against any claims from any third party or the Allottee with respect to the assignment of the Allotment Agreement.

Subodh
K. SINHA
B-Team (Horn)
MOBILE: 9830017111
e-mail: sinhatawdhushe@gmail.com

Subodh Puria
Chief Engineer (Banhardih Coal Block)
Banhardih Ura Utpadan Nigam Ltd
Ranchi- 834004

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal/Coal Mine)
PATRATA VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JRM)
Patratu, Dist.-Rangach-829119

Duloo
श्रीमती शान्ता गुहा / Smt. Shanta Guha
असहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रण कार्यालय / C/o. The Coal Cer.
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

10. The Allottee further covenants that on the request of the Assignee it will execute all the documents, forms and authorization that may be necessary for the purpose of this assignment for securing, completing or vesting in Assignee, all the rights, title and interest for getting the execution of work of coal block under the said Allotment Agreement dated 30.03.2015.
11. The Assignee shall not have any additional rights than those are available to the Allottee in accordance with the Allotment Agreement.
12. Representation and Warranties: The Assignee represents and warrants to the Nominated Authority that it has full legal right, capacity and power and authority to execute, deliver, and perform this Deed and its obligations under the Agreement. Further, neither the execution of this deed nor the performance of its obligations hereunder by the Assignee, will violate or otherwise conflict with any applicable laws or any Agreement, contract or Court order to which it is a party.
13. Governing Law and other Provisions: This deed shall be construed in accordance with the Law of India. Clause 25 and Clause 26 of the Coal Mines (Special Provisions) Act 2015 shall be deemed to be incorporated mutatis mutandis in this deed by reference.
14. Notice: Any notice to be given under this Deed shall be in writing and shall be deemed to have been duly and properly served upon the Parties hereto if delivered against acknowledgement or by registered mail with acknowledgement due, addressed to Parties herein at the following addresses or such changed addresses as will be duly notified by the Parties from time to time. Address:

Jharkhand Urja Utpadan Nigam Limited
Engg Building, HEC, Dhurwa
Ranchi(Jharkhand), Pin- 834004

Patratu Vidyut Utpadan Nigam Limited
Patratu, Rangach (Jharkhand)
Pin- 829119

15. Counterparts: This Deed may be executed in two counterparts, each of which will be deemed an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, but all of which together will constitute one and the same instrument.

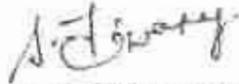


A. R. Sinha
A. R. SINHA
B-Tech (Hons) MINING, FCC
QUALIFIED PERSON
MOBILE : 88426381711
e-mail : sinhasardesh@gmail.com
S. Sinha
Chief Engineer (Bankhandi Coal Block)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi- 834004

IN WITNESS WHEREOF, the parties have caused this Deed to be duly executed by their duly authorized representatives in the date and year mentioned above at Ranchi.

Signatories

Jharkhand Urja Utpadan Nigam Limited

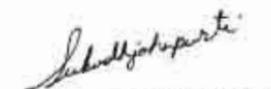


Chief Engineer (Banhardi Coal Block V)
Jharkhand Urja Utpadan Nigam Ltd.
Ranchi- 834004

Name: Sidheshwar Tiwari

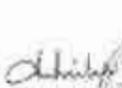
Designation: Chief Engineer

Date: May 18, 2018



SUBODH JOHN PURTI
Sr. Manager (Coal/Coal Mine)
PATRATI VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of JPCIL in Joint Venture with JBMU)
Patratu, Dist.-Rangpur-829119

Patratu Vidyut Utpadan Nigam Limited



Name: A K Sinha

Designation: Chief Executive Officer

Date: May 18, 2018



श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001



A. H. BHATIA
B-Tech (Mech) PCC (COAL)
MOBILE: 9742-231711
e-mail: ahsawdhas@ymail.com

Annexure-IE

**Corrigendum to the Allotment order No.
103/18/2015/NA dt. 30thJune, 2015 and
allotment order in favour of M/S Patraru
Vidyut Utpadan Nigam Limited (PVUNL)
vide allotment order No. 103/18/2015 NA
dt. 25th of June, 2018**

ANNEXURE- IE

No. 103/18/2015/NA
Government of India
Ministry of Coal

120, F Wing, First Floor, Shastri Bahawan
New Delhi, Dated: 25th June, 2018

To,
The CEO,
Patratu Vidyut Utpadan Nigam Limited,
Patratu, P.O.-PTPS Patratu Dist. Ramparh,
Jharkhand-829119

Subject: Corrigendum No. 02 to the Allotment Order dated 30th
June 2015 in respect of Banhardih coal mine.

Sir,

I am directed to refer to the subject mentioned above and to forward herewith
Corrigendum No. 02 dated June' 2018 (in original) to the Allotment Order No.
103/18/2015/NA dated 30th June' 2015 in respect of Banhardih coal mine.

Yours faithfully,

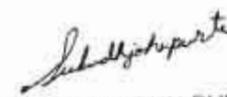
Encl: As above

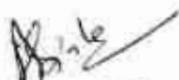


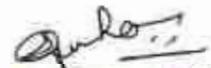
(N.K. Singh)
Deputy Secretary to the Govt. of India
Tel. No.- 011 23384104

Copy along with enclosure for information to:

1. Coal Controller, Coal Controller Organization, Kolkata, West Bengal
2. CMD, CMPDIL, Ranchi
3. US (CBA-II), Ministry of Coal
4. The Managing Director, Jharkhand Urja Utpadan Nigam Limited,
Engineering Building, H.E.C., Dhanu, Ranchi 834004


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of MTPCL Ltd. in Joint Venture with BIRLA)
Patratu, Dist.-Ramparh-829119


A. K. SINHA
B-Tech (Hons) 1984/90, FCC (COAL)
QUALIFIED PERSON
MOBILE : 9808387701
e-mail : sinhasawdhan@gmail.com


श्रीमती शंता गुहा / Sant. Shanta Guha
असम कोयला नियंत्रक / Dy. Asstt. Coal Controller
सरकार भारत / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
को-700 001 / Kolkata-700 001

F. No. 103/18/2015/NA
Government of India
Ministry of Coal
O/o the Nominated Authority

120, F Wing, First Floor, Shastri Bhawan, New Delhi

Corrigendum No. 2 to the Allotment Order no. 103/18/2015/NA dated 30th June 2015.

In re: **Banhardih Coal Mine** (the "mine")

Date: 25th June, 2018

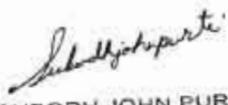
In favour of: **Patratu Vidyut Utpadan Nigam Limited** (a joint venture of NTPC Limited and Jharkhand Bijli Vitran Nigam Limited), incorporated in India under the Companies Act, 2013 with corporate identity number U40300DL2015GOI286533, whose registered office is NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003, India (the "Allottee")

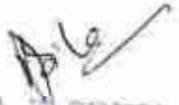
WHEREAS, The Nominated Authority has, in accordance with provisions of the Coal Mines (Special Provisions) Act, 2015 (the "Act") and the Coal Mines (Special Provisions) Rules 2014 (the "Rules") had issued Allotment order No. 103/18/2015/NA dated 30th June 2015 in favour of M/s Jharkhand Urja Utpadan Nigam Limited.

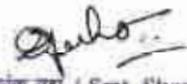
AND WHEREAS M/s Jharkhand Urja Utpadan Nigam Limited had requested for the prior consent in writing of the Nominated Authority for assignment of Allotment Agreement in respect of Banhardih Coal Mine to M/s Patratu Vidyut Utpadan Nigam Limited.

AND WHEREAS, M/s Patratu Vidyut Utpadan Nigam Limited (Government of India Undertaking) is a Joint Venture Company with 74 % equity stake of NTPC Limited and 26% equity stake of Jharkhand Bijli Vitran Nigam Limited.

AND WHEREAS, the Nominated Authority , M/s. Jharkhand Urja Utpadan Nigam Limited and M/s. Patratu Vidyut Utpadan Nigam Limited have entered into a tripartite agreement ("Deed of Adherence") dated 02.06.2017 towards fulfilment of the "Assignment Conditions" in terms of Clause 19.2 of the Allotment Agreement.


SUBODH JOHN PURTI
Sr. Manager (Coal/Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. a Joint Venture with GOI)
Patratu, Dist.-Rangpur-829119


A. R. SINHA
B-Tech (Mech) IIT Bombay, FCC (COAL)
Coal Division
MOBILE NO. 9811111111
e-mail : sinhaar@iitb.ac.in


श्रीमती शंती गुबा / Smt. Shanti Guba
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, कर्मनगर हाउस ब्लॉक / 1, Karmnagar House Block
कोलकाता-700 001 / Kolkata- 700 001

AND WHEREAS, subsequent to fulfilment of 'Assignment Conditions' in terms of clause 10.2 of the Allotment Agreement, the prior consent of the Nominated Authority for Assignment of Allotment Agreement was granted on 21.06.2017.

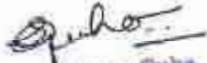
AND WHEREAS, the deed of Assignment dated 18.05.2018 has been executed assigning the Allotment Agreement from M/s Jharkhand Urja Utpadan Nigam Limited to M/s Patratu Vidyut Utpadan Nigam Limited and a copy of the said deed of Assignment has been submitted to the Nominated Authority

AND WHEREAS, on examination of the matter, it was felt necessary to modify the name of the Allottee in the Allotment order as M/s Patratu Vidyut Utpadan Nigam Limited instead of M/s Jharkhand Urja Utpadan Nigam Limited.

AND WHEREAS, it is clarified that this corrigendum to the Allotment order will not entitle the new Allottee company towards any claim of revision of zero date.

NOW THEREFORE, the Allotment order shall read to be issued in the favour of:

"Patratu Vidyut Utpadan Nigam Limited (a joint venture of NTPC Limited and Jharkhand Bijli Vitran Nigam Limited), incorporated in India under the Companies Act, 2013 with corporate identity number U40300DL2015GOI286533, whose registered office is NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003, India (the "Allottee")."


श्रीमती शंता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / D/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata-700 001


(N.K. Sudhansu)
Nominated Authority


A. K. SINHA
B-Tech (Hons) MINING, FCC (COAL)
EMPLOYED PERSON
MOBILE: 9840081111
e-mail: sinhaswadesh@gmail.com


SUBODH JOHN PURTI
Sr. Manager (Civ. Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. a Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Annexure-IF

**Letter regarding modification of bounding
coordinate mentioned in the Allotment
Agreement of Banhardih Coal Mine**



पत्रतु विद्युत उत्पादन निगम लिमिटेड
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A subsidiary of NTPC in Joint Venture with JBVNL)

पत्रतु / PATRATU

Ref. no. PVUNL/BAN/CMPDI/17-84

Date: 03.04.2021

To,
The General Manager, Exploration
CMPDIL, HQ
Gandwana Place,
Kanke Road, Ranchi-834031

Subject: Request for modification of the bounding coordinates mentioned in the Allotment Agreement of Banhardih Coal Block dt. 27th of March, 2015.

- References:**
1. The Allotment Agreement between Jharkhand Urja Utpadan Nigam Limited and Ministry of Coal, Government of India, dt. 27.03.2015.
 2. The amended allotment agreement between Jharkhand Urja Utpadan Nigam Limited and Ministry of Coal dt. 30.6.2015.
 3. The Certification of the Geological Block Boundary of Banhardih Coal Block from CMPDIL, vide their Letter no. CMPDI/DG/Captive/24/607; dt. 28.07.2017.
 4. Certification of the Block Boundary of Banhardih Coal Block for section 4(1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /860; dt. 13.10.2017.
 5. Certification of the Block Boundary of Banhardih Coal Block for section 7(1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /494; dt. 17.07.2019.
 6. Certification of the Block Boundary of Banhardih Coal Block for section 9 (1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /735; dt. 6.11.2020.

Sir,

With reference to the above mentioned subject matter, we would like to draw your kind attention regarding the bounding coordinates of Banhardih Coal Block as stated below:

The bounding Coordinates of Banhardih Coal Block as mentioned in the Allotment Agreement signed between Jharkhand Urja Utpadan Nigam Limited and Ministry of Coal, Government of India (27th March, 2015), is as given below:

Latitude	23°43'21" N	23°45'51" N
Longitude	84°34'43" E	84°40'03" E

Office: Patratu Vidyut Utpadan Nigam Limited, Patratu, P.O. PTPS Patralu, Distt. Ramgarh, Pin - 829119 (Jharkhand) Tel. No. 06553-286031, Email: hoppatralu@nipc.co.in
Registered Office: NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Ph. 011-24360071, CIN No. U40300DL2015GOI286533

श्रीमती शान्ता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o The Coal Controller
1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
द. 700001-700001 / Kolkata-700 001

Ref. no.PVUNL/BAN/CMPDIP/17-84

Date:03.06.2021

To,
The General Manager- Exploration
CMPDIL, HQ.
Gondwana Place.
Kanke Road, Ranchi-834031

Subject: Request for modification of the bounding coordinates mentioned in the Allotment Agreement of Banhardih Coal Block dt. 27th of March, 2015.

- References:**
1. The Allotment Agreement between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal,, Government of India, dt. 27.03.2015.
 2. The amended allotment agreement between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal dt. 30.6.2015.
 3. The Certification of the Geological Block Boundary of Banhardih Coal Block from CMPDIL, vide their Letter no. CMPDI/DG/Captive/24/677; dt. 28.07.2017.
 4. Certification of the Block Boundary of Banhardih Coal Block for section 4(1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /890 ; dt. 13.10.2017.
 5. Certification of the Block Boundary of Banhardih Coal Block for section 7(1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /494 ; dt. 17.07.2019.
 6. Certification of the Block Boundary of Banhardih Coal Block for section 9 (1) notification under CBA Act, 1957 vide Letter No. CMPDI/ DG/ Captive /24 /735 ; dt. 6.11.2020.
 7. Certificate from CMPDI regarding use of the Geological Block coordinates in accordance to the Vesting Order and preparation of Mining Plan do not encroach into any/ adjacent Coal Block (Banhardih Coal Block) – Reg. Submission of Certificate, vide letter No. CMPDI/B.D./C (886-A)/e-196556/I-8719; dt. 17.03.2020.

Sir,

With reference to the above mentioned subject matter, we would like to draw you kind attention regarding the bounding coordinates of Banhardih Coal Block as stated below:

Office: Patratu VidyutUtpadan Nigam Limited, Patratu, P.O PTPS Patratu, Distt. Ramgarh, Pin - 829119 (Jharkhand) Tel. No. 06553-286031, Email: hoppatratu@ntpc.co.in
Registered Office: NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Ph. 011-24360071. CIN No. U40300DL2015GOI286533

Page 1 of 4

A. K. SINHA
B-Tech (Hons) MINING, FCC (COAL)
QUALIFIED PERSON
MOBILE : 92-30361711
e-mail : sinhaawditesh@gmail.com

श्रीमती शान्ता गुप्ता / Smt. Shanta Gupta
उप सहायक कोयला नियंत्रक / Dy. Asst. Coal Controller
पत्रातु संसद / Govt. of India
कोयला नियंत्रक कार्यालय / C/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 601 / Kolkata- 700



पतरातु विद्युत उत्पादन निगम लिमिटेड
PATRATU VIDYUT UTPADAN NIGAM LTD.

(A subsidiary of NTPC in Joint Venture with JBVNL)

पतरातु / PATRATU

Ref. no. PVUNL/BAN/CMPDI/17-04

Date: 03.06.2021

- a. The bounding Coordinates of Banhardih Coal Block as mentioned in the Allotment Agreement signed between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal, Government of India (27th March, 2015), is as given below:

Latitude	23°43'21" N	23°45'51" N
Longitude	84°34'43" E	84°40'03" E

- b. The Allotment Agreement between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal, GOI got modified on 30.6.2015 with the unchanged boundary coordinates.
- c. CMPDI has certified the Geological Block Boundary of Banhardih Coal Block and provided 124 cardinal Points vide their Letter No. CMPDI/DG/Captive/24/677; dt. 28.07.2017. Though the Block boundary certificate doesn't contain any Bounding Coordinates, however, the extent of the coordinates are different in comparison with the bounding coordinates provided in the Allotment Agreement.
- d. CMPDI has certified the Block Boundary once again during Section 4(1) Notification as per CBA Act, 1957 for Banhardih Coal Block vide their Letter No. CMPDI/DG/Captive/24/677; dt. 28.07.2017. The certified Plan contained the Bounding Coordinates mentioned as stated below:

Latitude	23°43'23.09" N	23°45'53.08" N
Longitude	84°34'35.084" E	84°39'55.045" E

The above stated bounding coordinates were different to that of mentioned in the Allotment Agreement referred above.

- e. CMPDI has made subsequent certifications of the Geological Block Boundary during Section 7 (1) and Section 9(1) Notifications under CBA Act, 1957 vide their Letter Nos. CMPDI/ DG/ Captive /24 /494 ; dt. 17.07.2019 and CMPDI/ DG/ Captive /24 /735 ; dt. 6.11.2020 respectively wherein both the certified Plans contained the bounding Coordinates as stated in point No.d.
- f. PVUNL has also obtained the certification of the Block Boundary while preparation of the Mining Plan wherein the bounding coordinates are mentioned as stated in point No. d. Please refer to letter No. CMPDI/B.D./C (886-A)/e-196556/1 B719; dt. 17.03.2020 issued by CMPDI along with the certified Plan.

Subodh John Puri

SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A subsidiary of NTPC Ltd. in Joint Venture with JBVNL)
 Patratu, Dist.-Rangpurh-829119

Office: Patratu Vidyut Utpadan Nigam Limited, Patratu, P.O. PTPB Patratu, Dist. Rangpurh, Pin - 829119 (Jharkhand) Tel. No. 06563 280031, Email: hoppatratu@nptc.co.in
 Registered Office: NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Ludhi Road, New Delhi 110003. Ph. 011 24360071. CIN No. U40300DL2015GOI280523

A. K. SINHA
 B-Tech (Mining) IIT Bombay, FCC (COAL)
 Director, Coal India Ltd.
 Patratu, Dist.-Rangpurh-829119
 e-mail : a.k.sinha@coalindia.com

श्रीमती शान्त गुहा / Smt. Shanta Guha
 Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निरीक्षण कार्यालय / O/d. The Coal Controller
 1, काउंसिल हाउस स्ट्रीट / 1, Council House Street.
 कोयला-700 001 / Kolkata- 700 001



पतरातु विद्युत उत्पादन निगम लिमिटेड
PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A subsidiary of NTPC in Joint Venture with JBVNL)
पतरातु / PATRATU

Ref. no. PVUNL/BAN/CMPDI/17-84

Date: 03.06.2021

We have formulated the Mining Plan including Mine Closure Plan considering the certified Geological Block Boundary and bounding Coordinates as provided by CMPDI.

The Mining Plan including Mine Closure Plan of Banhardih Coal Block is now under active consideration of Ministry of Coal and already recommended by the Internal Committed subsequent to our presentation made on 17th May, 2021. However, ministry of Coal has sought the Modified Allotment Agreement with respect to Bounding Coordinates in their latest observation vide letter no. 55/1/2020-CPAM ; dt. 31st May, 2021.

In view of the above facts and requirement specified by Ministry of Coal, we would request you to kindly modify the Bounding Coordinates of the Allotment Agreement and enable us to obtain the approval of the Mining Plan including Mine Closure Plan of Banhardih Coal Block.

Thanking you.

Yours sincerely,

Faiz Talyah

Mob - 9405902977

Copy To:

1. The Under Secretary, Nominated Authority, Ministry of Coal, Government of India.

Enclosures:

1. The Allotment Agreement between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal,, Government of India, dt. 27.03.2015.
2. The amended allotment agreement between Jharkhand UrjaUtpadan Nigam Limited and Ministry of Coal dt. 30.6.2015.
3. The Certification of the Geological Block Boundary of Banhardih Coal Block from CMPDI, vide their Letter no. CMPDI/DG/Captive/24/677; dt. 28.07.2017.

Sudhakar Prasad
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC in Joint Venture with JBVNL)
 Patraru, Dist.-Rangarh-825119

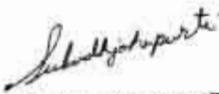
Office: Patraru VidyutUtpadan Nigam Limited, Patraru, P.O. PTPB Patraru, Dist. Rangarh, Ph - 829119 (Jharkhand) Tel. No. 06553-200031, Email: hupp@patraru@ntpc.co.in
 Registered Office: NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Lohdi Road New Delhi-110003 Ph. 011-24360071, CIN No. U40300DL2015GOI200539

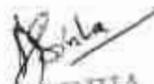
Smt. Shanta Guha
 श्रीमती शान्त गुहा / Smt. Shanta Guha
 डी.एस.सी. कोयला नियंत्रक / Dy. Asst. Coal Controller
 भारत सरकार / Govt. of India
 कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Ref. no. PVUNL/BAN/CMPDIP/17-84

Date: 03.06.2021

4. Certification of the Block Boundary of Banhardih Coal Block for section 4(1) notification under CBA Act, 1957 vide Letter No. CMPDI/DG/ Captive /24 /890 ; dt. 13.10.2017.
5. Certification of the Block Boundary of Banhardih Coal Block for section 7(1) notification under CBA Act, 1957 vide Letter No. CMPDI/DG/ Captive /24 /494 ; dt. 17.07.2019.
6. Certification of the Block Boundary of Banhardih Coal Block for section 9 (1) notification under CBA Act, 1957 vide Letter No. CMPDI/DG/ Captive /24 /735 ; dt. 6.11.2020.
7. Minutes of the Meeting of Internal Committee held on 17th May, 2021 through Video Conference to consider the Mining Plan (including Mine Closure Plan) for Banhardih Coal Mine of M/s Patratu Vidyut Utpadan Nigam Limited. -reg, vide Letter No. MPS-55/1/2020-CPIAM; dt. 20.05.2021
8. Ministry of Coal's Letter No. 55/1/2020-CPAM ; dt. 31st May, 2021 regarding submission of the Modified Allotment Agreement.
9. Certificate from CMPDI regarding use of the Geological Block coordinates in accordance to the Vesting Order and preparation of Mining Plan do not encroach into any/ adjacent Coal Block (Banhardih Coal Block) – Reg. Submission of Certificate, vide letter No. CMPDI/B.D./C (886-A)/e-196556/I-8719; dt. 17.03.2020.


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC in Joint Venture with JBVNL)
Patratu, Dist.-Rangarh-829119


A. K. SINHA
B-Tech (Mining) FCC (COAL)
COAL & MINING
MOBILE : 943081711
e-mail : sinhasardhesh@gmail.com


श्रीमती शान्ता चूडा / Smt. Shanta Chha
उप सहायक कोयला निरीक्षक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोयला-700 001 / Kolkata- 700 001

Annexure-IG

**Corrigendum No. 3 to the Allotment order
no. 103/18/2015/NA dated June 30, 2015 in
favour of Patratu Vidyut Utpadan Nigam
Limited (PVUNL) dated 30th June, 2021**



Government of India
Ministry of Coal
O/o the Nominated Authority

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Circ.Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JBMV)
Patratu, Dist.-Ramgarh-829119

Shastri Bhawan, New Delhi-110001

Corrigendum No. 3 to the Allotment order no. 103/18/2015/NA dated June 30, 2015

In re: Banhardih Coal Mine (the "mine")

Date: June 30, 2021

In favour of: **Patratu Vidyut Utpadan Nigam Limited** (A joint venture of NTPC Limited and Jharkhand Bijli Vitaran Nigam Limited), incorporated in India under the Companies Act, 2013 with corporate identity number U40300DL2015GOI286533, whose registered office is at NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi - 110003, India and principal place of business is at Patratu Vidyut Utpadan Nigam Limited, Patratu, P.O.-PTPS Pataratu, District Ramgarh, Jharkhand-829119, India (the "Assignee").

WHEREAS, The Nominated Authority has, in accordance with provisions of the Coal Mines (Special Provisions) Act, 2015 (the "Act") and the Coal Mines (Special Provisions) Rules 2014 (the "Rules") issued Allotment order No. 103/18/2015/NA dated June 30, 2015.

AND WHEREAS the Nominated Authority, the Allottee and the Assignee have entered into a Deed of Adherence No.IN-DL88829871258448P dated June 02, 2017 in respect of the mine.

AND WHEREAS CMPDIL has issued the revised bounding co-ordinates for the mine.

AND WHEREAS considering such request the matter was examined and it was felt necessary to modify the co-ordinates in the Allotment order.

NOW THEREFORE, following corrigendum to the Allotment order is issued:

1. In Annexure I of the Allotment order, Part A shall be modified as follows.

Shanta Guha
श्रीमती शान्ता गुहा / Shant. Shanta Guha
असि. अधीक्षक कोयला नियंत्रण / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रण / O/o. The Coal Controller
1, हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

A. K. Sinha
A. K. SINHA
B-Tech (Hons) MINING, FCO (COAL)
QUALIFIED PERSON
MOBILE : 98420001711
e-mail : sinhasawdesh@gmail.com



Annexure 1: Particulars of the mine

Part A – Description of the mine

Name of Coal	Banhardih
Mine	
Latitude	23°43'23.09" N to 23°45'53.08" N
Longitude	84°34'35.084" E to 84°39'55.045" E
Coalfield	Auranga
Villages	Block- Chandwa: Mouzas- Banhardi, Bari, Surli, Tota , Ate, Rinchi, Barwadih and Rampur Block-Latehar: Mouzas- Sabano, Jagaldaga and Udayapura
District	Latehar
State	Jharkhand

(M Nagaraju)

Nominated Authority

Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. Joint Venture with JVVNL)
 Patna, Dist.-Ranchi-829119

A. R. Sinha
A. R. SINHA
 B-Tech (Hons) MINING, FCC (COAL)
 QUALITY PERSON
 MOBILE: 9360336171
 e-mail: sinhaawdesh@gmail.com

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
 उच्च कक्षात्मक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
 1, फर्स्ट फ्लोर हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata- 700 001

Annexure-IIA
Certification letter of Geological Block
Boundary by CMPDIL of Banhardih Coal
Mine, dated 13.10.2017



cmpdi
A Mini Ratna Company

सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लिमिटेड
(एनडीएल लिमिटेड की 100% स्वामित्व वाली सार्वजनिक क्षेत्र की कंपनी)
गोन्दवारा प्लेस, कान्के रोड, रांचो - 834 031, झारखण्ड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Gondwana Place, Kanke Road, Ranchi - 834 031, Jharkhand (INDIA)
CORPORATE IDENTITY NUMBER - IIL42927H1975G01803223

पत्रांक संख्या: सीएमपीडीआई/डीजी/केपीटी/24/ 890

दिनांक: 13.10.2017

सेवा में,

Chief Executive Officer (~~Banhardih Coal Block~~)
Patratu Vidyut Utpadan Nigam Limited,
Patratu, Ramgarh - 829119

विषय: Certification of the Block Boundary of Banhardih Coal Block for Section 4(1) notification under CBA Act - 1957

महाशय,

With reference to your letter No. PVUNL/JM/17 dated 03.10.2017 regarding the above mentioned subject, the copy of certified plan is enclosed herewith.

धन्यवाद,

संलग्नक: उपरोक्त

भवदीय

आलोक शर्मा
13/10/17

(आलोक शर्मा)

महाप्रबंधक (गतवर्षण)

Subodh John Parti
SUBODH JOHN PARTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of MPCLtd. & Jharkhand State Power Corp. Ltd.)
Patratu, Dist.-Ramgarh-829119

A.K. Sinha
A. K. SINHA
B-Tech (Hons) IIT, IIT, FCC (COAL)
IIT Kharagpur
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Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
उप महाप्रबंधक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, कान्के रोड हाउस स्ट्रीट / 1, Kanke Road Street
कोलकाता-700 001 / Kolkata- 700 001



फोन नम्बर/Phone No.: 0651-2232637

फैक्स नम्बर/Fax No.: 0651-2230875

ई-मेल/E-mail: gmexpcmpdi@coalindia.in

वेब साइट/Website: www.cmpdi.co.in

Annexure-IIB

Certificate of qualified person/accredited mining plan preparing agency (MPPA) as the project area is confined within the vested/ allotted boundary / existing mining lease

Date: 22.07.2020

CERTIFICATE OF QUALIFIED PERSON

This is to certify that the project area conceptualized while planning of Banhardih Coal Mine of Auranga Coalfield, Latehar District, Jharkhand falls well within the Geological Block boundary as certified by CMPDI.

The geo-reference Co-ordinates considered for preparation of Mining Plan of Banhardih Coal Mine of Auranga Coalfield, Latehar District, Jharkhand is in line with vesting/allotment order and does not encroach any other adjacent coal block.

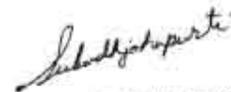


श्रीमती शान्ता गुहा / Smt. Shanta Guha
इस सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रण आयोग / O/o. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001



Shri A. K. Sinha

A. K. SINHA
B-Tech (Mining) - CMPDI, COAL
COAL FIELD DIVISION
MOBILE : 9836241111
e-mail : sinhaawdhashi@gmail.com



SUBODH JOHN PURTI
Sr. Manager (Cinn. Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL, a Joint Venture with JEVN)
Patratu, Dist.-Rangpur-829119

Annexure-IIC
Notification with under section 7(1) respect
to 1042.73 ha under CBA Act


भारत का राजपत्र
The Gazette of India

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY
साप्ताहिक
WEEKLY

सं. 41] नई दिल्ली, अक्टूबर 6—अक्टूबर 12, 2019, शनिवार/आश्विन 14—आश्विन 20, 1941
No. 41] NEW DELHI, OCTOBER 6—OCTOBER 12, 2019, SATURDAY/ASHVINA 14—ASHVINA 20, 1941

इस भाग में भिन्न पृष्ठ संख्या दी जाती है जिससे कि यह पुस्तक संकलन के रूप में रखा जा सके
Separate Paging is given to this Part in order that it may be filed as a separate compilation

भाग II—खण्ड 3—उप-खण्ड (II)
PART II—Section 3—Sub-section (II)

भारत सरकार के मंत्रालयों (रक्षा मंत्रालय को छोड़कर) द्वारा जारी किए गए सांविधिक आदेश और अधिसूचनाएं
Statutory Orders and Notifications Issued by the Ministries of the Government of India
(Other than the Ministry of Defence)

विदेश मंत्रालय
(सी.पी.बी. प्रभाग)

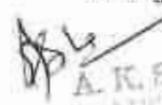
नई दिल्ली, 23 सितम्बर, 2019

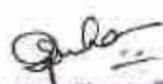
क्र.आ. 1802.—राजनयिक और मौसुलीय अधिकारी (प्राथम्य एवं फीस) के अधिनियम, 1948 (1948 का 41) की धारा 2 के खंड (क) के अनुसरण में वैधानिक आदेश।

एतद्वारा, केंद्र सरकार भारत के दूतावास, भस्वन्द में श्री साहित्य आहुजा, सहायक अनुभाग अधिकारी को दिनांक 23 सितम्बर 2019 से सहायक मौसुलीय अधिकारी के तौर पर कोसुलर सेवाओं के निर्वहन के लिए प्राधिकृत करती है।

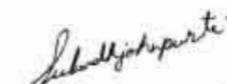
[सं. टी-4330/01/2016]

विदेश कुमार कालड़ा, अवर सचिव (कोसुलर)


A. K. SINHA
B-Tech (Hons) Mining, IIT (COAL)
COAL - 100000
MOB: 9876543210
e-mail: sinhaowdesh@gmail.com


श्रीमती शान्त गूहा / Smt. Shanta Guha
उप सहायक कोसुलर नियंत्रक / Sr. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोसुलर नियंत्रक कार्यालय / O/o. The Coal Controller
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कोलकाता-700 001 / Kolkata- 700 001

5105 GI/2019


SUBODH JOHN PURTI
Sr. Manager (Coal/Mine)
PATRATO VIDYU UTPADAN NIGAM LTD.
A Subsidiary of PCL Ltd. in Joint Venture with JVVNL
Paratu, Dist.-Rangpur-829119

TABLE

Serial Number	Designation of officer of the NLC Tamil Nadu Power Limited	Categories of the public premises and local limits of Jurisdiction
(1)	(2)	(3)
1.	Estates Officer, NLC Tamil Nadu Power Limited (NTPL), Tuticorin-628004, Tamil Nadu	All the public premises belonging to or acquired or hired by NLC Tamil Nadu Power Limited (NTPL), Tuticorin-628004, Tamil Nadu
2.	Township Administrator, NLC Tamil Nadu Power Limited (NTPL), Tuticorin-628004, Tamil Nadu	

[F. No. PCA-38026/7/2018-PCA]

ALKA SHEKHAR, Under Secy.

नई दिल्ली, 10 अक्टूबर, 2019

का.आ. 1817.—केंद्रीय सरकार ने कोयला धारक क्षेत्र (अर्जन और विकास) अधिनियम, 1957 (1957 का 20) (जिसे इसमें इसके पश्चात् उक्त अधिनियम कहा गया है) की धारा 4 की उप-धारा (1) के अधीन भारत सरकार के कोयला मंत्रालय द्वारा जारी की गई अधिसूचना संख्या का. आ. 3791(अ), तारीख 30 नवम्बर, 2017, जो भारत के राजपट, असंधारण, भाग II, खण्ड 3, उप-खण्ड (ii), तारीख 01 दिसम्बर, 2017 में प्रकाशित की गई थी, वगैरह अधिसूचना से उपखण्ड अनुसूची में विनिर्दिष्ट परिक्षेत्र की भूमि में जिसका माप 1818.10 हेक्टेयर (लगभग) या 4492.51 एकड़ (लगभग) है, कोपले का पूर्वेक्षण करने के अपने आशय की सूचना दी थी;

और, केंद्रीय सरकार का यह समाधान हो गया है कि इस अधिसूचना से संलग्न अनुसूची में विहित उक्त भूमि के भाग में कोयला अधिप्राप्त है;

अतः, अब, केंद्रीय सरकार उक्त अधिनियम की धारा 7 की उप-धारा (1) द्वारा प्रस्तुत शक्तियों का प्रयोग करते हुए, इसी संलग्न अनुसूची में वर्णित 1042.73 हेक्टेयर (लगभग) या 2575.54 एकड़ (लगभग) माप वाली भूमि में या उस पर के सभी अधिकारों का अर्जन करने के अपने आशय की सूचना देती है;

टिप्पण 1: इस अधिसूचना के अधीन आने वाले क्षेत्र के रेखांक संख्याएँ पीवीएमएल/वीएएन/आईसी-7(1), तारीख 26 जून, 2019 का निरीक्षण उपायुक्त, जिला कारेहार - 829206, आरखंड के कार्यालय में या कोयला निगम, 1, काउंसिल हाउस स्ट्रीट, कोलकाता - 700 001 के कार्यालय में या डी.जी.एम. (सीएम-सिविल), पटरातु विद्युत उत्पादन विभाग लिमिटेड, पटरातु, जिला रामगढ़-829119, आरखंड या सहायक महा प्रबंधक (सीएम), पटरातु विद्युत उत्पादन विभाग लिमिटेड, पटरातु, जिला रामगढ़-829119, आरखंड के कार्यालय में या मुख्य महा प्रबंधक (कोज प्रभाग), गैटल राइन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लिमिटेड, गोंडवना प्लेस, कांके रोड, रांची-834008, आरखंड में किया जा सकता है।

टिप्पण 2: उक्त अधिनियम की धारा 8 के उपबंधों की ओर ध्यान आकृष्ट किया जाता है, जिसमें निम्नलिखित उपबंध हैं :-

"8. अर्जन के संबंध में आपत्ति:- (1) कोई व्यक्ति जो किसी भूमि में, जिसके संबंध में धारा 7 के अधीन अधिसूचना निकाली गई है, हितवद्ध है, अधिसूचना के जारी किए जाने से तीस दिन के भीतर सम्पूर्ण भूमि या उसके किसी भाग या ऐसी भूमि में या उस पर के किसी अधिकारों का अर्जन किए जाने के बारे में आपत्ति कर सकता है।

स्पष्टीकरण:- इस धारा के अधिनियम यह बाधित नहीं मानी जाएगी, कि कोई व्यक्ति किसी भूमि में कोयला उत्पादन के लिए स्वयं खनन संक्रियार करना चाहता है और ऐसी संक्रियार केंद्रीय सरकार या किसी अन्य व्यक्ति को नहीं करनी चाहिए।

Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL, a Joint Venture of BICL)
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कोलकाता-700 001 / Kolkata-700 001

(2) उप-धारा (1) के अधीन प्रत्येक आपत्ति सक्षम प्राधिकारी को लिखित में की जाएगी और सक्षम प्राधिकारी, आपत्तिकर्ता को लय सुने जाने या विधि व्यवसायी द्वारा सुनवाई का अवसर देगा और ऐसी सभी आपत्तियों को सुनने के पश्चात् और ऐसी अतिरिक्त जांच, यदि कोई हो, करने के पश्चात् जो वह आवश्यक समझता है, वह या तो धारा 7 की उप-धारा (1) के अधीन अधिसूचित भूमि के या ऐसी भूमि में या उस पर के अधिकारों के संबंध में एक रिपोर्ट या ऐसी भूमि के विभिन्न इकाइयों या ऐसी भूमि में या उस पर के अधिकारों के संबंध में आपत्तियों पर अपनी सिफारिशों और उसके द्वारा की गई कार्रवाहों के अभिलेख सहित विभिन्न रिपोर्टों केन्द्रीय सरकार को उसके विनिश्चय के लिए देगा।

(3) इस धारा के प्रयोजनों के लिए वह व्यक्ति किसी भूमि में हितबद्ध समझा जाएगा जो प्रतिकर में छूट का दावा करने का हकदार हो, यदि भूमि या ऐसी भूमि में या उस पर के अधिकार इस अधिनियम के अधीन अर्जित कर लिए जाते हैं।

टिप्पण 3: केन्द्रीय सरकार ने कोयला नियंत्रक, 1, काउंसिल हाउस स्ट्रीट, कोलकाता - 700 001 को उक्त अधिनियम की धारा 3 के अधीन अधिसूचना संख्यांक का. आ. 2570(अ), तारीख 11 अगस्त, 2017, जो भारत के राजपत्र, भाग II, खंड 3, उप-खंड (ii), तारीख 11 अगस्त, 2017 में प्रकाशित की गयी थी, द्वारा सक्षम प्राधिकारी नियुक्त किया है।

अनुसूची

बनहरदी कोयला ब्लॉक

औरंगा कोलफील्ड

जिला - जातेहार झारखण्ड

(रिवांक संख्यांक पीडीयूएनएल/बीएनएल/एसईडी-7(1), तारीख 25 जून, 2019)

सभी अधिकार:

(क) राज्यस्त भूमि:

क्र.सं.	ग्राम	श्रवणा	जिला	धाना संख्या	कुल क्षेत्रफल (लगभग)		टिप्पणियाँ
					हेक्टेयर	एकड़	
1.	रुहे	चंदवा	जातेहार	254	107.42	265.34	भाग
2.	बनहरदी	चंदवा	जातेहार	249	154.96	382.75	भाग
3.	बारी	चंदवा	जातेहार	251	584.01	1442.51	भाग
4.	बरावाडीह	चंदवा	जातेहार	255	16.14	39.86	भाग
5.	रामपुर	चंदवा	जातेहार	252	10.27	25.37	भाग
6.	सुरजी	चंदवा	जातेहार	250	23.01	56.83	भाग
7.	टोडा	चंदवा	जातेहार	256	5.84	14.42	भाग
कुल:					901.65	2227.08	

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Siddhesh Partti
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(ख) वन भूमि

क्र.सं.	ग्राम	थाना	जिला	थाना संख्या	कुल क्षेत्रफल (लगभग)		टिप्पणियाँ
					हेक्टेयर	एकड़	
1.	एटे	चंदवा	लातेहार	254	1.26	3.10	भाग
2.	वारी	चंदवा	लातेहार	251	119.06	294.09	भाग
3.	सुरली	चंदवा	लातेहार	250	8.83	21.80	भाग
4.	टोटा	चंदवा	लातेहार	256	11.93	29.47	भाग
कुल:					141.08	348.46	

सारांश :

(क) कुल राजस्व भूमि	:	901.65 हेक्टेयर (लगभग)	=	2227.08 एकड़ (लगभग)
(ख) कुल वन भूमि	:	141.08 हेक्टेयर (लगभग)	=	348.46 एकड़ (लगभग)
(ग) सकल योग (क + ख)	:	1042.73 हेक्टेयर (लगभग)	=	2575.54 एकड़ (लगभग)

अर्जित किए जाने वाले राजस्व प्रकारों की सूची:

(1) ग्राम - एटे:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60(भाग), 61(भाग), 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160(भाग), 161, 162, 163, 164(भाग), 165, 166, 167(भाग), 168(भाग), 169(भाग), 171(भाग), 176(भाग), 177(भाग), 178, 179(भाग), 180, 181, 182(भाग), 183, 184, 185, 186, 187, 188, 189, 190, 191, 192(भाग), 193, 194 (भाग), 201(भाग), 202(भाग), 203, 204(भाग), 205, 206(भाग), 207(भाग), 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242(भाग), 243, 244, 245, 246, 247, 248(भाग), 249, 250(भाग), 251(भाग), 252, 253, 254(भाग), 255(भाग), 256(भाग), 257, 258, 259, 260, 273(भाग), 275(भाग), 276(भाग), 385(भाग), 1087, 1095, 1099, 1100, 1101, 1110, 1111, 1112.

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(2) ग्राम - बनहरदी:

348(भाग), 349(भाग), 350(भाग), 351(भाग), 352, 353, 354, 355, 356, 357, 358, 359, 360(भाग), 380(भाग), 381(भाग), 382(भाग), 383, 384, 385(भाग), 386(भाग), 396(भाग), 805(भाग), 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824(भाग), 828(भाग), 829, 830(भाग), 831(भाग), 832(भाग), 869(भाग), 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885(भाग), 886, 887, 888, 889(भाग), 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988(भाग), 989(भाग), 990(भाग), 991(भाग), 992, 993, 994(भाग), 995(भाग), 996, 997, 998(भाग), 999(भाग), 1000, 1001, 1002, 1003(भाग), 1005(भाग), 1007, 1008, 1009, 1010, 1011, 1012, 1013, 1014, 1015, 1016, 1017, 1018, 1019, 1020, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034, 1035, 1036, 1037, 1038(भाग), 1129(भाग), 1130(भाग), 1131(भाग), 1132, 1133, 1134, 1135, 1136, 1137, 1138, 1139, 1140, 1141, 1142, 1143, 1144, 1145, 1146, 1147(भाग), 1148, 1149, 1150, 1151, 1152(भाग), 1153(भाग), 1154(भाग), 1156(भाग), 1157(भाग), 1158(भाग), 1161(भाग), 1191(भाग), 1192(भाग), 1193(भाग), 1194, 1195, 1196, 1197(भाग), 1198, 1199, 1200, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1209, 1210, 1211, 1212, 1213, 1214, 1215, 1216, 1217, 1218, 1219, 1220, 1221, 1222, 1223, 1224, 1225, 1226, 1227, 1228, 1229, 1230, 1231, 1232, 1233, 1234, 1235, 1236, 1237, 1238, 1239, 1240, 1241, 1242, 1243, 1244, 1245, 1246, 1247, 1248, 1249, 1250, 1251, 1252, 1253, 1254, 1255, 1256, 1257, 1258, 1259, 1260, 1261, 1262, 1263, 1264, 1265, 1266, 1267, 1268, 1269, 1270, 1271, 1272, 1273, 1274, 1275, 1276, 1277, 1278, 1279, 1280, 1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289, 1290, 1291, 1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303, 1304, 1305, 1306, 1307, 1308, 1309, 1310, 1311, 1312, 1313, 1314, 1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1324, 1325, 1326, 1327, 1328, 1329, 1330, 1331, 1332, 1333

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 Patnā, Dist.-Rangpur-821119

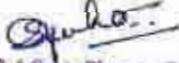
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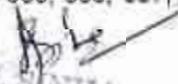
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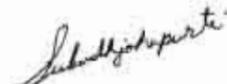
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(3) ग्राम - बारी :

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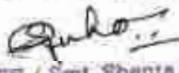
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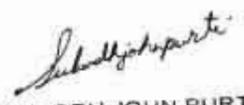
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1789(भाग), 1790(भाग), 1794(भाग), 1826(भाग), 1827, 1828, 1829(भाग), 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845(भाग), 1846(भाग), 1848(भाग), 1850(भाग), 1852, 1853, 1854, 1855, 1856, 1857, 1858, 1859, 1860, 1861, 1862, 1863, 1864, 1865, 1866, 1867, 1868, 1869, 1870, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, 1882, 1883, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894, 1895, 1896, 1897, 1898, 1899, 1900, 1901, 1902, 1903, 1904, 1905, 1906, 1907, 1908, 1909, 1910(भाग), 1911, 1912, 1913, 1914, 1915, 1916(भाग), 1917(भाग), 1930(भाग), 1937(भाग), 1938, 1939, 1940, 1941(भाग), 1942(भाग), 1947(भाग), 1950(भाग), 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962(भाग), 1964(भाग), 1971(भाग), 1987(भाग), 1988(भाग), 1989(भाग), 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010(भाग), 2011(भाग), 2012(भाग), 2013(भाग), 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055(भाग), 2057, 2058(भाग), 2057(भाग), 2059, 2060(भाग), 2061(भाग), 2066(भाग), 2067, 2068(भाग), 2069(भाग), 2070(भाग), 2071, 2072, 2073(भाग), 2074(भाग), 2075(भाग), 2078, 2079(भाग), 2080(भाग), 2101(भाग), 2155(भाग), 2156(भाग), 2157(भाग), 2158(भाग), 2159(भाग), 2160(भाग), 2161(भाग), 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2177(भाग), 2174(भाग), 2797(भाग), 2800, 2805, 2809(भाग), 2811, 2813, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2829, 2830, 2831(भाग), 2833, 2835, 2836, 2803, 2160(भाग), 2799(भाग), 2798, 2037, 1851, 1930(भाग), 2036, 2831(भाग).

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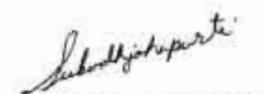
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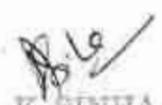
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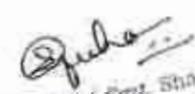
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(6) ग्राम - रामपुर :

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शान्ता गहा गुहा / Smt. Shanta Gaha
ज्येष्ठ सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
राज्य कोयला विभाग / Dept. of India
कोयला विनिष्पन्न प्राधिकरण / CIL, The Coal Controller
1, बरवाडीह जल संयंत्र / I, Oru, Jil (Ranggh) District
कोयला-769 031 / Telephone- 442 031

(7) ग्राम - सुरली :

1, 2, 3, 6, 4, 5, 8, 9, 12, 13, 16(भाग), 19, 20, 24, 26, 27, 29, 30, 31(भाग), 34(भाग), 115(भाग), 116(भाग), 117(भाग), 118, 119, 120(भाग), 121, 122, 123, 124, 125, 128(भाग), 129, 130, 131, 132(भाग), 135, 136, 140, 141, 142(भाग), 143, 144, 145(भाग), 165(भाग), 166(भाग), 168, 169, 170, 171, 172(भाग), 173(भाग), 174(भाग), 176(भाग), 177, 178(भाग), 179(भाग), 203(भाग), 444(भाग), 447(भाग), 621(भाग).

वन कौन्सिल सर्वेक्षण में अर्जित किए जाने वाले प्लॉट संख्याओं की सूची :

1. ग्राम एटे : 24.
2. ग्राम बारी : 1303, 62, 9, 6(भाग), 5(भाग), 4(भाग), 1281, 1283, 35, 187, 91, 116, 93, 114, 1310(भाग), 771(भाग).
3. ग्राम सुरली : 298(भाग), 1(भाग), 305.
4. ग्राम टोटा : 2 (भाग), 144(भाग).

सीमा - वर्णन :

रेखा क - का1 - ख - ख1 - ख2 - ख3 - ख4 - ख5 - ख6 - ख7 - ग : रेखा ग्राम बनहरदी (बाना जंक्शन) में प्लॉट संख्या 732 में बिंदु 'क' से आरम्भ होते हुए उत्तर पूर्व दिशा में प्लॉट संख्या 732 में बिंदु 'का1' तक है। इसके पश्चात यह रेखा पूर्व दिशा में बढ़ती हुए बिंदु 'का' से बिंदु 'ख' तक बनहरदी के प्लॉट संख्या 719, 685, 1563, 1648, 1687 से गुजरते हुए पहुँचती है। इसके पश्चात यह रेखा दक्षिण पूर्व दिशा में बिंदु 'ख' से जाती हुए ग्राम सुरली के वन भूमि प्लॉट संख्या 16, 31 से गुजरती हुए ग्राम सुरली में बिंदु 'ख1' में प्लॉट संख्या 120 तक है। इसके पश्चात यह रेखा बिंदु 'ख1' से दक्षिण पूर्व दिशा में ग्राम सुरली के प्लॉट संख्या 120 और 128 से होते हुए बिंदु 'ख2' ग्राम सुरली के प्लॉट संख्या 128 तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'ख2' से ग्राम सुरली प्लॉट संख्या 115, 168, 172, 447 और ग्राम बारी प्लॉट संख्या 1016, 1066 से गुजरती हुए दक्षिण पूर्व दिशा में ग्राम बारी के प्लॉट संख्या 1066 में बिंदु 'ख3' तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'ख3' से दक्षिण पूर्व दिशा बढ़ते हुए ग्राम बारी के प्लॉट संख्या 1093, 1100, 1103, 1104 से गुजरती हुए ग्राम बारी के प्लॉट संख्या 1788 में बिंदु 'ख4' तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'ख4' से दक्षिण पूर्व दिशा में बढ़ते हुए ग्राम बारी के प्लॉट संख्या 1789, 1787, 1826, 1845 से गुजरती हुए ग्राम बारी के प्लॉट संख्या 1848 में बिंदु 'ख5' तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'ख5' से ग्राम बारी प्लॉट संख्या 1916, 1910, 1950, 1962 से गुजरते हुए दक्षिण पूर्व दिशा में ग्राम बारी के प्लॉट संख्या 1964, में बिंदु 'ख6' तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'ख6' से ग्राम बारी के प्लॉट संख्या 1967, 1988 और ग्राम रामपुर के प्लॉट संख्या 918, 919, 926 से गुजरती हुए दक्षिण पूर्व दिशा में ग्राम रामपुर प्लॉट संख्या 944 में बिंदु 'ख7' तक पहुँचती है। इसके पश्चात यह रेखा दक्षिण पूर्व दिशा में बढ़ती हुए ग्राम रामपुर के प्लॉट संख्या 972, 955, 1009 से गुजरती हुए ग्राम रामपुर के प्लॉट संख्या 1011 में बिंदु 'ख' तक पहुँचती है।

रेखा ग-गा1-ग2-ग3-ग4-ग5-ग : रेखा ग्राम रामपुर प्लॉट संख्या 1011 में बिंदु 'ग' से दक्षिण दिशा में बढ़ते हुए ग्राम बारी के प्लॉट संख्या 2010 में बिंदु 'गा1' तक पहुँचती है। इसके पश्चात यह रेखा बिंदु 'गा1' दक्षिण पश्चिम दिशा में बढ़ते हुए ग्राम बारी प्लॉट संख्या 2012, 2075, 2074 से गुजरते हुए ग्राम बारी के प्लॉट संख्या 2080 में बिंदु 'ग2' तक पहुँचती है। इसके पश्चात

श्रीमती शान्ता गुहा / Smt. Shanta Guha
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Subodh John Parti
SUBODH JOHN PARTI
Sr. Manager (Civ. Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL, a Joint Venture with BHEL)
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यह रेखा बिंदु ग2 से दक्षिण पश्चिम दिशा में बढ़ते हुए ग्राम बारी के प्लाट संख्या 2080, 2073 से गुजरती हुए ग्राम बारी के प्लाट संख्या 2073 बिंदु ग3 तक पहुँचती है। इसके पश्चात यह रेखा दक्षिण पश्चिम दिशा में बढ़ती हुए ग्राम बारी के प्लाट संख्या 2060, 2058, 2155, 2159, 2174, 1514, 1492 और ग्राम एटे के प्लाट संख्या 385, 273, 275, 208, 201 से गुजरती हुए ग्राम एटे के प्लाट संख्या 192, में बिंदु ग4 तक पहुँचती है। इसके पश्चात यह रेखा बिंदु ग4 से दक्षिण पश्चिम दिशा में बढ़ती हुए ग्राम एटे के प्लाट संख्या 194, 179, 164, 1105 और ग्राम बरवाडीह के प्लाट संख्या 509, 149, 145, 39 से गुजरती हुए ग्राम बरवाडीह के प्लाट संख्या 14 में बिंदु ग5 तक पहुँचती है। इसके पश्चात यह रेखा बिंदु ग5 पश्चिम दिशा में बढ़ती हुए ग्राम बरवाडीह के प्लाट संख्या 15, 6, 3 और ग्राम टोटा के प्लाट संख्या 12, 11, 7, से गुजरती हुए ग्राम टोटा के वन भूमि प्लाट संख्या 6, में बिंदु 'घ' तक पहुँचती है।

रेखा :- घ - घ1 - घ2 - घ3 - घ4 - घ5 - घ6 - घ7 - घ8 - घ9 - घ10 - घ11 - घ12 - घ13 - घ14 - ङ : रेखा ग्राम टोटा के वन भूमि प्लाट संख्या 6 में बिंदु 'घ' से उत्तर पश्चिम दिशा में बढ़ती हुए इसी प्लाट में बिंदु 'घ1' तक पहुँचती है। इसके पश्चात यह रेखा में नाला के किनारे होते हुए ग्राम टोटा में प्लाट संख्या 69 में बिंदु घ 2 और, घ 3 और ग्राम बारी प्लाट संख्या 204 में बिंदु घ4, घ5, घ6, घ7, घ8, घ9, घ10, घ11, घ12 और घ13 से, और ग्राम बारी वन भूमि प्लाट संख्या 8 में बिंदु घ14 होते हुए ग्राम बारी के वन भूमि प्लाट संख्या 8 में बिंदु 'ङ' तक पहुँचती है।

रेखा :- ङ - क : रेखा ग्राम बारी के वन भूमि प्लाट संख्या 8 में बिंदु 'ङ' से उत्तर दिशा में बढ़ते हुए ग्राम बारी के प्लाट संख्या 8, 9, 10, 12 में जंगल से होते हुए ग्राम बारी के प्लाट संख्या 11, 26, 29, 31, और ग्राम चन्हरी के प्लाट संख्या 1193, 1131, 1005, 991, 350, 386, 735 से गुजरते हुए ग्राम चन्हरी के प्लाट संख्या 732 में बिंदु 'क' पर समाप्त होती है।

[क्र. सं. 43015/40/2017-एलए एक अर्द्धआठ]

राम शिरोमणि सरोज, उपायुक्त

New Delhi, the 10th October, 2019

S.O. 1817.—Whereas by the notification of the Government of India in the Ministry of Coal number S.O. 1791(E), dated the 30th November, 2017, issued under sub-section (1) of section 4 of the Coal Bearing Areas (Acquisition and Development) Act, 1957 (20 of 1957) (hereinafter referred to as the said Act) and published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (ii), dated the 1st December, 2017, the Central Government gave notice of its intention to prospect for coal in 1818.10 hectares (approximately) or 4402.51 acres (approximately) of the land in the locality specified in the Schedule annexed to that notification;

And, whereas, the Central Government is satisfied that coal is obtainable in a part of the said lands prescribed in the schedule appended to this notification.

Now, therefore, in exercise of powers conferred by sub-section (1) of section 7 of the said Act, the Central Government hereby gives notice of its intention to acquire the land measuring 1842.75 hectares (approximately) or 2575.54 acres (approximately) and all rights in or over the said lands as described in the Schedule appended hereto:

Note I: The plan bearing number PVUNL/BAN/SEC-7(1), dated the 25th June, 2019, the area covered by this notification may be inspected in the office of the Deputy Commissioner, District Letcher-829206, Jharkhand or at the office of the Coal Controller, 1, Council House Street, Kolkata - 700 001 or at the office of the DGM (CM-Civl), Patratu Vidyut Utpadan Nigam Limited, Patratu, District Ramgarh-829119, Jharkhand or at the office of the Assistant General Manager (CM), Patratu Vidyut Utpadan Nigam Limited, Patratu, District Ramgarh-829119, Jharkhand or Chief General Manager (Explosive Division), Central Mine Planning and Design Institute Limited, Gondwana Palace, Kanke Road, Ranchi-834008, Jharkhand.

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civl) Coal Mine
PATRATU VIDYUT UTPADAN NIGAM LTD.
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भारत सरकार / Govt. of India
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कोलकाता-700 001 / Kolkata- 700 001

Note 2: Attention is hereby invited to the provisions of section 8 of the said Act which provides as follows:-

"8. **Objection to acquisition.** - (1) Any person interested in any land in respect of which a notification under section 7 has been issued may, within thirty days of the issue of the notification, object to the acquisition of the whole or any part of the land or any rights in or over such land.

Explanation.- It shall not be an objection within the meaning of this section for any person to say that he himself desires to undertake mining operation in the land for the production of coal and that such operation should not be undertaken by the Central Government or by any other person.

(2) Every objection under sub-section (1) shall be made to the competent authority in writing, and the competent authority shall give the objector an opportunity of being heard either in person or by a legal practitioner and shall, after hearing all such objections and after making such further inquiry, if any, as he thinks necessary, either makes a report in respect of the land which has been notified under sub-section (1) of section 7 or of rights in or over such land, or make different reports in respect of different parcels of such land or of rights in or over such land, to the Central Government, containing his recommendations on the objections, together with the record of the proceedings held by him, for the decision of the Government.

(3) For the purposes of this section, a person shall be deemed to be interested in land who would be entitled to claim an interest in compensation if the land or any rights in or over such land were acquired under this Act".

Note 3: The Coal Controller, 1, Council House Street, Kolkata-700 001 has been appointed by the Central Government as the competent authority under section 3 of the said Act, vide notification number S.O. 2570(E), dated the 11th August, 2017, published in Part II, Section 3, Sub-section (ii) of the Gazette of India, dated the 11th August, 2017.

SCHEDULE

**Banhardih Coal Block
Auranga Coalfield
District - Latchar, Jharkhand**

[Plan bearing number PVUNI/ BAN/ SEC- 7(1), dated the 25th June, 2019]

ALL RIGHTS

(A) REVENUE LAND :

Sl.No.	Village	Thane	District	Thana number	Total area (approximately)		Remarks
					hectare	acre	
1.	Ate	Chandwa	Latchar	254	107.42	265.34	Part
2.	Banhardi	Chandwa	Latchar	249	154.95	382.75	Part
3.	Bari	Chandwa	Latchar	251	584.01	1442.51	Part
4.	Harwadih	Chandwa	Latchar	255	16.14	39.86	Part
5.	Kampur	Chandwa	Latchar	252	10.27	25.37	Part
6.	Sudi	Chandwa	Latchar	250	23.01	56.83	Part
7.	Tota	Chandwa	Latchar	256	5.84	14.42	Part
Total					901.65	2227.08	

Subodh John Purti
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Sr. Manager (CWS/Coal Mine)
PATRATHI VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd.) Jharkhand
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आरता सारंग / Govt. of India
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1, काउंसिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

(B) FOREST LAND :

Sl No.	Village	Thana	District	Thana number	Total area (approximately)		Remarks
					hectare	acre	
1.	Ate	Chandwa	Latehar	254	1.26	3.10	Part
2.	Bari	Chandwa	Latehar	251	119.08	294.09	Part
3.	Serli	Chandwa	Latehar	250	8.83	21.80	Part
4.	Tata	Chandwa	Latehar	256	11.93	29.47	Part
Total :					141.08	348.46	

SUMMARY:

- (A) Total Revenue Land - 901.65 hectares (approximately) =2227.08 acres (approximately)
- (B) Total Forest Land - 141.08 hectares (Approximately) =348.46 acres (approximately)
- (C) Grand Total (A+B) : 1042.73 hectares (approximately) =2575.54 acres (approximately)

LIST OF REVENUE PLOT NUMBERS TO BE ACQUIRED :

(1) Village - ATE :

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60(Part), 61(Part), 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160(Part), 161, 162, 163, 164(Part), 165, 166, 167(Part), 168(Part), 169(Part), 171(Part), 176(Part), 177(Part), 178, 179(Part), 180, 181, 182(Part), 183, 184, 185, 186, 187, 188, 189, 190, 191, 192(Part), 193, 194 (Part), 201(Part), 202(Part), 203, 204(Part), 205, 206(Part), 207(Part), 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222-225, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242(Part), 243, 244, 245, 246, 247, 248(Part), 249, 250(Part), 251(Part), 252, 253, 254(Part), 255(Part), 256(Part), 257, 258, 259, 260, 273(Part), 275(Part), 276(Part), 285(Part), 1087, 1095, 1099, 1100, 1101, 1110, 1111, 1112.

(2) Village -Banharai :

348(Part), 349(Part), 350(Part), 351(Part), 352, 353, 354, 355, 356, 357, 358, 359, 360(Part), 380(Part), 381(Part), 382(Part), 383, 384, 385(Part), 386(Part), 396(Part), 605(Part), 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624(Part), 628(Part), 629, 630(Part), 631(Part), 632(Part), 669(Part), 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685(Part), 686, 687, 688, 689(Part), 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 704(Part), 705(Part), 708(Part), 709(Part), 710, 711, 712, 713, 714, 715(Part), 716, 717, 718, 719(Part), 724(Part), 731(Part), 732(Part), 734(Part), 735(Part), 736, 737, 738(Part), 739(Part), 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801(Part), 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905.

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2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082(Part), 2083, 2084, 2085, 2086, 2087.

(3) Village – Bari :

8(Part), 9(Part), 10(Part), 11(part), 12(Part), 14(Part), 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26(Part), 27, 28(Part), 29(Part), 31(Part), 32(Part), 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141(part), 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 173 (part), 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 196(part), 197(part), 198(part), 199, 200, 201, 202, 203(part), 204(part), 205(part), 206(part), 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1917(Part), 1930(Part), 1937(part), 1938, 1939, 1940, 1941(Part), 1942(Part), 1947(Part), 1950(Part), 1952, 1953, 1954, 1955, 1956, 1957, 1958, 1959, 1960, 1961, 1962(Part), 1964(Part), 1971(Part), 1987(part), 1988(Part), 1989(Part), 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010(Part), 2011(Part), 2012(Part), 2013(Part), 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021,

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 Sr. Manager (Circ. Coal Mine)
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 भारत सरकार / Govt. of India
 बरेला नियंत्रण कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस ब्लॉक / 1, Council House Block
 कोलकाता-700 001 / Kolkata-700 001

2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055(Part), 2057, 2058(Part), 2057(Part), 2059, 2060(Part), 2061(Part), 2066(Part), 2067, 2068(Part), 2069(Part), 2070(Part), 2071, 2072, 2073(Part), 2074(Part), 2075(Part), 2078, 2079(Part), 2080(Part), 2101(part), 2155(Part), 2156(Part), 2157(Part), 2158(Part), 2159(Part), 2160(Part), 2161(Part), 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2177(Part), 2174(Part), 2797(part), 2800, 2805, 2809(Part), 2811, 2813, 2815, 2816, 2817, 2818, 2819, 2820, 2821, 2822, 2823, 2824, 2825, 2826, 2827, 2829, 2830, 2831(Part), 2833, 2835, 2836, 2803, 2160(Part), 2799(Part), 2798, 2037, 1851, 1930(part), 2036, 2831(Part).

(4) Village - Barwadli :

1(Part), 2, 3(Part), 4(Part), 5(Part), 6(Part), 7, 8(Part), 9, 10, 11, 12, 13(Part), 14(Part), 15(Part), 35(Part), 39(Part), 145(Part), 146, 147(Part), 148, 149(Part), 180(Part), 181(Part), 182(Part), 183, 184(Part), 185, 186, 187, 188(Part), 509(Part).

(5) Village - Tota :

1, 3, 4, 5, 6(Part), 7(Part), 9 (Part), 10(Part), 11(Part), 12(Part), 69(Part).

(6) Village - Rampar :

918(Part), 919(Part), 920, 921(Part), 925(Part), 928(Part), 932(Part), 933(Part), 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944(Part), 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955(Part), 956, 957, 958(Part), 960(Part), 964(Part), 965(Part), 970(Part), 971, 972(Part), 973(Part), 977(Part), 978(Part), 998(Part), 999, 1000, 1001, 1002, 1003(Part), 1006(Part), 1007, 1008, 1009(Part), 1011(Part), 1042(Part).

(7) Village - Surli :

1, 2, 3, 6, 4, 5, 8, 9, 12, 13, 16(Part), 19, 20, 24, 26, 27, 29, 30, 31(Part), 34(Part), 115(Part), 116(Part), 117(Part), 118, 119, 120(Part), 121, 122, 123, 124, 125, 128(Part), 129, 130, 131, 132(Part), 135, 136, 140, 141, 142(Part), 143, 144, 145(Part), 163(Part), 166(Part), 168, 169, 170, 171, 172(Part), 173(Part), 174(Part), 176(Part), 177, 178(Part), 179(Part), 205(Part), 444(Part), 447(Part), 621(Part).

List of Forest Cadastral Survey plot numbers to be acquired:

1. Village Ate : 24.
2. Village Bari : 1303, 62, 9, 6 (Part), 5 (Part), 4 (Part), 1281, 1283, 35, 187, 91, 116, 93, 114, 1310 (Part), 771 (Part).
3. Village Surli : 296 (Part), 1 (Part), 305.
4. Village Tota : 2 (Part), 144(Part).

Boundary description:

Line A - A1 - B - B1 - B2 - B3 - B4 - B5 - B6 - B7 - C : The line starts from point 'A' inside the plot no.732 of Banhardi village (Thana Chandwa) moves in North-east direction to point A1 inside plot no.752 of Banhardi village. Line moves in East direction from point A1 to point B through plot nos.719, 685, 1563, 1648, 1687 in Banhardi village. Further line moves to Southeast direction from Point B to B1 in Plot no.120 of Surli village through Plot nos. 16, 31 in forest land of Surli village. From point B1 line moves in Southeast direction to point B2 in plot no.128 of Surli village

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असहायक कोयला नियंत्रक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
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through plot no.128 in Surfi village. From point B2 line moves in Southeast direction to point B3 in Plot no.1066 in Bari village through Plot nos.115, 166, 172, 447 in Surfi village and through Plot nos.1016, 1066 in Bari village. Line moves further in Southeast direction from point B3 to point B4 in Plot no.1788 in Bari village through Plot nos.1093, 1100, 1103, 1164 in Bari village. Further block boundary line moves in Southeast direction from point B4 to point B5 in Plot no.1248 in Bari village through Plot nos.1789, 1787, 1826, 1845 in Bari village. Further line moves in Southeast direction from point B5 to point B6 in Plot no.1964 in Bari village through Plot nos. 1916, 1910, 1950, 1962 in village Bari. Further line moves in Southeast direction through Plot nos. 1987, 1988 in Bari village and Plot nos. 918, 919, 928, in Rampur village from point B6 to point B7 in Plot no.944 in Rampur village. Line moves in Southeast direction from point B7 to point C in Plot no.1011 in Rampur village, through Plot nos. 972, 955, 1009 in Rampur village.

Line C- C1 - C2 - C3 - C4 - C5 - D : The line moves in South direction from point C in Plot no.1011 in Rampur village to point C1 in Plot no.2010 in Bari village. Further line moves in Southwest direction from point C1 to point C2 in Plot no.2080 in Bari village through Plot nos.2012, 2075, 2074 in Bari village. Line moves in Southwest direction from point C2 to C3 in Plot no.2073 in Bari village through plot nos.2080, 2073 in Bari village. Further line continue to move in Southwest direction from point C3 to point C4 in Plot no.192 in Ate village through Plot nos. 2060, 2058, 2156, 2159, 2174, 1514, 1492 in Bari village and Plot nos. 323, 275, 273, 206, 201 in Ate village. Further line moves in Southwest direction from point C4 to point C5 in Plot no.14 in Barwadih village through Plot nos.194, 179, 164, 1100 in Ate village and Plot nos.509, 149, 145, 39 in Barwadih village. From point C5 line further moves in West direction to point D in Plot no.6 in forest land of Tota village through Plot nos.15, 6, 3 in Barwadih village and Plot nos. 12, 11, 7 in Tota village.

Line D - D1 - D2 - D3 - D4 - D5 - D6 - D7 - D8 - D9 - D10 - D11 - D12 - D13 - D14 - E : Line moves in Northwest direction from point D to point D1 in Plot no.6 in forest land of Tota village. Further line moves along the Nala in Tota village Plot no.69 through point D2 and D3 and through point D4, D5, D6, D7, D8, D9, D10, D11, D12, and D13 in Plot no. 204 in Bari village and through point D14 in Plot no.8 in forest land of Bari village to point E in Plot no.8 in forest land of Bari village.

Line E-A : The Line moves in North direction from point 'E' in Plot no.8 in forest land of Bari village to end at point 'A' in Plot no.732 in Banhardi village through Plot nos. 8,9, 10, 12 in forest land of Bari village and Plot nos. 11, 26, 29, 31 in Bari village and Plot nos. 1193, 1131, 1005, 991, 350, 385, 735 in Banhardi village.

[F. No. 43015/40/2017-LA & IR]

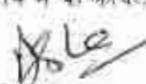
RAM SHIROMANI SAROI, Dy. Secy.

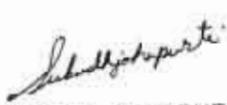
नई दिल्ली, 10 अक्टूबर, 2019

क्र.आ. 1816.—केन्द्रीय सरकार को यह प्रतीत होता है कि इससे उपायुक्त अनुसूची में वर्णित परिक्षेत्र की भूमि में से कोयला अभिप्राप्त होने की संभावना है :

और, उक्त अनुसूची में वर्णित भूमि के क्षेत्र में अंतर्विष्ट करने वाला रेखांक संख्यांक आरईवी/02/2019, तारीख 14 अगस्त, 2019 का निरीक्षण सेंट्रल कोयलीन्ड्स लिमिटेड (भूमि और राजस्व विभाग), दरभंगा हाउस, रोची - 834029 (झारखण्ड) के कार्यालय में या महाप्रबंधक, सेंट्रल कोयलीन्ड्स लिमिटेड, डोरी क्षेत्र, जिला बोकारो (झारखण्ड) या उपायुक्त, जिला बोकारो (झारखण्ड) या महाप्रबंधक (जोत प्रभाग) कार.आई-1/1, केन्द्रीय खान योजना और डिजाईन संस्थान, बौधवाना पीलेस, फॉक रोड, रोची- 834 031 (झारखण्ड) के कार्यालय में या कोयला निबंधक, 1, माउंसिल हाउस स्ट्रीट, कोयलाका-700001 के कार्यालय में किया जा सकता है।


श.नी. शांता गहा / Smt. Shanta Gaha
अप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निबंधक कार्यालय / O/o. The Coal Controller
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Paratu, Dist.-Ranchi-829119

Annexure-IID

**Notification under section 4(1) of Coal
Bearing Act,1957**

Most Immediate
Extra-ordinary Notification

F.No. 43015/40/2017-LA&IR
Government of India
Ministry of Coal

New Delhi, dated the 1st December, 2017

To
The Manager (Technical),
Government of India Press,
Mayapuri, Ring Road,
New Delhi.

Sub: Notification under section 4(1) of the Coal Bearing Areas (A&D) Act,1957 in respect of Banhardih Coal Mining Block, Auranga Coalfields, District Latehar, Jharkhand,

Sir,
I am directed to forward herewith a copy of notification file No. 43015/40/2017-LA&IR, dated 30.11.2017 one each in Hindi and English with the request to publish the same in Part-II, Section 3, Sub-section (ii) of the Gazette of India(Extraordinary).

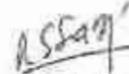
2. It is certified that contents of the soft copy as well as hard copy are same and also approved by the competent authority.

The notification has duly been signed by the Joint Secretary in this Ministry.

Yours faithfully,

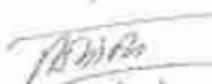
Encl: as stated

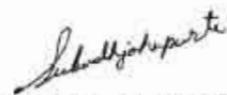

श्रीमती शान्ता गुहा / Smt. Shanta Guha
जय प्रकाश सोमरा निदेशक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
1, काठनिहा हाउस स्ट्रीट / 1, Coalshed House Street
कोलकाता-700 001 / Kolkata- 700,001


(R.S. Saroj)
Under Secretary to the Govt. of India
Tel: 24016989
E-mail address: prw.mcc@nic.in

c/c.

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1/12/17


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Sr. Manager (Coal Mine)
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(UNDERTAKING BY ADMINISTRATIVE MINISTRY / DEPARTMENT)

GOVERNMENT OF INDIA

MINISTRY / DEPARTMENT CoAL

The Competent Authority in the above mentioned Ministry / Department has approved publication of a Gazette notification and subsequently the authenticated matter for Gazette notification has been submitted by this Ministry / Department vide letter No. 43015/14/2017-LAIR dated 30-11-2017

It is understood that as per the procedure defined by the Ministry of Urban Development regarding e-Publication of Government of India Gazette notifications, this Gazette notification will be e-published on the official website www.e gazette.nic.in and no physical printing will be undertaken and no hard copies will be provided. It is undertaken that this Ministry / Department will take all steps and action necessary requiring submission and circulation of the e-published Gazette notification (either in electronic form or in physical form) to various authorities mandated by Law or otherwise. In particular, timely submission will be ensured, wherever required, to submit required number of copies for laying on the Table of Both the Houses of Parliament, the Committee on Subordinate Legislation, Parliament Library, etc.

Signature



Name C. V. S. Subban

Place NEW DELHI

Date 30-11-2017

Joint Secretary

Ministry / Department of CoAL

To

Stamp / Seal

The Manager,
Government of India Press
Mayapuri, New Delhi - 05

श. सं. सुबोध/एन.ए.सुबोध
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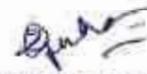
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Subodh John Purti
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Sr. Manager (Civil Coal Mine)
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A Subsidiary of NTPCL in Joint Venture with JSWIL
Patratu, Dist-Rangpur-829119

(भारत के राजपत्र, असाधारण, भाग II, खंड 3, उप-खंड (ii) में प्रकाशनार्थ)

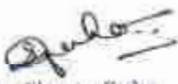
भारत सरकार
कोयला मंत्रालय

अधिसूचना

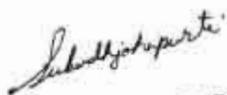
नई दिल्ली, तारीख 30 नवम्बर, 2017

का.आ. (अ).-केंद्रीय सरकार को प्रतीत होता है कि इससे उपाबद्ध अनुसूची में उल्लिखित परिशेख की भूमि में से कोयला अभिप्राप्त किये जाने की संभावना है;

उक्त अनुसूची में वर्णित भूमि के क्षेत्र के अर्न्तगत आने वाले क्षेत्र के ध्येरे रेखांक संख्यांक पी.बी.यू.एन.एल./एफ.एम./सेक्शन-4(1), तारीख 12 अक्टूबर, 2017 का निरीक्षण पतरातु विद्युत उत्पादन निगम लिमिटेड (पी.बी.यू.एन.एल.), अपर महाप्रबंधक, बनहारडीह कोल माईनिंग, पतरातु डाक - पतरातु, जिला - रामगढ़ झारखण्ड- 829119, के कार्यालय में या महाप्रबंधक (खोज प्रभाग), से-ट्रल माईन प्लानिंग और डिजाईन इन्स्टीट्यूट लिमिटेड, गोंडवाना, प्लेस, काके रोड, रॉदी-834031 के कार्यालय में या कोयला नियंत्रक, 1, काउंसिल हाउस स्ट्रीट, कोलकाता-700 001 के कार्यालय में या जिला कलेक्टर, जिला लातेहार-829206, झारखंड, के कार्यालय में


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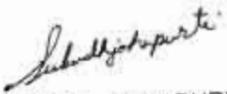

SUBODH JOHN PARTI
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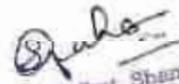
या महाप्रबंधक (काल माईनिंग), एनटीपीसी भवन, स्कोप काम्प्लेक्स, 7, इस्टीट्यूशनल एरिया, लोथी रोड, नई दिल्ली-110003 के कार्यालय में किया जा सकता है;

अतः अब, केंद्रीय सरकार, कोयला धारक क्षेत्र (अर्जेंट और विकास) अधिनियम, 1957 (1957 का 20) (जिसे इरामें इराके परचात उक्त अधिनियम कहा गया है) की धारा 4 की उप-धारा (1) द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, उक्त अनुसूची में वर्णित भूमि में कोयला का पूर्वक्षण करने के अपने आशय की सूचना देती है;

उक्त अनुसूची में वर्णित भूमि में हितगढ़ कोई व्यक्ति, इस अधिसूचना के राजपत्र में प्रकाशन की तारीख से नब्बे दिन के भीतर अपर महाप्रबंधक, परचात विद्युत उत्पादन निगम लिमिटेड (पी.वी.यू.एन.एल.), बनहारडीह कोल माईनिंग प्रोजेक्ट, परचात, डोकधर - परचात, जिला - रामगढ़, झारखंड-829119, के कार्यालय से-

- (i) संपूर्ण भूमि या उसके किसी भाग या ऐसी भूमि में या उसके ऊपर किसी अधिकार की अर्जेंट पर आक्षेप कर सकेगा; अथवा
- (ii) उसकी धारा 4 की उप-धारा (3) के अधीन की गई किसी कार्रवाई से हुई या होने वाली समाविष्ट किसी क्षति के लिए उक्त अधिनियम की धारा 8 के अधीन प्रतिकर का दावा कर सकेगा; अथवा
- (iii) उक्त अधिनियम की धारा (13) की उप-धारा (1) के अधीन पूर्वक्षण अनुज्ञापियों के प्रभावहीन होने के संबंध में या उक्त अधिनियम की धारा 13 की उप-धारा (4) के अधीन खनन पट्टे प्रभावहीन होने के लिए प्रतिकर का दावा कर सकेगा और उसे उक्त अधिनियम की धारा 13 की उप-धारा (1) के खंड (i) से खंड (iv) में विनिर्दिष्ट मद्दा की बाबत उपरत व्यय को उपदर्शित करने के लिए सूचित भूमि से संबंधित सभी मानचिह्नों, चाटों और अन्य दस्तावेजों को परिदत्त कर सकेगा।


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अनुसूची

बनहारडीह कोल माईनिंग ब्लॉक
औरंगा कोलफील्ड्स
जिला लातेहार, झारखंड

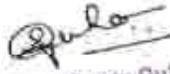
(खिांक संख्यांक धी.वी.यू.एन.एल./एफ.एन./सेशन-4(1), तारीख 12 अक्तूबर, 2017)

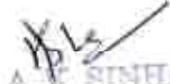
क्रम सं.	नीजा/ग्राम	थाना	थाना संख्या	जिला	एकड़ में क्षेत्र	हेक्टेयर में क्षेत्र	टिप्पणियां
1	उदयपुरा	लातेहार	327	लातेहार	76.77	31.07	भाग
2	सावानो	लातेहार	329	लातेहार	694.20	280.94	भाग
3	जालदाा	लातेहार	328	लातेहार	153.82	62.25	भाग
4	बनहारडीह	चदवा	249	लातेहार	1137.20	460.22	भाग
5	सुरती	चदवा	250	लातेहार	81.72	33.07	भाग
6	रामपुर	चदवा	252	लातेहार	26.19	10.60	भाग
7	रोटे	चदवा	254	लातेहार	266.84	107.99	भाग
8	बनहारडीह	चदवा	255	लातेहार	40.77	16.50	भाग
9	होटा	चदवा	256	लातेहार	41.19	16.67	भाग
10	बारी	चदवा	251	लातेहार	1973.81	798.79	भाग
कुल:					4492.51	1818.10	

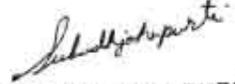
कुल क्षेत्र: 1818.10 हेक्टेयर (लगभग) या 4492.51 एकड़ (लगभग)

सीमा वर्णन:

- रेखा ए1- ए2: रेखा, कोयला ब्लॉक के उत्तर-पश्चिम कोने से ग्राम उदयपुरा में स्थित बिन्दु ए1 से प्रारम्भ होकर, पूर्व दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए2 ग्राम उदयपुरा और सावानो की सीमा पर समाप्त होती है।
- रेखा ए2- ए3: रेखा, ग्राम सावानो के उत्तर-पश्चिम कोने से में स्थित बिन्दु ए2 से प्रारम्भ होकर, उत्तर-पूर्व दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए3 ग्राम उदयपुरा और सावानो की सीमा पर समाप्त होती है।


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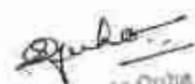
3. रेखा, ए3- ए4: रेखा, उत्तर-पश्चिम कोने से ग्राम सावानो में स्थित बिन्दु ए3 से प्रारम्भ होकर, पूर्व दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए4 ग्राम सावानो पर समाप्त होती है।
4. रेखा, ए4- ए5: रेखा, ग्राम सावानो के उत्तर-पश्चिम कोने में स्थित बिन्दु ए4 से प्रारम्भ होकर, उत्तर दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए5 ग्राम सावानो और बनहारडीह की सीमा पर समाप्त होती है।
5. रेखा, ए5- ए6: रेखा, ग्राम बनहारडीह के उत्तर-पश्चिम कोने में स्थित बिन्दु ए5 से प्रारम्भ होकर, पूर्व दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए6 ग्राम बनहारडीह और सुरली पर समाप्त होती है।
6. रेखा, ए6- ए7: रेखा, ग्राम सुरली के उत्तर कोने में स्थित बिन्दु ए6 से प्रारम्भ होकर, उत्तर दिशा में बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए7 ग्राम सुरली पर समाप्त होती है।
7. रेखा, ए7- ए8: रेखा, ग्राम सुरली के उत्तर कोने में स्थित बिन्दु ए7 से प्रारम्भ होकर, उत्तर-पूर्व दिशा के कोने से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए8 ग्राम सुरली और बारी की सीमा पर समाप्त होती है।
8. रेखा, ए8- ए9: रेखा, ग्राम सुरली के उत्तर-पश्चिम कोने में स्थित बिन्दु ए8 से गुजरती है और उक्त बिन्दु ए9 ग्राम बारी और रामपुर की सीमा पर समाप्त होती है।
9. रेखा, ए9- ए10: रेखा, ग्राम रामपुर के उत्तर-पश्चिम कोने में स्थित बिन्दु ए9 से प्रारम्भ होकर, पूर्व दिशा के कोने से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए10 ग्राम रामपुर और बारी की सीमा पर समाप्त होती है।
10. रेखा, ए10- ए11:- रेखा, ग्राम रामपुर के पूर्व कोने में स्थित बिन्दु ए10 से प्रारम्भ होकर, दक्षिण दिशा से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए11 ग्राम बारी पर समाप्त होती है।
11. रेखा, ए11- ए12:- रेखा, ग्राम बारी के दक्षिण कोने में स्थित बिन्दु ए11 से प्रारम्भ होकर, उत्तर-पश्चिम दिशा से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए12 ग्राम बारी पर समाप्त होती है।
12. रेखा, ए12- ए13:- रेखा, ग्राम बारी के उत्तर-पूर्व कोने में स्थित बिन्दु ए12 से प्रारम्भ होकर, दक्षिण-पश्चिम दिशा से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए13 ग्राम बारी और ऐंटे की सीमा पर समाप्त होती है।

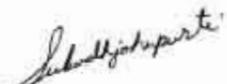
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13. रेखा ए13- ए14- रेखा, ग्राम ऐटे के पूर्व कोने में स्थित बिन्दु ए13 से प्रारम्भ होकर, पश्चिम दिशा से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए14 ग्राम ऐटे और बरवाडीह की सीमा पर समाप्त होती है।
14. रेखा ए14- ए15- रेखा, ग्राम बरवाडीह के उत्तर-पूर्व कोने में स्थित बिन्दु ए14 से प्रारम्भ होकर, पश्चिम कोने से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए15 ग्राम बरवाडीह और टोटा की सीमा पर समाप्त होती है।
15. रेखा ए15- ए16- रेखा, ग्राम टोटा के उत्तर-पूर्व कोने में स्थित बिन्दु ए15 से प्रारम्भ होकर, पश्चिम कोने से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए16 ग्राम टोटा और बारी की सीमा पर समाप्त होती है।
16. रेखा ए16- ए17- रेखा, ग्राम बारी के उत्तर-पूर्व कोने में स्थित बिन्दु ए16 से प्रारम्भ होकर, पश्चिम से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए17 ग्राम बारी पर समाप्त होती है।
17. रेखा ए17- ए18- रेखा, ग्राम बारी के पूर्व कोने में स्थित बिन्दु ए17 से प्रारम्भ होकर, पश्चिम से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए18 ग्राम बारी और बगहाडीह की सीमा पर समाप्त होती है।
18. रेखा ए18- ए19- रेखा, ग्राम बनहाडीह के पूर्व कोने में स्थित बिन्दु ए18 से प्रारम्भ होकर, पश्चिम-पश्चिम से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए19 ग्राम बनहाडीह और जगलदगा की सीमा पर समाप्त होती है।
19. रेखा ए19- ए20- रेखा, ग्राम जगलदगा के पूर्व कोने में स्थित बिन्दु ए19 से प्रारम्भ होकर, दक्षिण से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए20 ग्राम जगलदगा पर समाप्त होती है।
20. रेखा ए20- ए21- रेखा, ग्राम जगलदगा के दक्षिण-पूर्व कोने में स्थित बिन्दु ए20 से प्रारम्भ होकर, उत्तर-पश्चिम से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु ए21 ग्राम जगलदगा और उदयपुरा की सीमा पर समाप्त होती है।


 श्रीमती शंता गुप्त / Smt. Shanta Gupta
 उप सहायक निदेशक / Dy. Asst. Coal Controller
 भारत सरकार / Govt. of India
 सहायक निदेशक बंगाल / Dy. The Coal Controller
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 Sr. Manager (Coal Mine)
 PATRABU VIDYUT UTPADAN NIGAM LTD.
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 1981-82
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21. रेखा, ए21-ए1- रेखा, ग्राम उदयपुरा के मध्य में स्थित बिन्दु ए21 से प्रारम्भ होकर, उत्तर-पश्चिम से बढ़ती हुई उक्त ग्राम से गुजरती है और उक्त बिन्दु 'ए1' ग्राम उदयपुरा पर समाप्त होती है।

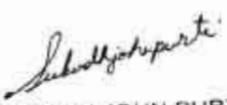
[फा.सं. 43015/40/2017-एलए एम्ब आईआर]

(श्री सुबोध)
संयुक्त सचिव, भारत सरकार

श्री. श्री. सुबोध / श्री. SUBODH
संयुक्त सचिव / Joint Secretary
कोयले विभाग / Ministry of Coal
राज्य सरकार / Govt. of India
राज्य भवन / State Bhawan
नई दिल्ली - 110001, New Delhi


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भारत सरकार / Govt. of India
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[TO BE PUBLISHED IN THE GAZETTE OF INDIA, EXTRAORDINARY, PART II, SECTION 3, SUB-SECTION (ii)]

Government of India
Ministry of Coal

Notification

Dated the 30th November, 2017

S.O. (E) - Whereas, it appears to the Central Government that Coal is likely to be obtained from the land in the locality described in the Schedule annexed hereto:

And, whereas, the plan bearing number PVUNL/FM/Sec-4(1), dated the 12th October, 2017 containing the area of land described in the said Schedule may be inspected at the office of the Patratu Vidyut Utpadan Nigam Limited (PVUNL), Additional General Manager, Barnardih Coal Mining, Patratu, Post Office – Patratu, District Ramgarh, Jharkhand – 829119 or at the office of the General Manager (Exploration Division), Central Mine Planning and Design Institute Limited, Gondwana Place, Kanke Road, Ranchi-834 031 or at the office of the Coal Controller, 1, Council House Street, Kolkata-700 001 or at the office of the District Collector, District Latehar-829206, Jharkhand or at the office of the General Manager (Coal Mining), NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003.

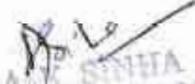
Now, therefore, in exercise of the powers conferred by sub-section (1) of section 4 of the Coal Bearing Areas (Acquisition and Development) Act, 1957 (20 of 1957), (hereinafter referred to as the said Act), the Central Government hereby gives notice of its intention to prospect for coal in the land described in the said Schedule,

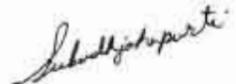
Any persons interested in the land described in the aforesaid Schedule may –

- (i) object to the acquisition of the whole or any part of the land, or of any rights in or over such land; or
- (ii) claim compensation under section 6 of the said Act for any damaged caused or likely to be caused by any action taken under sub-section(3) of section 4 thereof; or
- (iii) claim compensation under sub-section (1) of section 13 of the said Act in respect of prospecting license ceasing to have effect or under sub-section (4) of section 13 of the said Act for mining lease ceasing to have effect and deliver all maps, charts and other documents relating to the aforesaid land to show the expenditure incurred in respect of items specified in clauses (i) to (iv) of sub-section (1) of section 13 of the said Act,

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श्रीमती शंता गुहा / Smt. Shanta Guha
असistant कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
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PATRATU VIDYUT UTPADAN NIGAM LTD.
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Patratu, Dist.-Ramgarh-829119

to the office of the Additional General Manager, Patratu Vidyut Utpadan Nigam Limited (PVUNL), Banhardih Coal Mining Project, Patratu, Post Office – Patratu, District – Ramgarh, Jharkhand - 829119 within ninety days from the date of publication of this notification in the Official Gazette.

Schedule

Banhardih Coal Mining Block
Auranga Coalfields
District Latehar, Jharkhand

[Plan bearing number PVUNL/FM/SEC-4(1), dated the 12th October, 2017]

Sl No.	Mouja / Village	Thana	Thana number	District	Area in acres	Area in hectares	Remarks
1	Udaypura	Latehar	327	Latehar	76.77	31.07	Part
2	Sabano	Latehar	329	Latehar	884.20	280.94	Part
3	Jagaldaga	Latehar	328	Latehar	153.82	62.25	Part
4	Banhardih	Chandwa	249	Latehar	1137.20	460.22	Part
5	Suti	Chandwa	250	Latehar	81.72	33.07	Part
6	Rampur	Chandwa	252	Latehar	26.19	10.60	Part
7	Ate	Chandwa	254	Latehar	288.84	107.99	Part
8	Barwedih	Chandwa	255	Latehar	40.77	16.50	Part
9	Tota	Chandwa	256	Latehar	41.19	16.67	Part
10	Bari	Chandwa	251	Latehar	1873.81	798.79	Part
Total:					4492.51	1818.10	

Total area: 1818.10 hectares (approximately) or 4492.51 acres (approximately)

Boundary Description :

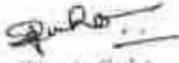
- (1) Line A1-A2: The line starts at point 'A1' located on North-West corner of village Udaypura which trends towards East corner of the village Udaypura and ends at point 'A2' of the village boundary of Udaypura and Sabano.

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SUBODH JOHN PURTI
Sr. Manager (Cust. Coal Mine)
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(A Subsidiary of NTPCL Limited incorporated with Jharkhand)
Patratu, Dist. Ramgarh-829119

A. K. Sinha
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Tech Director
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Kolkata-700001
e-mail: sinhasawdhasin@gmail.com

Dr. J. K. Sinha
डी.के. सिन्हा / Sr. Dy. Asstt. Commr.
ज. मंत्रालय कोयला विभाग / Dy. Asstt. Commr.
भारत सरकार / Govt. of India
कोयला नियंत्रण आयोग / O/o. The Coal Control
1, बरहमिस्त काला स्ट्रीट / 1, Coloured House Street
कोलकाता-700 001 / Kolkata-700 001

- (2) Line A2-A3: The line starts at point 'A2' located on North -West corner of village Sabano which trends towards North-East of the village Sabano and ends at point 'A3' of Sabano.
- (3) Line A3-A4: The line starts at point 'A3' located on North East corner of village Sabano which moves towards East of the village sabano turns towards North- East and ends at point 'A4' of the village Sabano.
- (4) Line A4-A5: The line starts at point 'A4' located on North corner of village Sabano which trends towards North- East of the village Sabano and ends at point 'A5' of the village boundary of Sabano and Banhardih.
- (5) Line A5-A6: The line starts at point 'A5' located on North corner of village Banhardih which moves towards East of the village Banhardih and ends at point 'A6' of the village boundary of Banhardih and Surli.
- (6) Line A6-A7: The line starts at point 'A6' located on north west corner of village Surli which trends towards east corner of the village Surli and ends at point 'A7' of the village Surli.
- (7) Line A7-A8: The line starts at point 'A7' located on east corner of village Surli, trends towards South -East of village Surli and ends at point 'A8' of the village boundary of Surli and Bari.
- (8) Line A8-A9: The line starts at point 'A8' located on South east corner Surli which moves further towards South- East of the village Bari and ends at point 'A9' of the village boundary of Bari and Rampur.
- (9) Line A9-A10: The line starts at point 'A9' located on North-West corner trends towards South -East of the village Rampur and ends at point 'A10' of the village boundary of Rampur and Bari.
- (10) Line A10-A11: The line starts at point 'A10' located on South- East corner of village Rampur which trends towards South- East corner of the village Bari and ends at point 'A11' of the village Bari.
- (11) Line A11-A12: The line starts at point 'A11' located on east corner of village Bari which moves towards South -West of the village Bari and ends at point 'A12' of the village Bari.
- (12) Line A12-A13: The line starts at point 'A12' located on south west corner of village Bari which moves further towards South-West and ends at point 'A13' of the village boundary of Bari and Ate.

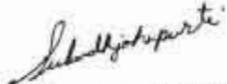


श्रीमती सीता गुप्त / Smt. Sitamati Gupta
 वर सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
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 Patnali, Dist.-Rangpur-820119

- (13) Line A13-A14: The line starts at point 'A13' located on North-East corner of village Ate which moves towards south-West of the village Ate and ends at point 'A14' of the village boundary of Ate and Barwadih.
- (14) Line A14-A15: The line starts at point 'A14' located on North-East corner of village Barwadih which trends towards South-West of the village Barwadih and ends at point 'A15' of the village Boundary of Barwadih and Tota.
- (15) Line A15-A16: The line starts at point 'A15' located on East corner of village Tota which moves towards North-West of the village Tota and ends at point 'A16' of the village boundary of Tota and Bari.
- (16) Line A16-A17: The line starts at point 'A16' located on South-West corner of village Bari which moves towards North-West of the village Bari and ends at point 'A17' of the village Bari.
- (17) Line A17-A18: The line starts at point 'A17' located on South-West corner of village Bari which moves towards North-West corner of the village Bari and ends at point 'A18' of the village boundary of Bari and Banhardih.
- (18) Line A18-A19: The line starts at point 'A18' located on south west corner of village Banhardih which trend towards North-West of the village Banhardih and ends at point 'A19' of the village boundary of Banhardih and Jagaldaga.
- (19) Line A19-A20: The line starts at point 'A19' located on East corner of village Jagaldaga which moves towards South-West of the village jagaldaga and ends at point 'A20'.
- (20) Line A20-A21: The line starts at point 'A20' located on South-West corner of village Jagaldaga which trends towards North-West of village Jagaldaga and ends at point 'A20' of village boundary of Jagaldaga and Udayapura.
- (21) Line A21-A1: The line starts at point 'A21' located on South-East of village Udayapura which moves towards North-West of the village Udayapura and ends at point 'A1' of the village Udayapura.

[F. No. 43G15/40/2017 -LA&IR]

Subodh John Purti
 Joint Secretary to the Government of India
 Ministry of Coal
 1, Council House Street
 Kolkata-700 001

(N.K. Sushansu)
 Joint Secretary to the Government of India
 Ministry of Coal
 1, Council House Street
 Kolkata-700 001

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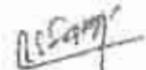
A. R. Sinha
 A. R. SINHA
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Subodh John Purti
 SUBODH JOHN PURTI
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 Patrao, Dist.-Rangpur-829119

Copy forwarded for information and necessary action to:- 'Speed Post'

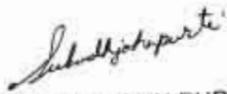
- 1 The Secretary to the Government of Jharkhand, Revenue Department, Ranchi-834001, Jharkhand. It is requested that the notification may be republished immediately in the State Gazette and a copy of the same may be sent to this Ministry.
- 2 The Chairman-cum-Managing Director, NTPC Ltd, NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003.
- 3 The Controller, Indian Bureau of Mines, 2nd Floor, Indira Bhawan, Nagpur-440001, Maharashtra.
- 4 The Coal Controller, 1, Council House Street, Kolkata-700001 along with two copies of the plan for inspection by the interested parties.
- 5 CEO, PVUNL, Patratu, Ramgarh (Jharkhand) / RED (Coal Mining), NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003.
- 6 The Director General, Geological Survey of India, 27, J.L. Nehru Road, 1st Floor, Kolkata-700 016.
- 7 The Deputy Commissioner, District Latehar-829206, Jharkhand.
- 8 The Regional Director, RI-III, CMPDIL, Gondwana Palace, Kanke Road, Ranchi, Jharkhand.
- 9 The NITI Aayog, Parliament Street, New Delhi.
- 10 Coal India Limited, Scope Minar, Laxmi Nagar District Centre, Core 4th floor, New Delhi-110002.
- 11 Deputy Secretary (NA), Shastri Bhawan, New Delhi.
- 12 For folder.

[F. No. 43015/40/2017 -LA&IR]


(R. S. Saroj)

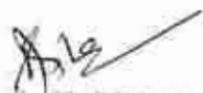
Under Secretary to the Government of India

Note: The copy of gazette notification may be downloaded through the website www.e-gazette.nic.in (Prepared by Ministry of Urban Development – Directorate of Printing, Government of India)


SUBODH JOHN PURTI
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श्रीमती शांता गुरु / Smt. Shanta Gubra
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o The Coal Controller
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Annexure-III

Approvals of Mining plan including mine closure plan from Board of the company

PATRATU VIDYUT UTPADAN NIGAM LIMITED

(A subsidiary of NTPC Limited in Joint Venture with Jharkhand Diji Vitran Nigam Limited)

**COPY OF THE RESOLUTION PASSED BY THE BOARD OF DIRECTORS
THROUGH CIRCULATION ON 27TH MARCH, 2020****CIRCULAR RESOLUTION NO. 2/2020**

Subject: Approval of Mining Plan & Mine Closure Plan, Authorization for submission of Mining Plan & Mine Closure Plan, authorization of Recognized Qualified Person (RQP) for preparation of Mining Plan & Mine Closure Plan and undertakings as per annexure-III of the new MoC guidelines dated 16.12.2019 with respect to Banhardih Coal Mine allocated to PVUNL for its Patratu Super Thermal Power Project (3X800MW), Phase-I, at Patratu (Jharkhand)

Resolved that approval of the Board be and is hereby accorded to the following :-

1. Acceptance of Mining Plan & Mine Closure Plan with recommendation for consideration of standing committee for approval.
2. Authorization of Shri A K Sinha having valid RQP certificate from MOC, vide number 34012/ (1)/2011-CPAM; dt. 28th February, 2011 and valid for 10 years from the date of issue and, representing M/S United Exploration India Private Limited, Kolkata for preparing the Mining Plan including Mine closure Plan of Banhardih Coal Mine, Latehar District.
3. CEO (PVUNL) or any other senior executive not below the level of AGM as authorized by CEO(PVUNL) be and is thereby authorized for submission of Mining Plan & Mine Closure Plan with respect to Banhardih Coal Mine allocated to PVUNL.
4. The Board undertakes that, the Mining Plan including Mine closure Plan of Banhardih Coal Mine is prepared with the correct set of data to the best of their Knowledge.
5. The Board undertakes that the Mine will be developed as per the approval of the mining plan and mine closure plan from Ministry of Coal and all other approvals as required will be obtained from relevant authorities in order to develop the Mine as per statute.

Subodh John Purti

SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JVRNL)
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Shruti
श्रीमती शोभा मुखर्जी / Smt. Shruti Mukherjee
एअसिस्टेंट कोयला निरीक्षक / Dy. Asstt. Coal Controller
परादा सचकाय / Govt. of India
कोयला निरीक्षण कार्यालय / O/u. The Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

A.K. Sinha
A. K. SINHA
B-Tech (Mining) / CO (COAL)
HOME: 033-25111111
email: sinhaswadesh@gmail.com

PATRATU VIDYUT UTPADAN NIGAM LIMITED

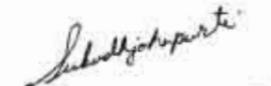
(A subsidiary of NTPC Limited in Joint Venture with Jharkhand Bijli Vitran Nigam Limited)

6. The Board also commit that the entire mining operation will be carried out as per the Statutory Provision given under Mines Act, 1952, Coal Mine Regulation 2017, EP Act 1986 and FC Act 1980 and wherever specific permissions are required, PVUNL will approach the concerned authorities.
7. The Board assures hereby that the Financial Requirement will be fulfilled to develop the Mine as per the approved plan and within the prevailing Statutory Framework.
8. The Board hereby undertakes that Reclamation and Rehabilitation work shall be carried out in accordance with the Approved Mine Closure Plan and any modifications/amendments which may be made in the Mine Closure Plan by Ministry of Coal from time to time.
9. The Board also undertakes that the protective measures contained in the Mine Closure Plan including reclamation and rehabilitation works will be carried out in accordance with the approved mine closure plan and final mine closure plan. Annual reports will be submitted before 1st of July of every year to the Coal Controller setting forth the extent of protective and rehabilitative works carried out as envisaged in the approved mine closure plans (Progressive and Final Closure).
10. The Board also undertakes that they will obtain a mine closure certificate from Coal Controller to the effect that the protective, reclamation and rehabilitation works carried out in accordance with the Approved Mine Closure Plan/ Final Mine Closure Plan and will surrender the reclaimed land to the State Government of Jharkhand.

Certified True Copy



Sipan K. Garg
Company Secretary



SUBODH JOHN PURTI
Sr. Manager (Coal/Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCLtd. in Joint Venture with JRVNL)
Patratu, Dist.-Rangarh-829119



A. K. SINHA
B-Tech (Mech) IIT KGP, FSC (COAL)
CORPORATE SECRETARY
MOBILE: 9943333711
e-mail: airmasawdeshn@gmail.com



श्रीमती रंजीत कुमारी / Sr. Manager (Coal/Mine)
आर.एस.ए.ए. / Sr. Asstt. Coal Secy
भारत सरकार / Govt. of India
कोयला नियंत्रण आयोग / C/o. The Coal Controller
1, काउन्सिल हाउस ब्लॉक / 1, Council House Street
कोरबा-790 001 / Korba-790 001

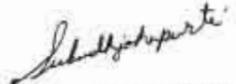
Annexure-IV
Copy of Earlier approval of mining plan

Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Civ. Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. & Joint Venture with BVMCL)
Patratu, Dist.-Rangpur-820119

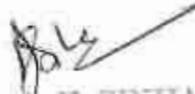


COPY OF EARLIER APPROVAL OF MINING PLAN

NOT APPLICABLE


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL in Joint Venture with BVMG)
Patrao, Dist.-Rangah-829119


श्रीमती सोनल मुक्त / Smt. Sonali L.
रक्षक निदेशक, कोयला विभाग / Dy. Asst. Coal Min. Officer
भारत सरकार / Govt. of India
सहायक निदेशक, कोयला विभाग / O/o. Dy. Coal Controller
1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata-700 101


A. K. SINHA
B-Tech (Mining) (M.Tech. in Coal)
e-mail: sinhasweetha@gmail.com

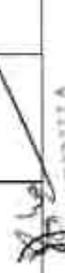
Annexure-V

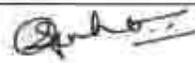
Plan showing schedule of Implementation of Mine Closure activities (Progressive and Final closure) with duration of important activities

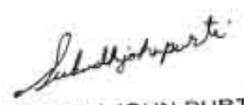
Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal/Coal Mine)
PATRATI VIJYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCL Ltd. in Joint Venture with JVVNL)
Patraji, Dist.-Rangghat-620119

Annexure V

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Progressive Closure	Water Quality Management								
	Air Quality Management								
	Waste Management								
	Ditch and Plant fencing around dump								
	Biological fencing around the Lease Area								
	Filling of voids								
	Top Soil management								
	Technical and Biological Reclamation of mined out of land and OB dump								
	Plantation over virgin area including green belt.								
	Manpower cost and supervision								
Dismantling of Infrastructure &	Toe wall around the dump.								
	Garland Drain								
	Garland Drain around the dump.								
	Any Other Activities.								
	Shifting of Crusher and Conveyor.								


A.K. SETHI
 Director (Environment) (CC-1004)
 B-Tech (Environmental Engg.)
 1982-83, IIT Kanpur
 e-mail : sishbawditech@gmail.com


 श्रीमती सोनू गुहा / Shri. Sanyu Guha
 एन कार्बन सेक्टर कंट्रोलर / En. Carbon Sector Controller
 भारत सरकार / Govt. of India
 कोयला विभाग कार्यालय / O/A. The Coal Controller
 1, पार्लियामेंट हाउस स्ट्रीट / 1, Council House Street
 कोलकाता-700 001 / Kolkata-700 001


SUBODH JOHN PURTI
 Sr. Manager (Envs.Coal Mine)
 PATRATO VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL Ltd. Joint Venture w/ JVN)
 Patrau, Dist. Ramgarh-829119

Sudhakar
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATH VIDYUT UPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. in Joint Venture with JVKM)
 Patratu, Dist.-Rangpur-821119

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
 ३५ सराफक कोयला निगम / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निगम कार्यालय / O/o, The Coal Controller
 १, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोलकाता - ७०० ००१ / Kolkata- 700 001

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Disposal or rehabilitation of Mining Machinery	Rehabilitation of the dismantled facility.								
	Dismantling of pumps and pipes / Other Facilities								
	Dismantling of Stowing bunkers/ provisioning of pumps for borewell pumping arrangement.								
	Dismantling of UG equipment								
	Rearranging water pipeline to dump top park / Agricultural land								
	Dismantling of power lines.								
	Barbed wire fencing around dumps								
	Barbed wire fencing around the pit.								
	Barbed wire fencing with masonry pillars								
	Concrete wall with masonry pillar around the pit.								
Safety & Security	Securing air shaft and installation of borewell pump								
	Securing of Incline								

AKS

A. K. SINHA
 B-Tech (Hons) Mining, IITC (COAL)
 QUALIFIED PERSON
 MOBILE : 9845351774
 e-mail : sinhaswadesh@gmail.com

१ २ ३ ४ ५ ६ ७ ८ ९ १० ११ १२ १३ १४ १५ १६ १७ १८ १९ २० २१ २२ २३ २४ २५ २६ २७ २८ २९ ३० ३१ ३२ ३३ ३४ ३५ ३६ ३७ ३८ ३९ ४० ४१ ४२ ४३ ४४ ४५ ४६ ४७ ४८ ४९ ५० ५१ ५२ ५३ ५४ ५५ ५६ ५७ ५८ ५९ ६० ६१ ६२ ६३ ६४ ६५ ६६ ६७ ६८ ६९ ७० ७१ ७२ ७३ ७४ ७५ ७६ ७७ ७८ ७९ ८० ८१ ८२ ८३ ८४ ८५ ८६ ८७ ८८ ८९ ९० ९१ ९२ ९३ ९४ ९५ ९६ ९७ ९८ ९९ १००

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Technical & Biological Reclamation of Mined out of land and OB Dump	Concrete wall fencing around the water body								
	Boundary wall around the water body								
	Stabilisation (Viz. Benching, Fitching) of side walls of the water body.								
	Toe wall around the dump.								
	Garland drain								
	Garland drain around the dump.								
	Drainage channel from main OB dump.								
	Filling of void.								
	Top Soil management								
	OB rehandling for backfilling.								
Terracing, Blanketing with soil, and vegetation of External OB dump									
Peripheral road, gates, view point, cemented steps on bank.									
Expenditure on development of agricultural land.									

Subbodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRANU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. in Joint Venture with JSRL)
 Patnab, Dist.-Rangapat-629119

Shubha
 श्रीमती शशांका सिन्हा / श्रीम. शशांका सिन्हा
 Sr. Asstt. Civil Controller
 (Civil/Coal Mine)
 1, 201 / Tolkeia-700 001

A. K. SINHA
 B-Tech (Mining Engineering) (COAL)
 (M.Tech. in Mining Engineering)
 (M.Phil. in Mining Engineering)
 e-mail : ahsinha@vsnl.com

Head	Parameters	Stage 1	Stage 3	Stage 5	Stage 10	Final Stage (30th Year)	Closure 1	Closure 2	Closure 3
Post Closure Management and Supervision	Landscaping and plantation.								
	Power Cost								
	Post mining water quality management								
	Post mining air quality management								
	Pit & dump slope/ Subsidence monitoring for three years.								
	Waste Management - Rehandling								
Others	Manpower cost and supervision.								
	Entrepreneurship development (Vocational/Skill development/training for sustainable income of affected people).								
	Golden Handshake / Retrenchment benefits to QC employees.								
	Golden Handshake / Retrenchment benefits to UG employees.								

A. K. SIVITA

A. K. SIVITA
 B-Tech (Mechanical Engg. COAL)
 IIT Kharagpur, West Bengal
 MOBILE : 9846045411
 e-mail : sivasawdineah@gmail.com

Subodh

श्री श्री श्री श्री / Smt. Shantia Gupta
 श्री श्री श्री श्री श्री / Dy. Asst. Cost Controller
 श्री श्री श्री श्री श्री / Govt. of India
 1. श्री श्री श्री श्री श्री / Dy. Asst. Cost Controller
 श्री श्री श्री श्री श्री / Central House Officer
 श्री श्री श्री श्री श्री / Kolkata - 700 001

Subodh John Purti

SUBODH JOHN PURTI
 Sr. Manager (Coal/Cost Mine)
 PATRA 10 WIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. Joint Venture with JHML)
 Patna, Dist. - Ramgarh-823119

Annexure-VI
Proof of the payment

ANNEXURE- VI

 **bharatkosh.gov.in**
Government of India Receipt Portal

RECEIPT

Transaction Ref.No.: 03072000000505 Dated: Jul 3 2020 8:07PM

Received from M/S. PATRATU VIDYUT UTPADAN NIGAM LIMITED
with Transaction Ref.No. 03072000000505

Dated Jul 3 2020 8:07PM the sum of INR. 375100 (Three Lakhs Seventy-Five Thousand One Hundred Only) through Internet based Online payment in the account of

Coal and Lignite, APPLICATION FEE OF MINING PLAN FOR BANHARDIH COAL BLOCK.

Disclaimer:- This is a system generated electronic receipt, hence no physical signature is required for the purpose of authentication

Printed On: 04-07-2020 10:29:29

Courtesy : Controller General of Accounts

Signature

Signature
A. K. SINHA
B-Tech (Mech) from IITCC (COAL)
E-MAIL: ak.sinha@iitcc.coal
PHONE: 03072001111
ADDRESS: ak.sinha@iitcc.coal

Signature
SUBODH JOHN PURTI
Sr. Manager (Chitai Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of MPCL in Joint Venture with JBMCL)
Patratu, Dist. -Rangarh-823110

संशोधन विभाग / कार्यालय
आ. वि. प्रमुख, कोयला विभाग, रांगरह
कोयला विभाग, कोयला विभाग, रांगरह
1, कोयला विभाग, रांगरह
कोयला-823110

PATRIJU VIDYUT UTPADAN NIGAM LIMITED	SO (CASH), MIN. OF COAL, SHASTRI BHAWAL, NEW DELHI (214788)	Coal and Lignite Other Receipts (Coal)	100.00	080300900000000	RAO(Coal), New-Delhi (014775)	APPLICATION FEE OF MINING PLAN FOR BANHANDRI COAL BLOCK
			Total :		3,75,100.00	

(In words) Rupees : Three Lakhs Seventy Five Thousand One Hundred Only

For Bank's Usage	
NEFT Request Received Date	03/07/2020
Transaction Amount	₹ 3,75,100/-
NEFT Charges	
NEFT UTR No	BKIDM20185638802
Deposit Slip Created Date	03/07/2020 (This Deposit Slip is Valid for 15 Days till 18/07/2020)
<p>Note : Please enter the UTR Number at the Track your Payment / Payment history link available at MTRP, as soon as you complete the NEFT/RTGS payment and receive a UTR Number from your Bank. If you fail to do so, the system will not be able to generate the transaction receipt.</p> <p>Remark : This Deposit slip is valid for 15 days from the date of creation of deposit slip at MTRP, please make sure to do the NEFT/RTGS within 15 days, else the NEFT will not be accepted and treated as invalid.</p>	

Courtesy : Public Financial Management System

A.K.
A. K. SINHA
 B-Tech (Electrical Engineering)
 100/111, Kirti Vihar, New Delhi-110016
 E-mail : aishwaryashin@gmail.com

Shastri

Shastri
 श्रीमती शोभा गुप्त / Smt. Shobha Gupta
 उप सचिव कोयला नियंत्रण / Dy. Asstt. Coal Controller
 कोयला विदेशक कार्यालय / O/o The Coal Controller
 1, शास्त्रीय भवन सड़क / 1, Courall House Street
 कोयला-700 001 / Kolkata-700 001

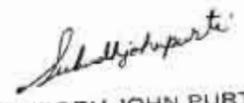
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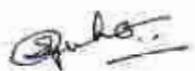
Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRIJU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPCL, a Joint Venture with JPVNL)
 Paratu, Dist.-Rangpur-829119

Annexure-VII
Expert Review Report

EXPERT REVIEW REPORT

NOT APPLICABLE


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPCLM in Joint Venture with BVM)
Patratu, Dist.-Rangpur-829119


श्रीमती शंका गुहा / Smt. Shanta Guha
इस उत्पादक कोषका निदेशक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o. The Coal Controller
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कोलकाता-700 001 / Kolkata- 700 001


A. K. SINHA
B-Tech (Mining) IIT KGP (COAL)
कॉल गवर्नर, कोयला विभाग
कोलकाता-700 001
e-mail : sinhaawdesh@gmail.com

Annexure-VIII A
Reference of WPI, April 2021

EMBARGO ADVISORY

This press release is embargoed against publication, telecast or circulation in any media till 12.00 noon today i.e. 17th May, 2021

**GOVERNMENT OF INDIA
 MINISTRY OF COMMERCE & INDUSTRY
 DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE
 OFFICE OF THE ECONOMIC ADVISER**

New Delhi, Date: May 17th, 2021

PRESS RELEASE

Index Numbers of Wholesale Price (Base Year 2011-12) in India for the month of April, 2021

The Office of Economic Adviser, Department for Promotion of Industry and Internal Trade is releasing index numbers of Wholesale Price in India for the month of April, 2021 (Provisional) and for the month of February, 2021 (Final) in this press release. Provisional figures of Wholesale Price Index (WPI) are released on 14th of every month (or next working day) with a time lag of two weeks of the reference month and compiled with data received from institutional sources and selected manufacturing units across the country. After 10 weeks, the provisional index is finalized, released and frozen thereafter.

2. In April, 2021 (over April, 2020), the **annual rate of inflation (YoY)**, based on monthly WPI, stood at 10.49% (Provisional). The annual rate of inflation in April 2021 is high primarily because of rise in prices of crude petroleum, mineral oils viz petrol, diesel etc, and manufactured products as compared the corresponding month of the previous year. The details of All India Wholesale Price Indices and Rates of Inflation for different commodity groups for April, 2021 are at **Annex I**. The Annual rate of Inflation (Y-o-Y) based on WPI for different commodity groups in the last 6 months is at **Annex II**. The WPI Index for different commodity groups in the last 6 months is at **Annex III**

Table 1: Index Numbers & Annual Rate of Inflation(Y-o-Y)*							
All Commodities/Major Groups	Weight (%)	Feb-21 (F)		Mar-21 (P)		Apr-21 (P)	
		Index	Inflation	Index	Inflation	Index	Inflation
All Commodities	100	128.1	4.83	129.3	7.39	131.7	10.49
I Primary Articles	22.6	147.1	3.01	146.2	6.40	151.8	10.16
II Fuel & Power	13.2	105.7	2.03	109.7	10.25	108.6	20.94
III. Manufactured Products	64.2	126.0	6.06	127.3	7.34	129.4	9.01
Food Index	24.4	153.4	3.58	153.4	5.28	158.9	7.58

Note: P: Provisional, F: Final, * Annual rate of WPI inflation calculated over the corresponding month of previous year

3. The **monthly rate of inflation**, based on month over month movement of WPI index, in April 2021 stood at 1.86% (Provisional) as compared to March 2021. The last six-month M-o-M rate of inflation is summarized below:

Table 2: Month Over Month (M-o-M) Rate of Inflation#							
All Commodities/Major Groups	Weight (%)	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21 (P)	Apr-21 (P)
All Commodities	100	1.21	0.24	0.88	1.26	0.94	1.86
I Primary Articles	22.6	0.66	-3.14	-2.09	1.52	-0.61	3.83
II Fuel & Power	13.2	3.63	2.87	3.92	4.97	3.78	-1.00
III. Manufactured Products	64.2	1.00	1.40	1.62	0.56	1.03	1.65
Food Index	24.4	-0.13	-3.13	-1.87	1.05	0.00	3.59

Note: P: Provisional, # Monthly rate of inflation, based on month over month (M-o-M) WPI calculated over the preceding month.

Shanta Guha
श्रीमती शंता गुहा / Smt. Shanta Guha
 डी. आस. कोयला निरीक्षण / Dy. Asst. Coal Controller
 भारत सरकार / Govt. of India
 कोयला निरीक्षण कार्यालय / O/n. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोयला-700 001 / Kolkata- 700 001

A.K. Sinha
A. K. SINHA
 B.Tech (Production) - FCC (COAL)
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 कोयला-700 001 / Kolkata- 700 001
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EMBARGO ADVISORY

This press release is embargoed against publication, telecast or circulation in any media till 11.00 noon today (i.e. 17th May, 2021)

4. Monthly inflation in Major Groups:

Primary Articles (weight 22.62%):- The index for this major group increased by (3.83%) to 151.8 (Provisional) in April, 2021 from 146.2 (Provisional) for the month of March, 2021. Prices of Minerals (6.66%), Crude Petroleum & Natural Gas (4.80%), Food Articles (3.84%) and Non-food Articles (2.65%) increased in April, 2021 as compared to March, 2021.

Fuel & Power (weight 13.15%):- The index for this major group declined by (-1.00%) to 108.6 (Provisional) in April, 2021 from 109.7 (Provisional) for the month of March, 2021. Prices of Coal (0.32%) and Mineral Oils (0.29%) increased in April, 2021 as compared to March, 2021. Prices of Electricity (-4.96%) declined in April, 2021 as compared to March, 2021.

Manufactured Products (weight 64.23%):- The index for this major group increased by (1.65%) to 129.4 (Provisional) in April, 2021 from 127.3 (Provisional) for the month of March, 2021. Out of the 22 NIC two-digit groups for Manufactured products, 20 groups have witnessed increase in prices in April 2021 compared to March 2021. The increase in prices are primarily contributed by the manufacture of basic metals, food products, chemical & chemical products, textiles, and rubber & plastic products. Two groups that have witnessed decrease in prices are manufacture of other manufacturing and printing and reproduction of recorded media in April, 2021 as compared to March, 2021.

5 WPI Food Index (weight 24.38%) The Food Index consisting of 'Food Articles' from Primary Articles group and 'Food Product' from Manufactured Products group have increased from 153.4 in March, 2021 to 158.9 in April, 2021. The rate of inflation based on WPI Food Index increased from 5.28% in March, 2021 to 7.58% in April, 2021.

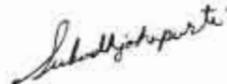
6 Final Index for the month of February, 2021 For the month of February, 2021 the final Wholesale Price Index and inflation rate for 'All Commodities' (Base: 2011-12=100) stood at 128.1 and 4.83% respectively.

7 Response Rate-The WPI for April, 2021 have been compiled at a weighted response rate of 76 percent, while the final figure for February, 2021 is based on the weighted response rate of 91 percent. The Provisional figures of WPI will undergo revision as per the final revision policy of WPI. This press release, item indices, and inflation numbers are available at home page <http://eaindustry.nic.in>.

8 Next date of press release: 14/06/2021 for the month of May, 2021.


श्रीमती शोभा गुहा / Smt. Shobha Guha
उप सहायक वरीष्ठ नियंत्रक / Dr. Asstt. Conf. Controller
भारत सरकार / Govt. of India
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Annex-I

All India Wholesale Price Indices and Rates of Inflation (Base Year: 2011-12=100) for April, 2021

Commodities/Major Groups/Groups/Sub-Groups/Items	Weight	Index(Latest Month)*	Latest month over month		Cumulative Inflation (YoY)		WPI Based rate of Inflation (YoY)	
			2020-2021	2021-2022*	2020-2021	2021-2022*	Apr-20	Apr-21*
ALL COMMODITIES	100.00	131.7	-1.00	1.86	-1.57	10.49	-1.57	10.49
I. PRIMARY ARTICLES	22.62	151.8	0.29	3.83	-1.08	10.16	-1.08	10.16
A. Food Articles	15.26	162.1	2.18	3.84	3.83	4.92	3.83	4.92
Cereals	2.82	157.3	0.62	1.42	3.63	-3.32	3.63	-3.32
Paddy	1.43	161.2	2.13	-0.19	3.63	-0.92	3.63	-0.92
Wheat	1.03	155.9	-1.04	3.79	6.40	-3.29	6.40	-3.29
Pulses	0.64	175.3	4.56	2.34	14.63	10.74	14.63	10.74
Vegetables	1.87	152.2	5.82	1.33	3.14	-9.03	3.14	-9.03
Potato	0.28	161.3	7.41	12.17	62.05	-30.44	62.05	-30.44
Onion	0.16	164.1	-10.86	-31.94	72.34	-19.72	72.34	-19.72
Fruits	1.60	197.0	12.19	22.89	0.26	27.43	0.26	27.43
Milk	4.44	154.7	0.26	-0.32	5.87	2.04	5.87	2.04
Eggs, Meat & Fish	2.40	162.1	-0.41	4.78	2.31	10.88	2.31	10.88
B. Non-Food Articles	4.12	143.2	-0.72	3.65	-2.98	15.58	-2.98	15.58
Oil Seeds	1.12	195.7	0.60	5.78	1.89	29.95	1.89	29.95
C. Minerals	0.83	184.3	-1.72	6.66	-2.47	19.60	-2.47	19.60
D. Crude Petroleum & Natural Gas	2.41	89.6	-22.87	4.80	-46.17	79.56	-46.17	79.56
Crude Petroleum	1.95	88.2	-29.23	6.01	-58.76	160.18	-58.76	160.18
II. FUEL & POWER	13.15	108.6	-9.75	-1.00	-12.65	20.94	-12.65	20.94
LPG	0.64	107.1	-7.39	1.04	-1.11	20.34	-1.11	20.34
Petrol	1.60	95.1	-16.60	0.21	-23.92	42.37	-23.92	42.37
Diesel	3.10	101.7	-12.14	-0.59	-20.42	33.82	-20.42	33.82
III. MANUFACTURED PRODUCTS	64.23	129.4	0.08	1.65	0.17	9.01	0.17	9.01
Mf/o Food Products	9.12	153.5	-0.15	3.16	5.33	12.62	5.33	12.62
Vegetable And Animal Oils and Fats	2.64	181.1	-0.71	6.03	10.97	43.28	10.97	43.28
Mf/o Beverages	0.91	125.5	0.32	0.16	1.87	0.40	1.87	0.40
Mf/o Tobacco Products	0.51	160.3	1.23	1.58	2.09	2.49	2.09	2.49
Mf/o Textiles	4.88	128.4	0.26	1.02	-2.01	9.74	-2.01	9.74
Mf/o Wearing Apparel	0.81	139.7	0.36	0.22	-0.07	0.58	-0.07	0.58
Mf/o Leather and Related Products	0.54	118.3	0.17	1.37	-2.40	0.51	-2.40	0.51
Mf/o Wood And of Products of Wood and Cork	0.77	138.2	-0.15	0.58	-0.75	4.22	-0.75	4.22
Mf/o Paper and Paper Products	1.11	133.5	0.17	4.13	-2.66	10.70	-2.66	10.70
Mf/o Chemicals and Chemical Products	6.47	127.0	-0.26	1.60	-3.92	10.24	-3.92	10.24
Mf/o Pharmaceuticals, Medicinal Chemical And Botanical Products	1.99	134.3	0.46	1.05	4.16	3.07	4.16	3.07
Mf/o Rubber and Plastics Products	2.30	121.4	-0.09	2.02	-2.19	13.14	-2.19	13.14
Mf/o other Non-Metallic Mineral Products	3.20	120.8	1.46	1.09	0.34	2.55	0.34	2.55
Cement, Lime and Plaster	1.64	123.9	3.03	1.14	2.25	1.06	2.25	1.06
Mf/o Basic Metals	9.65	127.6	0.94	3.24	-3.17	19.25	-3.17	19.25
Mild Steel - Semi Finished Steel	1.27	112.4	0.52	2.46	-1.73	16.72	-1.73	16.72
Mf/o Fabricated Metal Products, Except Machinery and Equipment	3.15	122.3	-0.43	1.16	-1.71	6.53	-1.71	6.53

Note: * - Provisional, Mf/o - Manufacture of

Shanta Guha

शान्ता गुहा / Smt. Shanta Guha
 उप सहायक क्षेत्रीय निरीक्षक / Dy. Asstt. Coal Controller
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Annex-II

Commodities/Major Groups/Groups/Sub-Groups/Items	Weight	Annual rate of Inflation (Y-o-Y) based on WPI for last 6 months					
		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21*	Apr-21*
ALL COMMODITIES	100.00	2.29	1.93	2.51	4.83	7.39	10.49
I. PRIMARY ARTICLES	22.62	3.80	-0.60	+1.56	3.01	6.10	10.16
A. Food Articles	15.26	4.61	-0.92	-2.93	1.81	3.24	4.92
Cereals	2.82	-5.52	-6.52	-7.40	-6.58	-4.08	-2.32
Paddy	1.43	0.62	0.12	-0.18	-0.37	1.38	-0.92
Wheat	1.05	-10.09	-11.10	-11.62	-10.38	-7.80	-3.29
Pulses	0.64	13.04	9.69	7.92	10.23	13.14	10.74
Vegetables	1.87	15.27	-12.05	-21.06	-2.95	-5.19	-9.03
Potato	0.28	138.05	45.41	-23.48	-30.16	-23.40	-30.44
Onion	0.16	-7.60	-54.69	-32.55	31.28	5.15	-19.72
Fruits	1.60	-1.36	1.36	3.08	9.40	16.33	27.43
Milk	4.44	5.53	3.77	3.36	3.54	2.65	2.04
Eggs, Meat & Fish	2.40	0.20	1.34	-1.83	0.65	5.38	10.88
B. Non-Food Articles	4.12	8.66	2.99	4.24	4.02	11.78	15.58
Oil Seeds	1.12	8.29	7.52	8.85	14.05	23.58	29.95
C. Minerals	0.83	10.38	16.67	12.35	17.09	10.20	19.60
D. Crude Petroleum & Natural Gas	2.41	-21.51	-15.99	-9.44	5.29	32.15	79.56
Crude Petroleum	1.95	-19.87	-12.26	-2.61	19.84	75.70	160.18
II. FUEL & POWER	13.15	-7.01	-6.10	-3.82	2.03	10.25	20.04
LPG	0.64	-3.04	2.15	2.68	1.42	10.30	20.34
Petrol	1.60	-14.69	-12.94	-7.31	4.96	18.48	42.37
HSD	3.10	-19.44	-15.20	-10.31	3.16	18.27	33.82
III. MANUFACTURED PRODUCTS	64.23	3.23	4.49	3.47	6.06	7.34	9.01
Mf/o Food Products	9.12	5.17	5.11	4.99	7.01	9.01	12.62
Vegetable And Animal Oils and Fats	2.64	24.04	22.63	20.82	27.15	34.17	43.28
Mf/o Beverages	0.91	-0.08	-0.57	-0.24	0.56	0.56	0.40
Mf/o Tobacco Products	0.51	2.03	4.11	3.75	2.58	2.14	2.49
Mf/o Textiles	4.88	0.26	2.67	5.76	6.84	8.91	9.74
Mf/o Wearing Apparel	0.81	0.65	0.00	1.23	1.09	0.72	0.58
Mf/o Leather and Related Products	0.54	-1.09	0.17	1.02	-1.19	-0.68	0.51
Mf/o Wood And of Products of Wood and Cork	0.77	1.20	1.73	2.64	2.64	3.46	4.22
Mf/o Paper and Paper Products	1.11	0.25	2.02	3.08	4.49	6.48	10.70
Mf/o Chemicals and Chemical Products	6.47	1.46	3.01	3.96	6.30	8.23	10.24
Mf/o Pharmaceuticals, Medicinal Chemical And Botanical Products	1.99	3.53	3.21	0.69	0.84	2.47	3.07
Mf/o Rubber and Plastics Products	2.30	3.99	5.73	7.40	7.78	10.80	13.14
Mf/o other Non-Metallic Mineral Products	3.20	1.04	1.65	1.47	1.20	2.95	2.55
Cement, Lime and Plaster	1.64	0.51	1.44	0.93	0.34	2.94	1.06
Mf/o Basic Metals	9.65	7.83	11.78	15.31	13.18	16.60	19.25
Mild Steel + Semi Finished Steel	1.27	7.30	10.14	11.32	10.00	14.51	16.72
Mf/o Fabricated Metal Products, Except Machinery and Equipment	3.15	0.17	2.34	3.91	5.32	4.86	6.53

* = Provisional, Mf/o = Manufacture of

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Annexure-III

Commodities/Major Groups/Sub-Groups/Items	Weight	WPI Index for last 6 months					
		Nov-20	Dec-20	Jan-21	Feb-21	Mar-21*	Apr-21*
ALL COMMODITIES	100.00	125.1	125.4	126.5	128.1	129.3	131.7
I. PRIMARY ARTICLES	22.62	152.8	148.0	144.9	147.1	146.2	151.8
A. Food Articles	15.26	170.1	161.1	155.8	157.5	156.1	162.1
Cereals	2.82	155.7	154.9	155.1	154.8	155.1	157.3
Paddy	1.43	163.1	162.2	162.0	161.7	161.5	161.2
Wheat	1.03	147.9	147.3	149.1	149.6	150.2	155.9
Pulses	0.64	172.5	168.6	166.3	168.9	171.3	175.3
Vegetables	1.87	281.0	213.9	170.6	167.5	149.9	152.2
Potato	0.28	401.1	364.4	200.7	147.5	143.8	161.3
Onion	0.16	442.3	330.7	316.0	362.6	241.1	164.1
Fruits	1.60	145.2	141.8	144.0	152.4	160.3	197.0
Milk	4.44	154.7	154.1	154.0	154.9	155.2	154.7
Eggs, Meat & Fish	2.40	149.0	151.2	150.3	154.7	154.7	162.1
B. Non-Food Articles	4.12	138.0	138.0	137.7	137.0	139.5	143.2
Oil Seeds	1.12	162.0	164.4	171.0	175.3	185.0	195.7
C. Minerals	0.83	157.4	172.2	172.8	184.3	172.8	184.3
D. Crude Petroleum & Natural Gas	2.41	67.5	74.1	78.7	85.6	85.5	89.6
Crude Petroleum	1.95	60.5	68.7	74.6	83.2	83.2	88.2
II. FUEL & POWER	13.15	94.2	96.9	100.7	105.7	109.7	108.6
LPG	0.64	79.7	85.4	88.2	100.1	108.0	107.1
Petrol	1.60	73.2	76.0	81.1	88.8	94.9	95.1
HSD	3.10	75.4	79.8	86.1	94.8	102.3	101.7
III. MANUFACTURED PRODUCTS	64.23	121.6	123.3	125.3	126.0	127.3	129.4
Mf/o Food Products	9.12	142.4	144.0	145.2	146.6	148.8	153.5
Vegetable And Animal Oils and Fats	2.64	148.1	155.0	159.0	164.4	170.8	181.1
Mf/o Beverages	0.91	123.6	123.0	123.8	124.6	125.3	125.5
Mf/o Tobacco Products	0.51	156.1	157.2	157.7	159.0	157.8	160.3
Mf/o Textiles	4.88	116.8	119.1	123.1	124.9	127.1	128.4
Mf/o Wearing Apparel	0.81	139.5	139.2	139.5	139.6	139.4	139.7
Mf/o Leather and Related Products	0.54	117.9	118.6	118.6	116.7	116.7	118.3
Mf/o Wood And of Products of Wood and Cork	0.77	134.7	135.3	136.3	136.2	137.4	138.2
Mf/o Paper and Paper Products	1.11	120.0	121.3	124.0	125.7	128.2	133.5
Mf/o Chemicals and Chemical Products	6.47	118.2	119.7	120.8	123.1	125.0	127.0
Mf/o Pharmaceuticals, Medicinal Chemical And Botanical Products	1.99	132.0	131.9	131.5	132.8	132.9	134.3
Mf/o Rubber and Plastics Products	2.30	112.0	114.4	116.1	116.3	119.0	121.4
Mf/o other Non-Metallic Mineral Products	3.20	116.9	117.4	117.4	117.9	119.5	120.8
Cement, Lime and Plaster	1.64	119.1	119.7	119.0	119.8	122.5	123.9
Mf/o Basic Metals	9.65	111.5	115.8	122.8	121.1	123.6	127.6
Mild Steel - Semi Finished Steel	1.27	100.0	103.2	107.2	105.6	109.7	112.4
Mf/o Fabricated Metal Products, Except Machinery and Equipment	3.15	115.9	117.9	119.7	120.7	120.9	122.3

* - Provisional, Mf/o = Manufacture of

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Annexure-VIII B
Summary of R & R policy

Socio- Economic Study and Social impact Assessment of Project Affected Families of Banhardi Coal Block Project of PVUNL in district Latehar, Jharkhand



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CHAPTER I Introduction

1.1 Background

India has the fifth largest coal reserves in the world, and is the fourth largest producer of coal in the world, producing 662.79 million metric tons (730.60 million short tons) in 2016-17. As on 31st March 2017, India had 315.14 billion metric tons (347.38 billion short tons) of the resource.

India has abundant domestic reserves of coal. Most of these are in the states of Jharkhand, Odisha, West Bengal, Bihar, Chhattisgarh, Telangana and Madhya Pradesh. On account of the growing needs of the steel industry, a thrust had to be given on systematic exploitation of coking coal reserves in Jharia coalfield. Jharkhand had 81.17 billion metric tonnes estimated coal reserves in India as on 31st March 2016.

1.2 Project Details

The Patratu Vidyut Utpadan Nigam Limited (PVUNL), a Joint Venture company incorporated between NTPC and the Jharkhand government (JBVNL). The India Ministry of Coal has allocated Banhardi captive coal block (400 MT) to PVUNL. Banhardi Coal Mine has a Reserve of about 956 MT with total area of ~18 sq km. The coal block is located in Banhardi, Chandwa Tehsil, in Latehar District.

The Banhardi coal block project of PVUNL covers villages of Udaypura, Sahano, Jagaldaga, Banhardi, Surli, Rampur, Ete, Barwadih, Tota and Bari. The Project will acquire 4492.51 acres of private land from the ten villages. All households of the ten villages will be affected as either their lands or houses will be acquired for the coal mining project.

The villages in the periphery will also be affected as a result of the Project. Some of the villages located in the periphery of the coal mining project have also been taken for Study. These villages are Renchi, Darea, Tarhasi, Zalim Khurd, Latdag, Aragunde, Sasang, Serak, Ambatiker and Kaima. A socio economic assessment of the sampled households in the peripheral villages will also be taken as part of the Socio Economic Study.

For this reason, a detailed Socio-Economic Study and Social Impact Assessment of Project Affected Families was required and a Rehabilitation Action Plan needs to be prepared as per Jharkhand R&R Policy 2008 and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

The mining Project will affect the core villages directly, but will also indirectly affect the villages situated in the peripheral areas. Therefore the peripheral villages situated in 10 km radius around the project sites, have also been studied.

The Socio-Economic Study of Project Affected Families (households) has been conducted to assess the socio economic conditions of the villages taken for Study. For analysing the SES and entitlement of PAFs in the ten villages, Rehabilitation Package has been prepared as per Jharkhand R&R Policy 2008 and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

The site of the Banhardi coal block is located in Latehar district in Jharkhand. The latitude and

longitude of the coal block is 23.7502° N, 84.6191° E. The nearest Railway station is at Chandwa, which is located at a distance of 23 km. from the mines on the Tori Chandwa Railway Junction route of South Eastern Railway. The distance is 35 km. by Train.

The aerial distance from Ranchi to Chandwa is 66 km. while the road distance between Ranchi to Chandwa is 83 km. Distance between Latehar to Chandwa is 35 km by Road. The nearest National Highway is the (NH 99) Dobhi-Chatra-Chandwa connecting Dobhi in Bihar and Chandwa in Jharkhand. The nearest Airport is at Ranchi.

1.3 Project Affected Families (PAFs) due to Banhardi Coal Project

The Banhardi Coal Block Project has a total lease area of 4492.51 acres (1818.18 ha) covering 10 villages under Chandwa and Sadar block, district Latehar. Out of this, 1362.10 (30.32%) acres is Notified Forest land, 75 (1.67%) acres is Forest JJ Land, 1228.23 (27.34) acres GM Land and 1827.18 (40.67) acres Raiyati land. No GM/JJ Land will be acquired for the Project. A major part of the land will be acquired from Raiyati land.

Table 6.1 Land acquisition details of Banhardi Coal Block Project

Sl. No.	Villages	Land Type (in acres)					Total	
		Jungle	Jungle Jhari (Jungle)	Jungle Jhari (GM)	GM Land	Raiyati	Acre	Ha
1	Etc	Nil	Nil	Nil	83.79	183.30	267.09	108.10
2	Banhardi	418.11	Nil	Nil	306.12	395.22	1119.45	453.06
3	Bari	491.57	71.28	Nil	501.14	908.48	1972.47	798.29
4	Barwadib	Nil	Nil	Nil	11.69	28.9	40.59	16.43
5	Rampur	Nil	Nil	Nil	3.48	21.96	25.44	10.30
6	Surli	22.72	Nil	Nil	6.17	52.16	81.05	32.80
7	Tota	13.50	Nil	Nil	1.80	26.03	41.33	16.73
8	Udaipura	40.67	Nil	Nil	27.18	8.92	76.77	31.07
9	Sabano	335.38	Nil	Nil	224.31	155.85	715.54	289.59
10	Jagaldaga	40.15	3.72	Nil	62.55	46.36	152.78	61.83
Total		1362.10	75.00	0.00	1228.23	1827.18	4492.51	1818.18

Figures within parenthesis are in percentage

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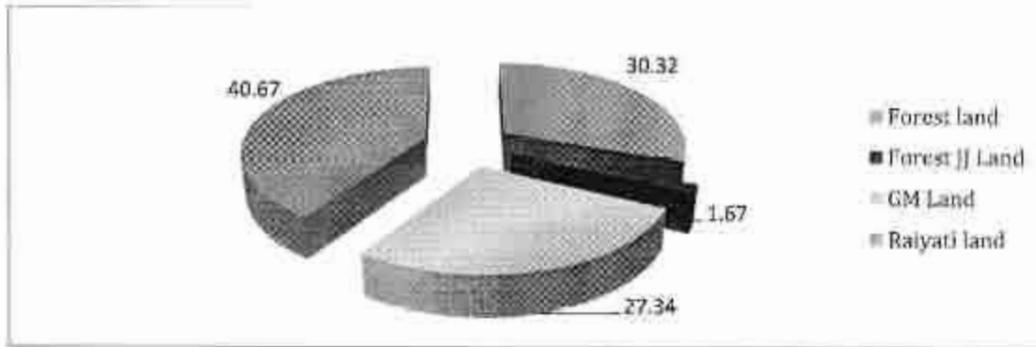


Fig 6.1: Land acquisition details of Banhardi Coal Block Project

Coverage area of Study

The coverage area of the study includes 10 villages of core zone and 10 villages of the peripheral zone.

Table 1.2 List of villages in the core and periphery area of the Project

Sl. No.	Core Villages	Block	Sl. No.	Peripheral Villages	Block
1.	Udaipura	Sadar	1.	Renchi	Chandwa
2.	Sabano	Sadar	2.	Darea	Chandwa
3.	Jagaldaga	Sadar	3.	Tarhasi	Chandwa
4.	Ete	Chandwa	4.	Latdag	Chandwa
5.	Tota	Chandwa	5.	Serak	Chandwa
6.	Barwadih	Chandwa	6.	Zalim Khurd	Chandwa
7.	Bari	Chandwa	7.	Aragunde	Chandwa
8.	Banhardi	Chandwa	8.	Sasang	Chandwa
9.	Rampur	Chandwa	9.	Ambatkar	Chandwa
10.	Surli	Chandwa	10.	Kaima	Chandwa

1.4 Objective of the Study

The objective of the Study was to assess the socio economic and impact status of the villages to be affected directly or indirectly in the core and peripheral areas of the proposed Expansion of the coal mining Project.

1.5 Scope of Study

The scope and coverage of the Study are as follows:

1.5.1 To prepare a comprehensive target area profile. This will consist of the following:

- i. Demographic profile / Socio economic profile: total population, sex ratio, number of people in different age groups, like infants, children, adults, old aged, vulnerable group etc.
- ii. Infrastructure available: i. Schools, ii. Roads, iii. Health care facilities, iv. Water, sanitation facilities, v. Electricity, vi. Community building vii. and others:

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iii. Knowledge, Attitude and Practices analysis (KAP)

- i. Language and habits of communication
 - ii. Cultural characteristics: traditions, values, beliefs, etc.
 - iii. Knowledge, attitudes and behaviours with respect to the development problem, to be dealt
- iv. Education Status: Literacy, education, school going children attending school, school dropout rate, training and skills, and opportunities for all members of the society cutting across gender, age, caste and religion.
 - v. Health issues in the community: Life expectancy, maternal and infant mortality, quality of life, and the level of health care available in the situation of morbidity.
 - vi. Major historical events in the area in terms of social movements and of social upheaval and its long-term impact (if any) on the area.
 - vii. Social problems (Crime, superstition, alcoholism, domestic violence, gender related discrimination, etc)
 - viii. Occupation and employment (season wise): identify the particular context of each group, the season or the time of day when its members are available, the seasonal nature of their economic occupations, their physical setting, etc.
 - ix. Festivals and customs.
 - x. Natural resources
 - xi. Existing development programmes and its impact

1.5.2 To identify employment needs, scope of self employment # level of employment and agriculture development for higher economic growth and stability with predefined economic indicators, for example per capita income, expenditure, and savings etc. to assess the impact in the future.

1.5.3 To identify gender wise critical educational, health, and recreation needs with specific social indicators like literacy, education, training and skills, and opportunities for all members of the society cutting across gender, age, caste and religion to evaluate the impact in the future.

1.5.4 To identify areas of interventions where community development activities can bring gender equality

1.5.5 To identify infrastructural needs of the target area and prioritize them.

1.5.6 To explore opportunity of networking / partnerships with Govt. / Local bodies' plans and intervention for spearheading overall development of the target area. Specifically it will include the following:

- i. To take stock of the development plans prepared by any government agency for the area.
- ii. To review the plans and the budgets available / likely to be provided under various central/state government schemes for development of the area.
- iii. To identify the gaps between the plans of the government/ local bodies and the specified indicators/goals.

1.5.7 Proposed acquisition serves public purpose

1.5.8 Estimation of affected families, number of families likely to be displaced

1.5.9 Extent of land, public & private houses, settlements and other common properties likely to be affected by the proposed project

2.0 Study of social impacts of the projects and the nature of cost of addressing them

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2.1 Impact of project on livelihood of families, public & community properties, assets & infrastructure like roads, drinking water, public utilities etc

1. Total no. of persons likely to be affected as per the various categories of the R&R policy of the project proponent preferably certified by the State Government.
2. Total no of person homesteads likely to be relocated. Possible options for self-relocation and that from shifting in the Resettlement colonies to be developed needs to be collected so as to gauge the requirement of land and infrastructure to be planned for Resettlement Colony.
3. Demographic data, skills available, so as to dovetail requirement of the project developer and availability of skills.
4. Various rehabilitation options, apart from employment opportunities in terms of agro-based, non agro based, self employment etc.
5. List of Common Property Recourses getting affected and requirements of replacement/rebuilding.
6. Requirement of Infrastructure facilities, Up gradation in the project affected villages and nearby areas.
7. Requirement of welfare activities which need to be undertaken including that pertaining to Health, Education, scheme for Vulnerable and Marginalized.
8. Requirement of Capacity Building and Training.
9. Any other recommendations as per policy provisions deemed fit by the consultant.

The Coal Mining Project will lead to land acquisition in the project area. The project thus involving land acquisition and resettlement requires a baseline socio economic data and impact of the Project. For this purpose the study was conducted involving data collection to understand how the existing socio-economic profiles may be affected by the project. The scope of the study was to identify and assess all social dimensions that were needed to formulate plans in order to restore and improve the quality of life of the PAFs being affected directly or indirectly.

Thus, PVUNL decided to carry out a detailed socio economic survey of the core and peripheral villages of the proposed Project.

As per the Service Purchase Order No. 5500030866-064-2025, dated 06.09.2018, The Asian Institute for Sustainable Development (AISD), Ranchi, an independent research agency was entrusted the task of conducting the above mentioned study, and to submit an unbiased report to PVUNL. AISD accomplished the survey assignment during November 2018.

1.6 Study Constraint

Initially the villagers were sceptical about the purpose of the survey. The villagers did not allow the surveyors to initiate the survey unless and until they were convinced about the objective of the Study. The Project was discussed with the villagers in detail. Once they were convinced about the benefit of the Project, they encouraged the other villagers for their support.

In general the household head or the owner of the land was interviewed. In case of their absence any adult member of the household was interviewed. In such cases, the approximate information provided with reference to land areas and income by the respondent may not be 100% accurate.

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CHAPTER VI

Socio Economic Profile of Respondents

6.1 Introduction

This chapter deals with the socio-economic profile of 10 villages which fall within the core area of the Banhardi Coal block project. The study of the social and economic conditions of the project affected villages was done to assess and evaluate the broad economic resource base and socio-economic profile of the PAFs.

The households from the 10 villages will be affected directly as their land will be acquired for the mining Project. In the studied villages, the PAFs (Project Affected Families) will either lose their land, house or both due to land acquisition for the mining Project. Socio-economic data through census household survey was gathered from the core project affected villages.

The household survey was conducted by an experienced team of investigators under expert supervision. Primary information of the PAFs was collected through the interview either with the household head or with the adult member of the family in case of the absence of household head. A semi structured interview schedule was used for the interview, which was developed by AISD and pre-tested before the main survey.

Information was gathered on five broad aspects viz. demography, social, economic condition of PAFs and loss of land and income due to acquisition and vulnerable groups.

A. Demographic Profile of PAFs

1. Type of family
2. Age distribution
3. Sex ratio
4. Marital status

B. Social Profile of PAFs

1. Religion
2. Caste/tribes
3. Mother tongue
4. Literacy rate
5. Housing details and homestead land
6. Source of lighting
7. Cooking fuel
8. Health and hygiene
9. Source of drinking water
10. Sanitation facilities

C. Economic Profile of PAFs

1. Land holding
2. Occupational status
3. Income Profile and Poverty classification
4. Immovable assets
5. Movable properties
6. Livestock

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D. Loss of Land and Income due to Land Acquisition

1. Loss of land
2. Loss of homestead land and house
3. Loss of cattle shed, shops etc.
4. Loss of income

E. Vulnerable Groups (Handicaps and other vulnerability)

6.2 Village Wise PAFs

Based on the social household survey, the socio-economic analysis of the project-affected households has been documented in this section. Census survey was conducted in all the project affected villages.

6.2.1 Number of PAFs

In the core Project area, based on the social household survey, 659(68.43%) households would be losing land only, 135(14.02%) would be losing house only and 169(17.55%) households would be home as well as land oustees, due to the project. Out of the total 963 PAFs, majority i.e. 356 PAFs are from Bari village, where 281 PAFs are land oustees and 75 PAFs would be losing home and land. Village Tota has 9 PAFs who are home oustees only (Table 6.1).

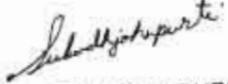
Table 6.1 Village wise categories of PAFs in core villages

Sl. No	Village	PAFs			Total
		Home Oustee	Land Oustee	Home + Land Oustee	
1	Udaipura	0	34	0	34
2	Tota	9	0	0	9
3	Banhardi	126	82	0	208
4	Ete	0	30	6	36
5	Barwadih	0	26	26	52
6	Sabano	0	80	29	109
7	Jagaldaga	0	55	0	55
8	Rampur	0	22	32	54
9	Surli	0	49	1	50
10	Bari	0	281	75	356
	Total	135(14.02)	659(68.43)	169(17.55)	963(100)

Figures within parenthesis are in percentage

6.2.2 Total land area of PAFs in core villages

Land possession has been categorised for those 963 PAFs who will be losing land, house or both. Categorisation has been done on the basis of those PAFs owning 0-1 acre land to PAFs owning more than 4 acres land. Out of 963 PAFs, there are 436 PAFs owning 1-2 acre land and 333 PAFs owning 0-1 acre land. There are 116 PAFs who have 2-3 acre land, 57 PAFs who have 2-3 acres land and 21 PAFs who have more than 4 acres land area in the core villages.


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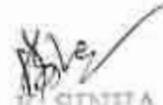

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Table 6.2 Total land area of PAFs in core villages

Name of Village	PAFs 963				
	0-1 acre	1-2 acre	2-3 acre	3-4 acre	Above 4 acre
Ete	19	10	4	3	0
Banhardi	74	101	17	8	8
Bari	92	209	36	12	7
Barwadih	22	13	10	6	1
Jagaldaga	19	24	9	3	0
Rampur	12	27	8	5	2
Sahano	51	25	17	13	3
Surli	24	19	3	4	0
Tota	6	3	0	0	0
Udaipura	14	5	12	3	0
Total	333(34.58)	436(45.28)	116(12.05)	57(5.92)	21(2.18)

Figures within parenthesis are in percentage

6.3 Demographic profile of Respondents

6.3.1 Household in PAVs

As per the primary data, 2618 households were surveyed during the Study. There are 13361 members or the total population in the 10 villages. The highest population is that of village Bari which is the largest in terms of area and households. The least number of households i.e. 41 with population of 207 exists in village Tota.

Table 6.3 Household in PAVs

Name of Village	Total households	Total household members/ Population
Ete	151	749
Banhardi	357	1844
Bari	750	3921
Barwadih	134	730
Jagaldaga	191	970
Rampur	304	1693
Sahano	318	1494
Surli	138	690
Tota	41	207
Udaipura	234	1063
Total	2618	13361

6.3.2 Sex wise distribution of the head of the household

The total surveyed households in the Project area was 2800 in the core villages. Interviews were preferably sought with the head of the family/ household. The 'Head of the family' is commonly described as a person holding a position of authority within the family lineage. The family head can either be an adult male or a female. However the position of 'Head of the family' is dominated by male incumbents.

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There were 95.8% male headed households and 4.4% female headed households in the surveyed core villages.

Table 6.4 Sex wise distribution of the head of the household

Village	Head of the Household of PAFs		
	Male	Female	Total
Ete	141 (93.4)	10 (6.6)	151 (100)
Banhardi	348 (97.5)	9 (2.5)	357 (100)
Bari	719 (95.9)	31 (4.1)	750 (100)
Barwadih	125 (93.3)	9 (6.7)	134 (100)
Jagaldaga	182 (95.3)	9 (4.7)	191 (100)
Rampur	291 (95.7)	13 (4.3)	304 (100)
Sabano	309 (97.2)	9 (2.8)	318 (100)
Surli	133 (96.4)	5 (3.6)	138 (100)
Tota	37 (90.2)	4 (9.8)	41 (100)
Udaipura	218 (93.2)	16 (6.8)	234 (100)
Total	2503 (95.8)	115 (4.4)	2618 (100)

Figures within parenthesis are in percentage

6.3.3 Type of family

In the Project area, 78% of the families were joint family and 22% were nuclear families in the core villages. The number of joint families is higher than the nuclear families. Among joint families mostly old parents were found staying with their sons (Table 6.5).

Table 6.5 Type of family

Village	PAFs		Total
	Joint	Nuclear	
Ete	125 (82.8)	26 (17.2)	151 (100)
Banhardi	306 (85.7)	51 (14.3)	357 (100)
Bari	617 (82.3)	133 (17.7)	750 (100)
Barwadih	85 (63.4)	49 (36.6)	134 (100)
Jagaldaga	156 (81.7)	35 (18.3)	191 (100)
Rampur	189 (62.2)	115 (37.8)	304 (100)
Sabano	235 (73.9)	83 (26.1)	318 (100)
Surli	104 (75.4)	34 (24.6)	138 (100)
Tota	26 (63.4)	15 (36.6)	41 (100)
Udaipura	200 (85.5)	34 (14.5)	234 (100)
Total	2043 (78.0)	575 (22.0)	2618 (100)

Figures within parenthesis are in percentage

6.3.4 Age wise distribution of household members of the population

Age wise distribution of household members of PAFs shows that, 32.3% were aged 6-18 years, 29.2% aged 18-36 years and 18.4% were aged between 36-61 years. 16.3% were below 6 years and nearly 4% were aged 61 years and above. The average age was 23.85 years and the SD was 17.570.

Table 6.6 Age wise distribution of household family members (in years)

Villages	Age Group (In Years)					Total	Average Age	SD
	Below 6	6-18	18-36	36-61	Above 61			
Ete	102 (13.6)	284 (37.9)	213 (28.4)	122 (16.3)	28 (3.7)	749	23.67	17.120
Banhardi	256 (13.9)	621 (33.7)	567 (30.7)	340 (18.4)	60 (3.3)	1844	24.04	17.049
Bari	718 (18.3)	1296 (33.1)	1083 (27.6)	689 (17.6)	135 (3.4)	3921	23.03	17.395
Barwadih	129 (17.7)	223 (30.5)	210 (28.8)	139 (19.0)	29 (4.0)	730	23.86	17.726
Jagaldaga	159 (16.4)	349 (36.0)	270 (27.8)	156 (16.1)	36 (3.7)	970	23.08	17.187
Rampur	321 (19.0)	463 (27.3)	499 (29.5)	331 (19.6)	79 (4.7)	1693	24.73	18.616
Sabano	717 (14.5)	490 (32.8)	433 (29.0)	303 (20.3)	51 (3.4)	1494	24.45	17.702
Surli	101 (14.6)	195 (28.3)	218 (31.6)	137 (19.9)	39 (5.7)	690	25.53	18.134
Tota	25 (12.1)	63 (30.4)	66 (31.9)	47 (22.7)	6 (2.9)	207	25.53	17.380
Udaipura	145 (13.6)	335 (31.5)	336 (31.6)	198 (18.6)	49 (4.6)	1063	24.76	17.417
Total	2173 (16.3)	4319 (32.3)	3895 (29.2)	2462 (18.4)	512 (3.8)	13361	23.85	17.570

Figures within parenthesis are in percentage

6.3.5 Sex wise distribution of the household members

The total household members of the studied core villages were 13361. Out of this, there were 49.9% males and 50.1% females. The sex ratio was 1004 females per 1000 males, i.e. females outnumbered the male population (Table 6.7).

Table 6.7 Sex wise distribution of household members

Village	PAF's Family Members			Sex Ratio
	Male	Female	Total	
Ete	379 (50.6)	370 (49.4)	749 (100)	976
Banhardi	942 (51.1)	902 (48.9)	1844 (100)	958
Bari	1945 (49.6)	1976 (50.4)	3921 (100)	1016
Barwadih	365 (50.0)	365 (50.0)	730 (100)	1000
Jagaldaga	467 (48.1)	503 (51.9)	970 (100)	1077
Rampur	832 (49.1)	861 (50.9)	1693 (100)	1035
Sabano	779 (52.1)	715 (47.9)	1494 (100)	918
Surli	328 (47.5)	362 (52.5)	690 (100)	1103
Tota	108 (52.2)	99 (47.8)	207 (100)	917
Udaipura	521 (49.0)	542 (51.0)	1063 (100)	1040
Total	6666 (49.9)	6695 (50.1)	13361 (100)	1004

Figures within parenthesis are in percentage

6.3.6 Marital status

Marital status of household members shows that, of the total 13361 household members, 54.1% were unmarried, 43.3% were married and 2.6% were widow/ widower.

Table 6.8 Marital status of household members

Village	Married	Unmarried	Widow/ Widower	Total
Ete	308 (41.1)	417 (55.7)	24 (3.2)	749 (100)
Banhardi	797 (43.2)	999 (54.2)	48 (2.6)	1844 (100)
Bari	1627 (41.5)	2202 (56.2)	92 (2.3)	3921 (100)

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Barwadih	326 (44.7)	386 (52.9)	18 (2.5)	730 (100)
Jagaldaga	395 (40.7)	546 (56.3)	29 (3.0)	970 (100)
Rampur	761 (44.9)	890 (52.6)	42 (2.5)	1693 (100)
Sabano	667 (44.6)	790 (52.9)	37 (2.5)	1494 (100)
Surli	331 (48.0)	336 (48.7)	23 (3.3)	690 (100)
Tota	103 (49.8)	100 (48.3)	4 (1.9)	207 (100)
Udaipura	476 (44.8)	558 (52.5)	29 (2.7)	1063 (100)
Total	5791 (43.3)	7224 (54.1)	346 (2.6)	13361 (100)

Figures within parenthesis are in percentage

6.4 Social Profile of PAFs

6.4.1 Religion wise distribution of Families

Religion wise distribution of families can broadly be classified under four categories i.e. Hinduism, Christianity, Islam and Sarna. The area is dominated by almost equivalent proportion of Hindu and Sarna households. There are 45.6% Hindus and 46.1% Sarna households found to be residing in the Study area. Only 8% Muslim households and very few (0.2%) Christian households were found in the core villages.

Table 6.9 Religion wise distribution of the household

Village	Hindu	Christian	Muslim	Sarna	Total
Etc	438 (58.5)	0	81 (10.8)	230 (30.7)	749 (100)
Banhardi	593 (32.2)	4 (0.2)	0	1247 (67.6)	1844 (100)
Bari	2013 (51.3)	16 (0.4)	709 (18.1)	1183 (30.2)	3921 (100)
Barwadih	511 (70.0)	0	0	219 (30.0)	730 (100)
Jagaldaga	150 (15.5)	6 (0.6)	0	814 (83.9)	970 (100)
Rampur	1061 (62.7)	0	160 (9.5)	472 (27.9)	1693 (100)
Sabano	365 (24.4)	0	0	1129 (75.6)	1494 (100)
Surli	368 (53.3)	6 (0.9)	123 (17.8)	193 (28.0)	690 (100)
Tota	189 (91.3)	0	0	18 (8.7)	207 (100)
Udaipura	403 (37.9)	0	0	660 (62.1)	1063 (100)
Total	6091 (45.6)	32 (0.2)	1073 (8.0)	6165 (46.1)	13361 (100)

Figures within parenthesis are in percentage

6.4.2 Caste wise distribution of population

The caste composition in all the villages of the core zone mainly constitutes SC (Scheduled Caste), ST (Scheduled Tribe), OBC (Other Backward Caste) and GEN (General) category of population. There are 54.6% ST, 20.2% SC, 23.6% OBC and only 1.6% GEN in the core villages of the Project area.

Table 6.10 Caste wise distribution of population

Village	ST	SC	OBC	GEN	Total
Etc	457 (61.0)	138 (18.4)	114 (15.2)	40 (5.3)	749 (100)
Banhardi	1299 (70.4)	248 (13.4)	297 (16.1)	0	1844 (100)
Bari	1474 (37.6)	1418 (36.2)	865 (22.1)	164 (4.2)	3921 (100)
Barwadih	252 (34.5)	100 (13.7)	378 (51.8)	0	730 (100)
Jagaldaga	950 (97.9)	16 (1.6)	0	4 (0.4)	970 (100)

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Rampur	501 (29.6)	398 (23.5)	790 (46.7)	4 (0.2)	1693 (100)
Sabano	1179 (78.9)	48 (3.2)	267 (17.9)	0	1494 (100)
Surli	232 (33.6)	195 (28.3)	263 (38.1)	0	690 (100)
Tota	18 (8.7)	23 (11.1)	166 (80.2)	0	207 (100)
Udaipura	930 (87.5)	116 (10.9)	17 (1.6)	0	1063 (100)
Total	7292 (54.6)	2700 (20.2)	3157 (23.6)	212 (1.6)	13361 (100)

Figures within parenthesis are in percentage

6.4.3 Mother tongue of the resident household

Kurukh and Sadri/ Nagpuri being the local dialect is spoken by the villagers in the project area. Hindi is commonly spoken by almost all residents of the villages. Hindi is also a common language for general communication.

6.4.4 Educational status of household members

The education status of the population of the core village shows that excluding almost 16.3% of the infants and children at the pre primary level, almost 29% of the population were illiterate, 23.3% at the Middle level and 19.2% at the Primary level of education. 8.4% have completed secondary level, 7.7% in Higher secondary and only 2.1% graduates.

Table 6.11 Educational status of household members

Village	Educational status									Total
	1	2	3	4	5	6	7	8	9	
Ete	171 (22.8)	167 (22.3)	53 (7.1)	69 (9.2)	12 (1.6)	2 (0.3)	0	173 (23.1)	102 (13.6)	749
Banhardi	377 (20.4)	480 (26.0)	147 (8.0)	134 (7.3)	37 (2.0)	8 (0.4)	0	405 (22.0)	256 (13.9)	1844
Bari	754 (19.2)	946 (24.1)	287 (7.3)	245 (6.2)	41 (1.0)	6 (0.2)	0	924 (23.6)	718 (18.3)	3921
Barwadih	176 (24.1)	172 (23.6)	61 (8.4)	55 (7.5)	18 (2.5)	0	1 (0.1)	118 (16.2)	129 (17.7)	730
Jagaldaga	196 (20.2)	249 (25.7)	63 (6.5)	63 (6.5)	22 (2.3)	2 (0.2)	1 (0.1)	215 (22.2)	159 (16.4)	970
Rampur	316 (18.7)	380 (22.4)	173 (10.2)	127 (7.5)	61 (3.6)	1 (0.1)	2 (0.1)	312 (18.4)	321 (19.0)	1693
Sabano	268 (17.9)	305 (20.4)	136 (9.1)	121 (8.1)	21 (1.4)	4 (0.3)	8 (0.5)	414 (27.7)	217 (14.5)	1494
Surli	84 (12.2)	142 (20.6)	53 (7.7)	73 (10.6)	23 (3.3)	2 (0.3)	0	212 (30.7)	101 (14.6)	690
Tota	46 (22.2)	45 (21.7)	26 (12.6)	21 (10.1)	4 (1.9)	0	0	40 (19.3)	25 (12.1)	207
Udaipura	176 (16.6)	226 (21.3)	119 (11.2)	123 (11.6)	35 (3.3)	5 (0.5)	0	234 (22.0)	145 (13.6)	1063
Total	2564 (19.2)	3112 (23.3)	1118 (8.4)	1031 (7.7)	274 (2.1)	30 (0.2)	12 (0.1)	3047 (22.8)	2173 (16.3)	13361

Code: 1: Primary, 2: Middle, 3: Secondary, 4: Higher Secondary, 5: Graduation, 6: Post Graduation, 7: Technical, 8: Illiterate, 9: Infant/pre-primary

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6.4.5 Housing facilities

It was reported that majority (99.8%) of the PAFs reside in their own houses, whereas only 0.2% live in a rented house.

Table 6.12 Housing Status of PAFs

Village	Own house	Rented	Total
Ete	151 (100)	0	151 (100)
Banhardi	357 (100)	0	357 (100)
Bari	747 (99.6)	3 (0.4)	750 (100)
Barwadih	133 (99.7)	1 (0.3)	134 (100)
Jagaldaga	191 (100)	0	191 (100)
Rampur	304 (100)	0	304 (100)
Sabano	318 (100)	0	318 (100)
Surli	137 (99.3)	1 (0.7)	138 (100)
Tota	41 (100)	0	41 (100)
Udaipura	234 (100)	0	234 (100)
Total	2613 (99.8)	5 (0.2)	2618 (100)

6.4.6 Type of house wise distribution of resident household

The type of housing has been categorized under fully *pucca* (concrete), *kutcha* (mud) with thatched or tiled roof and *kutcha-pucca* (semi concrete) mixed. In the Project area, majority i.e. 95.6% are *kutcha* houses, 3.3% are *kutcha-pucca* and only 1.1% are *Pucca* houses.

Table 6.13 Type of house wise distribution of resident household

Village	Kutcha	Kutcha-Pucca mixed	Pucca	Total
Ete	148 (98.0)	3 (2.0)	0	151 (100)
Banhardi	339 (95.0)	15 (4.2)	3 (0.8)	357 (100)
Bari	702 (93.6)	41 (5.5)	7 (0.9)	750 (100)
Barwadih	129 (96.3)	3 (2.2)	2 (1.5)	134 (100)
Jagaldaga	186 (97.4)	2 (1.0)	3 (1.6)	191 (100)
Rampur	296 (97.4)	4 (1.3)	4 (1.4)	304 (100)
Sabano	309 (97.2)	5 (1.6)	4 (1.3)	318 (100)
Surli	130 (94.2)	7 (5.1)	1 (0.7)	138 (100)
Tota	39 (95.1)	1 (2.4)	1 (2.4)	41 (100)
Udaipura	226 (96.6)	5 (2.1)	3 (1.3)	234 (100)
Total	2504 (95.6)	86 (3.3)	28 (1.1)	2618 (100)

Figures within parenthesis are in percentage

6.4.7 Roofing condition

The type of roof has been categorized under thatched, tiles, asbestos and concrete roof. In the studied households, maximum i.e. 96.3% of the houses have tiled roof, almost 2% have concrete roof 1.3% with thatched roof and only 0.6% have asbestos roof.

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Table 6.14 Type of Roof

Village	Thatched	Tiles	Asbestos	Concrete roof	Total
Ete	3 (2.0)	148 (98.0)	0	0	151 (100)
Banhardi	8 (2.2)	337 (94.4)	4 (1.1)	8 (2.2)	357 (100)
Bari	11 (1.5)	708 (94.4)	11 (1.5)	20 (2.7)	750 (100)
Barwadih	1 (0.7)	131 (97.8)	0	2 (1.5)	134 (100)
Jagaldaga	1 (0.5)	187 (97.9)	0	3 (1.6)	191 (100)
Rampur	3 (1.0)	297 (97.7)	0	4 (1.3)	304 (100)
Sabano	2 (0.6)	312 (98.1)	0	4 (1.3)	318 (100)
Surli	2 (1.4)	132 (95.7)	0	4 (2.9)	138 (100)
Tota	1 (2.4)	39 (95.1)	0	1 (2.4)	41 (100)
Udaipura	2 (0.9)	229 (97.9)	0	3 (1.3)	234 (100)
Total	34 (1.3)	2550 (96.3)	15 (0.6)	49 (1.9)	2618 (100)

Figures within parenthesis are in percentage

6.4.8 Electricity Status, Cattle shed, Bathroom Facilities, Toilet Facilities

The major source of light in the PAVs is electricity, where 79.6% of the households have electricity. Only 3.7% of the households have a cattle shed.

With respect to sanitation facilities, only 1% has a bathroom and 51.6% have toilet facilities. The remaining households in the villages go for open air defecation.

Table 6.15 Electricity Status, Cattle shed, Bathroom Facilities, Toilet Facilities of PAFs

Village	Housing Facilities				Total
	Electricity Status	Cattle shed	Bathroom Facilities	Toilet Facilities	
Ete	103 (68.2)	8 (5.3)	2 (1.3)	93 (61.6)	151 (100)
Banhardi	276 (77.3)	18 (5.0)	6 (1.7)	202 (56.6)	357 (100)
Bari	602 (80.3)	26 (3.5)	11 (1.5)	338 (45.1)	750 (100)
Barwadih	110 (82.1)	5 (3.7)	1 (0.7)	72 (53.7)	134 (100)
Jagaldaga	158 (82.7)	6 (3.1)	1 (0.5)	100 (52.4)	191 (100)
Rampur	247 (81.3)	12 (3.9)	2 (0.7)	175 (57.6)	304 (100)
Sabano	262 (82.4)	11 (3.5)	2 (0.6)	163 (51.3)	318 (100)
Surli	92 (66.7)	5 (3.6)	1 (0.7)	78 (56.5)	138 (100)
Tota	35 (85.4)	1 (2.4)	0	24 (58.5)	41 (100)
Udaipura	200 (85.5)	6 (2.6)	1 (0.4)	105 (44.9)	234 (100)
Total	2085 (79.6)	68 (3.7)	27 (1.0)	1350 (51.6)	2618 (100)

Figures within parenthesis are in percentage

6.4.9 Cooking fuel used

Though the households in the Project area use multiple choices for cooking fuel, the main fuels used by resident household for cooking were wood, cow dung and coal. The household using wood is 94.2%, 26.3% use coal, 15.8% use cow-dung and only 1.9% use Gas. Majority of the households have received LPG through the flagship program of Ujjwala Yojna, but it is less

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often used as cooking fuel. Wood is most commonly used as it is readily available, and gas is used mostly during emergencies (Table 6.16).

Table 6.16 Village wise cooking fuel used by resident Household

Village	Fuel Use for Cooking				
	Wood	Cow dung	Coal	Gas	Total
Ete	135 (89.4)	15 (9.9)	29 (19.2)	3 (2.0)	151 (100)
Banhardi	331 (92.7)	53 (14.8)	90 (25.2)	6 (1.7)	357 (100)
Bari	708 (94.4)	131 (17.5)	211 (28.1)	14 (1.9)	750 (100)
Barwadih	126 (94.0)	24 (17.9)	36 (26.9)	2 (1.5)	134 (100)
Jagaldaga	185 (96.9)	26 (13.6)	45 (23.6)	4 (2.1)	191 (100)
Rampur	292 (96.1)	0	68 (22.4)	7 (2.3)	304 (100)
Sabano	304 (95.6)	50 (15.7)	85 (26.7)	7 (2.2)	318 (100)
Surli	121 (87.7)	24 (17.4)	41 (29.7)	2 (1.4)	138 (100)
Tota	41 (100.0)	7 (17.0)	9 (22.0)	1 (2.4)	41 (100)
Udaipura	224 (95.7)	45 (19.2)	76 (32.5)	4 (1.7)	234 (100)
Total	2467 (94.2)	415 (15.8)	690 (26.3)	50 (1.9)	2618 (100)

Figures within parenthesis are in percentage

6.5 Economic Profile of PAFs

The economic profile of the residents of the villagers have been assessed in terms of occupation, employment, annual income of households, livestock, movable assets, card holders etc.

6.5.1 Land holding of PAFs

Land holding of PAFs determines that 49.7% of the PAFs possess 1-2 acres of land, 22.7% with 2-3 acres of land and 20.7% possess upto 1 acre of land. 5% of the PAFs have 3-4 acres of land and only 1.8% has more than 4 acres of land.

Table 6.17: Total land holding of PAFs

Village Name	0-1 acre	1-2 acre	2-3 acre	3-4 acre	4 acres & Above	Total
Udaipura	33	144	51	6	0	234
Bari	160	367	183	34	6	750
Surli	33	76	27	2	0	138
Banhardi	92	169	54	26	16	357
Jagaldaga	11	102	44	21	13	191
Sabano	125	143	38	9	3	318
Ete	12	67	51	14	7	151
Rampur	47	155	85	16	1	304
Barwadih	15	58	55	4	2	134
Tota	15	20	6	0	0	41
Total	543(20.7)	1301(49.7)	594(22.7)	132(5)	48(1.8)	2618(100)

Figures within parenthesis are in percentage

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6.5.2 Home stead land of PAFs

Almost 40% of the PAFs do not have any homestead land area, 5.8% have more than 200 sq. ft., 19.7% have 200- 500 sq. ft and 35.2% have 500- 1000 sq ft. homestead land area.

Table 6.18: Home stead land area

Village	Homestead area (Sq. ft.)				Total
	Nil (000)	>200	200-500	500-1000	
Ete	21 (13.9)	42 (27.8)	39 (25.8)	49 (32.5)	151 (100)
Banhardi	214 (59.9)	9 (2.5)	64 (17.9)	70 (19.6)	357 (100)
Bari	386 (51.5)	11 (1.5)	112 (14.9)	241 (32.1)	750 (100)
Barwadih	21 (15.7)	7 (5.2)	6 (4.5)	100 (74.6)	134 (100)
Jagaldaga	58 (30.4)	3 (1.6)	56 (29.3)	74 (38.7)	191 (100)
Rampur	37 (12.2)	34 (11.2)	20 (6.6)	213 (70.1)	304 (100)
Sabano	115 (36.2)	23 (7.2)	136 (42.8)	44 (13.8)	318 (100)
Surli	108 (78.3)	4 (2.9)	17 (12.3)	9 (6.5)	138 (100)
Tota	2 (4.9)	17 (41.5)	0	22 (53.7)	41 (100)
Udaipura	64 (27.4)	3 (1.3)	67 (28.6)	100 (42.7)	234 (100)
Total	1026 (39.5)	153 (5.8)	517 (19.7)	922 (35.2)	2618(100)

Figures within parenthesis are in percentage.

6.5.3 Movable assets

Movable assets included 2292 ploughs, 304 spray pumps, 573 Pump set, 1945 bicycles, 765 scooter/motorbikes and 2669 mobile phones were owned by PAFs. Apart from this, sewing machine, Television/VCD/DVD and vehicles etc. were the other movable assets also owned by some of the PAFs. Village wise details of a number of movable assets owned by PAFs are shown below in Table 6.19.

Table 6.19 Village wise distribution of movable assets owned by resident PAFs

Village	Movable assets											Total
	1	2	3	4	5	6	7	8	9	10	11	
Ete	124	8	32	109	29	137	5	0	1	5	8	458
Banhardi	314	37	79	266	99	360	12	0	3	23	18	1211
Bari	662	93	183	575	234	756	19	0	10	59	33	2624
Barwadih	119	19	29	103	45	142	5	0	1	12	5	480
Jagaldaga	164	22	32	132	54	204	5	0	1	14	6	634
Rampur	266	30	55	218	78	321	8	0	3	18	11	1008
Sabano	278	38	63	228	92	326	9	0	3	24	13	1074
Surli	119	15	39	108	40	132	6	0	2	10	3	474
Tota	36	6	5	28	12	47	1	0	0	4	1	140
Udaipura	210	36	56	178	82	244	7	0	4	24	6	847
Total	2292	304	573	1945	765	2669	77	0	28	193	104	8950

Code: 1- Plough, 2- Spray pumps, 3- Pump-set, 4- Bicycle, 5- Scooter/Motor-bike, 6- Phone, 7- Tractors, 8- Jeep/Truck, 9- Light & sound system, 10- Television/VCD/VCR, 11- Sewing machine.

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6.5.4 Immovable assets as Trees

Among the trees, Bamboo, Karanj, Bair, Mahuwa, Mango, Jackfruit and Jamun trees were dominant domesticated species. Forest trees included Sakhua, Sagan, Jamun and Sisham etc. However, some of these trees are also owned by private land owners (Table 6.20).

Table 6.20 Trees owned by resident PAFs

Name of Tree	Village										Total
	Ete	Banhardi	Bari	Barwadih	Jagaldaga	Rampur	Sabano	Surli	Tota	Udaipura	
Anar	2	7	14	5	0	2	11	1	0	5	47
Bair	0	12	8	100	22	23	17	8	3	25	218
Bamboo	15	50	200	23	14	47	25	20	2	23	419
Jamun	2	7	14	2	7	1	3	2	0	8	46
Karanj	11	23	47	8	19	30	12	50	3	41	244
Jackfruit	3	17	40	7	9	3	11	3	0	12	105
Mahuwa	12	24	45	8	7	13	20	24	9	19	181
Mango	5	11	21	17	8	3	5	12	0	8	90
Sagan	0	0	12	3	0	0	7	0	0	0	22
Sakhuwa	0	0	0	0	0	0	0	0	0	0	0
Sisham	8	12	15	3	41	20	15	8	5	12	139
Total	58	163	416	176	127	142	126	128	22	153	1511

6.5.5 Indebtedness among PAFs

Moneylenders in the area seem to have almost vanished. With the intervention of NRLM in the rural areas, SHGs have erupted as an active village level community organisation that has been recognised as a viable institution to lending and borrowing activities at the village level. Among the debtors, all the 26 households seem to have borrowed on an average Rs. 15000/- from the SHGs.

Table 6.21 Indebtedness among PAFs

Village	No. of Debtors	Amount	Source of credit facilities
Ete	2	15000	SHG
Banhardi	4	15000	SHG
Bari	6	15000	SHG
Barwadih	2	15000	SHG
Jagaldaga	1	15000	SHG
Rampur	3	15000	SHG
Sabano	2	15000	SHG
Surli	3	15000	SHG
Tota	0	15000	SHG
Udaipura	1	15000	SHG
Total	26		

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6.5.6 Occupational status

Agriculture is the primary source of livelihood in the area. In the Project area there are 48.8% students, 16.1% people engaged in Agriculture, 2.2% engaged in private job and 0.7% have small businesses. 2.7% are Agriculture labourers/ casual labourers and 22.4% of the members are unemployed

Table 6.22 Occupational Status (Main) of Household members

Village	Occupational status										Total
	1	2	3	4	5	6	7	8	9	10	
Ete	78 (10.4)	9 (1.2)	3 (0.4)	6 (0.8)	12 (1.6)	2 (0.3)	46 (6.1)	385 (51.4)	35 (4.7)	173 (23.1)	749
Banhardi	335 (18.2)	16 (0.9)	3 (0.2)	2 (0.1)	2 (0.1)	5 (0.3)	28 (1.5)	874 (47.4)	139 (7.5)	440 (23.9)	1844
Bari	563 (14.4)	90 (2.3)	14 (0.4)	47 (1.2)	32 (0.8)	7 (0.2)	116 (3.0)	2019 (51.5)	195 (5.0)	838 (21.4)	3921
Barwadih	66 (9.0)	32 (4.4)	4 (0.5)	8 (1.1)	5 (0.7)	9 (1.2)	34 (4.7)	352 (48.2)	42 (5.8)	178 (24.4)	730
Jagaldaga	132 (13.6)	27 (2.8)	6 (0.6)	2 (0.2)	2 (0.2)	3 (0.3)	32 (3.3)	508 (52.4)	43 (4.4)	215 (22.2)	970
Rampur	133 (7.9)	91 (5.4)	27 (1.6)	18 (1.1)	31 (1.8)	6 (0.4)	79 (4.7)	795 (47.0)	95 (5.6)	418 (24.7)	1693
Sabano	405 (27.1)	10 (0.7)	6 (0.4)	2 (0.1)	3 (0.2)	7 (0.5)	10 (0.7)	723 (48.4)	81 (5.4)	247 (16.5)	1494
Surli	124 (18.0)	8 (1.2)	0	1 (0.1)	1 (0.1)	1 (0.1)	9 (1.3)	296 (42.9)	55 (8.0)	195 (28.3)	690
Tota	10 (4.8)	11 (5.3)	2 (1.0)	1 (0.5)	1 (0.5)	2 (1.0)	21 (10.1)	88 (42.5)	18 (8.7)	53 (25.6)	207
Udaipura	303 (28.5)	4 (0.4)	15 (1.4)	1 (0.1)	2 (0.2)	5 (0.5)	4 (0.4)	476 (44.8)	56 (5.3)	197 (18.5)	1063
Total	2149(16.1)	298 (2.2)	80 (0.6)	88 (0.7)	91 (0.7)	47 (0.4)	379 (2.8)	6516 (48.8)	759 (5.7)	2954 (22.1)	13361

Figures within parenthesis are in percentage

Code: 1- Agriculture, 2- Private/contractual jobs, 3- Trading, 4- Small business (grocery shop, selling firewood, flour mill, pressing oil, green grocer, tea and snacks stalls, betel shop, tailoring, dhobi etc.), 5- Traditional work (black smith, carpentry, barber, bamboo work, goldsmith, potter, tailoring etc), 6- Govt. service, 7- Agriculture labourer/Casual Labour, 8-Student, 9-Unemployed, 10- Housewife

Season wise Occupational involvement of Household members

The area has three main crop seasons: Kharif (aghani), Rabi and Zaid/ Garma (summer). The major Kharif crops are rice, millet and maize. The Rabi crops are wheat, pulses, gram and mustard. In the Garma, farmers grow rice, maize groundnuts and vegetables. There is a short season between Kharif and Rabi season in the months of March to July. Zaid crops are summer season crops grown on drylands which do not have to wait for the monsoon.

Of the 2149 people engaged in agriculture, most of them i.e. 1289 (60%) cultivate Kharif crop, 860 (40%) cultivate Rabi crops and very few 215 (10 %) take up summer season crops due to limited irrigation facilities.

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Table 6.22 Season wise Occupational involvement of Household members

Village Name	Total Persons Involved	Kharif	Rabi	Zaid	All Season Other Work
		June to October	Nov to March	March to July	
Ete	78	47	31	8	78
Banhardi	335	201	134	34	56
Bari	563	338	225	56	306
Barwadih	66	40	26	7	92
Jagaldaga	132	79	53	13	72
Rampur	133	80	53	13	252
Sabano	405	243	162	41	38
Surli	124	74	50	12	20
Tota	10	6	4	1	38
Udaipura	303	182	121	30	31
Total	2149	1289	860	215	983

6.5.7 Income profile and poverty classification

In the Project area, the household in core village who earn between Rs 27,000 – Rs 1 lakh annually is 71.1%, 14.3% earn income ranging from Rs. 1 lakh – Rs. 1,60,000/-. Almost 11% of PAFs earn income less than Rs 27,000/- whereas 0.3% earn Rs. 5 lakhs – 10 lakhs and 1 household in Rampur village is wealthy enough to earn more than Rs. 10 lakhs annually. The average annual income of resident households in core village is Rs. 73,102/-.

Table 6.23 Village wise distribution of annual income of households

Village	Annual income (In Rs.)							Average Income (in Rs.)
	Below 27000	27000 – 100000	100000 - 160000	160000 - 250000	250000 - 500000	500000 - 1000000	Above 1000000	
Ete	25 (12.6)	142 (71.4)	29 (14.6)	2 (1.0)	1 (0.5)	0	0	77079.49
Banhardi	48 (11.7)	317 (77.3)	35 (8.5)	6 (1.5)	4 (1.0)	0	0	64505.45
Bari	34 (4.3)	541 (67.9)	189 (23.7)	26 (3.3)	3 (0.4)	4 (0.5)	0	77786.64
Barwadih	4 (3.4)	40 (34.2)	51 (43.6)	19 (16.2)	1 (0.9)	2 (1.7)	0	103856.60
Jagaldaga	3 (2.1)	118 (81.4)	22 (15.2)	0	1 (0.7)	1 (0.7)	0	79148.04
Rampur	14 (4.0)	212 (60.1)	97 (27.5)	25 (7.1)	3 (0.8)	1 (0.3)	1 (0.3)	92942.61
Sabano	64 (13.0)	408 (82.9)	12 (2.4)	2 (0.4)	6 (1.2)	0	0	49573.10
Surli	103 (29.7)	241 (69.5)	1 (0.3)	1 (0.3)	1 (0.3)	0	0	32351.39
Tota	6 (7.9)	54 (71.1)	9 (11.8)	6 (7.9)	1 (1.3)	0	0	98479.17
Udaipura	62 (16.4)	283 (74.7)	28 (7.4)	2 (0.5)	3 (0.8)	1 (0.3)	0	61730.82
Total	363	2356	473	89 (2.7)	24 (0.7)	9 (0.3)	1 (0.01)	737453.5

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	(10.9)	(71.1)	(14.3)				
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Figures within parenthesis are in percentage

a. Average Income, Expenditure and Saving

The average income of PAFs in ten core villages is Rs. 7,37,453/- ,of which the average expenditure recorded is Rs. 6,45,893 and the average saving is Rs. 91,559/- only.

Table 6.23 Average Income, Expenditure and Saving of households

Village	Average Income (in Rs.)	Average Expenditure (in Rs.)	Average Savings (in Rs.)
Ete	77079.49	63590.58	13488.91
Banhardi	64505.45	55635.95	8869.50
Bari	77786.64	66406.45	11380.19
Barwadih	103856.6	90646.04	13210.56
Jagaldaga	79148.04	70536.73	8611.31
Rampur	92942.61	84800.84	8141.77
Sabano	49573.1	43564.84	6008.26
Surli	32351.39	28876.85	3474.54
Tota	98479.17	86789.70	11689.48
Udaipura	61730.82	55045.37	6685.45
Total	737453.3	645893.4	91559.97

b. Earning and dependent members

Average size of resident PAFs' household was 5 members. However, only 27.3% members of the total households was the bread earner with load of almost 76.3% dependent members. Such ratio represents subsistence to low economic profile of target population.

Table 6.24 Village wise Earning & dependent members of PAFs

Village	Total		
	Earning Members	Dependents Members	
Ete	199 (20.8)	756 (79.2)	955 (100)
Banhardi	410 (21.1)	1534 (78.9)	1944 (100)
Bari	797 (22.3)	2777 (77.7)	3574 (100)
Barwadih	117 (21.8)	418 (78.2)	535 (100)
Jagaldaga	145 (21.0)	544 (79.0)	689 (100)
Rampur	353 (23.6)	1142 (76.4)	1495 (100)
Sabano	492 (30.9)	1099 (69.1)	1591 (100)
Surli	347 (20.9)	1312 (79.1)	1659 (100)
Tota	76 (23.2)	252 (76.8)	328(100)
Udaipura	379 (31.1)	1218 (68.9)	1218 (100)
Total	3313 (23.7)	10675 (76.3)	13988 (100)

Figures within parenthesis are in percentage

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Note: 1= Bullocks, 2= Cows Milk, 3= She-buffaloes Milk, 4= He buffaloes, 5= Calves, 6= Goat, 7= Sheep, 8= Chicken, 9= Duck

6.6 Health

6.6.1 Health and hygiene of resident household

The district has a three tier public health care system viz. village level, Block level and District level. There are primary health centers, private clinics, government hospitals and drug vendors that meet the basic health care needs of people in the district. Services that are provided include disease prevention and mother and child health care.

In the Project area most of the respondents prefer to visit the Govt. Doctor (83.8%), 62.4% preferred to go to hospital, 17.5% preferred PHC/HSC and 7.4% preferred Others like Ojha and Village Quack.

Table 6.27 Health treatment opted by resident households

Village	Govt. Doctor	PHC	Hospital	Homeopathy	Total
Ete	140 (92.7)	10 (6.6)	126 (83.4)	7 (4.6)	151 (100)
Banhardi	305 (85.4)	51 (14.3)	236 (66.1)	23 (6.4)	357 (100)
Bari	630 (84.0)	142 (18.9)	454 (60.5)	64 (8.5)	750 (100)
Barwadih	113 (84.4)	24 (17.9)	81 (60.4)	10 (7.5)	134 (100)
Jagaldaga	148 (77.5)	39 (20.4)	105 (55.0)	13 (6.8)	191 (100)
Rampur	246 (80.9)	54 (17.8)	185 (60.9)	17 (5.6)	304 (100)
Sabano	263 (82.7)	61 (19.2)	190 (59.7)	22 (6.9)	318 (100)
Surli	127 (92.0)	14 (10.1)	112 (81.2)	13 (9.4)	138 (100)
Tota	35 (85.4)	9 (22.0)	18 (43.9)	2 (4.9)	41 (100)
Udaipura	186 (79.5)	55 (23.5)	128 (54.7)	24 (10.3)	234 (100)
Total	2193 (83.8)	459 (17.5)	1635 (62.4)	195 (7.4)	2618 (100)

6.6.2 Immunization of children

In the case of immunization of children, it was observed that 83.6% of household in core village have immunized their children fully and 9.6% have partly immunized their children. 1.1% have given one or two whereas there are 5.8% of households who have never immunized their children.

Vaccinations were mostly obtained from Hospitals and *Anganwadi* centres. It is a matter of concern of those households who reported that they had never given any vaccines to their children.

Table 6.28 Immunization of children in resident household

Village	Immunization of Children				Total
	Fully	Partly	One or two	Nil	
Ete	159 (83.4)	18 (9.3)	2 (1.3)	11 (6.0)	191 (100)
Banhardi	332 (85.2)	30 (7.8)	5 (1.4)	22 (5.6)	390 (100)
Bari	598 (83.7)	74 (10.3)	8 (1.1)	35 (4.9)	715 (100)
Barwadih	87 (81.3)	13 (11.9)	2 (1.5)	6 (5.2)	107 (100)
Jagaldaga	118 (85.3)	9 (6.8)	1 (0.5)	10 (7.3)	138 (100)
Rampur	260 (86.8)	18 (5.9)	1 (0.3)	21 (6.9)	300 (100)
Sabano	268 (84.6)	22 (6.9)	4 (1.3)	23 (7.2)	317 (100)

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Surli	265 (79.7)	50 (15.2)	7 (2.2)	10 (3.9)	332 (100)
Tota	60 (90.2)	3 (2.4)	0	5 (7.3)	66 (100)
Udaipura	193 (79.1)	32 (13.2)	3 (1.3)	16 (6.4)	244 (100)
Total	2340 (83.6)	268 (9.6)	34 (1.1)	158 (5.8)	2800 (100)

Figures within parenthesis are in percentage

6.7 Differently Able Persons

There are 48 Differently Able people among the PAFs in the project affected area found during the field survey.

Table 6.29 Vulnerable groups as disabled

Village	Blind	Deaf & Dumb	Dumb	Mental Problem	Orthopaedic	Paralysed	Total
Ete	0	0	0	0	0	0	0
Banhardi	0	0	0	0	0	7	7
Bari	0	1	0	2	1	18	22
Barwadih	0	0	0	0	0	4	4
Jagaldaga	0	0	0	0	0	4	4
Rampur	0	0	0	0	0	4	4
Sabano	0	0	0	0	0	3	3
Surli	1	0	1	0	0	1	3
Tota	0	0	0	0	0	0	0
Udaipura	0	0	0	0	0	1	1
Total	1	1	1	2	1	42	48

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CHAPTER XII

Summary and Recommendations

12.1 Introduction

In 1986, the UN General Assembly adopted a Declaration on the Right to Development, which states that "every human person and all people are entitled to participate in, contribute to and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized." People displaced by the development projects should not be seen as a necessary sacrifice on the road to development. The dominant perspective is thus that the positive aspects of development projects, the public interest outweigh the negative ones. Hence these positive aspects should be framed in a well defined Rehabilitation and Resettlement policy (R&R Policy).

With the acquisition of land for Banhardi coal block project of PVUNL at Chandwa & Sadar Blocks of Latehar District, the project would put in place a progressive, just and equitable R&R policy that would be part of a larger development policy. The policy's stated aim would be to strike a balance between the need for land for developmental activities and at the same time protecting the interests of the land owners particularly the SCs, STs, OBCs and other marginal farmers whose livelihood depends on the land involved.

The benefits under the policy would be available to all affected persons and families whose land, property or livelihood would be adversely affected by land acquisition or by involuntary displacement of a permanent nature due to any other reason. It would also have a compensation mechanism for those who lost their land, home and sources of livelihood.

12.2 Issue of Rehabilitation and Resettlement

Land acquisition and involuntary resettlement would be avoided or minimized where feasible, from an economic, social and environmental aspect, and plans would be prepared for those displaced.

- Project Affected Families would be identified and their land, houses and other assets enumerated during project design, measurement survey and socio-economic survey conducted to assess impact and propose income rehabilitation plan.
- PAFs would receive full compensation for all losses, including assets and livelihoods.
- Cash compensation for land, houses, trees and other assets in accordance with the existing procedures will be given. Those PAFs who do not want any constructed house in the resettlement area, or desire to be relocated elsewhere, then that family shall get one-time financial assistance of Rs. 3,00,000/- as per JRRP 2008.
- Before land acquisition PAFs would be informed of and consulted on land acquisition, resettlement and compensation options. Meetings with PAFs, village leaders and local governments were held. Household interviews and socio-economic survey of PAFs were also conducted.
- Information campaigns through the local media, meetings, village committees and resettlement offices to inform the PAFs would be carried out. This process would continue throughout the planning and implementation stages. Land acquisition and resettlement should be an integral part of project design. No land acquisition will take place prior to the satisfactory relocation of PAFs.

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12.3 Institutional Framework

For a proper resettlement management and implementation there would be appropriate institutional framework at both the agency / company and field levels. These institutions would ensure that appropriate agencies are mandated to plan and implement compensation, income restoration, and rehabilitation programs. A strong institutional framework is also essential to ensure bridging of PAFs between the company and the community.

12.3.1 Resettlement Coordination Committees (RCC)

The resettlement agency or company would take the initiative to form local level Resettlement Coordination Committees (RCC) of PAFs and others for the purposes of consultation and participation. These committees, at various levels (for example, village, sub-district, area, project level), would essentially include:

- PAFs, beneficiaries, (both men and women), and representatives of the host population;
- Other stakeholders with interest in the project (e.g., local or national governments, elected officials, NGOs; and
- Technical experts whose knowledge may assist in identifying potential impacts and in finding appropriate solutions.

Participation and consultation facilitate development of appropriate and acceptable entitlement options and ownership by the people. Hence, participation and consultation with the PAFs would be ensured by the project management to share all aspects of projects physical planning, designs with alternative options, and known impacts of the project in terms of land acquisition, relocation, and resettlement. Such committees are also vital for ensuring that project monitoring and implementation take place effectively.

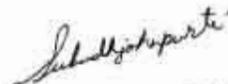
12.3.2 Grievance Redressal Committees (GRC)

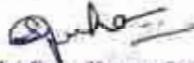
Under circumstances where the host government assumes responsibility for resettlement, the project sponsor may be unable to guarantee fair and timely redressal of grievances. Regardless of its scale, involuntary resettlement inevitably gives rise to grievances among the affected population over issues ranging from rates of compensation and eligibility criteria to the location of resettlement sites and the quality of services at those sites. Timely redressal of such grievances is vital for the satisfactory implementation of resettlement. The project sponsor would ensure that procedures are in place to allow affected people to lodge a complaint or a claim (including claims that derive from customary law and usage) without cost and with the assurance of a timely and satisfactory resolution of that complaint or claim. In addition, the project may have to make special accommodations for women and members of vulnerable groups to ensure that they have equal access to grievance redressal procedures. The project management would make every effort to resolve grievances at the community level. Recourse to the legal system would be avoided except as a last resort.

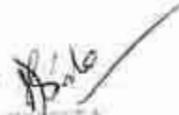
The Resettlement Action Plan (RAP) would describe the grievance redressal framework that will be put in place by the host government or project sponsor. This would include:

- Institutional arrangements;
- The procedures for recording and processing grievances;
- The mechanisms for adjudicating grievances and appealing judgments;
- A schedule, with deadlines, for all steps in the grievance redressal process.

The GRCs would be constituted dealing with two types of grievance:


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- i. Formal courts of appeal concerning land compensation practices.
- ii. Locally constituted GRCs for dispute resolution involving resettlement benefits.

Operational procedures for GRCs would be formalized and established clearly in the RAP.

12.4 Consultation with the PAFs

Village meetings were conducted by the survey team in each village separately. In those meetings all villagers (PAFs and non PAFs) were appraised about purpose of Banhardi coal mining project area and its plausible effect on PAFs, the future opportunities that would emerge out of the project. Besides these, villagers were also appraised about NPRR 2007 and Jharkhand R & R policies (JRRP 2008) and the various provisions made thereof for PAFs and other categories of people.

Initially villagers were less cooperative but after frequent meetings and discussions by the survey team, PAFs cooperated with the survey. PAF's opinion about R & R package, resettlement sites, and capacity building were also assessed through FGDs. Women opinions were also gathered through organizing separate FGDs for women.

12.4.1 PAFs' expectations from Banhardi coal block project of PVUNL

PAF's views can be summarized in the following manner:

1. Land prices and existing immovable assets (like trees, etc.) should be assessed as per existing market rate and compensation should be given on that basis.
2. Provision of livelihood compensation must be ensured.
3. Jobs should be created to engage all working age male and female in gainful employment.
4. Provision of monthly pension should be ensured.
5. Steps should be taken to stop the involvement of intermediaries during the payment of compensation.
6. PVUNL should take measures to deposit the entire compensation amount in fixed deposit account of both husband and wife so that the couple can avail interest on monthly basis. FD account can be opened either at Post Office or nearest bank.
7. PVUNL must arrange vocational training to equip men and women to get jobs or initiate self-employment programme.

12.4.2 Choice of Rehabilitation Option of the PAFs

When the affected people belong to indigenous groups with a close or special affiliation to the lands on which they live, the impact is adverse. The land acquisition affects different aspects of life of the dwellers. The opinions of the PAF w.r.t. rehabilitation options have been analysed as discussed with them during FGDs.

1. At the foremost, majority of the native PAFs prefer staying in their homeland. The PAFs wish to be least displaced and expect the Project authorities to create least displacement opportunities. Preference for staying in the existing land was primary.
2. The PAFs as usual have much affinity to their existing homeland, but however if at all they have to be resettled, the PAFs desire to be relocated in the nearby areas of their previous location.
3. The PAF would like to be compensated fairly for their land and home and within a stipulated time. They feel that there should not be any unnecessary delay in payment of compensation.

4. Most of the PAFs would like to be resettled in a newly constructed house, but they should be paid for the shifting cost incurred by them. Some of the PAFs also would like to be offered with land for agriculture purpose, while many PAFs also prefer land for house construction.
5. Preference for jobs comes unanimously, as almost all the PAFs irrespective of whether they become jobless due to land acquisition or otherwise, would like to be offered a job to one of their family members.

PVUNL will decide and finalise the Resettlement site, which should wherever possible be planned close to the affected zone to reduce the hardship of the PAFs.

12.5 Principles of Compensation

In accordance with the legal and policy requirements of the National as well as the state Government, the principles of the compensation and entitlements established for the project are as follows:

- Compensation and entitlements provided to PAFs are adequate to at least maintain their pre-project standard of living, with the prospect of improvement;
- Land temporarily occupied and the period of disruption are kept to a minimum;
- All PAFs, legal and illegal, are taken into consideration and accounted for;
- After land acquisition, the average land holding per capita should be sufficient to maintain their living standard;
- Where land allocation per capital is not sufficient to maintain previous livelihood standards, other income generating activities are provided for;
- All PAFs are adequately informed on eligibility, compensation rates and standards, livelihood and income restoration plans, and project timing;
- No land acquisition will take place prior to satisfactory compensation and resettlement of the PAFs;
- The resettlement cost should be included as part of the Project costs;

12.5.1 Rehabilitation package

The Rehabilitation package would fully comply with the guiding principles stated above. All rights and entitlements of the PAFs would be legally enforceable, through individual contracts entered into by the requiring authority with each PAF declaring the affected area, families, property and entitlements.

The Rehabilitation package has been calculated as per the JRRP- 2008 and the RFCTLARR 2013 subject to the current Consumer Price Index (CPI). CPI measures changes over time in general level of prices of goods and services that households acquire for the purpose of consumption. CPI is widely used as a macroeconomic indicator of inflation, as a tool by governments and central banks for inflation targeting and for monitoring price stability, and as deflators in the national accounts.

Therefore for the calculation of the Rehabilitation package, the current CPI has been taken into consideration

(i) Employment

Jobs would be provided to at least one person from each affected family, subject to availability of vacancy and the suitability of the affected persons seeking employment.

unskilled and skilled employment in the project must preferably go to a PAF on fulfilling the requisite criteria, as long as any such positions are available. Those with appropriate qualifications must also be given first priority for skilled positions.

(ii) Training and other support services

The R & R authorities would provide at project cost necessary training to develop entrepreneurship and assist the members of the displaced families to take up economically viable self employment projects. The project would ensure necessary skills to render the PAFs eligible for employment for at least semiskilled positions and for those with sufficient educational qualifications for skilled positions.

The other benefits would include training and capacity building for taking up suitable jobs and for self-employment, scholarships for education of the eligible persons from the affected families and other economic opportunities in or around the project site.

(iii) Homestead and dwelling houses

For any of the displaced people, adequate provisions would be made for establishment of Resettlement and Rehabilitation (R&R) Colony in the nearby vicinity. Comprehensive infrastructural facilities and amenities would also be provided in the resettlement area including education, health care, drinking water, roads, electricity, sanitation, religious activities, cattle grazing, and other community resources.

Homestead land of 150 sq meter would be provided to all displaced families as per the JRRP 2008. Hence constructed houses will be provided, along with constructed cattle- sheds, as per mentioned in JRRP 2008, Cl. 7.8. to all entitled displaced families on the allotted homestead. The standard of the constructed house and cattle- shed will not be below than what has been prescribed in the *Indira Awas Yojana (IAY)*.

(iv) Transportation cost

The cost of transportation of family, its domestic animals, moveable properties and other belongings from the place of displacement to the place of resettlement would be borne by the project as per shifting cost @ Rs. 15,000/- per PAF as prescribed in JRRP 2008, Cl. 7.9 subject to the CPI.

(v) Rehabilitation grant to compensate loss of income/ livelihood

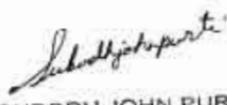
All PAFs and agriculture labours dependent on acquired land will get 600 days wages as per existing minimum wages without discrimination as per the provision of JRRP 2008, Ch. 7.14.

(vi) Periphery Development

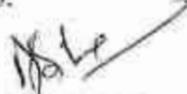
The Requiring Bodies shall be responsible for development of designated areas on the periphery of the project site and shall earmark funds for the purpose of such periphery development activities. The Company will earmark a minimum of 1% of net profit of the project in development activities in its field and peripheral area as per JRRP 2008, Cl. 7.21.

(vii) Pension to vulnerable persons

A special provision has been made for providing life-time monthly pension to the vulnerable persons, such as the disabled, destitute, orphans, widows, unmarried girls, abandoned women, or persons above 60 years of age (who are not provided or cannot immediately be provided with alternative livelihood) as per the provision of JRRP 2008, Cl. 7.15.


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(viii) Special provision for Tribals

Special provision for the STs and SCs include preference in land-for-land for the STs followed by SCs; A Tribal Development Plan which also includes a land free-of-cost for community and religious gatherings and continuation of reservation benefits in resettlement areas. PVUNL will prepare the Compensation and Annuity package as per the recommendations of JRRP 2008.

12.6 Summary

It is expected that the R&R Policy when adopted will achieve the following:

- (i) It will minimize displacement and prevent company/state induced impoverishment of people on account of compulsory acquisition of land and will search for non-displacing or least displacing alternatives to people displacing projects.
- (ii) It will ensure that displaced and adversely affected families will have better standard of living than was before the acquisition.
- (iii) It will address the special needs of the poorest, especially tribals, in the rehabilitation and resettlement measures by improving their skills and knowledge and thus their income on a sustainable basis.
- (iv) It will ensure quick but peaceful acquisition of land for the Banhardi coal block project.

Administrative mechanisms will have to be set up which translate the spirit of the intended policy into action. The State level departments and designated officers would be appointed for effective planning, implementation and monitoring of R&R Projects:

A separate R&R cell would be created and appointment of an R&R authority with requisite financial powers, technical staff to have effective liaison with District/ State authorities in acquiring land, resettling the displaced persons, training, construction of houses, jobs, working sheds, roads, other infrastructure and arrange comprehensive rehabilitation.

While the policy deals with what must be given to those who are displaced, both project authorities and local authorities would consider follow up on long-term issues. This would ensure preventing impoverishment as well as for availing of the accountability of the implementing agencies, and assessing the success or failure of PVUNL, R & R Policy at Banhardi coal block project in Latehar District, Jharkhand. The resettlement and compensation program would be implemented in accordance with the policies set forth in the Resettlement Action Plan and would be carefully monitored to make sure that affected persons will not be worse off after relocation.

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Chapter XIII

Perspective Plan for Rehabilitation and Resettlement (R & R) and Community development for Project Affected People

13.1 Introduction

In order to develop the standard of living of the project affected families through the provision of adequate Compensation & Rehabilitation measures in the project area, Jharkhand Government has formulated a comprehensive Rehabilitation and Resettlement (R & R) Policy in 2008. This policy has been revised as per the "Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act 2013" (RFCTLARR). The present R & R policy is therefore regulated by above statute and Rules under "Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (Jharkhand Amendment) Act, 2017.

The main objectives of the R & R policy are to avoid displacement wherever possible and minimize it exercising available options to recognize voices of displaced communities and vulnerable sections. The policy need to emphasize their needs to ensure environmental sustainability through participatory and transparent process. The policy should help guide the process of developing institutional mechanism for implementation, monitoring, conflict resolution and grievance redressal.

The RFCTLARR 2013 also emphasizes to conduct a socio-economic survey for identification of displaced families and for preparing their socio-economic baseline. The R& R perspective Plan for project affected families for the Banhardi coal block Project has been prepared in accordance with the JRRP, 2008 and RFCTLARR 2013. The R&R Plan is implemented in association with the concerned State Government, representatives from project affected families and other stakeholders in the area. A detailed socio-economic survey has been conducted before formulation of R&R Plan for the project affected families (PAFs) so as to assess the socio-economic and socio-cultural set-up of the affected families and local people.

As per the RFCTLARR (Jharkhand Amendment) Act, 2017, Government Infrastructure projects including Schools, Colleges, Universities, Hospitals, Panchayat Building, Anganwadi Centres, Rail, Road, Waterways, electrification, irrigation, housing for the economically weaker section, water supply, pipelines, Transmission and other Government Building for undertaking such projects, advise of Gram Sabha/ Local Authority shall also be taken.

13.2 Objectives:

The primary objective of the R&R Plan is to identify impacts and to plan measures to mitigate various losses of the Project while the specific objectives are as follows:

- To prepare an action plan for the project affected people for improving or at least retaining the living standards in the post resettlement period.
- To outline the entitlements for the affected persons for payment of compensation and assistance for establishing the livelihoods

13.3 General Methodology:

The survey was carried out taking into account the community lands and as per land revenue records of the area. Families belonging to the concerned communities were considered as affected families. The land impacted by the project was ascertained by the PVUNL with

concerned authority. The land loosing families were identified with the help of panchayat members and local people of concerned villages/areas.

Door to door socio-economic survey of the project-affected families was conducted to collect the base line data for preparation of R&R plan. Discussion was held with all project affected families/persons of the Project.

A detailed social survey will be performed again during the procedure of land acquisition, and before the time of implementation of the plan in order to have the most up to date information and in order to implement the most targeted and efficient R & R plan. In any case, the mitigation measures and various compensations under this plan will be applied to all the concerned families whenever their land holdings have been impacted by the Project, whether the rights of the said families over such land are community rights, customary rights over forest or agricultural lands or individual rights.

The ultimate purpose of identifying affected families is to properly implement a well targeted Rehabilitation plan. The land required falls under the ten directly affected villages falling within the project area.

13.4 Components for R&R plan

The proposed rehabilitation plan is divided into two sections:

1. **R&R Entitlement**
2. **Peripheral Development**

13.4.1 R&R Entitlement

Summary of Benefits to be offered

There are 963 project affected families (PAF) who will be losing land and home. The compensation package for land loosing families of Banhardi Coal Block Project area has been prepared in consonance with the JRRP, 2008 and RFCTLARR 2013

The compensation package or the R&R Entitlement Matrix for PAFs of Banhardi coal block project area will be prepared in consonance with the JRRP 2008 and RFCTLARR 2013. The compensation package for PAFs will be worked out as per the provision of JRRP 2008 subject to the current CPI. The CPI of the current year for 963 PAFs will be taken into consideration while calculating compensation packages. Absentee PAFs should also be considered when they come forward for the claim.

Table 13.1 R& R Matrix for Banhardi coal block Project

Sl. No.	Criteria	Provision as per JRRP 2008	No. of PAFs	Compensation Package as per JRRP 2008 and RFCTLARR 2013
1.	Compensation for land values	Compensation for land values will be decided as decided by District authorities	963 PAFs	Four times the market price of land, to be settled in consultation with the district authorities and PVUNL
2.	Shifting costs (JRRP 2008 Ch 7.9)	One-time financial assistance of Rs. 15000/- per PAF, for shifting of the family, building materials, belongings and cattle	304 PAFs	Rs. 88,00,800

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		(As per current CPI Rs. 28,950/ per PAF)		
3.	Cattle shed (JRRP 2008 Ch 7.8)	For construction of cattle shed each affected family shall get financial assistance of Rs. 35000/- per PAF (As per current CPI Rs. 67,550/ per PAF)	104 PAFs	Rs. 70,25,200
4.	Land for house construction (JRRP 2008, Ch 7.2)	10 decimal land/PAF/	304 PAFs	30.4 acres land & 25% extra land to be provided within R & R colony for roads and community building, market place & health Centre
5. (i)	House construction costs (JRRP Ch 7.2)	1000 sq. ft. carpet area within 10 decimal area, single storied house with toilet & kitchen JRRP 2008 (Clause 7.2 & 7.3 of JRRP)	304 PAFs	304,000 sq. ft. carpet/floor area
(ii)	House construction costs (PAFs who do not want any constructed house in the resettlement area but desire to be relocated elsewhere) (JRRP 2008 Ch 7.2)	One time financial assistance of Rs. 3,00,000/PAF (As per current CPI Rs. 5,79,000/ per PAF)	304 PAFs	Rs. 17,60,16,000 To be paid if house is not constructed by PVUNL
6.	Wage compensation/ PAF (JRRP Ch 7.14)	If employment is provided from the date of displacement then 300 man days will be provided for one year (@ Rs.170/day as on 01.04.2018) OR If employment not provided within one year, they will be given an amount equal to 600 days of agriculture wage. (@ Rs.170/day as on 01.04.2018)	963 PAFs	Rs. 4,91,13,000 Rs. 9,82,26,000
7	Wage compensation for Agricultural labour and artisans	Minimum wages for 600 days @ Rs. 170/day as on 01.04.2018	109 PAFs	Rs. 1,11,18,000
8.	Annuity for PAF (In lieu of employment) (JRRP 2008, Ch	The amount of Rs. 12,000/- at 2008 price per annum per acre will increase by Rs. 500 every two years.	Village Committee will provide list for those who have	-

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	7.12)	Provided further that the maximum amount from the annuity policy will be limited to Rs. 10,000/- per month per affected family.	not been given employment and who do not wish to avail employment	
9.	Shop (JRRP Ch 7.10)	PVUNL will provide constructed shops to the eligible PAFs as mentioned in JRRP 2008, Cl. 7.10 (As per current CPI Rs. 96,500/ per PAF)	16	Rs. 15,44,000
10.	Pension for Widows/ Widower & Deserted (JRRP 2008, Ch 6.4.v & 7.13)	1500/- per month pension (As per current CPI Rs. 2,895 per PAF)	128	Rs. 3,70,560 per mth.
11.	Pension for Handicapped and Orphan (as per JRRP 2008, Ch-3 cl-3.1 h, sec ii & 7.13)	Pension @ Rs. 1500/ month at 2008 price. (As per current CPI Rs. 2,895 per PAF)	20	Rs. 57,900 per mth.
12.	Pension for PAFs above fifty years of age (vulnerable) (JRRP 2008, Ch 7.16)	Pension for life to the vulnerable @ Rs. 1500/ month at 2008 price (As per current CPI Rs. 2,895 per PAF)	564	Rs. 16,32,780 per mth
13.	Profit sharing (1% net profit/year) by PAF (as per JRRP 2008, Ch 7.13.1 & 7.13.2)	PVUNL being a PSU, so profit sharing not applicable	N.A.	-

Note: JRRP 2008= Jharkhand Resettlement and Rehabilitation Policy 2008

*CPI calculated as per applicable Central Govt. guidelines

*CPI current yr - Rs. 193/-

*Minimum wage- Rs. 170/- as per 01.04.2018

Note: JRRP 2008= Jharkhand Resettlement and Rehabilitation Policy 2008

Training Cost

PVUNL will make special efforts to facilitate skill up-gradation of the one nominated member of each land losing families to make him/her 'employment' in their project.

The affected persons shall be offered the necessary training facilities for development of entrepreneurship, technical and professional skills for employment.

PVUNL would invite trainees among the land losing families for the training on various courses. It would select 963 trainees for the period of 2 years course. PVUNL would bear all expenditure including accommodation, travel etc. of the trainees and charges. Total financial out lay for the training programme would be (@ Rs. 5000/- per month for a trainee).

13.4.2 Core and Periphery Development Plan

Periphery Development Plan shall be executed by PVUNL for the social upliftment of the local habitants and to help them to fulfill their aspirations. The plan will be implemented in

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10 villages located in the periphery of 10 km. radius from the Project area. PVUNL will be responsible for periphery development activities as decided by the Advisory Committee constituted for Rehabilitation and Peripheral Development. The committee should be empowered to decide on compensation and rehabilitation package that are persistently raised by protesting villagers.

A need assessment has been carried out by the Study Team in project affected villages as part of socio economic study. The need assessment has been compiled in Chapter IX. Based on the study results, a consolidated budget for Enterprise Social Commitment should be earmarked for improving the socio-economic condition and infrastructure for providing basic amenities to the PAFs.

The consolidated budget for infrastructure, Health and Education, Livelihood program and Employment programme has been estimated in the table below:

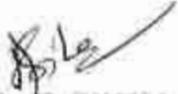
Table 13.2 Cost Estimation for Infrastructure Repairing and New units

Item	Core	Peripheral	Core	Peripheral
			Total Cost(Rs.)	Total Cost (Rs.)
Hand pump repairing @ Rs. 20,000/unit	0	0	0	0
Hand pump new Unit @ Rs. 75,000/unit	125	82	9375000	6150000
Repairing of public wells@ Rs.20,000/unit/	0	0	0	0
Additional new Public Wells@ Rs. 1,45,000/ well	109	71	15805000	10295000
Additional new Deep bore Well @ Rs.1,60,000/unit	0	0	0	0
De-silting of ponds@ Rs.50,000/unit/	0	0	0	0
Additional New ponds @ Rs.2,25,000/pond	36	33	8100000	7425000
Additional new irrigation well @ Rs. 1,45,000/ well	0	0	0	0
Construction of check dams @ Rs. 2,00,000/Per Unit	37	21	7400000	4200000
Renovation of check dams @ Rs. 1,00,000/Per Unit	0	0	0	0
Community centre@ Rs.10,00,000/Per Unit	13	8	13000000	8000000
Drains @ 225/- per Fit.	16080	13080	3618000	2943000
Total	16400	13295	57298000	39013000

Table 13.3 Cost of need fulfillment of Health services

Sl. No.	Indicator	Core	Peripheral
		Total (in Rs.)	Total (in Rs.)
1	New PHC @ Rs. 30 lakhs/ PHC	1,50,00000	1,80,0000
2	New CHC @ Rs. 1 crore	1,0000000	0
3	New Veterinary Centre @Rs. 10 lakhs/centre	10,00000	0
4	Mobile health Clinic van @ Rs. 15 lakhs	15,00000	15,00000
5	Distribution of 5000 LLIN Mosquito Nets @ Rs. 500/ per piece	13,09,000	11,91,500
Total		1,98,09000	44,91,500


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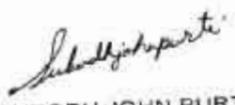

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Table 13.4 Cost of need fulfillment in educational services

Sl. No.	Indicator	Core	Peripheral
		Total (in Rs.)	Total (in Rs.)
1	Additional class rooms in Primary school @ Rs. 1200/sq. ft = Rs. 1.44 lakhs/class room	2880000	2448000
2	Additional class rooms in the middle school @ Rs. 1200/sq. ft = Rs. 1.44 lakhs/class room	1152000	1584000
3	Upgraded primary School to middle school @ Rs.7.20 lakhs/ School	0	0
4	Upgraded middle School to high school @ Rs.7.20 lakhs/ School	0	0
5	New Anganwadi center @ Rs. 5 lakhs	6500000	2000000
Total		10532000	6032000

Table 13.5 Estimated cost of special Livelihood programme

Type of employment	Core	Peripheral	Rate (Rs.)/ Group & Unit	Core	Peripheral
	Requirement (4+4+5)	Requirement (4+4+5)		Total Amount (Rs.)	Total Amount (Rs.)
Agriculture related training	250	200	30,000/ SHG bank loan	7500000	6000000
Bee Keeping	50	50	60,000/ SHG bank loan	3000000	3000000
Dairy and Poultry farming	10	10	5,00,000/ SHG bank loan	5000000	5000000
Leaf plate making	140	80	10,000/ SHG bank loan	1400000	800000
Mushroom Cultivation	100	100	10,000/ SHG bank loan	1000000	1000000
Pickle Making	60	100	30,000/ SHG bank loan	1800000	3000000
Tailoring and Embroidery	300	250	60,000/ SHG bank loan	18000000	15000000
Total				37700000	33800000

Table 13.6 Estimated cost of skill based employment programme

Type of employment	Core	Peripheral	Rate (Rs.)/ Group & Unit	Core	Peripheral
	Requirement (tentative)	Requirement (tentative)		Total Amount (Rs.)	Total Amount (Rs.)
Para teachers (for 5 years)	20	18	5000/teacher/month	100000	90000
Nursing training	60	50	1,20,000/ trainee	7200000	6000000
Driving Training (Auto, Taxies and Hired Vehicles)	450	500	8000/trainee	3600000	4000000

Drivers)					
Training for construction work	100	100	5000/ trainee	500000	500000
ITI and Mechanical Training	20	20	80,000/ trainee/two years	1600000	1600000
Mobile Repairing Training	10	10	5000/ trainee	50000	50000
Total				13050000	12240000

The cost estimated for infrastructure, Health and Education, Livelihood program and Employment programme has been summarised in the table below:

Table 13.7 Summary of total Cost Estimation

Item	Core	Peripheral
	Total Costs (Rs.)	Total Costs (Rs.)
Infrastructure Repairing and New units	57298000	39013000
Health services	19809000	4491500
Education needs	10532000	6032000
Livelihood program	37700000	33800000
Employment programme	13050000	12240000
Total	13,83,89,000	9,55,76,500

Total Amount is Rs. 13,83,89,000 (Rupees Thirteen Crores Eighty three lakhs Eighty Nine thousand only) for Core area and Rs. 9,55,76,500 (Rupees Nine Crores Fifty Five lakhs Seventy Six Thousand Five Hundred only) for peripheral area.

The total cost estimation has been proposed on the basis of the FGIDs with the community residing in the core and peripheral villages. However, this should be treated as indicative and may be modified as per the contextual needs arising out of changing social and political dimensions.

13.4.3 Budget for Rehabilitation and Resettlement Package is mentioned here under,

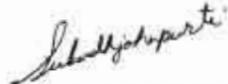
- Rehabilitation Entitlement -- R& R Matrix as presented in Table 13.1
- Core and Periphery Development Cost -- As presented in Table 13.7 and as decided and determined by the Advisory Committee for Rehabilitation and Peripheral Development
- Support Cost for R&R Implementation (10% of the total budget); Implementation charges; Administration, Management, Monitoring etc.

13.5 Monitoring and Evaluation

The land and compensation related issues are generally critical and become the matter of dispute. Therefore, in order to sort out these issues, an independent committee is required for evaluation and monitoring, especially the Rehabilitation and Resettlement Plan. The State Government shall constitute a standing Rehabilitation and Peripheral Development Advisory Committee under the chairmanship of the Revenue Divisional Commissioner of Latehar District to monitor the progress of Rehabilitation and Resettlement plan. The composition, powers, function and other matters relating to the functioning of Rehabilitation and

Resettlement Committee shall be prescribed by the State Government. Any affected person, if aggrieved, for not being offered the benefits admissible, may move a petition for redressal of his/her grievances arising out of the matters covered under the policy. Any dispute related to the compensation will be disposed off as per applicable rules.

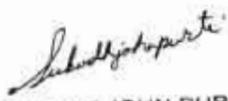
For effective implementation of R & R plan as well as the Peripheral Development Plan, PVUNL will constitute a Rehabilitation & Resettlement Cell (R & R Cell) for the project and Corporate Social Responsibility Cell (CSRC). R & R Cell will be responsible for the effective implementation of R & R entitlements while CSRC will take the responsibility of peripheral development. Both will assist the Advisory Committee for Rehabilitation and Peripheral Development in monitoring and evaluation.


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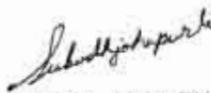
Annexure-VIII C
Declaration by allottee for Road diversion


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UNDERTAKING

This is to state that, the applicant intends to establish the Coal Mining Project at Bahardih, Latehar District, Jharkhand and a Road passing in the middle of the Coal Block needs to be diverted. Since heavy equipments are to be deployed, the Road required to be shifted and diverted along the periphery of the block. Necessary charges for shifting will be borne and paid by the applicant, as we are the proponent of the project. Therefore, we undertake to shift and divert the Road passing in the middle of the active mining area proposed in the beginning of our operations at Bahardih Coal Block, Latehar District, Jharkhand.


Anil Kumar / Anil Kumar
Authorised Signatory
Add. General Manager (CMFMA)
आनिल कुमार / ANIL


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Annexure-VIII D

**Letter regarding Revision in efficiency
parameter of Banhardih Coal Mine**

Patratu Vidyut Utpadan Nigam Ltd

(A subsidiary of NTPC in Joint Venture with JBVNL)

Ref No. /PVUNL/ BAN/12

Date: 20/07/2020

To
The Under Secretary to Govt
Office of the Nominated Authority
Ministry of Coal
120-F, Shastri Bhawan
New Delhi

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SUBODH JOHN PARTI
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Subject: Revision in Efficiency Parameter (Schedule E) with respect to Bannardih Coal Block of Patratu Vidyut Utpadan Nigam Limited(PVUNL).

- References:**
1. Your letter No. 103/18/2019/NA- dt. 25.06.2019
 2. Our letter no. PVUNL/BAN/2018/SCN dt. 22.9.2019.
 3. BG appropriation letter from MoC dt. 17.07.2019
 4. Our Letter No. PVUNL/BAN/2019/01 dt. 2.6.2019, PVUNL/BAN/07 dt. 12.09.2019 & PVUNL/CEC/4284 dt.03.06.2020
 5. Letter No. 1917 dt. 27.7.2019, from Energy Secretary, Government of Jharkhand.
 6. Your Letter No. 103/18/2019/NA- dt. 9th June, 2020
 7. Observation on Mining Plan including Mine Closure Plan of Bannardih Coal Project – vide MoC's letter No. MPS-55/1/2020/CIAM dt. 9th July, 2020.

Sir

With reference to the above subject and the referred letters pertaining to the development of Bannardih coal block by PVUNL, we would like to submit the following facts for your consideration please.

- The Geological Report was received by PVUNL from the prior allottee(JUUNL) on 27th of July 2019 though necessary expenditure incurred by the previous allottee in respect to the Geological Report(GR) was paid by PVUNL before entering into Deed of Adherence executed on 02.08.2017.
- In spite of the fact that PVUNL was not responsible for the delay in achieving of the efficiency parameters, which were actually related to the receipt of GR, the basic input for all mine development activities MoC has appropriated the Bank Guarantee no. 18090100005689 amounting to Rs 118.80 crore on 17.07.2019. Though PVUNL had requested MoC to revert the encashed amount, no response has so far been received in this regard.
- To avoid the cascading effect of the delay in availability of GR on the remaining efficiency parameters, PVUNL has given several letters, requesting MoC for revision of the 'Zero Date' to 27.07.2019, the date of receipt of GR from the previous allottee i.e. JUUNL, BSNHA

[Signature] **शशि शंकर गुप्ता / Smt. Shanta Gupta**
Sr. Manager (Coal/Mine) / Sr. Manager (Coal/Mine)
Patratu Vidyut Utpadan Nigam Ltd. (A Subsidiary of NTPC in Joint Venture with JBVNL)
Patratu, Dist.-Rangpur-829119. Phone no-0655-3186031
B-Tech (M.Tech) (COAL)
Registered Office: NTPC House, Sector-7, Institutional Area, Lodki Road, New Delhi-110003.
e-mail : shhowsu@npsc@gmail.com
1. कार्यालय इलाहाबाद 110003 / 1, Council House Street
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Patratu Vidyut Utpadan Nigam Ltd

(A subsidiary of NTPC in Joint Venture with JSVNL)

- D. Subsequent to submission of the Mining Plan including the Mine Closure Plan of this mine on 30th March, 2020, we have received the observations from Ministry of Coal on 9th July 2020. One of the observations indicates the following

"The para under reference requires start date of the Mine as per CMDPA, however in this case reference has been made with respect to the date of receipt GR, which needs to be reconciled. Further, as per CMDPA the start date of the mine is December 2020, however, commencement of the mine has been shown from Year 22-23. As such, project proponent is advised to either schedule the operation of the mine in line with the CMDPA else suitable permission obtained in this regard from Nominated Authority must be attached."

- E. As advised by MOC in the above-referred letter No. MF5-55/1/2020 CPIAM, dttd 8th July, 2020, the compliance with the corrected report needs to be submitted within 15 days from the date of issuance of the said letter i.e. by 24th of July, 2020.

Considering the above facts and deadlines, we would request your good self to kindly consider our request for amendment of the efficiency parameters/schedules (Schedule-E of CMDPA) as per the date of actual receipt of GR as the "Zero Date".

In anticipation that our request for revision of milestone shall be favorably considered, PVUNL is going ahead with the submission of the comments/compliance report against the observations received from MOC vide the above-referred letter dated 9th July 2020 with the Mining Plan. In this regard we would like to refer your letter no. 103/18/2015/INAdtd. 9th June 2020, wherein it was stated that our application for amendment would be placed before the Scrutiny Committee MOC in the next meeting.

In this regard, we would like to reiterate that PVUNL has proactively taken the steps for submission of applications for environment clearance, forest clearance, Section 9 under CBA Act, etc.

We therefore earnestly solicit an early action from MOC for revision of "Zero Date" and amending of the efficiency parameters, so that the further coal block development activities are proceeded with.

Thanking you,

Yours sincerely,

(Faiz Tayyab)
AGM(Mining)

Dr. Faiz / Faiz Tayyab
Add. General Manager (C/MF/M)
Dr. Faiz Tayyab / PVUNL

Gulab
श्रीमती गुलाब गुप्त / Smt. Shanta Gulab
अप सहायक कोयला निदेशक / Dy. Asst. Coal C. Manager
आर.एस.ए.ए. / Asst. of India
कोयला निदेशक कार्यालय / O/In. The Coal Authority
1, मन्मथनगर प्रान्त एस्टेट / 1, Govt. Colony, Patratu
बिहार-703 001 / Bihār-703 001

A. K. Sinha
A. K. SINHA

9-Tech (COAL)

e-mail : sinhaswchush@gmail.com

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC in Joint Venture with JSVNL)
Patratu, Dist.-Rangpur-829119

Enclosure: As per reference:

File No. 103/18/2015/NA

103/18/20

No.103/18/2015/NA
Government of India
Ministry of Coal
O/o. the Nominated Authority

120-F, Shastri Bhawan, New Delhi
Dated : the 9th June, 2020

To,

AGM (FM) (DD) (Mining)

The CEO,

CFO
SJA

Paratu Vidyut Utpadan Nigam Limited,
Paratu, P.O.-PTPS Paratu Dist. Ramgarh,
Jharkhand-829119.

Subject Regarding status of PVUNL reply dated 28.12.2019, against the Show Cause dated 19.12.2019,

Sir,

I am directed to refer PVUNL's letter dated 20.06.2020 on the subject mentioned above and to say that a Scrutiny Committee has been constituted for consideration / examination of the submissions/ replies made by Successful Bidder / Allottees of the Coal Mines in respect of deviation from the Efficiency Parameter as mentioned in the Coal Mines Development and Production Agreement / Allotment Agreement, and for making suitable recommendation.

2. PVUNL's reply dated 28.12.2019 submitted against the Show Cause dated 19.12.2019 would be placed before the Scrutiny Committee in its next meeting for consideration.

3. I am further directed to request you to submit / renew the Bank Guarantee before 7 working days from the due date of the expiry in terms of this office's letter No.410/1/2018-NA dated 30.09.2019 failing which appropriate action as per clauses of Allotment Agreement will be initiated

Yours faithfully,

शोमती शंता गुहा / Smt. Shanta Guha
उप सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
श्रीमंत विद्युत उत्पादन / O/o. The Coal Controller
1, एनएनएस हाउस ब्लॉक / 1, Conard House Street
कोलकाता-700 001 / Kolkata-700 001

Sd/-

(Manish Uniyal)

Tel : 23364106

Signature Not Verified

Digitally signed by MANISH UNIYAL
Date: 2020.06.09 12:37:01 IST

ANIL SINHA
B-Tech (Mech) IITISM, FCO (COAL)
09826037234
MOBILE NO-911131741
e-mail : stishasw@nesh@gmail.com

SUBODH JOHN PURTI
Sr. Manager (Chief Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
IASubodh@NTPCLtd.in, Joint Venture with Jharkh
Paratu, Dist.-Ramgarh-829119



पतरातु विद्युत उत्पादन निगम लिमिटेड
PATRATU VIDYUT UTPADAN NIGAM LTD.

(A subsidiary of NTPC in Joint Venture with JBVNL)

पतरातु / PATRATU

Sudarsan Chakrabarti
Chief Executive Officer, PVUN

Ref: PVUNL/BAN/2019/01

Date: 02.08.2019

To
The Nominated Authority & Joint Secretary
Government of India
Ministry of Coal
Shastri Bhawan
New Delhi-110001

Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Coal/Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC in Joint Venture with JBVNL)
Patratu, Dist.-Rangpur-829119

Sub: Request for non-appropriation of Bank Guarantee(Performance Security) no. 16090100005689 by Ministry of Coal amounting to Rs. 118.80 Crore pertaining to PVUNL with respect to development of Banhardih coal mine

Ref: MoC letter no. 11D/03/2017/NA, dated 17th July 2019

Dear Sir,

Patratu Vidyut Utpadan Nigam Limited (PVUNL), a subsidiary company of NTPC Ltd. in JV with Jharkhand Bijlee Vitaran Nigam Limited (JBVNL), Government of Jharkhand (GoJ), is setting up 3x800MW ultra super critical units at Patratu, Jharkhand, having a linked coal mine at district Latehar(Jharkhand), named as Banhardih, with approximately 925MMT of geological reserves. PVUNL has been assigned this mine from the previous allottee, Jharkhand Urja Utpadan Nigam Ltd. (JUUNL), GoJ, vide Deed of Adherence(dated 02.06.2017), Grant of prior consent for assigning the allotment agreement(dated 21.06.2017), and Deed of Assignment(dated 18.05.2018).

Regarding appropriation of Bank Guarantee pertaining to Banhardih coal block, we would like to humbly submit here the following facts for your kind information and consideration:

1. Subsequent to the receipt of prior consent from the office of the Nominated Authority on 21.06.2017, PVUNL had approached to the previous allottee i.e. JUUNL, to immediately hand over the Geological Report(GR) of the coal mine based on the exploration done by them in the year 2013-14.
2. In response to the show cause dated 13.09.2018, served by MoC to PVUNL against the non-compliance of five milestones as listed in Schedule-E (Efficiency parameters or milestone schedule) of the original allotment agreement with JUUNL, PVUNL vide its letter dated 22.09.18 have submitted the reply to Ministry of Coal (MoC) on 24.09.2018, mentioning PVUNL's continuous efforts to get the GR. It was also intimated that without availability of GR, the immediate next

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Registered Office: NTPC Bhawan, Core-7, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Ph. 011-24360071, CIN No. U40300DL2015GOI289633

Sudarsan Chakrabarti
कोयला विभाग / Smt. Shastri Bhawan
वा. मंत्रालय कोयला विभाग / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/n. The Coal Controller
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A. R. Sinha
B-Tech (Hons.)
COAL
e-mail : sinhasowhesh@gmail.com

activity of preparation of Mining Plan cannot be taken up, and the process for subsequent activities like Environment & Forest Clearances, which are dependent upon Mining Plan, cannot be initiated. It was again brought to the notice of your good office vide PVUNL letter dated 04.10.2018.

In this regard, it may kindly be noted that as per Schedule-E (efficiency parameters) of the allotment agreement for Banhardih coal mine, preparation and completion of GR is the 2nd milestone activity and without the attainment of this milestone, the subsequent milestone activities could not be taken up by PVUNL.

3. PVUNL has raised the issue of GR in almost every State level Secretarial meetings, monitoring committee meetings held under the chairmanship of Secretary(Coal), review meetings held in Ministry of Power (MoP), and this issue has been apprised to the office of Nominated Authority, MoC, through all the monthly Pre-Commencement Reports.

4. PVUNL was not in a position to start the detailed exploration activities, afresh, and to get the GR prepared from alternative sources since as per the clause 19.2(d) of the allotment agreement, it was the responsibility of previous allottee, JUUNL, and they had already got the detailed exploration done in this block. A sum of Rs. 70.19 Cr was also paid by PVUNL to JUUNL which included the cost of exploration & drilling works required for preparation of GR. Moreover the time required for completion of exploration and preparation/finalization of GR is around 24-30 months, a time consuming process, too.

In this regard, we would also like to refer the letter dated 27.07.2019 from Secretary(Energy), Government of Jharkhand, addressed to your good office. In this letter, they have intimated you the following reasons which have contributed for the delay in preparation of GR :

- Wrong entry of the names of the villages and time taken in the rectification of the same through an amendment in the Ministry of Coal.
- Time taken in obtaining the certified boundary map with the co-ordinates of coal block boundary from CMPDIL and consequent preparation of land schedule as per revised new revenue survey required by the Dept. Of Mines and Geology, Government of Jharkhand.

5. We would also like to bring into your kind notice that PVUNL has taken lots of initiatives for the development of coal block, which are possible without GR. And, even, had taken up the following activities related to development of Banhardih coal mine, with the anticipation that GR would be ready in a shorter timeframe after the prior consent received from MoC in June,2017 :

- For land acquisition, PVUNL has been granted Section 4(1) under CBA Act vide Gazette notification dated 30.11.2017.

Plan for land acquisition application under Section 7(1) under CBA Act got certified from CMPDI and has been submitted to MoC on 29.07.2019.

- Finalization and authentication of land schedules by district authority.
- Feasibility Report for coal evacuation from Banhardih mine to Patratu Power Station was prepared and got approval from Railways.
- Socio-Economic Survey (SES) for project-affected people completed.

Shanta Gulia
श्रीमती शंका गुलिया / Smt. Shanta Gulia
असistant कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला विभाग कार्यालय / O/o. The Coal Controller
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B-Tech (M.Tech)
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Subodh John Purti
SUBODH JOHN PURTI
 Sr. Manager (Civil/Coal Mine)
 PATRATO VIDYUT UTYADAN NIGAM LTD.
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 Patratu, Dist.-Rangpur-820119

e. Authentication & certification of forest area was done through the respective Divisional Forest Officer.

6. In this context, we would also like to draw your kind attention to the following facts :

- i) The meeting of Scrutiny Committee of MoC held on 24/9/2018 was regarding milestone schedules indicated in the show-cause notice served to JUUNL.
- ii) The Scrutiny Committee of MoC in its meeting held on 24/9/2018, which was also attended by representatives of JUUNL & PVUNL, did not discuss about the reply / clarifications submitted by PVUNL against the milestones indicated in show-cause notice served to PVUNL, vide MoC letter dated 13/9/2018. Even no such meeting/hearing was conducted before Scrutiny Committee / MOC at any date after submission of reply by PVUNL on 24.09.2018 and as such, PVUNL was not given any opportunity to present its case.
- iii) In the review meetings of all coal mines allocated through auction/allotment, chaired by Secretary(Coal), held on 24.05.2017, 02.06.2017 & 05.06.2017, it was discussed & recorded that the preparation of GR has been pending for about 2 years.

In the 8th. meeting of Monitoring Committee of Secretary(Coal) held with Chief Secretary, Jharkhand, on 11.01.2019, the issue of non-availability of GR was discussed. During the meeting, it was submitted that the GR would be available within one month. And, it was discussed that subsequently, within 3 months Mining Plan would be submitted to MoC and after GR, applications for all the clearances would be made and within 18 months, allottee would have EC/FC for the coal mine.

However, it is humbly submitted that the non-availability of GR, the vital & essential input for all subsequent milestones, was not considered while evaluating the performance of PVUNL in achieving of the Efficiency Parameters during BG appropriation decision.

- iv) Further, in this regard, Secretary(Energy), Government of Jharkhand, vide their letter dated 27.07.2019, has also brought out the factual reasons for non-achievement of the milestones and requested your good office to drop the show cause and consequent penalties. It was also communicated in this letter that the GR has now been made available (received on 27.07.2019) and the activities, which are dependent upon it, can now be expedited.

Therefore, considering the circumstances as explained above by PVUNL and also by Government of Jharkhand in their above-referred letter, you are requested to kindly consider the following :

- 1) Revising of the 'Zero Date' of 'Efficiency Parameters' to '27.07.2019', considering the date of actual availability of GR;
- 2) To revise all the Efficiency Parameters / milestones schedule considering the above 'Zero Date';
- 3) To revert the BG appropriation amount of Rs. 118.80 Crore to PVUNL.

With kind regards,

Yours faithfully,

Sudarsan Chakrabarti
 (Sudarsan Chakrabarti)

श्रीमती शान्ता गुहा / Smt. Shanta Guha
 उप महासक कोयला नियंत्रक / Dy. Asstt. Coal Controller
 भारत सरकार / Govt. of India
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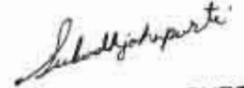
12/08/2019
3/12/2019
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 1971
 e-mail : sinhaswoshan@gmail.com

Letter No. 18/Board-01-U.V.-12/2008

Government of Jharkhand
Department of Energy

From,

Vandana Dadel,
Secretary,


SUBODH JOHN PURTI
Sr. Manager (Coal Mine)
PATRATI VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of Jharkhand State Power Corporation Ltd.)
Patratu, Dist.-Rangpur-829119

To,

Shri Ashish Upadhyay
Joint Secretary & the Nominated Authority,
Ministry of Coal, Govt. of India,
Shashtri Bhawan,
New Delhi-110001
Email ID : nomauthority.moc@nic.in
Fax:- 011-23414136

Ranchi, dated :.....

Subject:- Request for non-appropriation of the performance Bank Guarantee No. 4902IPEBG150029 amounting Rs.11.88 Crores from JUUNL and performance Bank Guarantee No. 16090100005689 amounting Rs.118.80 Crores from PVUNL with respect to development of Banhardih Coal Mine .

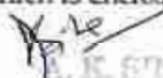
Ref.:- Your letter ref. no.-F.No.-103/18/2015/NA dated 17.07.2019
Sir,

With reference to the Ministry's Letter No.-103/18/2015/NA dated 17.07.2019 (copies enclosed) on the referred subject it is observed that the Ministry has decided to appropriate performance Bank Guarantee submitted against Banhardih Coal Block linked with efficiency parameters of development/ milestone by JUUNL and PVUNL.

It has been also observed that Ministry has taken a decision that the financial liabilities of adherence with efficiency parameters after dated 18.04.2016 lie in the part of PVUNL and before 18.04.2016 lie in the part of JUUNL. Accordingly, the Ministry issued this notice for appropriation of 5% amount of performance B.G. of JUUNL amounting to Rs.11.88 Crores on account of delay in prospective licences and completion of exploration and preparation of GR and 50% amount of performance guarantee amounting to Rs.118.8 Crore from PVUNL for delay in efficiency parameters of mining lease application, submission of mining plan, mine plan approval, forest and environment clearances.

In this regard, this is to submit that Ministry of Coal had issued a show cause notice against non-achievement of prescribed milestones vide letter dated 25.04.2016 to JUUNL and reply to that notice was submitted vide letter no.-54 dated 04.05.2016 by MD, JUUNL, copy of which is enclosed herewith.

श्रीमती शान्ता गुप्ता / Smt. Shanta Gupta
एन सीआर डीएल नियंत्रक / Dy. Asst. Coal Controller
भारत सरकार / Govt. of India
कोयला विनियमन आयोग / O/o. The Coal Controller
1, राजनिवास हाउस स्ट्रीट / 1, Council House Street
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S. K. GUPTA
B-Tech (Mechanical Engg) (COAL)
[Signature]
e-mail : sintisawdesh@gmail.com

Also show cause notice were sent to PUVNL by your office dated 13.09.2018 against non-achievement of prescribed milestones and reply to that notice was submitted vide letter dated 22.09.18, a copy of which is enclosed herewith.

It is humbly submitted to consider the circumstances of the delay in achievement of milestones on the part of JUUNL & PVUNL despite their regular efforts mentioned hereunder. The main reasons for delay in obtaining Prospecting License and preparation of G.R. by JUUNL was due to:

- a) Wrong entry of the names of the villages and time taken in the rectification of the same through an amendment in the Ministry of Coal.
- b) Time taken in obtaining the certified boundary map with the co-ordinates of Coal Block Boundary from CMPDIL and consequent preparation of land schedule as per revised new revenue survey required by the Dept. of Mines and Geology, Government of Jharkhand.

Clearly JUUNL had no control over the above-mentioned situations and reconsideration of the case of JUUNL is therefore requested.

Regarding non-achievement of milestones of mining lease application, submission of mining plan, mine plan approval forest and environment clearance for which decision for appropriation of 50% B.G from PVUNL have been taken by the Ministry, in this regard, it is submitted that the above mentioned delay on the part of JUUNL had a cascading effect on PVUNL, who were dependent on completion of milestones by JUUNL, leading to non-achievement of the milestones of mining lease application, submission of mining plan, mine plan approval, forest and environment clearances.

As per Schedule-E (efficiency parameters) of the allotment agreement for Banhardih coal mine, preparation and completion of GR is the 2nd milestone activity and without the attainment of this milestone, the subsequent milestone activities could not be taken up and thus, schedules for post-GR milestones could not be adhered to by PVUNL.

It is worthwhile to bring to your notice that PVUNL has taken a lot of initiatives for the development of coal block, which were possible without GR in anticipation that JUUNL would finalize the GR in a shorter timeframe, after the prior consent received from MoC in June,2017. Some of the activities are listed as follows :

- a. For land acquisition, PVUNL has applied and been granted Section 4(1) under CBA Act vide Gazette notification dated 30.11.2017.

Plan for land acquisition application under Section 7(1) under CBA Act got certified from CMPDI and will be submitted to MoC in this month.

- b. Finalization and authentication of land schedules by district authority,

श्रीमती शर्मिष्ठा गुप्ता / Smt. Sharmista Gupta
उप सहायक क्षेत्रीय निरीक्षक / Dy. Asstt. Coal Controller
राज्य सरकार / Govt. of India
कोयला निरीक्षण कार्यालय / O/o, The Coal Controller
1, बालकृष्ण कृष्ण स्टीर / 1, Balakrishna Krishna Steer
कोयला-700 001 / Koldam

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Subodh John Puri
SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
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Patna, Dist.-Rangach-825119

c. Feasibility Report for coal evacuation from Banhardih mine to Patratu Power Station was prepared and received approval from Railways, which is a long drawn process.

d. Socio-Economic Survey (SES) for project-affected people completed.

e. Authentication & certification of forest area was done through the respective Divisional Forest Officer after putting considerable efforts.

In the light of the above activities performed that were not dependent on GR submission, PVUNL 's earnestness is amply evident in adhering to the project milestones. However further activities like preparation of Mine Plan & its approval, application for Forest Clearance & its approval, application of Environment clearance & its approval etc. related to milestone parameters cannot be undertaken without the availability of Geological Report for which Ministry has appropriated 50% of performance bank guarantee which is unfair to PVUNL as the delay is borne out of circumstances beyond the control of PVUNL. This appropriation by the Ministry is detrimental to PVUNL as it has scarce resources at its disposal to complete a 4,000 MW Power plant which is critical for self-sufficiency and 24X7 power availability in the state. If at the start of the project, such a huge amount by way of penalty is imposed on the JV company which is already financially constrained, the project would certainly be at stake.

It is clear from the aforesaid that despite the commitment of both Government of Jharkhand and NTPC, milestones were not achieved due to the unavoidable circumstances and not due to reluctance.

Therefore, it is requested to kindly re-consider the decision of the Ministry regarding appropriation of B.G. as communicated vide letter dated 17.07.2019 under reference. It is our humble submission that Government of Jharkhand is committed to make Jharkhand a Power Hub and hence this project of installation of 4,000 MW is very important. State government is providing all the necessary support required for the timely installation of the power plant which is critical for state's power availability in future.

Moreover, I would like to submit that the critical Geological Report which was delayed over a period of 2 years leading to cascading delays in achievement of efficiency parameters/milestones has been completed and received this week. As this report was the key cause for the delay, now certainly the activities which were dependent on it, can be expedited.

In the light of the above, it is requested that the Ministry would be kind enough to drop the show cause and consequent penalties.

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JVVNL)
Patratu, Dist.-Rangpur-829119

Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
असistant कोयला निरीक्षक / Dr. Asstt. Coal Controller
भारत सरकार / Govt. of India
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A. K. Sinha
A. K. SINHA
B-Tech (M... (COAL)
e-mail : akinswaha@gmail.com

It is further requested that the date of completion of milestones may also be kindly rescheduled as requested earlier vide letter dated 22.09.2018 (copy enclosed). State Government will take appropriate measures to ensure that PVUNL adheres to the rescheduled timelines

Yours faithfully

Sd/-
(Vandana Dadel)
Secretary

Memo No.

Date :

Copy forwarded to MD, JUUNL/CMD, JUVNL, Ranchi for kind information.

Sd/-
(Vandana Dadel)
Secretary

Memo No.

Date :

Copy forwarded to CEO, PVUNL for kind information.

Sd/-
(Vandana Dadel)
Secretary

Memo No.

Date :

Copy forwarded to Chief Secretary, Govt. of Jharkhand, Ranchi / Principal Secretary to Hon'ble Chief Minister, Govt. of Jharkhand, Ranchi for kind information.

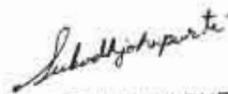
Sd/-
(Vandana Dadel)
Secretary

Memo No. ...1919...

Date : ...27.07.19...

Copy submitted to Secretary, Ministry of Coal, Govt. of India, New Delhi for kind information.


27.7.19
(Vandana Dadel)
Secretary


SUBODH JOHN PURTI
Sr. Manager (Cust./Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC) Ltd. in Joint Venture with JUVNL
Patratu, Dist.-Ranchi-829119


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4. After receiving Prior Consent from the NA on 21.06.2017, PVUNL approached JUUNL to get final GR, and then it came to the knowledge of PVUNL that the matter was not pursued further by JUUNL to finalize the incomplete draft GR since 2014.

As may be seen from the ensuing paragraphs, following sincere efforts were made by PVUNL to get the GR

- > Vide letter dated 21.07.2017 PVUNL requested to JUUNL/DoMG to convene a meeting to resolve the issue of GR. A meeting was held in this regard on 27.07.2017 where all stake holders were present. JUUNL had agreed to release the payment of the agency involved in the preparation of GR but later an objection was raised by JUUNL and no payment was made by JUUNL to the agency connected with preparation of GR. (Annexure-III)

On the contrary, JUUNL on 21.09.2017 wrote a letter to DoMG with a copy to PVUNL in which DoMG was advised to directly discuss the GR matter with PVUNL, though JUUNL/ISEB had assigned the work of GR to DoMG. It is not out place to mention here that earlier payment of Rs. 70.19Cr was made to JUUNL, only before executing the Deed of Adherence. (Annexure-IV)

- > PVUNL vide letter dtd. 12/01/2018, requested DoMG to hold a joint meeting with JUUNL to resolve the GR issue. When scheduled meeting was postponed PVUNL vide letter dtd. 12/2/2018 requested to Commissioner Mines (GoI) to intervene and resolve the issue so that PVUNL gets GR at the earliest. (Annexure-V)

- > A Meeting was convened by DoMG on 27.02.2018 in which JUUNL did not participate. DoMG clarified that finalization of GR is not possible unless JUUNL releases the payment of agencies involved in the said work. MoM enclosed. (Annexure-VI)

- > PVUNL vide letter 19/4/2018 had asked DoMG regarding the availability of all technical inputs of GR with them, in response DoMG vide letter dtd. 18/5/2018 confirmed the same and reiterated that GR can be finalized only after payment is done to all the agencies involved in GR preparation and drilling. (Annexure-VII)

- > PVUNL vide letter dtd. 1/6/2018 requested MD (JUUNL) to intervene and resolve the issue, so that GR can be made available to PVUNL at the earliest.

In its continuous effort and on apprehension of failing to achieve the milestones of Efficiency parameters, PVUNL vide letter dated 28/6/2018 requested JUUNL to immediately provide GR so that PVUNL can start further block development activities. (Annexure-VIII)

- > Seeing no response from JUUNL, finally PVUNL uploaded the issue of non-availability of GR of Barhadih Coal Block on e-Suvidha portal of GoI on 14.08.2018. The issue was reviewed in two successive review meetings taken by CEO (ex-coal secretary) on 17/8/2018 & 18/9/2018. GR issue is yet to be resolved. (Annexure-IX)

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- 5 Even before PVUNL came in to the picture, the issue of finalization of GR was discussed in the review meeting of MoC. In the record notes of the meetings held on 24/05/2017, 02/08/2017 & 05/06/2017 by Secretary (Coal) to review progress of coal mines following has been recorded about Barnardih coal block. (Annexure-X).

Quote

The preparation of Geological Report (GR) has been pending for 2 years as payments were not made by the allottee to CMPRI. Chief Secretary, Jharkhand directed Commissioner (Mines) Jharkhand to resolve the issue at the earliest and also have a meeting on 05th June, 2017 with CMPRI and the allottee to expedite vetting of the GR by CMPRI and complete the finalization by 30th June, 2017.

Unquote

- 6 During the review meeting taken by Joint Secretary (Thermal), Ministry of Power held on 23.08.2016, regarding finalization of pending Geological Report (GR) of Barnardih coal mine by Dept. of Geology and Mines, Govt. of Jharkhand, Secretary (Energy), Govt. of Jharkhand stated that the issue of GR data is stuck up due to legal problem. (Annexure- XI).

- 7 PVUNL has flagged the issue of non receipt of GR from JUMM, in the state level meeting chaired by chief secretary (Coal) and the state project monitoring meetings chaired CFO State Development Council. (Annexure-XII)

In the 4th monitoring committee meeting held on 23/7/2016, chaired by Secretary Coal, Govt. JUMM was instructed to make pending payments and provide GR to PVUNL. The issue of non receipt of GR has been mentioned in all the Pre-commencement reports sent to your office by PVUNL.

A meeting was called by Secretary (Energy) on 19/9/2016 to resolve the issue of payment regarding GR and subsequent availability of GR, which may take another 4 months after the issue between JUMM & DoMG gets resolved. MoM awaited. Invitation of the meeting attached. (Annexure-XIII)

- 8 In order to commence the development activities of the coal mine, PVUNL requires the Geological Report (GR) as a vital essential input, which has not been handed over by the previous allottee i.e. JUMM, till date. As per Schedule-E (efficiency parameters) of the allotment agreement for Barnardih coal mine, preparation of GR is the 2nd milestone and without the compliance to the schedule of this milestone, the schedule of subsequent milestones could not be practically taken up and adhered to.

- 9 After the prior consent for assignment of Barnardih coal block was granted by the Nominated Authority, PVUNL had started development activity of the coal block, anticipating that JUMM shall take decision in finalization of GR with DoMG and hand it over to PVUNL at the earliest. PVUNL has already taken the following actions:

- For land acquisition Section 4(1) under CBA Act has been notified vide Gazette notification dated 30.11.2017.
- PVUNL has set up a small office in Lohardih finalization of land schedule work is complete. PVUNL cannot apply for obtaining section-7 without the availability of GR.
- Feasibility study of coal evacuation from mine to end use plant through Indian Railways is under progress.
- Socio economic survey study of the project affected villages has been started.

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e. Budgetary offer has been sought by NTPC from CMPDI Ranchi for preparation of Mining Plan and Feasibility study for Banhardih coal block vide letter dated 18/04/2018, anticipating that GR will be made available by JUUNL in response. CMPDI sought copy of GR as well as confirmation on availability of Minux Model. Since the GR was not made available to us we were unable to provide the requisite inputs to CMPDI. (Annexure- XIV)

10. It is worth mentioning that the show cause notices regarding non compliance of completion of exploration & preparation of geological report (GR), mining lease application & submission of mining plan has been served to JUUNL vide letters dated 17/7/2017 and 19/3/2018 respectively, and the show cause served to PVUNL vide letter dated 13/9/2018 is as a consequence to the non compliance of previous milestones and not due to any laxity or negligence on the part of PVUNL. PVUNL has not been able to comply to the efficiency parameters mentioned in the show cause dated 13/9/2018 in spite of best efforts, due to the non compliance of preceding efficiency parameters by the previous allottee (JUUNL). Annexure-XV)
11. PVUNL has already submitted a request letter to C/o Nominated authority on 09/7/2018, regarding waiver of apportionment from the Bank guarantee of PVUNL if imposed by the Nominated Authority, for those milestones falling after 18/04/2018. (Annexure-XVI)
12. We would like to bring to your kind notice that since PVUNL is acquiring the land under CBA Act, 1957 hence Sl. No. 2 & 3 mentioned in the show cause notice dated 13/9/2018 i.e. previous approval application and previous approval milestones are not applicable to PVUNL.

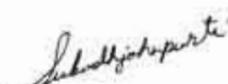
From the above explanation, you may kindly appreciate that,

- (i) Non compliance of efficiency parameters on part of PVUNL is due to non compliance of preceding milestones by JUUNL and has been not complied till date.
 - (ii) All efforts have been made and are being made by PVUNL to obtain GR from JUUNL.
 - (iii) PVUNL, in anticipation has already started block development activity and there is no delay from PVUNL side for compliance of Efficiency Parameters once GR is obtained.
- Therefore, considering the above facts which were beyond the control of PVUNL, it is humbly requested that the show cause notice against PVUNL for Banhardih coal mine may kindly be dropped and fresh Zero date with respect to efficiency parameters may be considered from the date on which PVUNL obtains GR from JUUNL.

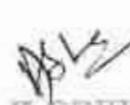
Sir, we sincerely hope that with your esteemed consideration and guidance as provided in the past, we shall be able to overcome this hurdle.

With kind regards


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Annexure-VIII E
Exploration Scheme

Exploration Scheme

For

Banhardih Coal Block

(Geological area 1818.10 ha)

Auranga Coalfield, Latehar District, Jharkhand

Prepared for

PATRATU VIDYUT UTPADAN NIGAM LIMITED
Patratu, P.O.-PTPS Patratu District, Ramgarh, Jharkhand-829119



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Prepared by

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May, 2020

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**Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand**

This block is accessible from Latehar, Ranchi and Daltonganj through NH-75. The southern boundary of coal block is nearest to Village Tota which is about 2 km from National Highway.

The approach of the southern block boundary from NH-75 is accessible from Brahmini through Bari in the east, through Tota in the center and from Jagaldagga in the west. Nearest railway station is Latehar that is about 15 km from the block. The area is situated to the north of Gomoh-Barkakana-Dehri-on-Sone loop of the eastern Railways. Nearest airport is Birsa Munda Airport.

A map showing the location of Banhardih Coal deposit superimposed in the combined Survey of India Toposheets F45A9 & F45A10 is furnished in **figure no. 1.**

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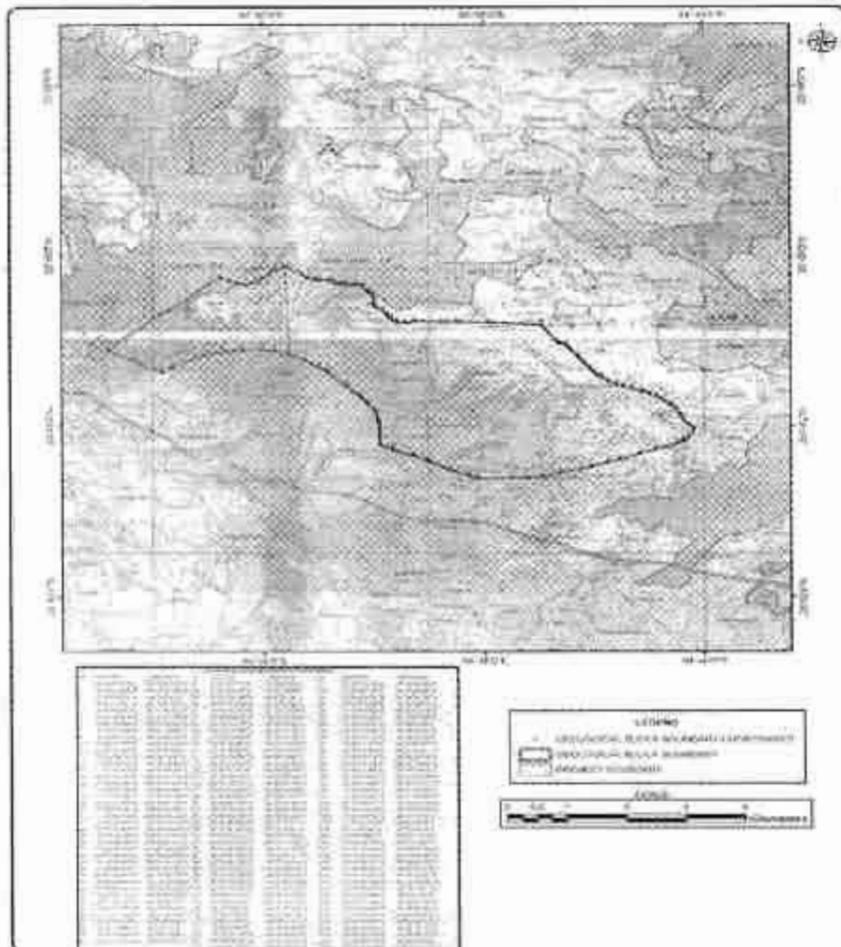


Figure No 1: Map showing the location of Banhardih Coal Block superimposed in the Survey of India Toposheet No.sF45A9 &F45A10.

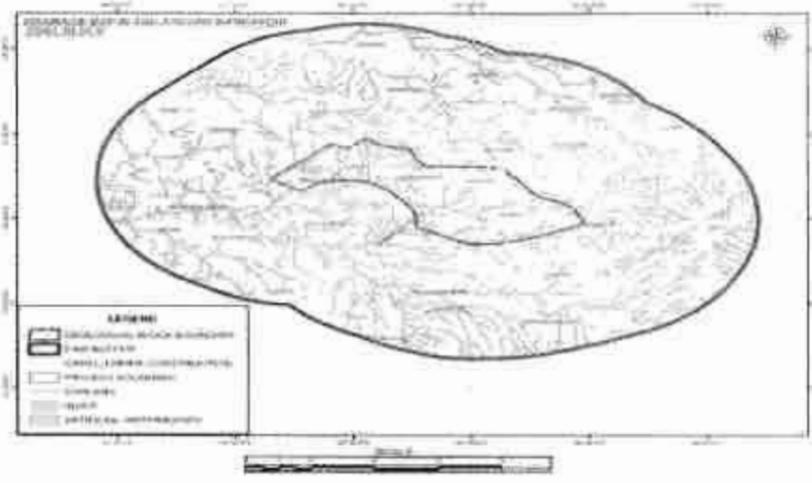
3.0 PHYSIOGRAPHY & DRAINAGE:

The Banhardih Coal Block falls in the Auranga coalfield surrounded by the older metamorphics of the Chhotanagpur Gneissic Complex represented by the Palamau Plateau. The general topography of the block characterizes with rolling terrain with low ridges and depressions. Elevation level of boreholes reveal that the minimum of 423.17m in borehole no 2W and maximum of 459.90m in borehole no 20E. Around 25% of the block is covered with Protected Forest located in the western part. Partly the villages like Serak, Renchi, Banhardih, Surli and Sabanu are falling within the forest area. Rest of the area within the block is covered with cultivated land and residential hutments.

The Bagdagganala and Rajdahanalas and their tributaries forms the main drainage system of the sector. The courses of nalas have been developed into cultivated lands and some gully head bandhs have been constructed across the nalas for storage of water for irrigation. A canal passes across the area from north to south at the Centre and parallel to main connecting road passes through Surli, Huchlu and Bari villages. Due to undulating nature of the land, a number of natural ponds have been formed and these ponds are aligned in a definite line indicating a possible presence of fault. Water level varies from 1 m to 5m. Nearly 10 boreholes drilled in the block are showing the artesian condition.

A drainage plan of the block area with respect to the nearby prominent water bodies are depicted in **Figure no. 2.**

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Figure No 2: Map showing the drainage system in and around Banhardih Coal Block in a radius of 5 km, Latehar District, Jharkhand.

**Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand**

4.0 CLIMATIC CONDITION:

The area is characterized by Sub-Tropical climate. April to June is the summer season with temperature rises up to 45° C or even more. It is very cold during the month of December and January when temperature lowers down to as low as 40 C. The monsoon starts from the middle of June and continues up to mid-September. There is heavy rainfall during the rainy season.

The average annual rainfall of the district is less than 1200 mm. In 2009 it was recorded maximum i.e. 1425 mm. whereas, in 2012 it was 750 mm.

5.0 REGIONAL GEOLOGY (As per Geological Report, prepared by Department of Mines & Geology, Government of Jharkhand) :

Banhardih Coal Block is a part of Auranga Coal Field. The Coalfield is located in the easternmost part of the Koel Valley Group of Coalfields occurring in Latehar district of Jharkhand. Banhardih coal block is situated in the north eastern part of the Auranga Coalfield. The regional geological exploration carried out by the Geological Survey of India has revealed five promising coal bearing sectors in Auranga Coal Field. These sectors are Jagaldagga (10sq.km), Gowa (15 sq.km), Rajbar (50 sq.km), Sabanu (10 sq.km) and Banhardih (10 sq.km). Jagaldaga sector is estimated to yield a total of 113.09 million tonnes of coal. The work in the Gowa sector has also been completed and this area is estimated to have a reserve of 51.48 million tonnes of coal. Banhardih occupies 18 sq km area in the south eastern part of the coalfield. The block is having Formations of Lower Gondwana Group unconformably overlying the Pre-Cambrians rock. The potential coal horizons are mainly confined in the Barakar and Raniganj Formations. Rock and coal exposures in the block is scanty due to the soil cover in major part of the block. However, exposures of Barakar sandstones and Metamorphics present in the block have been mapped.

On the basis of data accrued through drilling and geological mapping of the block, it is interpreted that the Talchir, the Barakar, the Barren Measures and the Raniganj Formations of the Lower Gondwana Group lie unconformably over the Pre Cambrian Metamorphics. In the Banhardi sector, Gondwana - Precambrian boundary in the east is marked by NW- SE trending border fault as evidenced from the occurrence of extensive quartz reef zone near Daria. This border fault is offset by two cross faults. The southern boundary of the sector is also marked by a boundary fault separating the Gondwana sedimentaries and Precambrian

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श्रीमान् विक्रान्त उपदान / 0/0. थ्री कोयला सेंट्रल
1. आर्जेन्टिन ग्रीन स्ट्रीट / 1, सेन्ट्रल हाउस स्ट्रीट
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basement. Barakar Formations in the southern most part lies in juxtaposition to Metamorphics may be due to influence & cumulative effect of fault F₁-F₁ and other sympathetic faults. However, logging of the drilled cores were done by outsourced agencies hence on the basis of documented data as the only source of information this inference has been drawn. Thenorthern boundary of the sector is marked by an E-W trending fault. All the cross-faults developed in this sector are intrabasinal normal faults.

5.1 Geological Succession

A generalized Geological succession of this coal block is as under:

Table No. 1:

Generalized Geological succession of this coal block

Group	Formation	Lithology	Thickness (m)
Lower Gondwana	Raniganj	Greenish to yellowish green, often micaceous and calcareous, fine to medium grained sandstone, siltstone and thin coal bands	1.46(9W)- 581.56(17W)
	Barren Measures	Greenish, medium to coarse grained feldspathic sandstone with predominant black shale and cross bedded sandstone.	19.83(9W)- 265.40(AB13)
	Barakar	Grey to grayish white fine to coarse grained cross bedded and laminated arkosic sandstone, pebble beds, conglomerate and grey to carbonaceous shale, coal seams and fireclay	16.91(24E)- 801.28(B00)
	Talchir	Greenish siltstone, sandstone with shale and laminated sandstone.	0.45(AB02)- 27.85(11E)
-----UNCONFORMITY-----			
Pre-Cambrian		Granite, granite gneiss with patches of micaschist, quartzite and pegmatite veins.	0.47(A3)- 11.00(27E)

5.2 Description of Formations

Pre-Cambrian

Metamorphic rocks constituting the basement of the Gondwana rocks is well exposed in the eastern and southern margin of the block. The southern and eastern margins of the sector are faulted. The metamorphic rocks consisting of granite gneiss, quartzites, mica-schists, amphibolites, pegmatites, vein-quartz etc. occur to the eastern part of the Banhardih sector. Altogether metamorphic

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**Exploration Scheme
 Banhardih Coal Block,
 Auranga Coalfield, Latehar, Jharkhand**

encountered in 43 boreholes in the block. Depth range of occurrence of metamorphic in the drilled boreholes from 6.00m(27E) in the south eastern part of the block to 908.50m(17W) in the south western part. In borehole AB-17 Metamorphics has been intersected at 378.35m depth and having a faulted contact with overlying Barakar Formation.

Talchir Formation

It is interesting to note that though no outcrop of Talchir Formation was delineated on the surface, the sub-surface data of 25 boreholes of E series, A series and AB series indicated the presence of Talchir Formation at depth. Depth of occurrence varies between minimum of 37.60m(24E) in the south eastern part of the block to maximum of 535.84m(A6) in the central part of the block. The sub surface data also reveals that Talchir Formation intersected in the boreholes are having thickness range 2.01m (Bh No 3E) to 27.85m (Bh No 11E). In borehole AB- 17, the Metamorphics directly underlie the Barakar sediments, apparently without any intervening Talchir strata or omission of the strata due to faulting. This suggests that the Talchir Formation occurs as discontinuous pockets and lenses with limited spread. The Talchir Formation is overlain by Barakar Formation with a gradational contact in boreholes AB - 6 and 9. The greenish colour is due to abundance of chloritic material in shale, siltstone, sandstone and heterolithic facies of rocks consisting of interlaminated fine-grained sandstone and shale.

The Talchir Formation is represented by green to greenish white coarse and medium to fine-grained sandstone and shale. The pebbly sandstone contains pebbles of quartz, pink and white feldspar, coarse grained sandstone rock fragments set in a greenish matrix.

Barakar Formation

This Formation is the most important one containing as many as six coal seam zones (I to VI) in ascending order and covers about 50-60% of the terrain of the total area. The coal seams occur as combined and in 2-3 splits. Out of these coal seams at places seams 1T,1B,2&3 attained more than 20m thickness. In addition to six correlatable horizons various coal bands developed in between the identified main coal horizons. At places they attained a thickness of more than 10m. however, due to non-persistent they have been kept as un-correlatable horizons. The maximum thickness of the Barakar Formation encountered in a

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Handwritten notes in right margin:
 1. Barakar Formation is present in all the boreholes.
 2. Talchir Formation is present in all the boreholes.
 3. Metamorphics are present in all the boreholes.
 4. Barakar Formation is overlain by Talchir Formation.
 5. Talchir Formation is overlain by Barakar Formation.

**Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latchar, Jharkhand**

single borehole drilled in this sector is 786.93m (Bh no 2N). However, the sub surface data reveals the thickness range of 16.91m (Bh No 24E) to 786.93m (Bh No 2N) and 773.44m (18W). Depth range of occurrence of Formations in the block varies between 5.50m(AB17&AB18) in almost central part to a maximum of 674.90m(1W) in the south western part. The maximum depth of occurrence of Barakar Formation in the block is at a depth of 988m in borehole no 8W.

The rocks of the Barakar Formation forming low linear ridges and valleys cover most of the eastern part of Banhardi Sector. Barakar Formation is juxtaposed against Metamorphics along NW-SE and almost E-W trending faults in the east and south respectively. The direct contact is concealed in some places but extensive ferrugination and profusion of strewn pebbles of reef- quartz hint probable faulted contact. Abrupt truncated isopach of Barakarsediment package encountered in boreholes against the Metamorphics also suggests a faulted relationship. Near Dana village the Barakars / Metamorphics contact is a faulted one as evidenced by occurrence of quartz-reef. The nature of contact with the underlying Talchir Formation is gradational as reflected in boreholes AB-6 and AB-9. The rock types include grey conglomerate, pebbly sandstone, very coarse-grained sandstone, coarse to fine grained sandstone, very fine-grained sandstone, siltstone, grey shale, carbonaceous shale, sideritic shale, fire clay and coal. Alternation of grey shale and siltstone to very fine-grained sandstone or medium to fine grained sandstone and siltstone, grey shale are very common.

The contact between the Barakar Formation and the overlying Raniganj Formation appears to be gradational.

Barren Measures Formation

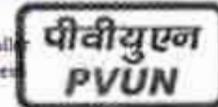
Overlying the Barakar Formation, the Barren Measures Formation occurs in 24 boreholes within the block boundary. Sub surface data reveals the depth of intersection varying between a minimum of 9.00m(2NW) in the central part to a maximum depth of 608.50m(17W) in the south western part of the block. The thickness range of the Formation varies between 19.83m(9W) to 265.40m(AB13). However, in some boreholes Raniganj Formation overlies of Barakar seam without the intervening Barren measures. The Formation is predominantly consisting of shale of dark grey colour with sandy shale at places. However, occasional fine-grained sandstone bands at the transitional zone may

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**Exploration Scheme
 Banhardih Coal Block,
 Auranga Coalfield, Latehar, Jharkhand**

also noticed. The Barren Measures Formation is devoid of any carbonaceous horizon.

Raniganj Formation

Overlying the Barren Measures Formation/Barakar Formation, the Raniganj Formation occupies, covering an area of more than 45% area in the south western and western part of the coal block. This is the uppermost coal bearing formation in Auranga Coalfield. The thickness of Raniganj Formation encountered in boreholes drilled in Banhardi coal block ranges from 1.46m (Bh No 9W) to 581.56m (Bh No 17W). Sub surface data reveals depth of intersections varying between a minimum of 7.20m(ABO2) in nearly central part to a maximum of 39.00m(4W) towards western part of the block. Raniganj Formation overlies the Barakar Formation with gradational contact. However, it is rather difficult to differentiate Barren Measures from that of Raniganj Formation due to absence of very little distinctive lithological character. It has been reported from other part of this coalfield that Barren Measures has conformable and gradational contact with both the underlying Barakar Formation and the overlying Raniganj Formation and the contacts are arbitrarily placed above or below the upper most coal seam of the Barakar Formation and the lowermost coal seam of the Raniganj Formation.

In few boreholes, coal horizons have been encountered which are named R1 to R3 in an ascending order in the block. Seam R1 occurs in 2-3 splits but seams R2 & R3 are seen occurring as composite seam. However, other coaly & carbonaceous horizons within the seams and above & below seams are found to occur.

Raniganj Formation dominantly consists of thinly interlaminated siltstone/fine to very fine-grained sandstone and shale, grey shale, carbonaceous shale, green shale, cross-bedded to internally laminated fine to medium grained sandstones, interbedded with micaceous siltstones, shales and coal seams, calcareous sandstone and marl. The sandstones of Raniganj Formation are distinct from those of Barakar Formation by their greenish tint, even texture, comparatively finer grain size with less of feldspar and more of mica besides calcareous nature. Coarse grained to pebbly sandstones are less frequent whereas finely laminated and cross-bedded sandstones are abundant.

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Panchet Formation

In the southwest, Raniganj beds are overlain by the rocks of Panchet Formation forming flat topped hillocks. The exposures of Panchet Formation are very scanty in this block. The contact between Panchet and Raniganj Formations runs ENE - WSW direction in the west, swings to E - W direction to the south of Sikni village and further east swings to NW - SE direction.

The Panchet Formation represented by variegated, medium to coarse-grained highly cross-bedded sandstone, chocolate and green clay and shale are found to occur to the west of Jokha village and south of Sikni village. The beds have general dip of 20° towards west and gradually changes towards south in the south-western part of this block.

Mahadeva Formation

The Panchet Formation is overlain by a monotonous sequence of highly ferruginous, coarse grained to pebbly sandstone with thin bands of cherry red siltstone. This litho-assembly has been designated as Mahadeva Formation and occurs in the south western part of the sector with an unconformable relation to the underlying Panchet Formation.

5.3 Structure

In the Banhardi sector, Gondwana - Precambrian boundary in the east is marked by NW- SE trending border fault as evidenced from the occurrence of extensive quartz reef zone near Daria. This border fault is offset by two cross faults. The southern boundary of the sector is also marked by a boundary fault separating the Gondwana sedimentaries and Precambrian basement. Barakar Formations in the southern most part lies in juxtaposition to Metamorphics may be due to influence & cumulative effect of fault F1-F1 and other sympathetic faults. However, logging of the drilled cores was done by outsourced agencies hence on the basis of documented data as the only source of information this inference has been drawn. Thenorthern boundary of the sector is marked by an E-W trending fault. All the cross-faults developed in this sector are intrabasinal normal faults. TheBanhardi sector is separated into two parts i.e Western part and Eastern part for the sake of description and development pattern of Formations. It also exhibits horst and graben structure owing to the fault F3-F3 which hades south westerly.

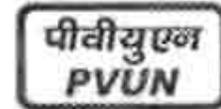
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**Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand**

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Western Part:

It is an arcuate shaped area covered by the lithic assemblages of Raniganj Formation overlain by the Panchet Formation towards south beyond block boundary. The regional strike of the beds of Raniganj Formation is WNW - ESE with 35° to 50° south-westerly dip. However, GSI reported the dip of beds 5° to 7° in the extreme western part of the sector near Borha village (adjacent to the western block boundary).

Eastern Part:

Structurally, the eastern part covered by Barakar Formation can be sub-divided into two different segments. These two segments are clearly separated by an NNW - SSE trending major intrabasinal strike fault which trends north easterly. Major coal seams incrop in both these segments of the eastern part. Further the block may be divided into two parts viz northern and southern part, separated by two major faults running almost east to west. In southern part of the block, Barakar Formation is intersected in boreholes drilled in the area. Some of the seams also occur with their incrops but it is the narrow strips of Formation and strike is swinging from north west to south east. In southern part the Barakar Formation ends at either Talchir or Metamorphic high.

Northern Segment:

The northern segment covers the major part of exposed Barakar Formation and is traversed by a number of ENE - WSW trending intra-basinal cross faults. The coal seam zones of Barakar Formation are affected by these faults. The strike of Barakar sediments is broadly NNW -SSE with 25° to 45° westerly dip. The inclination of beds increases near the boundary fault dipping basin-ward.

Southern segment:

This segment is structurally more complex compared to the northern segment. In this segment, a synformal structure is preserved between the major intrabasinal cross fault dipping northerly. This synformal structure plunges westward with a closure in the east. In the northern limb of this syncline, the beds dip at 25° to 45° while in the southern limb it is 35° to 60°. The strike of the beds in the northern limb is WNW- ESE and swings to N- S near closure and then changes to E- W on the southern limb. Two faults F1F1 & F2F2 on the southern limb have almost E-W trend.

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Table No. 2

Fault intersected in Boreholes of Banhardih Coal Block.

SL.N o.	No of Fault	Direction	Position of Fault	Type of Fault	Throw (in m) and direction of Fault	Evidence of Fault
1	F1-F1	Almost E- W	This fault running almost east to west from eastern to western boundary, and occurring in the southern extremity of the block as boundary fault	Normal strike fault	110-500 and dipping northerly	Floor difference revealed from sub surface data and depression in the surface
2	F2-F2	E-SW	It is running parallel to fault F1-F1 starting from eastern blockboundary, swinging to south west in the central portion and abut at fault F1F1.		360-480 with northerly to north westerly dip	Floor difference in the boreholes
3	F3-F3	Westerly in the western block boundary & Swinging towards south in the central portion and abuts at fault F2-F2	Running from the western block boundary towards central portion and swinging to south and dipping south westerly. This fault abuts at fault F2-F2 in the south dividing the block into two parts where western part encountered Raniganj Formation from the surface and the eastern sector consisting of Barakar Formation.		100-560 and dipping south westerly	Floor level difference and encountering Raniganj & Barakar Formations
4	F4-F4	North westerly to southerly	Starting from the northern block boundary and running upto the central portion which abuts at fault F2-F2		100-160 and dipping easterly	Floor level differences in the borehole
5	F5-F5	NNW-SSE	Starts from the northern block boundary and abuts at fault F2-F2 in the central part of the block		40-50 and dips north easterly	Floor level difference evident from the borehole data

5.4 Broad Geological Details:

Part of the block comprising an area of around 10.49 sq. km out 18.18 sq.km is covered under detail exploration with a borehole density of 7.81 BH/Sq. km. based on the exploration carried out so far, 18 coal horizon has been established in the block. the seam I and II are the most potential coal seams. Besides, there are few local seams which seems to be developed occasionally and attained

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workable thickness in places. The sequence of coal seams and parting details for the explored part of the block is furnished below in table no. 3.

Table No. 3

Thickness Range of All Coal Seam Horizons of Banhardih Coal Block.

Coal seams	Thickness of coal seam (in m)		Coal seam intersected in Total number of Boreholes	Average Thickness of Coal Seam (in m)
	Minimum	Maximum		
R3	1.08	3.88	4	2.2
Borehole	16W	3W		
R2	0.58	8.50	10	4.23
Borehole	18W	20W		
R1 T	0.62	14.68	14	4.74
Borehole	2W	1S		
R1 M	0.61	7.50	15	2.74
Borehole	2W	AB15		
R1 B	0.67	8.5	15	3.04
Borehole	1S	AB13		
6 T	0.88	17.41	13	5.81
Borehole	8W	1N		
6 M	0.74	14.02	13	4.74
Borehole	17W	A8		
6 B	1.18	11.05	15	5.61
Borehole	17W	AB05		
5 T	0.68	10.09	18	4.53
Borehole	7W	A7		
5 M	0.70	7.51	12	2.74
Borehole	1W	18W		
5 B	0.70	10.85	15	3.59
Borehole	1S	13W		
4 T	0.50	15.35	22	3.18
Borehole	2W	17W		
4 M	0.53	8.01	20	2.53
Borehole	7W	A7		
4 B	0.62	13.94	20	3.39

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**Exploration Scheme
 Banhardih Coal Block,
 Auranga Coalfield, Latehar, Jharkhand**

Coal seams	Thickness of coal seam (in m)		Coal seam intersected in Total number of Boreholes	Average Thickness of Coal Seam (in m)
	Minimum	Maximum		
Borehole	1S	15W		
3	0.76	33.55	21	7.14
Borehole	1N	AB14		
2	3.83	57.20	37	26.82
Borehole	18E	A7		
1 T	3.23	49.06	47	23.94
Borehole	4E	A2		
1 B	9.05	68.40	44	37.86
Borehole	17E	4E		

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6.0 EXPLORATION DESIGN:

The exploration activities are subdivided into following activities and are described below:

6.1 Topographical Survey:

The block boundary cardinal points as certified by CMPDI are given below in table no. 4.

Table No. 4

Block Boundary Cardinal Points of Banhardih Coal Block.

POINT ID	Longitude	Latitude	POINT ID	Longitude	Latitude
0	84°34'35.146"E	23°44'53.675"N	61	84°39'1.177"E	23°44'36.863"N
1	84°34'35.247"E	23°44'53.851"N	62	84°39'4.081"E	23°44'34.235"N
2	84°35'4.223"E	23°45'18.641"N	63	84°39'7.658"E	23°44'31.811"N
3	84°35'8.792"E	23°45'21.421"N	64	84°39'12.282"E	23°44'29.245"N
4	84°35'36.825"E	23°45'45.087"N	65	84°39'16.090"E	23°44'28.060"N
5	84°35'41.488"E	23°45'42.488"N	66	84°39'21.317"E	23°44'26.386"N
6	84°35'46.621"E	23°45'40.426"N	67	84°39'26.244"E	23°44'24.782"N
7	84°35'50.824"E	23°45'39.549"N	68	84°39'30.572"E	23°44'22.837"N
8	84°35'55.622"E	23°45'41.037"N	69	84°39'34.600"E	23°44'20.686"N
9	84°35'59.491"E	23°45'44.034"N	70	84°39'38.550"E	23°44'17.985"N

श्रीमती सोना मुल / ...
 २५ सालका योजना निर्माण, ...
 भारत सरकार / Govt. ...
 कोयला विद्येयक कार्यालय / Coal Control ...
 १, कायदेमाला हाता हाउस, ...
 कोयला-७०० ००१ / Kolkata- ७०० ००१



**Exploration Scheme
 Bankardih Coal Block,
 Auranga Coalfield, Latehar, Jharkhand**

POINT ID	Longitude	Latitude	POINT ID	Longitude	Latitude
10	84°36'4.299"E	23°45'47.781"N	71	84°39'42.571"E	23°44'14.527"N
11	84°36'7.933"E	23°45'50.133"N	72	84°39'45.100"E	23°44'11.763"N
12	84°36'10.864"E	23°45'52.273"N	73	84°39'46.657"E	23°44'9.140"N
13	84°36'12.267"E	23°45'52.370"N	74	84°39'47.916"E	23°44'6.057"N
14	84°36'13.901"E	23°45'51.939"N	75	84°39'49.248"E	23°44'3.898"N
15	84°36'21.239"E	23°45'46.641"N	76	84°39'51.256"E	23°44'1.618"N
16	84°36'25.084"E	23°45'44.045"N	77	84°39'52.968"E	23°44'0.028"N
17	84°36'28.468"E	23°45'42.956"N	78	84°39'54.757"E	23°43'58.781"N
18	84°36'31.039"E	23°45'42.839"N	79	84°39'54.554"E	23°43'58.164"N
19	84°36'34.545"E	23°45'43.041"N	80	84°39'54.267"E	23°43'57.081"N
20	84°36'36.180"E	23°45'42.712"N	81	84°39'50.980"E	23°43'51.156"N
21	84°36'37.929"E	23°45'41.845"N	82	84°39'48.805"E	23°43'49.719"N
22	84°36'39.084"E	23°45'40.894"N	83	84°39'45.807"E	23°43'48.424"N
23	84°36'40.876"E	23°45'40.336"N	84	84°39'33.971"E	23°43'43.930"N
24	84°36'42.221"E	23°45'40.056"N	85	84°39'25.358"E	23°43'40.936"N
25	84°36'44.914"E	23°45'40.114"N	86	84°39'14.197"E	23°43'36.783"N
26	84°36'48.804"E	23°45'40.375"N	87	84°39'8.205"E	23°43'34.811"N
27	84°36'51.122"E	23°45'40.297"N	88	84°38'58.321"E	23°43'31.685"N
28	84°36'52.840"E	23°45'39.671"N	89	84°38'53.378"E	23°43'30.053"N
29	84°36'54.705"E	23°45'38.631"N	90	84°38'41.476"E	23°43'27.279"N
30	84°36'56.639"E	23°45'36.421"N	91	84°38'31.817"E	23°43'24.496"N
31	84°36'58.126"E	23°45'34.419"N	92	84°38'23.739"E	23°43'23.771"N
32	84°36'59.982"E	23°45'31.451"N	93	84°38'14.971"E	23°43'23.431"N
33	84°37'0.122"E	23°45'29.386"N	94	84°37'58.023"E	23°43'23.348"N
34	84°37'0.263"E	23°45'27.458"N	95	84°37'56.330"E	23°43'23.904"N
35	84°36'59.957"E	23°45'25.944"N	96	84°37'51.521"E	23°43'25.483"N
36	84°37'0.403"E	23°45'25.323"N	97	84°37'41.222"E	23°43'29.654"N
37	84°37'1.295"E	23°45'24.081"N	98	84°37'29.662"E	23°43'35.895"N
38	84°37'3.009"E	23°45'22.904"N	99	84°37'22.276"E	23°43'39.572"N
39	84°37'5.395"E	23°45'21.174"N	100	84°37'10.555"E	23°43'43.542"N
40	84°37'6.659"E	23°45'19.723"N	101	84°37'3.321"E	23°43'47.562"N
41	84°37'7.699"E	23°45'18.136"N	102	84°37'3.498"E	23°43'53.619"N
42	84°37'8.291"E	23°45'16.688"N	103	84°37'3.154"E	23°44'0.092"N
43	84°37'9.705"E	23°45'15.168"N	104	84°37'2.354"E	23°44'4.982"N
44	84°37'10.898"E	23°45'14.337"N	105	84°37'1.031"E	23°44'10.150"N
45	84°37'13.062"E	23°45'13.365"N	106	84°36'56.796"E	23°44'16.018"N
46	84°37'16.052"E	23°45'13.078"N	107	84°36'53.002"E	23°44'20.438"N

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Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand

POINT ID	Longitude	Latitude	POINT ID	Longitude	Latitude
47	84°37'17.622"E	23°45'12.866"N	108	84°36'45.485"E	23°44'28.177"N
48	84°37'19.791"E	23°45'12.995"N	109	84°36'35.212"E	23°44'38.542"N
49	84°37'21.964"E	23°45'13.881"N	110	84°36'30.813"E	23°44'41.381"N
50	84°37'45.520"E	23°45'13.444"N	111	84°36'22.834"E	23°44'46.368"N
51	84°38'2.868"E	23°45'12.963"N	112	84°36'14.177"E	23°44'50.462"N
52	84°38'31.802"E	23°45'11.263"N	113	84°36'6.560"E	23°44'52.900"N
53	84°38'38.856"E	23°45'0.703"N	114	84°35'59.534"E	23°44'53.684"N
54	84°38'40.940"E	23°44'58.492"N	115	84°35'48.990"E	23°44'53.792"N
55	84°38'42.582"E	23°44'57.934"N	116	84°35'37.616"E	23°44'52.252"N
56	84°38'44.898"E	23°44'57.305"N	117	84°35'28.709"E	23°44'50.357"N
57	84°38'47.275"E	23°44'53.991"N	118	84°35'22.715"E	23°44'47.833"N
58	84°38'51.884"E	23°44'48.190"N	119	84°35'10.572"E	23°44'41.338"N
59	84°38'55.302"E	23°44'43.702"N	120	84°35'5.024"E	23°44'38.054"N
60	84°38'58.424"E	23°44'39.765"N	121	84°34'35.264"E	23°44'53.536"N

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Subcdh John Purti

Subcdh
श्रीमती विद्या 7781 / Smt. Sunita Chulia
307 सारवा-कोला फील्ड / Dy. Asstt. Coal Controller
कोला सारवा / Govt. of India
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The survey work will be carried out with the aid of DGPS & Total Station instruments. Benchmark references & associated information required for the survey work in the additional area will be carried forward from the existing explored area. Existing topographical survey data of 1043 Ha area will be required during the period of survey activity to maintain the parity of the work.

Once the benchmarks are established, topographical survey (on RF 1:4000/5000) will be conducted by Total Stations. All relevant surface features will be surveyed to indicate the boreholes, geophysical points; water bodies, habitations, roads, railway tracks, hillocks, rock exposures and determination of reduce level of boreholes, or any other relevant map-able surface features to prepare the surface plan of the block.

Surveying of the boreholes will be conducted with Total station & shall be processed in software's. Spot level will be taken at 5 -10 m interval and also at closer interval when there is abrupt change in ground elevation.

6.4 Geological Mapping:

Detailed Geological mapping (on RF 1:4000/5000) including outcrops of different lithological units/coal seams, structural details, will be



completed within the first phase of drilling activity. The available rock outcrops will be correlated and marked in the map. The basin boundary in the southern part of the block will be deciphered through resistivity profiling and utilized for preparation of Geological Map.

6.5 Drilling:

It will be ensured to maintain the overall recovery of the core 85%-90%(ignoring the area having structural & formational difficulties). Full coring borehole with diameter of NQ or HQ size with double tube or triple tube wire-line system will be followed in the present exploratory drilling program. This proposal is prepared considering the coring borehole only, however the addition of the infilling non-coring boreholes will be done after completion of the coring drilling. Boreholes will be closed on attaining atleast 7 meter depth after intersection of the lowermost coal seams of the part. Few boreholes, comprising about 25% of the total number of boreholes will be extended till the metamorphic. So far, the block is explored with 82 number of drill holes done by GSI and DMG, Jharkhand. Details are provided in table no. 5.

Subodh John Purti
श्रीमान् श्रीमान् श्रीमान् / Sr. Manager (Civil Coal Mine)
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एन एन एन एन एन एन एन / Govt. of India
कोयला विभाग कार्यालय / O/o. The Coal Controller
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कोयला - 700 001 / Kolkata - 700 001

Table No. 5:

Details of drilled boreholes of Banhardih Coal Block

Sl. No.	No. of Boreholes	Agency	Type	Meterage (m)
1	15	Geological Survey of India	Coring	6432.60
2	67	Department of Mines & Geology, Government of Jharkhand	Coring	35299.00
Total	82			41731.60

Table No. 6:

Details of proposed boreholes of Banhardih Coal Block

List of Proposed Boreholes in Unexplored area					
POINT ID	X	Y	LATTITUDE	LONGITUDE	PROPOSED DEPTH (M)
p1	257611.275	2628720.774	23° 45' 4.7298" N	84° 37' 18.8491" E	824.00
p2	257611.275	2628320.774	23° 44' 51.7341" N	84° 37' 19.0852" E	954.00
p3	257611.275	2627920.774	23° 44' 38.7385" N	84° 37' 19.3213" E	1097.00
p4	257611.275	2627520.774	23° 44' 25.7428" N	84° 37' 19.5573" E	1200.00



**Exploration Scheme
 Banhardih Coal Block,
 Auranga Coalfield, Latehar, Jharkhand**

List of Proposed Boreholes in Unexplored area

POINT ID	X	Y	LATTITUDE	LONGITUDE	PROPOSED DEPTH (M)
p5	257611.275	2627120.774	23° 44' 12.7471" N	84° 37' 19.7933" E	1100.00
p6	257611.275	2626720.774	23° 43' 59.7514" N	84° 37' 20.0293" E	700.00
p7	257611.275	2626320.774	23° 43' 46.7557" N	84° 37' 20.2652" E	800.00
p8	257212.628	2626584.000	23° 43' 55.0911" N	84° 37' 6.0413" E	440.00
p9	257212.628	2626933.657	23° 44' 6.4512" N	84° 37' 5.8347" E	800.00
p10	257212.628	2627333.657	23° 44' 19.4468" N	84° 37' 5.5984" E	700.00
p11	257212.628	2627733.657	23° 44' 32.4425" N	84° 37' 5.3620" E	1100.00
p12	257212.628	2628133.657	23° 44' 45.4381" N	84° 37' 5.1255" E	1147.00
p13	257212.628	2628533.657	23° 44' 58.4337" N	84° 37' 4.8890" E	1028.00
p14	257212.628	2628933.657	23° 45' 11.4294" N	84° 37' 4.6525" E	873.00
p15	256811.275	2629520.774	23° 45' 30.2855" N	84° 36' 50.1382" E	851.00
p16	256811.275	2629120.774	23° 45' 17.2899" N	84° 36' 50.3752" E	967.00
p17	256811.275	2628720.774	23° 45' 4.2943" N	84° 36' 50.6122" E	1117.00
p18	256811.275	2628320.774	23° 44' 51.2987" N	84° 36' 50.8491" E	1100.00
p19	256811.275	2627920.774	23° 44' 38.3031" N	84° 36' 51.0859" E	1100.00
p20	256811.275	2627520.774	23° 44' 25.3075" N	84° 36' 51.3228" E	700.00
p21	256455.278	2628093.516	23° 44' 43.7212" N	84° 36' 38.4189" E	1100.00
p22	256400.106	2628500.118	23° 44' 56.9011" N	84° 36' 36.2305" E	1100.00
p23	256400.106	2628900.118	23° 45' 9.8966" N	84° 36' 35.9931" E	1183.00
p24	256400.106	2629300.118	23° 45' 22.8922" N	84° 36' 35.7558" E	1074.00
p25	256400.106	2629700.118	23° 45' 35.8877" N	84° 36' 35.5183" E	936.00
p26	256011.275	2629920.774	23° 45' 42.8439" N	84° 36' 21.6621" E	1003.00
p27	256011.275	2629520.774	23° 45' 29.8484" N	84° 36' 21.8999" E	1130.00
p28	256011.275	2629120.774	23° 45' 16.8529" N	84° 36' 22.1377" E	1100.00
p29	256011.275	2628720.774	23° 45' 3.8574" N	84° 36' 22.3754" E	1100.00
p30	256011.275	2628320.774	23° 44' 50.8619" N	84° 36' 22.6131" E	1100.00
p31	255670.242	2628534.939	23° 44' 57.6332" N	84° 36' 10.4490" E	1100.00
p32	255670.242	2628934.939	23° 45' 10.6287" N	84° 36' 10.2110" E	1100.00
p33	255670.242	2629334.939	23° 45' 23.6241" N	84° 36' 9.9729" E	1100.00
p34	255670.242	2629734.939	23° 45' 36.6196" N	84° 36' 9.7348" E	1189.00
p35	255670.242	2630082.685	23° 45' 47.9174" N	84° 36' 9.5277" E	1081.00
p36	255299.546	2629812.787	23° 45' 38.9455" N	84° 35' 56.6035" E	1100.00
p37	255270.242	2629520.774	23° 45' 29.4423" N	84° 35' 55.7432" E	1100.00
p38	255270.242	2629120.774	23° 45' 16.4469" N	84° 35' 55.9817" E	1100.00
p39	255270.242	2628720.774	23° 45' 3.4514" N	84° 35' 56.2202" E	1100.00
p40	255119.824	2628459.289	23° 44' 54.8736" N	84° 35' 51.0670" E	1100.00
p41	254870.242	2628720.774	23° 45' 3.2318" N	84° 35' 42.1020" E	1100.00
p42	254870.242	2629120.774	23° 45' 16.2272" N	84° 35' 41.8631" E	1100.00
p43	254870.242	2629520.774	23° 45' 29.2226" N	84° 35' 41.6243" E	1100.00
p44	254811.275	2629920.774	23° 45' 42.1856" N	84° 35' 39.3039" E	1100.00
p45	254479.907	2629595.671	23° 45' 31.4411" N	84° 35' 27.8017" E	1100.00

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Subodh John Purti

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 May, 2020

A. K. SINHA
 B-Team (Coal)
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Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand

पीवीयुएन
PVUN

List of Proposed Boreholes in Unexplored area

POINT ID	X	Y	LATTITUDE	LONGITUDE	PROPOSED DEPTH (M)
p46	254479.907	2629195.671	23° 45' 18.4458" N	84° 35' 28.0409" E	1100.00
p47	254479.907	2628795.671	23° 45' 5.4504" N	84° 35' 28.2802" E	1100.00
p48	254482.238	2628490.380	23° 44' 55.5332" N	84° 35' 28.5450" E	1100.00
p49	254070.242	2628320.774	23° 44' 49.7961" N	84° 35' 14.1053" E	1100.00
p50	254070.242	2628720.774	23° 45' 2.7914" N	84° 35' 13.8657" E	1100.00
p51	254070.242	2629120.774	23° 45' 15.7868" N	84° 35' 13.6261" E	1100.00
p52	253670.242	2628939.965	23° 45' 9.6918" N	84° 34' 59.6102" E	1100.00
p53	253670.242	2628548.513	23° 44' 56.9743" N	84° 34' 59.8510" E	1100.00
p54	253670.242	2628148.513	23° 44' 43.9790" N	84° 35' 0.0910" E	1100.00
p55	253284.913	2628506.794	23° 44' 55.4059" N	84° 34' 46.2760" E	1100.00

List of Proposed Boreholes in Explored area

POINT ID	X	Y	LATTITUDE	LONGITUDE	PROPOSED DEPTH (M)
E1	257917.751	2628865.095	23° 45' 9.0679" N	84° 37' 27.9134" E	320.00
E2	258369.038	2628384.031	23° 44' 54.7572" N	84° 37' 44.5008" E	340.00
E3	258761.578	2628707.230	23° 45' 5.0423" N	84° 38' 0.1799" E	335.00
E4	258600.523	2628163.880	23° 44' 47.6389" N	84° 37' 52.9204" E	335.00
E5	259571.984	2628688.294	23° 45' 5.3628" N	84° 38' 28.1691" E	325.00
E6	259472.062	2627932.781	23° 44' 40.5020" N	84° 38' 23.2099" E	345.00
E7	257886.291	2628145.026	23° 44' 46.1754" N	84° 37' 30.2407" E	320.00
E8	258393.423	2627872.153	23° 44' 37.4775" N	84° 37' 48.0702" E	330.00
E9	258928.392	2627637.662	23° 44' 30.2718" N	84° 38' 7.2122" E	335.00
E10	259814.069	2627041.062	23° 44' 11.0179" N	84° 38' 38.6670" E	325.00
E11	260625.759	2626859.536	23° 44' 5.0528" N	84° 39' 6.8467" E	320.00
E12	259240.097	2626514.723	23° 43' 54.8343" N	84° 38' 16.8117" E	340.00
E13	259434.673	2625986.774	23° 43' 37.1846" N	84° 38' 26.4610" E	345.00
E14	259974.108	2626380.739	23° 43' 50.2675" N	84° 38' 44.7090" E	335.00
E15	261519.253	2626881.340	23° 44' 7.3226" N	84° 39' 39.0878" E	350.00

[Signature]
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May, 2020

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6.6 Core Logging:

The bore holes will be logged & also characteristics like colour, grain size, mineralogical composition, sphericity & roundness of grains, cementing materials, sedimentary structure etc. will be recorded. Daily monitoring will be exercised & proper care will be taken to achieve minimum (85-90)% core recovery for given strata. The structural features, like core dip, Slickenside, fractures, RQD, & Geotechnical logging etc. as exhibited in the bore hole cores will be observed & recorded during logging. All cores will be properly photographed with high resolution camera.

6.7 Geophysical Logging:

Borehole geophysics is another important criteria which will be going to be the significant factor for UG reserve evaluation. The geophysical logging will be recorded using Electronic geophysical Borehole logging digital system. The system provides continuous record of various geophysical parameters with the help of different modules & probes like, resistivity probe, caliper probe, density probe and natural gamma ray probe.

6.8 Sampling / Sample advice:

Sampling will be carried out by the exploration agency as per ISP 2017. Each coal core will be sampled & properly packed, tagged & forwarded to laboratory for further studies along with proper sample advice.

- Band by Band sample advice : from the core logging, band by band analysis will be done for each individual coal, shaly coal (sampling range 0.50m to 1.50m thickness), carb shale & dirt bands (within seam) with range of 0.10m to 1.00m.
- Seam overall advice: On the basis of received band by band analysis result, seam overall advice will be prepared **I₃₀** & **I₁₀₀** & **Ip** Sample basis.
- Special studies (AFT, HGL, Ash analysis, Ultimate analysis, Petrographic test, gassiness & physio-mechanical test etc.) will be advice on the basis of maximum intersected seam thickness & 10% of total exploratory drill holes.
- PMT and Geotechnical Studies.

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जय भारती कोयला निगम लिमिटेड / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
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6.9 Geological Modeling & Reserve Estimation:

Geological model & reserve estimation (Estimation / validation of seam wise reserve, overburden & interburden, and stripping ratio "SR") will be done by highly qualified/ certified & experience team. The interpretation of the geology and structure will be done mainly on the basis of sub-surface data generated through boreholes including existing information. The study of physical characteristics, delineation and disposition of dirt bands in the seam etc. will be carried out on the basis of megascopic study of the borehole cores while the nature of combustible dirt bands, coal quality etc. will be established through chemical analysis of the cores. The data entry, validation, checking, processing of data, 3D model generation & reserve estimation will be done through MS-Excel package and GEOVIA Minex 6.3 software. The seam structure and litho logs generated through AutoCAD Software & All the plans have been generated through MINEX software and final layouts were made in AutoCAD software.

6.10 Hydrogeology:

Hydrogeological Studies including drilling of Pumping and Observation wells, Aquifer Performance tests, Flow Modeling, Impact of Mining and remedial measures.

7.0 WORKING HOURS:

Drilling will be continued 24 hours a day. There will be two shifts for drilling. National Holidays and local Holidays will be off days for the project activities.

8.0 CONTRACT LABOR LAW:

Party will follow all the rules and regulations of labor law as per the contract labor (Regulation & abolition Act 1970). Wedge Payment: Minimum wedges will be paid as per contract labor (R& A 1970) & Contact labor(R& A Central Rules 1971).

For the manpower highly skilled, semi-skilled and un-skilled worker will be engaged as per requirement. In certain cases local unskilled person will be engaged as per requirements. Necessary licenses will be obtained to fulfill the statutory obligations.

[Signature]
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एन एचएल प्रबंधन निदेशिका / Dy. Asstt. Coal Controller
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**Exploration Scheme
Banhardih Coal Block,
Auranga Coalfield, Latehar, Jharkhand**

श्रीमती शान्ता गुहा / Smt. Shanta Guha
डी. आर. कोयला नियंत्रण / Dy. Asstt. Coal Controller
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Geological report is the complete Geological Report incorporating all the chapters in the Text, Annexure & Plates as per preferred format with due consultation of PVUNL. PVUNL's vetting comments on the IGN will have to be incorporated. One hard copy of DGR will have to be submitted to PVUNL along with softcopy for their necessary action.

➤ **Final Geological Report (FGR):** After receipt of PVUNL's vetting comments on the DGR, FGR is to be submitted soon after incorporating these comments along with the pending analysis results. The client will have to ensure the completion of all the analysis & results of the same will be made available to EXPLORATION AGENCY before submission of FGR. EXPLORATION AGENCY will take at least 30 working days after getting the final vetting on DGR including last received of analysis result.

10.0 SEQUENCE OF ACTIVITY:

The activities described above are listed with their approximate quantities in below table number 7.

**Table No. 7
Schedule of work**

Sl. No.	Description of Job	Unit	Quantity	Remarks
1	Drilling of Coring Boreholes, 0-600 meter depth Range).	Meter	5440	16 no. of borehole.
2	Drilling of Coring Boreholes, 600-800 meter depth Range).	Meter	3700	5 nos. of borehole.
3	Drilling of Coring Boreholes, 800-1000 meter depth Range).	Meter	5405	6 nos. of Borehole.
4	Drilling of Coring Boreholes, 1000-1300 meter depth Range)	Meter	47449	43 nos. of borehole.
5	Resistivity Profiling.	LKM	35	To decipher the incrop Zones and Metamorphic Zones.
6	Geophysical Logging.	Meter	61994	100% of drilling.
7	Band by Band Analysis.	Nos.	25455	Considering Average Cumulative Coal Thickness per borehole is 125 meter.
8	Seam Overall Analysis.	Nos.	840	Approx Numbers. Considering 12 number of coal seams in each boreholes on an average. Barring the Local seams.
9	Special Tests	Nos.	100	For Five Boreholes having full sequence.

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May, 2020

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Sl. No.	Description of Job	Unit	Quantity	Remarks
10	PMT	BH	3	Whole Boreholes will be sent for Physico Mechanical tests.
11	Geotechnical Study	BH	2	Two boreholes will be sent to Geotechnical Studies.
12	Hydrogeological Study	LS	1	This includes drilling of Pumping and Observation Well, Electrical Resistivity Survey (VES), APT and Report Preparation.
13	Preparation of Interim Geological Note as per scope of services.	LS	1	Including Printing of IGN.
14	Preparation of Draft Geological Report as per scope of services.	LS	1	Including Printing of DGR.
15	Preparation of Geological Report as per scope of services.	LS	1	Including Printing of FGR.

11.0 EXPLORATION & REPORT PREPARATION PERIOD:

Period of Completion from date of award of work(Days) including 30 days mobilization period		
For Field & Lab studies	For GR	Total
310	90	400

Subodh
 श्रीमती सोभा गुहा / Smt. Shobha Guha
 ज्व. खानाबंदी कोयला निगम / Jw. Asstt. Coal Controller
 भारत सरकार / Govt. of India
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 A. H. PRANTA
 B-Tech (M.E.)
 (COAL)
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Annexure-VIII F

**Letter regarding certification of Block
Boundary of Banhardih Coal Mine by
CMPDIL**



ANNEXURE VIIIIF

cmpdi

A Mini Ratna Company

सेन्ट्रल माईन प्लानिंग एण्ड डिजाइन इन्स्टीट्यूट लिमिटेड
(कोईल इण्डिया लिमिटेड की 100%पूरी स्वाम्यता / भारत सरकार का एक सौदागरी उपक्रम)
गोंदवना प्लेस, कार्का रोड, रांची - 834 031, झारखण्ड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Govt. of India Public Sector Undertaking)
Gondwana Place, Karika Road, Ranchi - 834 031, Jharkhand (INDIA)
CORPORATE IDENTITY NUMBER - U14292JH1975GO1801223

पत्रांक संख्या: सीएमपीडीआई/डीजी/कैपटीव/24/ 677

दिनांक 28.07.2017

सेवा में,

Chief Engineer (Banhardih Coal Block)
Jharkhand Urja Utpadan Nigam Limited
Engineering Building, H.E.C., Dhurwa,
Ranchi - 834004

विषय: Regarding Boundary Map of Banhardih Coal Block, Dist-Latehar.

महाशय,

In continuation to our letter No. सीएमपीडीआई/डीजी/कैपटीव/24/322 dated 31.03.2016 regarding above issue, please find enclosed the revised Geological boundary of Banhardih Coal block along with Geographical Coordinates of its nodal points in WGS84 datum for your kind perusal. Further, it is to be mentioned that this letter supersedes all the previous correspondence(s) made regarding above issue.

धन्यवाद,

संलग्नक: उपरोक्त

भवदीय

आलोक शर्मा
28/7/17

(आलोक शर्मा)

महाप्रबंधक (गवेषण)

Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATO VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. a Joint Venture with BHEL)
Patratu, Dist.-Rangpur-829119

Copy to:

1. General Manager (Geology)/HOD(Exploration), CMPDI, RH-II, Gondwana Place, Ranchi-834031
2. Mr. Faiz Taiyab, AGM, NTPC, Patratu,

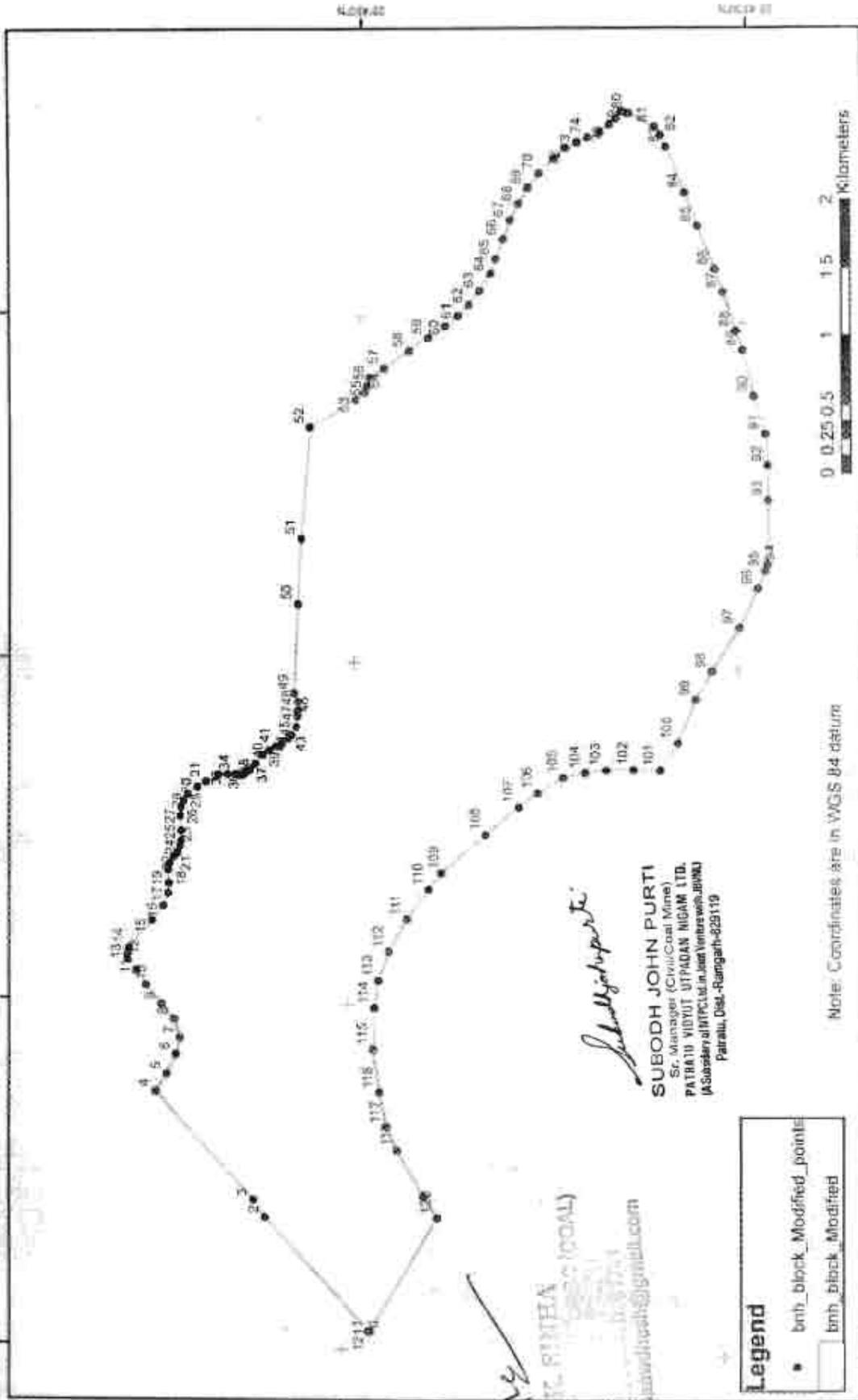
Shanta Guha
श्रीमती शान्ता गुहा / Smt. Shanta Guha
का सहायक कोयला नियंत्रक / Dy. Asstt. Coal Controller
भारत सरकार / Govt. of India
कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
1, कौन्सिल हाउस स्ट्रीट / 1, Council House Street
कोलकाता-700 001 / Kolkata- 700 001

A. K. Sinha
A. K. SINHA
B-Tech (Mining) (COAL)
E-mail: a/sinawd@vsnl.com



फोन नम्बर/Phone No. : 0651 - 2232637
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वेब साइट/Website: www.cmpdi.co.in

BANHARDIH COAL BLOCK



श्रीमती शान्ता गुहा / Smt. Shanta Guha
 ज्य. सहायक कोयला नियंत्रक / Dy. Asst. Coal Controller
 भारत सरकार / Govt. of India
 कोयला नियंत्रक कार्यालय / O/o. The Coal Controller
 1, काउन्सिल हाउस स्ट्रीट / 1, Council House Street
 कोयला-730 001 / Kolkata-700 001

MTC. SYMHA
 B-Block-0-
 e-mail : bnh@sanvedic.co.in

SUBODH JOHN PURTI
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 Patrauli, Dist.-Rangarh-829119

Legend
 • bnh_block_Modified_point
 — bnh_block_Modified

Note: Coordinates are in WGS 84 datum

Subodh John Parti

SUBODH JOHN PARTI
 Sr. Manager (Civil/Coal Mine)
 PATRATU VIDYUT UTPADAN NIGAM LTD.
 (A Subsidiary of NTPC Ltd. in Joint Venture with JSWNL)
 Patratu, Dist.-Rangarh-829119

Banhardih Coal Block (Coordinates in WGS 84)

FID	X WGS	Y WGS	FID	X WGS	Y WGS
0	84° 34' 35.146" E	23° 44' 53.675" N	61	84° 39' 1.177" E	23° 44' 36.863" N
1	84° 34' 35.247" E	23° 44' 53.851" N	62	84° 39' 4.081" E	23° 44' 34.235" N
2	84° 35' 4.223" E	23° 45' 18.641" N	63	84° 39' 7.658" E	23° 44' 31.811" N
3	84° 35' 8.792" E	23° 45' 21.421" N	64	84° 39' 12.282" E	23° 44' 29.245" N
4	84° 35' 36.825" E	23° 45' 45.087" N	65	84° 39' 16.090" E	23° 44' 28.060" N
5	84° 35' 41.488" E	23° 45' 42.488" N	66	84° 39' 21.317" E	23° 44' 26.386" N
6	84° 35' 46.621" E	23° 45' 40.426" N	67	84° 39' 26.244" E	23° 44' 24.782" N
7	84° 35' 50.824" E	23° 45' 39.548" N	68	84° 39' 30.572" E	23° 44' 22.837" N
8	84° 35' 55.622" E	23° 45' 41.037" N	69	84° 39' 34.800" E	23° 44' 20.686" N
9	84° 35' 59.491" E	23° 45' 44.034" N	70	84° 39' 38.550" E	23° 44' 17.985" N
10	84° 36' 4.299" E	23° 45' 47.781" N	71	84° 39' 42.571" E	23° 44' 14.527" N
11	84° 36' 7.933" E	23° 45' 50.133" N	72	84° 39' 45.100" E	23° 44' 11.763" N
12	84° 36' 10.864" E	23° 45' 52.273" N	73	84° 39' 46.857" E	23° 44' 9.140" N
13	84° 36' 12.267" E	23° 45' 52.376" N	74	84° 39' 47.916" E	23° 44' 6.657" N
14	84° 36' 13.901" E	23° 45' 51.939" N	75	84° 39' 49.248" E	23° 44' 3.898" N
15	84° 36' 21.239" E	23° 45' 46.641" N	76	84° 39' 51.256" E	23° 44' 1.618" N
16	84° 36' 25.084" E	23° 45' 44.045" N	77	84° 39' 52.968" E	23° 44' 0.028" N
17	84° 36' 28.468" E	23° 45' 42.956" N	78	84° 39' 54.757" E	23° 43' 58.781" N
18	84° 36' 31.038" E	23° 45' 42.638" N	79	84° 39' 54.554" E	23° 43' 58.164" N
19	84° 36' 34.545" E	23° 45' 43.041" N	80	84° 39' 54.267" E	23° 43' 57.081" N
20	84° 36' 36.180" E	23° 45' 42.712" N	81	84° 39' 50.980" E	23° 43' 51.158" N
21	84° 36' 37.929" E	23° 45' 41.845" N	82	84° 39' 48.805" E	23° 43' 49.719" N
22	84° 36' 39.084" E	23° 45' 40.894" N	83	84° 39' 45.807" E	23° 43' 48.424" N
23	84° 36' 40.876" E	23° 45' 40.336" N	84	84° 39' 33.971" E	23° 43' 43.930" N
24	84° 36' 42.221" E	23° 45' 40.056" N	85	84° 39' 25.358" E	23° 43' 40.636" N
25	84° 36' 44.914" E	23° 45' 40.114" N	86	84° 39' 14.197" E	23° 43' 38.783" N
26	84° 36' 45.804" E	23° 45' 40.376" N	87	84° 39' 8.205" E	23° 43' 34.811" N
27	84° 36' 51.122" E	23° 45' 40.297" N	88	84° 38' 58.321" E	23° 43' 31.685" N
28	84° 36' 52.840" E	23° 45' 39.671" N	89	84° 38' 53.378" E	23° 43' 30.053" N
29	84° 36' 54.705" E	23° 45' 38.631" N	90	84° 38' 41.476" E	23° 43' 27.279" N
30	84° 36' 56.639" E	23° 45' 36.421" N	91	84° 38' 31.817" E	23° 43' 24.496" N
31	84° 36' 58.126" E	23° 45' 34.419" N	92	84° 38' 23.739" E	23° 43' 23.771" N
32	84° 36' 59.982" E	23° 45' 31.451" N	93	84° 38' 14.971" E	23° 43' 23.431" N
33	84° 37' 0.122" E	23° 45' 29.386" N	94	84° 37' 58.023" E	23° 43' 23.348" N
34	84° 37' 0.263" E	23° 45' 27.458" N	95	84° 37' 56.330" E	23° 43' 23.904" N
35	84° 37' 59.957" E	23° 45' 25.944" N	96	84° 37' 51.521" E	23° 43' 25.483" N
36	84° 37' 0.403" E	23° 45' 25.323" N	97	84° 37' 41.222" E	23° 43' 29.854" N
37	84° 37' 1.295" E	23° 45' 24.081" N	98	84° 37' 29.682" E	23° 43' 35.695" N
38	84° 37' 3.009" E	23° 45' 22.904" N	99	84° 37' 22.278" E	23° 43' 39.572" N
39	84° 37' 5.395" E	23° 45' 21.174" N	100	84° 37' 10.555" E	23° 43' 43.542" N
40	84° 37' 6.859" E	23° 45' 19.723" N	101	84° 37' 3.321" E	23° 43' 47.562" N
41	84° 37' 7.699" E	23° 45' 18.136" N	102	84° 37' 3.498" E	23° 43' 53.619" N
42	84° 37' 8.291" E	23° 45' 16.688" N	103	84° 37' 3.154" E	23° 44' 0.062" N
43	84° 37' 9.705" E	23° 45' 15.168" N	104	84° 37' 2.354" E	23° 44' 4.982" N
44	84° 37' 10.898" E	23° 45' 14.337" N	105	84° 37' 1.031" E	23° 44' 10.150" N
45	84° 37' 13.062" E	23° 45' 13.365" N	106	84° 36' 56.796" E	23° 44' 18.018" N
46	84° 37' 16.052" E	23° 45' 13.078" N	107	84° 36' 53.002" E	23° 44' 20.438" N
47	84° 37' 17.622" E	23° 45' 12.866" N	108	84° 36' 45.485" E	23° 44' 28.177" N
48	84° 37' 19.791" E	23° 45' 12.995" N	109	84° 36' 35.212" E	23° 44' 38.542" N
49	84° 37' 21.964" E	23° 45' 13.881" N	110	84° 36' 30.813" E	23° 44' 41.381" N
50	84° 37' 45.520" E	23° 45' 13.444" N	111	84° 36' 22.834" E	23° 44' 46.368" N
51	84° 38' 2.888" E	23° 45' 12.963" N	112	84° 36' 14.177" E	23° 44' 50.462" N
52	84° 38' 31.802" E	23° 45' 11.263" N	113	84° 36' 6.560" E	23° 44' 52.900" N
53	84° 38' 38.856" E	23° 45' 0.703" N	114	84° 35' 59.534" E	23° 44' 53.684" N
54	84° 38' 40.940" E	23° 44' 58.492" N	115	84° 35' 48.990" E	23° 44' 53.792" N
55	84° 38' 42.582" E	23° 44' 57.934" N	116	84° 35' 37.816" E	23° 44' 52.252" N
56	84° 38' 44.898" E	23° 44' 57.305" N	117	84° 35' 28.709" E	23° 44' 50.357" N
57	84° 38' 47.275" E	23° 44' 53.991" N	118	84° 35' 22.715" E	23° 44' 47.833" N
58	84° 38' 51.884" E	23° 44' 48.190" N	119	84° 35' 10.572" E	23° 44' 41.338" N
59	84° 38' 55.302" E	23° 44' 43.702" N	120	84° 35' 5.024" E	23° 44' 38.054" N
60	84° 38' 58.424" E	23° 44' 39.765" N	121	84° 34' 35.264" E	23° 44' 53.536" N

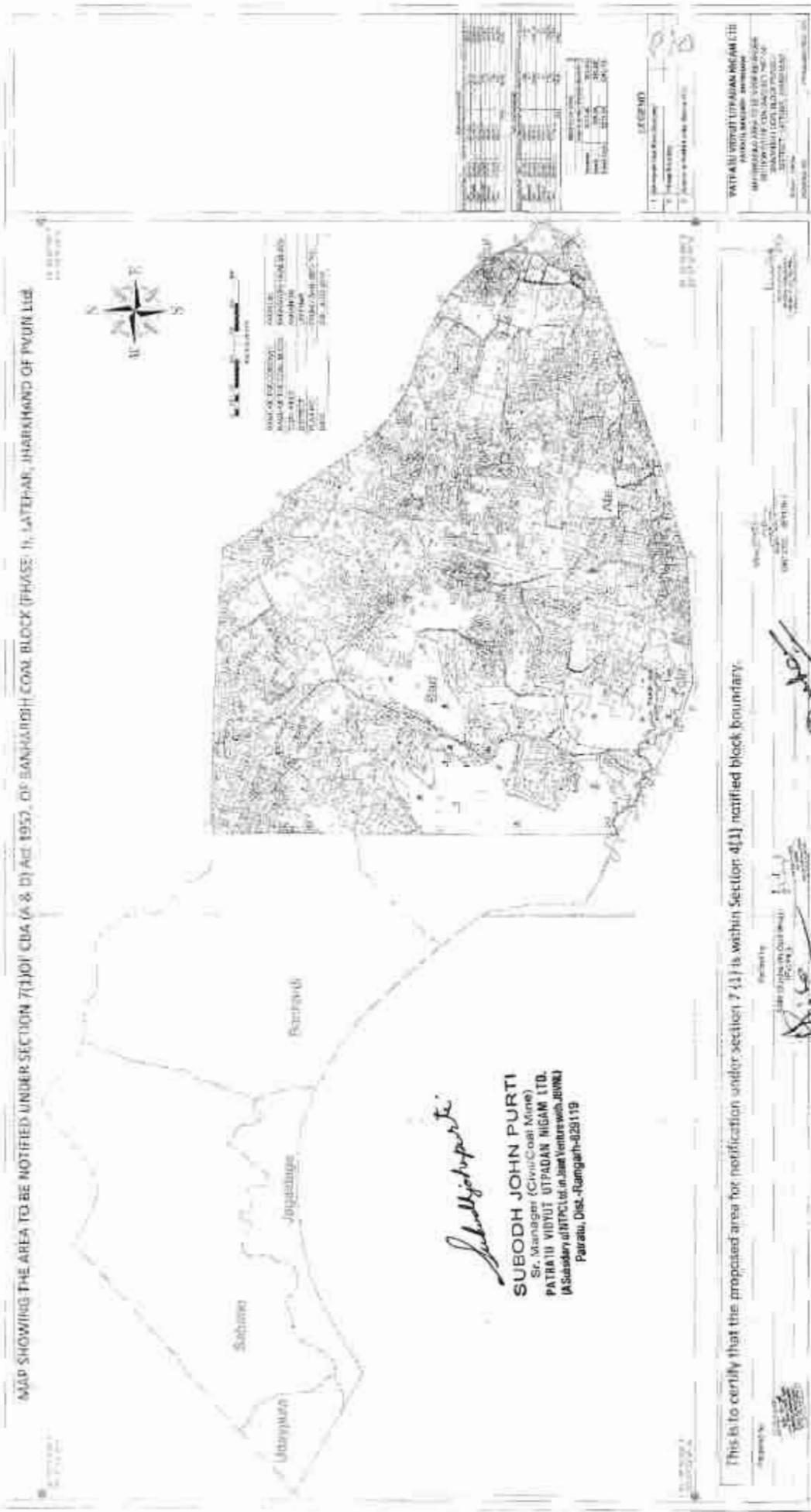
B.L.

Annexure-VIII G

**Certified Boundary of Banhardih Coal Mine
by CMPDIL under notification Section 7 (1)**

ANNEXURE VIII G

MAP SHOWING THE AREA TO BE NOTIFIED UNDER SECTION 7(1)(I) CBA (A & D) ACT 1957, OF BANKARIGH COAL BLOCK (PHASE - II), LATIPAR, JHARKHAND OF PVUN Ltd.



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This is to certify that the proposed area for notification under section 7(1) is within section 4(1) notified block boundary.

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