

No. IA-J-11015/13/2020-IA-II(M)

Government of India Ministry of Environment, Forest and Climate Change Impact Assessment Division

> Indira Paryavaran Bhawan, Jorhagh Road, N Delhi – 3 Email: <u>Ik.bokolia@nic.in</u> Tel: 011-24695301 Dated: 2nd October 2020

To,

The Manager,
M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL),
District Latehar - 829119 (Jharkhand)
Email: sjpurti@ntpc.co.in

Sub: Banardih Coal Mining Project of 12 MTPA (Peak) in mine lease area of 1818.10 ha of M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL) located in villages Ate, Banardih, Bari, Barwadih, Jagaldaga, Rampur, Sabano, Surli, Tota and Udaypura in Tehsil Latehar & Chaudwa, District Latehar (Jharkhand) - reg. Terms of Reference

Sir,

This has reference to your online proposal no. IA/JH/CMIN/160604/2020 on 26th June, 2020, submitted to this Ministry for grant of Terms of Reference (ToR) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 for Banardih Coal Mining Project of 12 MTPA (Peak) in mine lease area of 1818.10 ha of M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL) located in villages Ate, Banardih, Bari, Barwadih, Jagaldaga, Rampur, Sabano, Surli, Tota and Udaypura in Tehsil Latehar & Chandwa, District Latehar (Jharkhand).

The project/activity is covered under category 'A' of item 1(a) 'Mining of Minerals' the Schedule to the EIA Notification, 2006

- 2. The proposal was considered by the Expert Appraisal Committee (EAC) in the Ministry for Coal Mining Sector in its 1st meeting held on 17-18 August, 2020 through Video Conferencing. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under: -
- (i) The project area is covered under Survey of India Topo Sheet No. F45A9 & F45A10 and is bounded by the geographical coordinates ranging from latitude 23° 43' 23.09" to 23° 45' 12.995" N and longitudes 84° 37' 19.791" to 84° 39' 55.045" E.
- (ii) Coal linkage of the project is with Patratu Super Thermal Power Project, for meeting the consumptive coal requirement.
- (iii) PVUNL is a subsidiary of NTPC Ltd. in joint venture with JBVNL (Govt. of Jharkhand enterprise).

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TOR - Banardih Coal Mining of M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL)

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

- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MOEF&CC's vide its: OM dated 13th January, 2010 has imposed moratorium on grant of Environment Clearance (EC).
- (v) Employment generation approx. 1300 nos. is expected to be generated from the project.
- (vi) Banardih Coal Block located in Auranga Coal Field in Latehar District of State of Jharkhand. This block is allotted for captive mining for supply of coal to Patratu Super Thermal Power Project by Ministry of Coal, Government of India vide F.No.103/18/2015NA dated 25th June 2018 for a total area of 1818.10 ha.
- (vii) The project is reported to be beneficial in terms of production of coal for meeting the consumptive coal requirement of Patratu STPP and thereby reducing the gap in the demand supply of coal in PVUNL Power Station. It will also cater infrastructure development in nearby areas and improve education and health conditions through CSR activities.
- (viii) Total mining lease area as per block allotment is 1818 Ha. Mining Plan (Including Progressive Mine Closure Plan) for the block (excluding Western part) was prepared by M/s. United Exploration India Pvt. Ltd, Kolkatta (UEIPL) based on the Geological Report on Coal Exploration (2019) prepared by Department of Mines & Geology, GoJ on the partly explored block. The Mining Plan envisages a production capacity of 12 MTPA. Mining Plan has been submitted to MOC on 30.03.2020 for approval.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details (in Hectares)

SI.		Гуре	Area in ha
6	Within ML		
1	Tenancy	Agricultural	739.89
, e		Settlements	
2.1.	Government	Water Bodies/Tanks	496.60
		Roads	
3	Forest & Open scrubs		581.61
Sub -	Total (I)		1818.10

Post Mining

S	Description	19.00		Land Use	(Post Cle	sure) (in Ha)		
N		Agricul tural Land	Plant ation	Water body	Public / Comp any uses	Forest Land (Returned)	Undis tribut ed	Total
1.	Excavation	3.6	3.00			1/2		597
2.	Back Filled Area	68.55	534.5 8			126.37		729.50
3.	Topsoil Dump		12.24					12.24
4.	Safety Zone	45 5 7 13	13.28					13.28

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S	Description		Land Use (Post Closure) (in Ha)									
N		Agricul tural Land	Plant ation	Water body	Public / Comp any	Forest Land (Returned)	Undis tribut ed	Total				
_					uses							
5.	Haul Road between quarries		6.25	+ 15	4.50			10.75				
6.	Road Diversion		N		5.60			5.60				
7.	Settling Pond	3 1 1 1 10			0.90			0.90				
8.	Road and Infrastructure Area		21.07		8.66	5.73	And I	35.46				
).	Garland drains				7.63			7.63				
10.	Undisturbed/Min ing Rights for UG					398.90	603.8	1002.7				
	Grand Total	68.55	587.4	0.00	27.29	531.00	603.8	1818.1				

- (x) Total geological reserve reported in the mine lease area is 1234.99 MT (excluding blocked reserves) with 270.81 MT mineable reserve. Out of total mineable reserve of 270.81MT, 250.50 MT are available for extraction. Percent of extraction is 62,38%.
- (xi) 17 seams with thickness ranging from 0.5 Mtr 68.40 Mtr are workable. Grade of coal is G-11 (4000-4300 Kcal/kg), stripping ratio 4.68 M³/T, while gradient is 25 to 45 degrees.
- (xii) Method of mining operations envisages by Mechanized Open Cast Mining with Surface Miner and Shovel-Dumper combination.
- (xiii) Life of mine is 30 years.
- (xiv) The project has 01 (one) external OB dump identified within the block over an area of 433 Ha accommodates 233.23 Mm³ of OB. 1 (one) of internal OB Dump in the de-coaled area of the mine over an area of 729.50 Ha with 922.73 Mm³ of OB is envisaged in the project.
- (xv) Total quarry area is 729.50 Ha out of which backfilling will be done in 729.50 Ha and no mine void will be created in the mine. Backfilled quarry area of 729.50 Ha shall be reclaimed with plantation.
- (xvi) Transportation of coal has been proposed by Dumper in mine pit head, from mine surface to ground bunker by Conveyor and from ground bunker to Rapid Loading Silo by Conveyors and from Silo, coal will be direct loading on Wagon.
- (xvii) Reclamation Plan in an area of Internal Dump 729.50 Ha, of green belt. In addition to this, an area included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) 581.61 ha of Forest Land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 525.40 ha of Forest Land for non-forestry purposes has been applied vide online proposal No. FP/JH/MIN/46516/2020 dated 22.06.2020,

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- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported within 10 km boundary of the project.
- (xx) The ground water level has been reported to be varying between 1 Mtr to 5 Mtr Below Ground Level (BGL). Total water requirement for the project is 11.25 MLD.
- (xxi) Application for obtaining the approval of the Central Ground Water Authority for permission to dewater ground water for Mining Industry will be submitted in due course.
- (xxii) Consent to Establish for the existing capacity will be obtained from the Jharkhand SPCB in
- (xxiii) Rajdaha Nala and Bagdagga Nala are flowing within the coal block. Nala Diversion study in this regard will be carried out by a reputed organization and clearance for diversion of this nala will be obtained from Chief Engineer. Water Resources department, Govt of Jharkhand,
- (xxiv) Regular monitoring of ambient air quality will be carried out twice in a week during study period. The documented EIA report will be submitted to MOEF&CC.
- (xxv) No court cases, violation cases are pending against the project of the PP.
- (xxvi) The project does not involve violation of the EIA Notification, 2006 and amendment issued there under. The coal production from the mine will be commenced in FY 2022 23.
- (xxvii) The project will involve about 963 project affected peoples. R&R of the PAPs will be done as per approved R&R plan.
- (xxviii)Total cost of the project is Rs 6,750 (fully departmental) Crore. Cost of production will be determined in feasibility report. R&R plan cost will be incurred as per approved R&R Plan. Capital investment and recurring EMP expenditure during production stage will be as per final EIA/EMP.
- 4. The Expert Appraisal Committee in its 1st meeting held on 17-18 August, 2020, through Video Conferencing has recommended the proposal for grant of Terms of References (ToR), the Ministry of Environment, Forest and Climate Change hereby grants the Terms of References (ToR) for Banardih Coal Mining Project of 12 MTPA (Peak) in mine lease area of 1818.10 ha of M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL) located in villages Ate, Banardih, Bari, Barwadih, Jagaldaga, Rampur, Sabano, Surli, Tota and Udaypura in Tehsil Latehar & Chandwa, District Latehar (Jharkhand), for preparation of EIA/EMP reports with public consultations, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto, subject to the compliance of the following terms and conditions as specified/notified in the standard ToR applicable for opencast coal mines, along with the additional conditions as under:-
- EAC sub-committee shall visit the site and submit its recommendations for the additional conditions to PP overall environment management of the mine.
- (ii) Public Consultation, including public hearing, shall be conducted through concerned SPCB as per the provisions/procedure contained in the EIA Notification, 2006 for information of the stakeholders about the present coal mining operations inviting comments and their redressal.
- (iii) Stage-I clearance for the entire forestland involved the project shall be obtained before making an application for the environmental clearance

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- (iv) Clarification from District Forest Officer that mine does not falls under corridors of any National Park and Wildlife Sanctuary.
- (v) Wind rose pattern in the area should be reviewed and accordingly location of AAMSQ shall be planned by the collection of air quality data. Monitoring location for collecting baseline data should cover overall the 10 km buffer zone i.e. dispersed in 10 km buffer area.
- (vi) Inpit conveyor belt with silo loading should be proposed and installed for transportation of coal till railway siding.
- (vii) Mitigation plan to avoid Human-Wildlife Conflict should be prepared scientifically with the help of Wildlife Experts
- (viii) No non-mining activity/ancillary activity shall be proposed in forest area
- (ix) Project proponent to prepare Environmental Cost Benefit Analysis for the project in EIA/EMP Report.
- (x) Permission for Diversion of nallah/water bodies lying in the project area from State Water Resource Department. Study the impact of diversion of nallah on nearby areas and villages.
- (xi) Permission for ground water withdrawal shall be obtained from Central Ground Water Authority (CGWA), if applicable.
- (xii) Fund allocation for Corporate Environment Responsibility (CER) shall be made as per Ministry's O.M. No. 22-65/2017-IA.III dated 30th September 2020 and based on commitment made during public consultation process for incorporating in EIA-EMP for deliberation of EAC.
- (xiii) PP shall explore the possibilities of utilization of OB material for different purposes (in construction of roads, manufacture of artificial sand, aggregates, use for farmers etc.) and accordingly Plan shall be included in EIA/EMP Report
- (xiv) Details of court cases and the compliance status (if any)
- (xv) Impact of proposed project/activity on hydrological regime of the area shall be assessed and report be submitted. Hydrological studies as per GEC 2015 guidelines to be prepared and submitted
- (xvi) Heavy metals including other parameters in surface water quality (also of Ghagri river) shall be analyzed and provided in EIA Report.
- (xvii) Samples of Arsenic, Lead and Silica shall be analyzed in ambient air quality.
- (xviii) PP shall provide an integrated mine production and mine reclamation plan of which the systematic and post mining land form management / land scape management of mining area, internal, and external dump area will be integral. Both internal and external dumps shall be

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A. Generic TOR for an opencast / UG coalmine project (i) An E/A-FMP Report should !

- An EIA-EMP Report should be prepared for a peak capacity of MTPA over an area of ha addressing the impacts of the underground coalmine project including the aspects of mineral transportation and issues of impacts on hydrogeology, plan for conservation of flora/fauna and afforestation/plantation programme based on the generic structure specified in Appendix III of the EIA Notification 2006.. Baseline data collection can be for any season except monsoon.
- (ii) The EIA-EMP report should also cover the impacts and management plan for the project specific activities on the environment of the region, and the environmental quality air, water, land, biotic community, etc. through collection of baseline data and information, generation of baseline data on impacts for MTPA of coal production based on approval of project/Mining Plan.
- (iii) A Study area map of the core zone and 10km area of the buffer zone (15 km of the buffer zone in case of ecologically sensitive areas) delineating the major topographical features such as the land use, drainage, locations of habitats, major construction including railways, roads, pipelines, major industries/mines and other polluting sources, which shall also indicate the migratory corridors of fauna, if any and the areas where endangered fauna and plants of medicinal and economic importance are found in the area.
- (iv) Map showing the core zone along with 3-5 km of the buffer zone) delineating the agricultural land (irrigated and unirrigated, uncultivable land (as defined in the revenue records), forest
 (v) Contour map at 3m interval along with 3-5 km of the buffer zone) delineating the agricultural areas (as per records) and grazing land and wasteland and water bodies.
- (v) Contour map at 3m interval along with Site plan of the mine (lease/project area with about 3-5 km of the buffer zone) showing the various surface structures such as buildings, infrastructure, CHP, ETP, Stockyard, township/colony (within/adjacent to the ML), green belt and undisturbed area and if any existing roads, drains/natural water bodies are to be left undisturbed along with details of natural drainage adjoining the lease/project and modification of thereof in terms of construction of embankments/bunds, proposed diversion/rechannelling of the water courses, etc., highways, passing through the
- (vi) Original land use (agricultural land/forestland/grazing land/wasteland/water bodies) of the area. Impacts of project, if any on the landuse, in particular, agricultural land/forestland/grazing land/water bodies falling within the lease/project and acquired for mining operations. Extent of area under surface rights and under mining rights.

S.N.	ML/Project Land use	Area under Surface Rights (ha)	Area Under Mining Rights (ha)	Area under Both
1.	Agricultural land			(na)
2.	Forest Land			
3:	Grazing Land			
	Settlements			

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5.	Others (specify)					1	32 6
Area U	nder Surface Rights						
S.N.	Details	Area (ha)	Forest Land	Agr. land	Wasteland	Settle ments	Other
1.	Buildings					1	
2.	Infrastructure			1 - 1 -			
3.	Roads :						4.0
4.	Others (specify)						
	TOTAL					77.	-

- (vii) Study on the existing flora and fauna in the study area carried out by an institution of relevant discipline and the list of flora and fauna duly authenticated separately for the core and buffer zone and a statement clearly specifying whether the study area forms a part of the migratory corridor of any endangered fauna. The flora and fauna details should be furnished separately for the core zone and buffer zone. The report and the list should be authenticated by the concerned institution carrying out the study and the names of the species scientific and common names) along with the classification under the Wild Life Protection Act, 1972 should be furnished.
- (viii) Details of mineral reserves, geological status of the study area and the seams to be worked, ultimate working depth and progressive stage-wise working plan/scheme until end of mine life should be reflected on the basis of the approved rated capacity and calendar plans of production from the approved Mining Plan. Geological maps should also be included.
- (ix) Impact of mining on hydrology, modification of natural drainage, diversion and channelling of the existing rivers/water courses flowing though the ML and adjoining the lease/project and the impact on the existing users and impacts of mining operations thereon.
- (x) Collection of one-season (non-monsoon) primary baseline data on environmental quality air (PM₁₀, PM_{2.5}, SO₅, NO₅ and heavy metals such as Hg. Pb. Cr, AS, etc.), noise, water (surface and groundwater), soil along with one-season met data.
- (xi) Map of the study area (core and buffer zone) clearly delineating the location of various monitoring stations (air/water/soil and noise each shown separately) superimposed with location of habitats, wind roses, other industries/mines, polluting sources. The number and location of the stations should be selected on the basis of the proposed impacts in the downwind/downstream/groundwater regime. One station should be in the upwind/upstream/non-impact non-polluting area as a control station. Wind roses to determine air pollutant dispersion and impacts thereof shall be determined. Monitoring should be as per CPCB guidelines and standards for air, water, noise notified under Environment Protection Rules. Parameters for water testing for both ground and surface water should be as per ISI standards and CPCB classification of surface water wherever applicable.
- (xii) Impact of mining and water abstraction and mine water discharge in mine on the hydrogeology and groundwater regime within the core zone and 10km buffer zone including long-term modelling studies on the impact of mining on the groundwater regime. Details of

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- (xiii) Study on subsidence, measures for mitigation/prevention of subsidence, modelling subsidence prediction and its use during mine operation, safety issues.
- (xiv) Detailed water balance should be provided. The break up of water requirement as per different activities in the mining operations, including use of water for sand stowing should be given separately. Source of water for use in mine, sanction of the competent authority in the State Govt. and impacts vis-à-vis the competing users should be provided.
- (xv) Impact of choice of mining method, technology, selected use of machinery and impact on air quality, mineral transportation, coal handling & storage/stockyard, etc, Impact of blasting, poise and vibrations
- (xvi) Impacts of mineral transportation within and outside the lease/project. The entire sequence of mineral production, transportation, handling, transfer and storage of mineral and waste, and their impacts on air quality should be shown in a flow chart with the specific points where fugitive emissions can arise and the specific pollution control/mitigative measures proposed to be put in place. Examine the adequacy of roads existing in the area and if new roads are proposed, the impact of their construction and use particularly if forestland is used.
- (xvii) Details of various facilities to be provided in terms of parking, rest areas, canteen, and effluents/pollution load from these activities. Examine whether existing roads are adequate to take care of the additional load of mineral and their impacts.
- (xviii) Examine the number and efficiency of mobile/static water sprinkling system along the main mineral transportation road within the mine, approach roads to the mine/stockyard/siding, and also the frequency of their use in impacting air quality.
- (xix) Impacts of CHP, if any on air and water quality. A flow chart of water use and whether the unit can be made a zero-discharge unit.
- (xx) Conceptual Final Mine Closure Plan along with the fund requirement for the detailed activities proposed there under. Impacts of change in land use for mining operations and whether the land can be restored for agricultural use post mining.

Table 1 Stage-wise Cumulative Plantation

S.N	N YEAR* Green Belt		External Dump		Backfilled Area		Others (Undisturbed Area / etc)		TOTAL		
		Area (ha)	No. of trees	Area (ha)	No. of Trees	Area (ha).	No. of Trees	Area (ha)	No. of Trees	Area (ha)	No. of Trees
1.	1st year	97.5	2011	The state of							177
2	3rd year								10 1		
3.	5th year								`		
4.	10th yr			Sec. 1.							
5.	15th yr									1	
6.	20th yr								1		
7.	25th yr	1.1	344				9.9		1,71		
8.	30th yr	1		1.3			, / ·			11.00	. (. t · ·
9.	34th year										
	(end of mine										
	life)	1					1.		2.5	7	

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					 A			1.	4 5 2	
10	34-37th		12.5		1			1		1
1	Year ·							1 1		
S	(Post-	11.5			1.0		3 F TV			
	mining)	1 1	*	1		1 1 2			100	

*As a representative example

- (xxi) Occupational health issues. Baseline data on the health of the population in the impact zone and measures for occupational health and safety of the personnel and manpower for the mine should be furnished.
- (xxii) Details of cost of EMP (capital and recurring) in the project cost and for final mine closure plan. The specific costs (capital and recurring) of each pollution control/mitigative measures proposed in the project until end of mine life and a statement that this is included in the project cost.
- (xxiii)Integrating in the Env. Management Plan with measures for minimising use of natural resources water, land, energy, raw materials/mineral, etc.
- (xxiv)R&R: Detailed project specific R&R Plan with data on the existing socio-economic status (including tribals, SC/ST) of the population in the study area and broad plan for resettlement of the displaced population, site for the resettlement colony, alternate livelihood concerns/employment for the displaced people, civic and housing amenities being offered, etc and costs along with the schedule of the implementation of the R&R Plan.
- (xxx) CSR Plan along with details of villages and specific budgetary provisions (capital and recurring) for specific activities over the life of the project.
- (xxvi)Public Hearing should cover the details as specified in the EIA Notification 2006, and include notices issued in the newspaper, proceedings/minutes of public hearing, the points raised by the general public and commitments by the proponent made should be presented in a tabular form. If the Public Hearing is in the regional language, an authenticated English Translation of the same should be provided.
- (xxvii) Status of any litigations/ court cases filed/pending in any Court/Tribunal on the project should be furnished.
- (xxxvi)Submission of sample test analysis of: Characteristics of coal this includes grade of coal and other characteristics ash, S and heavy metals including levels of Hg. As, Pb, Cr etc.
- (xxxviii) Copy of clearances/approvals such as Forestry clearances, Mining Plan Approval, NOC from Flood and Irrigation Dept. (if req.), etc.

(A) Forestry Clearance

(B)	Total ML / /Project Area (ha)	Total Forest Land (ha)	Date of FC	Extent of forest land	Balance area for which FC is yet to be obtained	Status of appl. for diversion of forestland
				than one, details of		

Mining Plan / Project Approval: Date of Approval of Mining Plan/Project Approval: Copy of Letter of Approval of Mining Plan/Project Approval (xxxviii) Corporate Environment Responsibility:

 The Company must have a well laid down Environment Policy approved by the Board of Directors.

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- The Environment Policy must prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
- c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions must be furnished.
- d) To have proper checks and balances, the company should have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.
- 4.1. This grant of Terms of References(ToR) for the said project is further subject to the general conditions as under
- (i) All documents should be properly indexed, page numbered.
- (ii) Period/date of data collection should be clearly indicated.
- (iii) Authenticated English translation of all material provided in Regional languages.
- (iv) After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and take necessary action for obtaining environmental clearance under the provisions of the EIA Notification 2006.
- (v) The letter/application for EC should quote the Ministry's file No. and also attach a copy of the letter prescribing the ToR.
- (vi) The copy of the letter received from the Ministry on the ToR prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- (vii) General Instructions for the preparation and presentation before the EAC of ToR/EC projects of Coal Sector should be incorporated/followed.
- (viii) The aforesaid ToR has a validity of three years only.
- (ix) Grant of ToR does not necessarily mean grant of EC.
- (x) Grant of ToR to the present project does not necessarily mean grant of TOR/EC to the captive/linked project.
- (xi) Grant of ToR to the present project does not necessarily mean grant of approvals under the Forest (Conservation) Act, 1980 or the Wildlife (Protection) Act, 1972.
- (xii) Grant of EC is also subject to circulars issued under the EIA Notification 2006, which are available on the Ministry's website: www.envfor.nic.in
- 5. You are required to submit the final EIA/EMP prepared as per TORs to the Ministry within 3 years as per this Ministry's O.M. No.J-11013/41/2006-IA. II (I) (Part) dated 29th August, 2017 for considering the proposal for environmental clearance.
- 6. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and Training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organization(s)/laboratories including their status of approvals etc. vide Notification of the MoEF dated 19th July, 2013.

(Lalit Bokolia) Director

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Ton-Banardih Coal Mining of M/s. Patratu Vidyut Utapdan Nigam Limited (PVUNL)

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SUBODH JOHN PURTI ST. Manager (Civil/Coal Mine) Sr. Manager (Civil/Coal Mine) PATRATU VIDYUT. UTPADAN NIGAM LTD. (ASubsidiary of NTPELtd. in Joint Venture with JBVNL) Patratu, Dist.-Ramgarh-829119

Copy to:

- 1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
- 2. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi
- The Additional Principal Chief Conservator of Forests, Regional office (ECZ), Ministry of Environment & Forests, Bungalow No. A-2, Shyamali Colony, Ranchi - 834002
- The Member Secretary, Jharkhand State Pollution Control Board, TA Building, HEC Complex. PO Dhurwa, Ranchi
- The Member Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
- 6. The District Collector, Latchar, Government of Jharkhand
- 7. Monitoring File/Guard File/Record File

(Lalit Bokolia) Director

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. ToR - Banardih Coal Mining of M/s, Patratu Vidyut Utapdan Nigam Limited (PVUNL)

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SUBODH JOHN PURTI SUBODH JOHN PURTI Sr. Manager (Civil/Coal Mine) PATRATU VIDYUT UTPADAN NIGAM LTD. PATRATU VIDYUT UTPADAN NIGAM LTD. (ASubsidiary of NTPCLtd. in Joint Venture with JBVNL) Patratu, Dist.-Ramgarh-829119