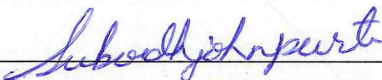


Submission of EDS Compliances w.r.t PCCF(Nodal) Vide letter no 499 dated 19.06.2025 and DFO vide letter no.1713 dated 18.07.2025

Sr. No.	EDS Compliances raised by MOEF &CC on 30.09.2024	Observation of DFO, Latehar	Observation by PCCF(Nodal)	Submission by User Agency (M/s PVUNL) w.r.t PCCF(Nodal) Vide letter no 499 dated 19.06.2025	Submission by User Agency (M/s PVUNL) w.r.t the EDS Sought by DFO, Latehar dated 18.07.2025												
1.	<u>EDS SI.No- 09</u> The user agency in their justification reported that in the initial phase, 727.24 Ha shall be utilised for Mining, 12.24 Ha shall be topsoil preservation, 7.85 Ha for safety zone, 10.21 Ha for Haulage Road in mining, 5.58 Ha for road diversion, 35.7 Ha for Mine end infra, 7.58 Ha for garland drain and 219.68 shall be undisturbed considering the presence of coal in Underground mining method.	The justification submitted by user agency exclaims the adequate coal reserve and the project is site specific as per the GSI report, but UA has not submitted the details of exploration report on the private area i.e. non forest area as well as forest area	इस पृच्छा के संबंध में प्रयोक्ता अभिकरण से प्रतिवेदन प्राप्त कर अग्रेतर कार्रवाई की जाय।	As per the regionally explored data of GSI report (copy enclosed as Flag-A), it proves there is a significant coal reserve in the temporary OB dump area of 440 Ha within the Mining Lease area of 1467.42 Ha, which ascertains the site specificity. However, the detailed exploration is essentially required before the commencement of mining operation as per the conditions imposed by Ministry of Coal in the approved mining plan to prepare a mining scheme for the second	- Geological Survey of India (GSI) has drilled 19 Boreholes in 1818.10 Ha. area of Banhardih Coal block which included temporary OB dump area of 440 Ha. Further, reference taken from Approved Geological Report of Dept. of Mines & Geology, Govt. of Jharkhand for 67 no. of boreholes in 1049 Ha. area of Banhardih Coal block. - Based on outcomes of the borehole drilled by GSI, M/s CMPDIL (Central Mine Planning & Design Institute Limited) the accredited exploratory Agency of Govt. of India and technical wing of Ministry of Coal, Gol for coal reserve estimation & Approval of Mining Plan, certified that the above temporary OB dump area is Coal Bearing area with Coal resources of estimated 170 Million tonne and which is technologically mineable. - This demonstrates the site specificity of the above area within the Mining lease area. (Copy of the Certification is enclosed as Annexure- X). In compliance to condition of Approved Mining Plan, PVUNL has appointed M/s CMPDIL to carry out the exploration in detail in the temporary OB dump area of 440.70 Ha. (Copy of LOA placed to CMPDIL is enclosed as Annexure-Y). It is further submitted that initial exploration as detailed above has already been carried out. Further details of Boreholes in Interim Temporary OB dump area earmarked for future Mining is reproduced as under: <table><tr><th>Agency</th><th>Type</th><th>No. of Boreholes</th></tr><tr><td>Dept. of Mines & Geology, Gov. of Jharkhand</td><td>Coring</td><td>4</td></tr><tr><td>GSI</td><td>Coring</td><td>4</td></tr><tr><td colspan="2">Total nos. of Boreholes</td><td>8</td></tr></table> <i>[Signature]</i>	Agency	Type	No. of Boreholes	Dept. of Mines & Geology, Gov. of Jharkhand	Coring	4	GSI	Coring	4	Total nos. of Boreholes		8
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The balance coal bearing area of 440 Ha shall be utilised for extraction of coal in the second phase as per the condition mentioned in the approved mining plan, presently earmarked for temporary OB dump, which shall be re-handled before commencement of mining in this area. However, the minable reserve in the 440 Ha land has not been given. Further, the status of land (forest & Non-forest land) involved in the first phase of mining comprising 727.24 ha land needs submission along with supporting maps, kml etc.	during processing the proposal no FP/JH/SRY/450505/2023 few queries have been raised by IRO on 19.09.2024. U.A has not submitted reply till date. In the absence of exploration data, it is difficult to ascertain site specificity of a forest land for diversion <i>Subhash Chandra</i>	phase of Mining in the OB dump area. Considering the condition of approved Mining Plan separate application (Form-C) for detailed exploration in Forest area of 0.637 Ha submitted in Parivesh Portal 2.0 to prepare mining scheme in the second phase of mining. Further, the proposal for exploration (Form-C) was recommended by DFO and subsequently recommended by PCCF(Nodal). However, during final approval at region office MOEF &CC, EDS has been sought by IRO on 19.09.2025 w.r.t the proposal no FP/JH/SRY/450505/2023, and the above EDS compliance have	KML file with forest and non-forest area and Borehole locations in Interim Temporary OB dump is being submitted in USB drive (cope of PDF is enclosed as Annexure-Z) The details of land use plan vis a vis given in EDS vis a vis given in MP given below. Land use plan as per Approved Mining Plan Vs Forest proposal <table><tr><th colspan="2"></th><th colspan="3">As per Approved Mine Plan</th><th colspan="3">As per Forest Diversion proposal</th><th rowspan="2">Remarks for change in forest area</th></tr><tr><th>S L</th><th>LAND USE</th><th>TOTAL FOREST IN HA</th><th>TOTAL NON-FOREST (HA)</th><th>TOTAL AREA IN HA</th><th>TOTAL FOREST IN HA</th><th>TOTAL NON-FOREST (HA)</th><th>TOTAL AREA IN HA</th></tr><tr><td>1</td><td>Excavation Area</td><td>106.99</td><td>620.25</td><td>727.24</td><td>94.25</td><td>632.99</td><td>727.24</td><td rowspan="7"></td></tr><tr><td>2</td><td>Top Soil; Dump</td><td>0</td><td>12.24</td><td>12.24</td><td>0.00</td><td>12.24</td><td>12.24</td></tr><tr><td>3</td><td>External Dump / Surface Dump (Temporary)</td><td>349.35</td><td>91.35</td><td>440.7</td><td>307.20</td><td>133.50</td><td>440.70</td></tr><tr><td>4</td><td>Safety Zone</td><td>0</td><td>7.85</td><td>7.85</td><td>1.65</td><td>6.20</td><td>7.85</td></tr><tr><td>5</td><td>Haul Road between quarries</td><td>0.99</td><td>9.22</td><td>10.21</td><td>1.38</td><td>8.83</td><td>10.21</td></tr><tr><td>6</td><td>Road Diversion</td><td>0</td><td>5.58</td><td>5.58</td><td>4.65</td><td>0.93</td><td>5.58</td></tr><tr><td>7</td><td>Settling Pond</td><td>0.64</td><td>0</td><td>0.64</td><td>0.63</td><td>0.01</td><td>0.64</td></tr></table>			As per Approved Mine Plan			As per Forest Diversion proposal			Remarks for change in forest area	S L	LAND USE	TOTAL FOREST IN HA	TOTAL NON-FOREST (HA)	TOTAL AREA IN HA	TOTAL FOREST IN HA	TOTAL NON-FOREST (HA)	TOTAL AREA IN HA	1	Excavation Area	106.99	620.25	727.24	94.25	632.99	727.24		2	Top Soil; Dump	0	12.24	12.24	0.00	12.24	12.24	3	External Dump / Surface Dump (Temporary)	349.35	91.35	440.7	307.20	133.50	440.70	4	Safety Zone	0	7.85	7.85	1.65	6.20	7.85	5	Haul Road between quarries	0.99	9.22	10.21	1.38	8.83	10.21	6	Road Diversion	0	5.58	5.58	4.65	0.93	5.58	7	Settling Pond	0.64	0	0.64	0.63	0.01	0.64
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been submitted by user agency on 25.06.2025 for kind approval.

Regarding Coal Reserve Estimation/Assessment in the 1467.42 ha of mining lease area of approved Mining Plan:

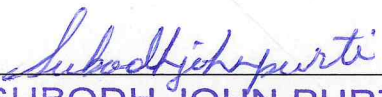
Coal reserve has been estimated in the approved Mine plan by Ministry of Coal. Gross Geological Reserves up to a depth of 1200 meter is 1372.21 Million Tonnes. Gross Geological Reserves up to 300 meter depth is 446.18 Million tonnes. As per the inputs of Geological Report, the Net Geological Reserves up to a depth of 1200 meter is 1234.98 Million Tonnes & Net Geological Reserves

8	Road & Infrastructure Area	2.46	33.24	35.7	7.54	28.16	35.70	As per certified forest land schedule
9	Garland Drain	2.75	4.83	7.58	3.20	4.38	7.58	
10	Undisturbed/ Mining Rights for UG	54.77	164.91	219.68	94.82	124.86	219.68	
	TOTAL	517.95	949.47	1467.42	515.32	952.1	1467.42	

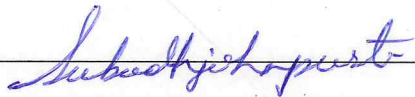
The forest area of 517.95 Ha as per approved mining plan has been revised to 515.32 Ha in the Forest Diversion proposal as per the authenticated Land Schedule of Forest Dept, Latehar on 30.5.2025. This change in area shall be incorporated in Mining Plan accordingly in the due course under the provision of Minor changes for Approval of Mining Plan.

The temporary OB dump area of 440.70 Ha. mentioned at Sl. No 3 of the above table is envisaged for Mining in future.

The component wise/purpose wise details KML maps and PDF Maps for forest land and non-forest land are being submitted in USB drive (cope in PDF is enclosed as **Annexure- XX**). However, the PDF version is enclosed in the PARIVESH Portal 1.0 due to no option for additional KML upload, which is enclosed in USB drive.


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				upto 300 meter depth is 401.56 Million tonnes. Considering the proved reserve of coal as per Geological report and GSI report, the total coal reserve is estimated as 561.56 million tonne (Approximately) as Geological Reserve and 378 Million Tonne as Mineable reserve out of which 350.50 Million Tonnes (Approximately) shall be extracted. The above coal reserve estimation has been calculated based on the extrapolation of the coal seams as per GSI report and Geological report. It is also envisaged that after detailed exploration, the coal reserve may be on the higher side.	
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				Accordingly, in the initial phase Mineable reserve is 270.81 million Tons (Mineable reserve estimated for the quarriable sector up to a depth range of 300 meter only) with 250.5 Million Tonnes extractable in the first phase and the balance of 100 Million tonnes(approximately) shall be extracted in the second phase of mining in the OB dump area of 440 Ha. It is also imperative to mention here in the total mining lease area of 1467.42 ha, the proposed forest diversion area of 515.32 Ha including Notified Forest and GMJJ (deemed forest land) contains approximately 110 Million tonnes of coal is present beneath the	
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Subodh John Parti

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				forest area and in the initial phase of mining, where the extraction of 250 Million tonne of coal is envisaged, it has 60 million tonnes of Coal Reserve beneath the Forest area. Further, during the second phase of mining in the OB dump area it is also envisaged that additional 100 million of coal extraction only 80 million tonnes of coal beneath the forest area considering the mining loss in barrier, batter and safety zone. However, considering the mining methodology in the second phase total envisaged 100 million tonnes of coal shall not be possible to be extracted without	
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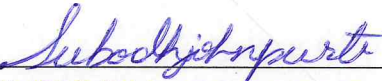
Patratu, Dist.-Ramgarh-829119

				diversion of proposed forest area. It is further concluded that around 160 Million tonnes of coal (60 Million Tonnes in 1st Phase & 100 Million tonnes of coal in 2nd phase of mining) shall be completely lost if the proposed forest diversion over 515.32 Ha is not being granted. Hence diversion of 515.32 Ha is highly essential. In view of the above analysis, it is evident to mention here that elimination of any forest patch of coal bearing area of 1467.42 Ha directs to a loss of 160 million tonne of Mineable reserve(approximately). Thus, excavation of coal from all part of the project area of 1467.42 Ha. is very	
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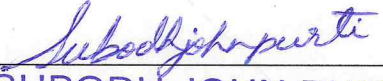

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				much essential and the proposed forest area may not be eliminated. In addition to above, If the coal reserve under the above forest area is left out, mining is not feasible only in non-forest land also the project shall be unviable considering the coal requirement for the captive power plant where there is sustainable coal supply of 12 million Tonne is highly essential to make the PVUNL power plant functional. Furthermore, it also leads to a loss of national wealth to a great extent.	 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.-Ramgarh-829119
02	EDS Sl.No- 14 A map along with KML file's showing the component wise/purpose wise	Submitted by the user agency but the KML file does not match with	इस पृच्छा के संबंध में प्रयोक्ता अभिरक्षण से प्रस्तावित	The component wise breakup showing the component wise/purpose wise utilisation of the	The component wise/purpose wise details KML maps and PDF Maps for forest land and non-forest land are being submitted in USB drive (cope in PDF is enclosed as Annexure- XX). However, the PDF version is enclosed in the PARIVESH Portal 1.0 due to no option for additional KML upload, which is enclosed in USB drive.

utilisation of the proposed forest land, including the components proposed to be undertaken on the Non-forest land shall be uploaded on PARIVESH.	the proposed land use map.	वनभूमि का झडर प्राप्त कर अग्रेतर कार्रवाई की जाय।	proposed forest land, including the components is enclosed in Appendix-3 . However, the PDF version is enclosed in the Parivesh Portal 1.0 due to no option for additional KML upload, which is enclosed in CD as Appendix-3 .	The component wise land break ups for both Forest and Non-Forest land are tabulated as under: <table><tr><th>SR. NO</th><th>LAND USE</th><th>TOTAL FOREST IN HA</th><th>TOTAL NON-FOREST (HA)</th><th>TOTAL AREA IN HA</th></tr><tr><td>1</td><td>Excavation Area</td><td>94.25</td><td>632.99</td><td>727.24</td></tr><tr><td>2</td><td>Topsoil Dump</td><td>0.00</td><td>12.24</td><td>12.24</td></tr><tr><td>3</td><td>External Dump/Surface Dump (Temporary)</td><td>307.20</td><td>133.50</td><td>440.70</td></tr><tr><td>4</td><td>Safety Zone</td><td>1.65</td><td>6.20</td><td>7.85</td></tr><tr><td>5</td><td>Haul Road Between Quarries</td><td>1.38</td><td>8.83</td><td>10.21</td></tr><tr><td>6</td><td>Road Diversion</td><td>4.65</td><td>0.93</td><td>5.58</td></tr><tr><td>7</td><td>Settling Pond</td><td>0.63</td><td>0.01</td><td>0.64</td></tr><tr><td>8</td><td>Road and Infrastructure Area</td><td>7.54</td><td>28.16</td><td>35.70</td></tr><tr><td>9</td><td>Garland Drain</td><td>3.20</td><td>4.38</td><td>7.58</td></tr><tr><td>10</td><td>Undisturbed/Mining Rights for UG.</td><td>94.82</td><td>124.86</td><td>219.68</td></tr><tr><td></td><td>TOTAL</td><td>515.32</td><td>952.1</td><td>1467.42</td></tr></table> 	SR. NO	LAND USE	TOTAL FOREST IN HA	TOTAL NON-FOREST (HA)	TOTAL AREA IN HA	1	Excavation Area	94.25	632.99	727.24	2	Topsoil Dump	0.00	12.24	12.24	3	External Dump/Surface Dump (Temporary)	307.20	133.50	440.70	4	Safety Zone	1.65	6.20	7.85	5	Haul Road Between Quarries	1.38	8.83	10.21	6	Road Diversion	4.65	0.93	5.58	7	Settling Pond	0.63	0.01	0.64	8	Road and Infrastructure Area	7.54	28.16	35.70	9	Garland Drain	3.20	4.38	7.58	10	Undisturbed/Mining Rights for UG.	94.82	124.86	219.68		TOTAL	515.32	952.1	1467.42
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03	EDS Sl.No- 17 As per DSS analysis Shape file/ KML file of forest land proposed for diversion is found 503.568 Ha (software calculated) instead of 515.32 ha as per the online proposal. Therefore, correct KML file of the proposed forest land shall be uploaded/updated.	User agency has submitted modified KML file but as per the modified KML file the total area is coming out more than 515.32 Ha and also village wise forest and JJ land area doesn't match with land schedule submitted by U.A. for diversion.	वन प्रमण्डल पदाधिकारी,ला तेहार वन प्रमण्डल के प्रतिवेदन से यह स्पष्ट नहीं हो रहा है, कि प्रयोक्ता अभिकरण द्वारा समर्पित ज़डर थपसम से कितना ज्यादा रकबा का ज़डर समर्पित किया गया है, जबकि प्रयोक्ता अभिकरण से इसका पूर्ण निराकरण कराकर इस कार्यालय को भेजा जाना अपेक्षित था। इस तरह की अधूरी सूचना / प्रतिवे	Corrected KML map has been uploaded in the portal parivesh 1.0 and also enclosed in CD as Appendix-4.	The revised KML Map with patch wise / plot wise details as per the land schedule are enclosed as Annexure-YY and is being submitted in USB Drive. This revised KML has been uploaded in PARIVESH 1.0.
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			दन भेजने का औचित्य वन प्रमण्डल पदाधिकारी, लातेहार वन प्रमण्डल समर्पित करेंगे तथा इस पर आप अपना मंतव्य सहित भेजेगे।		
04	EDS Sl.No- 21 The land use details at the end of mine life as per the approved mining shall be submitted/uploaded	User Agency has not submitted proper land details at the end of mine life as per the approved Mining Plan.	इस पृच्छा के निराकरण में प्रयोक्ता अभिकरण से इसका पूर्ण निराकरण कराकर वन प्रमण्डल पदाधिकारी, लातेहार वन प्रमण्डल द्वारा अग्रसारित किया जाना चाहिये था। परन्तु इस	As desired, the post mining land use plan as per the approved Mining Plan along with land details are enclosed as Flag-B .	In the approved Mining Plan the total area shown is 1467.42 Ha. out of this, in 1049 Ha. detailed exploration has been done confirming Mineable reserves of 250.50 MT. Balance, 440.70 Ha. area has been earmarked as temporary OB dump area within the Mining lease area of 1467.42 Ha. Further, As mentioned in the Sl no.1 above, the above temporary OB dump area is certified by M/s CMPDIL as Coal Bearing area with estimated 170 Million tonnes of Coal Resources and technologically mineable. However, presently extraction of 250.50 MT is planned as per approved Mining Plan with corresponding OB of 1173 Million cubic meter, which shall be stored temporarily in the temporary OB dump area of 440.70 Ha. and shall be rehandled before commencement of Mining in the OB dump area after detailed exploration & revision of Mining Plan.


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			तरह की अधूरी सूचना / प्रतिवेदन भेजने का औचित्य वन प्रमण्डल पदाधिकारी, लातेहार वन प्रमण्डल समर्पित करेंगे	Further, the detail exploration in the area of 440.70 Ha. (312.90 Ha. of forest area and 127.80 Ha. non -forest land) is under progress and shall be completed on top priority. Based on detailed exploration report, the present Approved Mining Plan may be revisited and shall be re-planned accordingly. In view of the above, consideration for grant of Stage-I Forest approval for the above area is requested, to commence mining operations as per the present approved scheme of Mining.
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**Central Mine Planning & Design Institute
Limited**

**Regional Institute-III
TO WHOM IT MAY CONCERN**

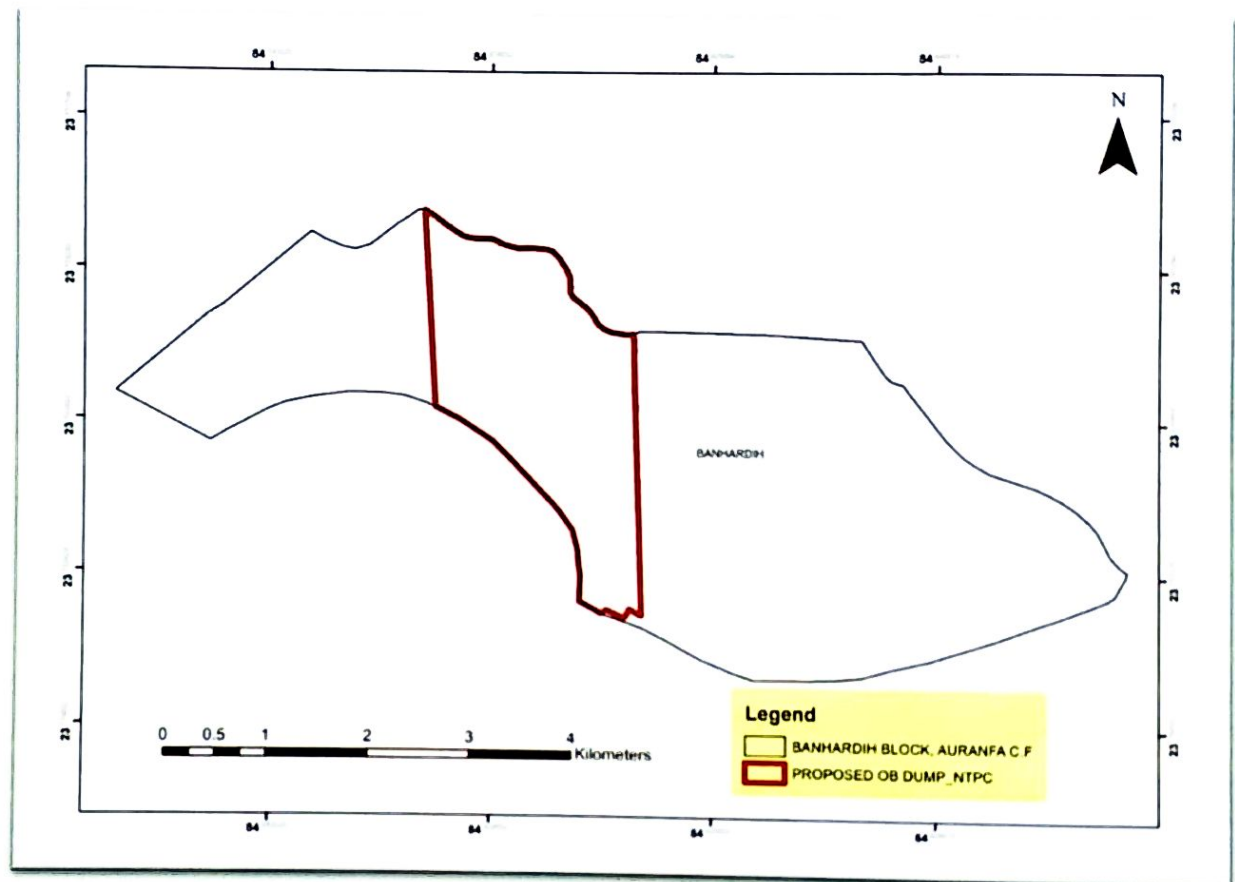
Subject: Coal Area Certification of Banhardih Coal Block, Auranga Coal Field, District Latehar, Jharkhand.

Ref.No.-PVUNL/BCMP/EXPL/25-26/010 Date: 08.09.2025 received through E-Mail

The area in the attached plan (area: 4.24 sq. kms.), ear marked in red (colour), within the Block boundary of **Banhardih Coal Block, Auranga Coalfield**, Dist. Latehar, Jharkhand is **coal bearing** as far as the existing Regional Geological Report of GSI.

Based on the outcome of the boreholes drilled by GSI, approximately 20-25m coal horizon was encountered with an estimated geological resource of about 170 Million tonnes which is technically minable.

In view of the above, the area mentioned above is coal bearing



Certified by:

 HOD (Exploration)
 CMPDI RI-III
 09/09/2025



cmpdi
A Mini Ratna Company



वसुधैव कुटुम्बकम्
ONE EARTH • ONE FAMILY • ONE FUTURE

सेन्ट्रल माईन प्लानिंग एण्ड डिजाईन इंस्टीट्यूट लिमिटेड
(कोल इण्डिया लिमिटेड की अनुषंगी कम्पनी / भारत सरकार का एक लोक उपक्रम)
गोन्दवाना प्लेस, कान्के रोड, राँची - 834031, झारखण्ड (भारत)
Central Mine Planning & Design Institute Limited
(A Subsidiary of Coal India Limited / Public Sector Undertaking of Govt. of India)
Gondwana Place, Kanke Road, Ranchi- 834031, Jharkhand (India)
Corporate Identity Number - U14292JH1975GOI001223

स्पीड डाक / ई-मेल / ई-ऑफिस द्वारा

Annexure Y

पत्रांक : सीएमपीडीआई / बी.डी. / ए (003)ऑफर/E- 810738 / I-19022

दिनांक 02.11.2023

सेवा में,

Sudeb Halder
DGM (C&M)
M/s PVUNL.
Ramgarh, Jharkhand-829119
Email: sudebhalder@ntpc.co.in
Mob: 9471002992

विषय : Detailed Exploration in Unexplored part of Banhardih Coal Block(PVUNL), Auranga Coalfield, Latehar, Jharkhand for M/s NTPC Ltd – Reg. Acknowledgement of work order.

- Ref. : i) Email, dated 12.06.2023
ii) CMPDI's offer letter no.CMPDI/BD/A(003)/2022/E810738/1190000040/ I-15581 dtd.08.09.2022
iii) Your LoA no.CS/9900259788/PVUNL/C&M/Banhardih Coal Block/001 dtd.20.10.2023

महोदय,

Hope, this letter finds you in the best of your spirit and long standing relationship with CMPDIL.

We thankfully acknowledge the receipt of LoA No. CS/9900259788/PVUNL/C&M/Banhardih Coal Block/001 dtd.20.10.2023 pertaining to the subject assignment for tentative amount of Rs. 54,63,28,000/- (Fifty four crore sixty three lakh twenty eight thousand) only (excluding GST).

The job will be taken up by RI-III, CMPDI, Ranchi. You are requested to contact CMPDI's nodal officer further for this assignment whose contact details is given below:

Shri Arijit Saha, Sr. Manager (Geology),
CMPDI, RI-III, Exploration Division,
Mob. No.- 9470138905, email: arijit.saha@coalindia.in

A copy of the LoA duly signed and stamped as a token of acknowledgement is attached herewith.

शीघ्र पत्रोत्तर के लिए धन्यवाद एवं सदैव अपनी सर्वोत्तम सेवाओं के आश्वासन सहित ।

भवदीय

(Signature)
21/11/2023

महाप्रबंधक (व्यवसाय विकास)

सूचनार्थ प्रतिलिपि

: T. Perumal, DGM (Geology), M/s NTPC Ltd., Opp. Chutia Police Sation, Ranchi, Jharkhand-834001
Email: tperumal@ntpc.co.in

LOA

Ref. No. CS/9900259788/PVUNL/C&M/Banhardih Coal Blok/001

Dated 20/10/2023

→ M/s CMPDIL,
Gondwana Place,
Kanke Road,
Ranchi-834031,
Jharkhand (India).

Kind Attention: Mr. Rajesh Kumar Amar, GM(BD)

Sub: Letter of Award for "Appointment of CMPDIL for Detailed Exploration and Preparation of Geological Report for Unexplored part of Banhardih Coal Block".

Dear Sir,

A. This has reference to the following:

Your offer letter dated 28.06.2023 against our NIT No. 9900259788 (Tender ID 2023_NTPC_77240_1) dated 22.06.2023 and MOM mail dated 10.07.2023 (Copy enclosed as Appendix-I & II respectively).

B. We are pleased to place to award on you for subject package as per terms and conditions contained in your offer letter dated 22.06.2023, subsequent mail dated 10.07.2023, your final offer letter dated 20.09.2023 (Copy enclosed as Appendix III).

C. SCOPE OF WORK

1.0 Summary of Banhardih Coal Block

Banhardih coal block located in Auranga coal field in Latehar District of Jharkhand State has been allocated to M/s. Patratu Vidyut Utpadan Nigam Limited (PVUNL), a subsidiary of NTPC and Government of Jharkhand. This block is allotted for captive mining for supply of coal to their M/s. Patratu Super Thermal Power Project (PSTPP) by Ministry of Coal (MOC), Government of India vide F.No.103/18/2015/NA dated 25.06.2018 for a total area of 1818.10 Ha.

Detailed exploration completed in 10.49 Sq.km and Geological Report available. Balance area of 7.69 Sq.km is unexplored with GSI boreholes on regional scale.

2.0 General

2.1 The Consultant shall be responsible for **Detailed Exploration and Preparation of Geological Report of Unexplored part of Banhardih Coal Block**. The assignment shall be prepared as per the scope of work specified in clause 2.0, 3.0 & 4.0

2.2 PVUNL will provide required data/information/report as required by the Consultant. Further, any other additional drawing, data, information etc. required for completion of above assignment is to be arranged by the Consultant.

3.0 Preparation of Geological Report

The scope of services, mentioned as below:

3.1 Dovetailing of Geological report of explored part

3.2 Study of Regional Exploration Data, Geological report of explored part, boreholes already drilled and planning of broad exploration module. It is proposed to carry out detailed exploration in two phases. In Phase-I, part of Central, Western and Explored part of the block will be explored to prepare the Geological Report. In Phase-II, remaining part will be covered.

3.3 Resistivity and Magnetic Survey for 25 line Km

3.4 Drilling in Phase-I & Phase II:-

(i) Detailed drilling in two phases-

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LOA

- a) Phase I - Approximately 3 sq.km area in the part of Central, Western and Explored part of the block, 38 boreholes involving about 29000 meters.
- b) Phase II - Approximately 5 sq.km area in the remaining part of Central, Western and Explored part of the block, 32 boreholes involving about 33000 meters.
- (ii) The actual meterage/borehole numbers will be ascertained by CMPDI as per the requirement of structural complexity/incrop-proving as the exploration work progresses. Drilling in forest area will be undertaken subject to Forest Clearance within appropriate time period, otherwise documentation will be done leaving the forest area.
- (iii) Survey of borehole points in order to prepare base plan of the block/sub-block.
- (iv) Drilling of borehole in NQ size which may be reduced in case of drilling difficulty.
- (v) Efforts will be made to achieve the Recovery >85% in coal portion and >70% in non-coal portion of borehole except in case of fault zones, loose, friable, crushed zones, clay, outcrop and weathered zones. In case of low recovery, GP logging will be carried out in that borehole to prove the actual thickness of coal seam(s).
- (vi) Drilling to be done upto 3 m below the target seam in normal geological condition. The target seam will be mutually decided after drilling of initial 15-20 boreholes in each phase.
- (vii) If a borehole fails to drill up to the targeted depth due to the drilling difficulties or otherwise, the CMPDI shall have to re-drill a fresh borehole in lieu of the abandoned bore-hole. However, CMPDI need not to drill a fresh borehole in lieu of that abandoned borehole in which more than 80% of the targeted depth has been achieved, provided that number of such abandoned boreholes are within 10% of the planned no. of boreholes for the block and they are scattered over the block. On mutual agreement between PVUNL and CMPDI for the abandoned boreholes, PVUNL shall pay for drilling against such abandoned borehole(s) up to 3-meter depth beyond floor of last correlated seam.
- (viii) Some boreholes shall be drilled to prove existence/non-existence of Karharbari seam. The scheme of exploration will be revised with mutual consultation after evaluating results of such boreholes.
- (ix) All borehole cores shall be preserved (till closing of borehole & for the purpose of Joint Measurement Certificate (JMC)).

3.5 Geological investigation and various core testing:-

- (i) Geological logging of borehole cores, which involves detailed sub-sampling of coal cores for chemical and other analyses.
- (ii) Geo-physical logging of some of the identified boreholes and resistivity/seismic survey in shallower area.
- (iii) Geotechnical Investigation of selected boreholes
- (iv) Packing of samples and preparation of band-by-band analysis advice and dispatch to CSIR Laboratories at IIMT, Bhubaneswar or others, and CMPDI (HQ), Ranchi for chemical analysis
- (v) Interpretation of Generated data, Seam Demarcation, Co-relation, 2D plan depiction, Grade Wise resource estimation etc.
- (vi) Documentation (3 copies) of Standard Geological Report for the area.
- (vii) Special topographical surface survey carried out by Survey of India on R.F 1:10,000. These toposheets will be used for preparation of relevant geological plans on RF 1:5,000.
- (viii) Submission of Geological Report along with database and plans in soft copy including geological modelling (MineX model).
- (ix) Above soft copies shall be in editable format.



3.6 Preparation of Geological Report:-

The following information will be incorporated in the geological report

(I) TEXT and its contents will be as follows:-

Chapter	
	Salient Features
1.	Introduction
2.	Exploration
3.	Geology & Structure
4.	Description Of Coal Seams
5.	Reserves
6.	Specialised Studies
7.	Mining & Utilisation
8.	Environmental Base Line Data
9.	Conclusion & Recommendation
	Bibliography

(II) List of ANNEXURES

Sl.#	Annexure No.	Particulars
1.	I	Co-ordinates and reduced levels of boreholes.
2.	IIA	Descriptive geological log of boreholes.
3.	IIB	Statement showing thickness of soil, weathered mantle and different formations intersected in boreholes.
4.	III	Seam correlation chart- borehole-wise
5.	IV	Descriptive band-by-band analytical data of boreholes.
6.	V	Descriptive computed seam overall dirt band data of boreholes.
7.	VI	Descriptive computed and analyzed seam overall analysis data of boreholes.
8.	VII	Seam wise results of special tests.
9.	VIII	Details of reserve estimation.
10.	IX	Details of OB estimation.
11.	X	Test results on physico-mechanical properties of rock/coal samples.
12.	XI	Depth of coal seams and other characteristics interpreted from geophysical logging of boreholes Surface survey results.

[Signature]



LOA

(III) List of PLATES (Scale to fit on paper size):

Sl#	Subject
1.	Location map (location of block within map of coalfield).
2.	Topographical map in RF 1:5,000.
3.	Geological map in RF 1: 5,000.
4.	Graphic lithologs of boreholes in RF 1:500.
5.	Seam structures in RF 1:50.
6.	Graphic correlation plans in RF 1:1,000.
7.	Floor contour plans of workable coal seams in RF 1: 5,000.
8.	Geological cross section in RF 1:2,000.
9.	Seam folio plans of workable coal seams in RF 1:5,000.
10.	OB plan above topmost workable coal seam and Iso-parting plans between workable coal seams in RF 1:5,000.
11.	Geo-physical logs

4.0 Deliverables

- Submission of Geological Report (Text, Annexures, Plates) along with database and plans in soft copy in editable format.
- Geological Model (MINEX), Drawings in AutoCAD

D. TIME SCHEDULE

The Time schedule for the subject assignment shall be from the "Zero" date as detailed below:

The 'ZERO' date shall reckon from the date of receipt of Work order or Allotment letter of the complete block

SI No.	Description	Time from Zero Date (in months)
1	Phase I	36 Months from the "Zero" date.
a)	Drilling	24 Months
b)	Chemical Analysis	06 Months.
c)	GR Preparation	06 Months.
2	Phase II	40 Months after completion of drilling for Phase I
a)	Drilling	28 Months
b)	Chemical Analysis.	06 Months.
c)	GR Preparation	06 Months.

E. CONTRACT PRICE



LOA

Total consultancy fees of **INR 54,63,28,000/-*** as per following breakup shall be payable.

Sl. No.	Item Description	Quantity	Units	BASIC RATE (IN INR)	TOTAL AMOUNT (IN INR)
1	2	3	4	5	6
10 Preparation of Geological Report					
10.1	Dovetailing with Proposed Job and Preparation of Broad Exploration Scheme	1	LPS	702500	702500
10.2	Resistivity and Magnetic Survey	25	KM	196700	4917500
10.3	Phase I drilling	29000	M	8584.00*	248936000
10.4	Phase II drilling	33000	M	8584.00*	283272000
10.5	Physico Mechanical Test (Geotech Investigation)	500	M	7000.00*	3500000
10.6	Washability Test	5	NO	1000000.00*	5000000
Total in INR					546,328,000.00*

Units Legends:- LPS – Lumpsum, KM-Kilometer, M-meter, NO- Numbers.

- * These rates are for estimation purpose and are likely to change and will be finalized after statutory audit. Such finalized rate would be certified by Statutory Auditor/ GM(Finance) of CMPDI. However, the GST already deposited on higher drilling rate shall be dealt with as per GST act if the final rates are lower than the billed rates.
- The charges for surveying, geophysical logging, chemical analytical tests, washability tests, physico-mechanical studies shall be payable by M/s PVUNL at actual plus service charges (if applicable) of CMPDI.
- The above fee does not include GST, which is to be paid by the PVUNL as applicable during the billing period in addition to the consultancy fee indicated above. The GST rate chargeable currently is @ 18% of the total consultancy fee. Any other statutory taxes and duties, if levied by the statutory authorities, will be paid by the PVUNL. In respect of GST, any statutory variations and any new cess and /or levies thereupon during the currency of contract shall be payable/reimbursable by PVUNL.



LOA

F. PAYMENT SCHEDULE:

The payment terms for the assignment shall be as below:

1. 100% of the total consultancy fee at actual plus service charges (if applicable) towards **Dovetailing etc.**, mentioned under 10.1 of Contract Price (Para E) along with 100% GST shall be paid after finalization of the Exploration scheme.
2. 100% of the total consultancy fee at actual plus service charges (if applicable) towards **Resistivity and Magnetic Survey**, mentioned under 10.2 of Contract Price (Para E) along with 100% GST shall be paid after completion of the survey & raising of the bill
3. Monthly running-on-account in respect of meterage completed during the corresponding month shall be submitted by CMPDI along with applicable Taxes i.r.o **Phase I drilling (10.3) & Phase II drilling(10.4)** mentioned under 10.3 & 10.4 of Contract Price (Para E).
 - 95% of monthly bill amount and 100% GST amount on bill shall be released by PVUNL.
 - 5% of each running bill shall be retained by PVUNL and it will be released on submission of final Geological Report
4. 100% of the total consultancy fee at actual plus service charges (if applicable) towards coal core sample testing, including Physico-mechanical/ washability mentioned under 10.5 & 10.6 of Contract Price (Para E). along with 100% GST would be made by M/s. PVUNL on completion of testing of each lot as per the CMPDI's advice and upon raising of the bill by CMPDI at actuals

Note:

- For above payments CMPDI will send a formal request for payment along with the invoice indicating the due payments and description of the activity completed. The payment shall be released through e-payment within 30 days from the date of submission of the respective bill. CMPDI shall provide EFT form duly verified by Bank along with cancelled cheque.
- At the end of the Detailed Exploration Work and submission of Geological Report, the 'Final fees of CMPDI, shall be calculated based on the actual drilling meterage carried out year wise multiplied by the respective year's drilling rate per meter. CMPDI shall raise final bill, corresponding to the 'Final fees' arrived after adjusting the payment received till date. PVUNL shall release the payment within 30 days from the date of submission of the final bill.
- The payment of coal core sample testing, including Physico-mechanical/ washability, would be made by M/s. PVUNL on completion of testing of each lot as per the CMPDI's advice and upon raising of the bill by CMPDI at actuals.

G. TIME SCHEDULE

Time Schedule and Deliverables, mentioned in-brief here below, shall be as per your budgetary offer dated 08.09.2022.

The 'ZERO' date shall reckon from the date of receipt of Work order or Allotment letter of the complete block or Forest Clearance and /or Written assurance from the Client for making arrangement for Safe and secured drill sites, clear of any hindrance, from the start and during entire operation in the field, whichever is later.

Sl.No.	Description	Time from Zero Date (in months)
1	Phase I drilling	36 months from Zero Date
a	Drilling	24 Months
b	Chemical analysis	06 Months
c	GR preparation	06 Months
2	Phase I drilling	40 months after completion of drilling for Phase I
a	Drilling	26 Months
b	Chemical analysis	06 Months
c	GR preparation	06 Months

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LOA

CMPDI shall submit detailed monthly progress report, in standard format, to the authorized representative of PVUNL for certification of work and authorized representative of PVUNL shall certify the same after verification within the first week of succeeding month. After Closing of the borehole, total quantity of drilling shall be jointly certified by PVUNL/NTPC and CMPDI and Joint Measurement Certificate (JMC) shall be issued.

H. LIQUIDATED DAMAGE / CPBG:

Not Applicable

- I. M/s CMPDIL shall execute an agreement with M/s PVUNL on appropriate non-judicial stamp paper before starting the work as per our proforma. Date of submission of agreement in no way shall change the date of start of work.
- J. All other terms & conditions shall be as per special terms and condition & GCC of tender documents.

K. ENGINEER- IN-CHARGE:

The Engineer -in-charge (EIC) for this contract shall be as under:

Sh. Rajeev Ranjan,
AGM (Tech Service - Geology),
Patratu Vidyut Utpadan Nigam Limited,
Ramgarh, Jharkhand – 829119.

L. EFFECTIVE DATE OF CONTRACT

The Contract shall become effective for all purposes and intents from the date of issue of this Letter of Award.

This Letter of Award is being issued to you in duplicate. We request you to return the duplicate copy of this Letter of Award duly signed and stamped on each page including all the enclosed Appendices by the authorized signatory of your company as a proof of your acknowledgement and confirmation. Kindly take necessary action to commence the work and confirm the same.

Yours Faithfully

For and on behalf of PVUNL

Name: Sudeb Halder

Email: sudebhalder@ntpc.co.in

Tel No: 9471002992

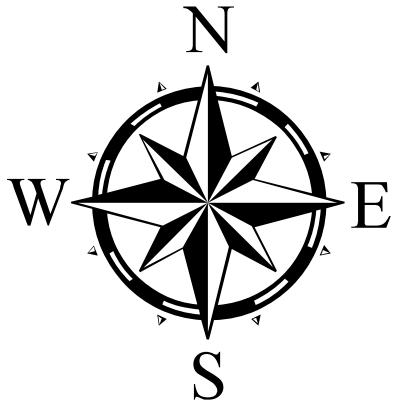
सुदेब हल्देर / Sudeb Halder
असिस्टेंट मैनैजिंग डायरेक्टर (C&M)
पात्रातु विद्युत उत्पादन निगम लिमिटेड
Patratu Vidyut Utpadan Limited

Enclosures: -

1. Appendix – I : CMPDI offer letter dated 28.06.2023 against our NIT No. 9900259788.
2. Appendix – II : MOM mail dated 10.07.2023.
3. Appendix --III: CMPDIL final offer dated 20.09.2023.



KML Map showing Borehole Locations in Forest and Non-Forest area for Interim Temporary OB Dump Area of 440.70 Ha



Sl.No.	Agency	Type	Borehole No.	Nos. of Boreholes
1	Dept. of Mines & Geology, Gov. of Jharkhand	Coring	16W, 17W, 19W & 20W	4
2	GSI	Coring	AB-3, AB-8, AB-11 & AB-13	4
Total nos. of Boreholes				8

Legend

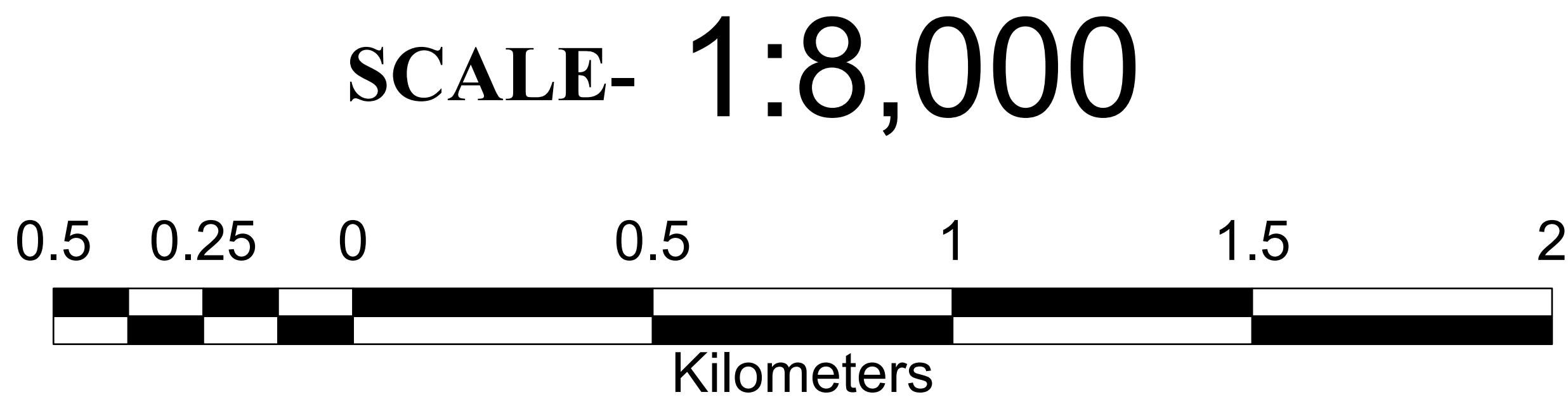
- BOREHOLE LOCATION POINT
- MINING LEASE BOUNDARY
- EXTERNAL DUMP/SURFACE DUMP(TEMPORARY)
- FOREST
- NON FOREST

23°45'0"N

23°43'30"N

23°45'0"N

23°43'30"N

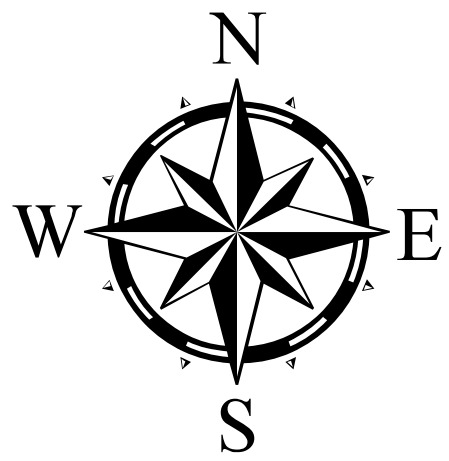


Subodh John Puri
SUBODH JOHN PURI
Sr. Manager (Civil/Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
(A Subsidiary of NTPC Ltd. in Joint Venture with JBVNL)
Patratu, Dist.-Rangbarh-829119

PATRATU VIDYUT UTPADAN NIGAM LIMITED A Subsidiary of NTPC Ltd. in JV with JBVNL	
SUBJECT :	KML Map showing Borehole Locations in Forest and Non-Forest area for Interim Temporary OB Dump Area of 440.70 Ha
	UNITED EXPLORATION INDIA PVT. LTD.
PREPARED BY :	

KML MAP SHOWING THE COMPONENT WISE/PURPOSE WISE UTILISATION OF THE PROPSOED FOREST LAND

Annexure XX



SL. No.	Land Use Type	Land Use Proposed Area (Ha.) in Forest Land	Land Use Proposed Area (Ha.) in Non Forest Land	Total Land Use Proposed Area (Ha.)
1	Excavation Area	94.25	632.99	727.24
2	Top Soil Dump	0.00	12.24	12.24
3	External Dump/Surface Dump(Temporary)	307.20	133.50	440.70
4	Safety Zone	1.65	6.20	7.85
5	Haul Road Between Quarries	1.38	8.83	10.21
6	Road Diversion	4.65	0.93	5.58
7	Settling Pond	0.63	0.01	0.64
8	Road and Infrastructure Area	7.54	28.16	35.70
9	Garland Drain	3.20	4.38	7.58
10	Undisturbed/Mining Rights for UG.	94.82	124.86	219.68
Total Area		515.32	952.10	1467.42

TOP SOIL

ROAD DIVERSION FOREST

ROAD DIVERSION

GARLAND DRAIN FOREST

GARLAND DRAIN

HAUL ROAD FOREST

HAUL ROAD

ROAD AND INFRASTRUCTURE AREA FOREST

ROAD AND INFRASTRUCTURE AREA

SAFETY ZONE FOREST

SAFETY ZONE

SETTLING POND FOREST

SETTLING POND

EXTERNAL DUMP/SURFACE DUMP FOREST

EXTERNAL DUMP/SURFACE DUMP (Temporary)

EXCAVATION AREA FOREST

EXCAVATION AREA

UNDISTURBED AREA FOREST

UNDISTURBED AREA

MINING LEASE BOUNDARY

SCALE- 1:8,000



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.-Rangpur-829119

PATRATU VIDYUT UTPADAN NIGAM LIMITED
A Subsidiary of NTPC Ltd. in JV with JBVNL

SUBJECT :

KML MAP SHOWING THE COMPONENT- WISE/ PURPOSE-WISE UTILIZATION OF THE PROPOSED FOREST LAND

PREPARED BY :

UNITED EXPLORATION INDIA PVT. LTD.

84°37'30"E

84°39'0"E

84°40'30"E

23°45'0"N

23°43'30"N

23°45'0"N

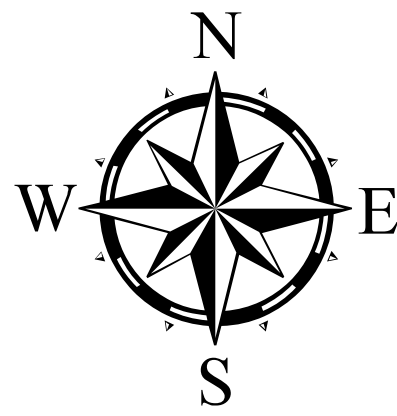
23°43'30"N

84°37'30"E

84°39'0"E

Annexure YY

84°40'30"E



KML MAP SHOWING NOTIFIED FOREST AND JUNGLE JHARI FOREST

DETAILS OF FOREST AREA PROPOSED FOR DIVERSION					
Sl.No	DISTRICT	DIVISION	RANGE/TEHSIL/ VILLAGE	FOREST AREA PROPOSED FOR DIVERSION (Ha.)	LEGAL STATUS OF FOREST AREA
1	2	3	4	5	6
1	Latehar	Latehar	Range & Tehsil- chandwa,Village-Ete	1.21	Notified forest
2	Latehar	Latehar	Range -Latehar,Tehsil- Chandwa,Village- Banhardih	177.30	Notified forest
				5.31	GMJJ
3	Latehar	Latehar	Range & Tehsil- chandwa,Village-Bari	247.68	Notified forest
				12.04	GMJJ
4	Latehar	Latehar	Range & Tehsil- chandwa,Village-Surli	8.62	Notified forest
5	Latehar	Latehar	Range & Tehsil- chandwa,Village-Tota	6.00	Notified forest
6	Latehar	Latehar	Range & Tehsil- Latehar,Village- Jagaldaga	8.36	Notified forest
7	Latehar	Latehar	Range & Tehsil- Latehar,Village-Sabano	47.85	Notified forest
				0.95	GMJJ
TOTAL AREA in Ha. =				515.32	

Legend

- MINING LEASE BOUNDARY
- FOREST PATCH**
- GMJJ
- NOTIFIED FOREST

23°45'0"N

23°43'30"N

SCALE- 1:8,000



84°37'30"E

84°39'0"E

84°40'30"E

23°45'0"N

23°43'30"N

PATRATU VIDYUT UTPADAN NIGAM LIMITED
A Subsidiary of NTPC Ltd. in JV with JBVNL



SUBJECT : KML MAP SHOWING NOTIFIED FOREST AND
JUNGLE JHARI FOREST

PREPARED BY :

UNITED EXPLORATION INDIA PVT. LTD.



Subodh John Purti
SUBODH JOHN PURTI
Sr. Manager (Civil/Coal Mine)
PATRATU VIDYUT UTPADAN NIGAM LTD.
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