



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

To,

The PO
Central Coalfields Limited
Kathara OCP Kathara Area Central Coalfields Limited,,Bokaro,Jharkhand-829144

Subject: Grant of Environmental Clearance (EC) to the proposed Project Activity under the provision of EIA Notification 2006-regarding

Sir/Madam,

This is in reference to your application for Environmental Clearance (EC) in respect of project submitted to the Ministry vide proposal number IA/JH/CMIN/179534/2020 dated 28 Feb 2022. The particulars of the environmental clearance granted to the project are as below.

1. EC Identification No.	EC22A042JH147601
2. File No.	IA/JH/CMIN/11566/2008
3. Project Type	New
4. Category	A
5. Project/Activity including Schedule No.	1(a) Mining of minerals
6. Name of Project	Kathara Opencast Project
7. Name of Company/Organization	Central Coalfields Limited
8. Location of Project	Jharkhand
9. TOR Date	22 Nov 2020

The project details along with terms and conditions are appended herewith from page no 2 onwards.

Date: 18/10/2022

(e-signed)
Lalit Bokolia
Scientist F
IA - (Coal Mining sector)

Note: A valid environmental clearance shall be one that has EC identification number & E-Sign generated from PARIVESH. Please quote identification number in all future correspondence.

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F. No. J- 11015/482/2008-IA- 11(M)
Government of India
Ministry of Environment Forest and Climate Change
Impact Assessment Division

Indira Paryavaran Bhavan,
JorBagh Road, New Delhi-110 003
Email: lk.bokolia@nic.in Tel: 01120819417

Dated: 18th October, 2022

To,

The General Manager (E&F)
M/s Central Coalfield Limited
Darbangha House, Ranchi-834001, Jharkhand
Email: pokatharaocp@gmail.com

Sub: Kathara Opencast Coal Mine of 1.9 MTPA (Peak) in a mine lease area of 773.23 Ha M/s Central Coalfields Limited, located in Block Bermo, District Bokaro (Jharkhand) - For Environmental Clearance (under violation Category) – reg.

Sir,

This has reference to your online proposal No. IA/JH/CMIN/11566/2008 dated 28th February, 2022 for grant of Environmental Clearance to the above project.

2. The Ministry of Environment, Forest and Climate Change has considered the application. It is noted that the proposal is for grant of Environment Clearance to Kathara Opencast Coal Mine of 1.9 MTPA (Peak) in a mine lease area of 773.23 Ha by M/s Central Coalfields Limited, located in Block Bermo, District Bokaro (Jharkhand).

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

3. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) in its 27th EAC meeting held on 3rd March, 29th EAC meeting held on 25th -26th April, 2022 and on 30th meeting held on 20th May, 2022. The details of the proposal, as ascertained from the proposal documents and as revealed from the discussions held during the meetings, are given as under:

- i. The project is covered in Survey of India toposheet no. 73E/13 & 73E/14 and is bounded by latitudes 23° 44' 47.26"N & 23° 46' 26.11"N and longitudes 85° 50' 59.89"E & 85° 54' 25.91"E.
- ii. Coal linkage of the proposed through washery through basket linkage & e-auction.
- iii. No Joint venture cartel has been formed for the project.
- iv. Project does not fall in Critically Polluted Area (CPA), where the MoEF&CC vide its OM dated 13th January 2010 has imposed moratorium on grant of environment clearance.
- v. Employment generation, project is source to direct employment of about 750 persons.

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EC of Kathara Opencast Mine to M/s CCL

- vi. The project is reported to be beneficial in terms of employment opportunities both for skilled and semi-skilled persons in the area. Business opportunity in secondary & Tertiary sectors will increase. The proposed project will also bring about enhanced socio-economic benefits to local population due to expenditure in CSR activities, post-mining enhancement of green cover, contribution to exchequer etc.
- vii. Earlier, this project has obtained Environmental clearance for 0.96/1.90 MTP under EIA Notification, 2006 vide letter no: J-11015/482/2008-IA-II (M) dt. 08.01.2014.
- viii. Terms of reference were granted vide F. No. J-11015/482/2008-IA-II Dated: 27.04.2021.
- ix. Total mining lease area as per block allotment is 773.23 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved in the 485th CCL Board held on 04.05.2020.
- x. The land use of the project is as follows:

Pre-mining Land use detail (Area in ha)

Particulars	Area in Ha.
Forest	0
Scrubs	93
Plantation Area	138
Agricultural Land	53
Waste Land	64
Mining Area	358.23
Settlements	62
Water Body	5
Total Area in Ha.	773.23

Land Use During Mining:

Description	Forest Area in Ha.	Non-Forest Area in Ha.	Total Area in Ha.
Quarry	0	258.46	258.46
External OB Dump	0	109.53	109.53
Reclaimed OB Dump and Embankment	0	74.09	74.09
Industrial Area (W/S, S/S, Haul Road, Office etc)	0	64.54	64.54
Colony & Settlement	0	122.87	122.87
Safety Zone / Green belt	0	45	45
Vacant Land	0	98.74	98.74
Total	0	773.23	773.23

Post Mining Land use:

SN	Land Use	Plantation	Water Body	Public Use	Un-disturbed	Total (in Ha)
1.	Quarry	160.90	97.56	0	0	258.46
2.	External OB Dump	109.53	0	0	0	109.53

3.	Reclaimed OB Dump and Embankment	74.09	0	0	0	74.09
4.	Infrastructure (W/S, S/S, Office, Road etc.)	0	0	64.54	0	64.54
5.	Colony & Settlement	0	0	122.87	0	122.87
6.	Safety Zone/Green belt	45	0	0	0	45
7.	Vacant Land	65.6	0	33.14	0	98.74
Total Area in Ha		455.12	97.56	220.55	0	773.23

- xi. Total geological reserve reported in the mine lease area is 185 MT with 22.16 MT balance mineable reserve. Out of total mineable reserve of 22.16 MT, 22.16 MT are available for extraction. Percent of extraction is 100%.
- xii. 4 seams with thickness ranging from 1 meter to 34 meter are workable. Grade of coal is Washery Grade- III, stripping ratio 3.45, while gradient is 12degree -25 degree.
- xiii. The method of mining to extract coal and OB in Kathara Opencast mine is with shovel-dumper combination, considering the geo-mining characteristics of this area.
- xiv. Life of mine is 12 years.
- xv. The project has 1 external OB dumps in an area of 109.53 Ha with 90 m height and 12 Mm3 of OB. 1 internal OB in an area of 160.90 Ha with 64.40 Mm3 of OB is envisaged in the project.
- xvi. Total quarry area is 258.46 ha out of which backfilling will be done in 160.90 Ha area. Final mine void will be created in an area of 97.56Ha with average depth of 120m. Backfilled quarry area of 160.90 Ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- xvii. Transportation of coal has been proposed by internal roads & Dumpers from mine pit head to nearby Kathara washery.
- xviii. Reclamation Plan in an area of 455.12 Ha comprising of 160.90 Ha of internal dump, 109.53 Ha of external dump, 45Ha of green belt and safety zone, 65.60 Ha in vacant land and an area of 74.09 ha, included for Reclaimed OB Dump and Embankment has also been proposed for reclamation
- xix. No forest land has been identified in the project.
- xx. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- xxi. Wildlife conservation plan for Schedule-I species has been prepared and submitted to Divisional Forest Officer, Bokaro.
- xxii. The ground water level has been reported to be varying between 2.40 m (Pre-monsoon) to 12.60 m (Pre-monsoon). Total water requirement for the project is 4900 cum/day including water demand of nearby Kathara Washery & colony.
- xxiii. Application for obtaining the NOC of the Central Ground Water Authority has been submitted vide application no: 21-4/837/JH/MIN/2022 dated 27.03.2022.
- xxiv. Public hearing for the project of 1.90 capacity in an area of 773.23 Ha was conducted on 31.08.2021at Officers Club, Kathara, Dist: Bokaro under the Chairmanship of Shri. S. Anwar, Additional Collector. Major issues raised in the public hearing include environment,

employment, R&R, compensation, health, road, electricity, education, afforestation, coordination between PAFs and project management etc. It has been proposed to spend around 6.43 Crores (i.e. more than 2% of Rs. 266.63 Crores = 5.3 Crore) towards compliance of the issues raised during the public consultation of Kathara OCP.

- xxv. Last Consent to Operate for the existing capacity was obtained from the Jharkhand State PCB on 19.01.2021 and which was valid upto 31.12.2021 for a capacity of 0.9 MTPA.
- xxvi. The general surface slopes towards the Damodar River, the master drainage in the area. The drainage of the area is controlled by Damodar River, Bokaro River and Konar River. Bokaro river and Konar river which flows from north-west to south-east and joins in Damodar River. Damodar River located south of the project flowing towards east. No nala diversion is required for this project.
- xxvii. Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB. In general, the results of ambient air quality monitoring data were found within prescribed limits except few aberrations which can be attributed to the specific local conditions during the day of sampling.
- xxviii. No court cases, violation cases are pending against the project of the PP.
- xxix. The project involves no R & R.
- xxx. Total cost of the project is Rs. 266.63 Crores. Cost of production is Rs. 3,550/Tonne in FY 2021-22. The fund for the CSR is allocated based on 2% of the average net profit of the Company for the three immediately preceding financial years. Environment Management cost is Rs. 38.33 Crore.

4. The Expert Appraisal Committee (EAC) in its 30th EAC meeting held on 20th May, 2022 considered for EC as per Standard Operating Procedure (SOP) issued by Ministry through OM dated 28th January 2022 for Identification and handling of violation cases under EIA Notification, 2006 and has recommended the project for grant of Environment Clearance (EC). Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords the proposal under violation category to EC for Kathara Opencast Coal Mine of 1.9 MTPA (Peak) in a mine lease area of 773.23 Ha M/s Central Coalfields Limited, located in Block Bermo, District Bokaro (Jharkhand), under EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:-

- (i) PP to implement Remediation plan and Natural & Community Resource Augmentation plan, which should be spent within a span of 3 years. The details of Remediation plan, Natural resource Augmentation plan and Community Resource Augmentation plan with budgetary provision are mention below

A. Remediation plan along with the action plan with a budget of Rs.17.42 Crores:

Remediation plan & budgetary provisions				Action Plan		
SN		Activity Proposed	Total	Year 01	Year 02	Year 03
1	Water Environment	Protection & Development of Damodar River bank:	3,50,00,000	60,00,000	1,30,00,000	1,60,00,000

		Development & Beautification of Damodar River Banks along with construction of picnic spots, approach road & pathways, chath ghat, shed, river side plantation etc at Khetko, Asnapani, near CPP colony and Jhirki Basti.				
2		Additional Water Sampling and analysis of Ground water and Surface water quarterly at 6 locations (4 Ground water at Bandh Basti, Jhirki Basti, Asnapani Tola and Kathara Basti and 2 surface water locations- u/s and d/s of Damodar River)	5,00,000	1,60,000	1,70,000	1,70,000
Total Water Environment			3,55,00,000	51,60,000	1,51,70,000	1,01,70,000
1	Land & Ecology	Development of ecological park (creation and maintenance) in 19.10 ha at Kathara Area	9,20,00,000	1,00,00,000	4,10,00,000	4,10,00,000
2		Distribution of fruit bearing Saplings like Amla, Guava, Mango, Lichi etc. to nearby villagers.	1,50,000	0	1,50,000	0
3		Providing colour coded bins (30 L) in nearby schools & hospitals in buffer zone.	4,00,000	0	4,00,000	0
4		Setting up of Vermi composting plant for treating Bio-degradable waste generated from nearby habitation	45,00,000	0	45,00,000	0
5		Awareness programme for conservation of flora-fauna & e-waste disposal	4,50,000	1,50,000	1,50,000	1,50,000
Total Ecological Environment			9,75,00,000	1,01,50,000	4,62,00,000	4,11,50,000



1	Air & Noise Environment	Periodic Health Camps to monitor the respiratory and E&T health status in villages Jhirki Basti, Bandh Basti and Asnapani Tola	1,15,00,000	35,00,000	40,00,000	40,00,000
2		Additional avenue Plantation (creation and maintenance) along with gabion protection on roads from filter plant to Asnapani More via khetko (Total length 1.50 kms)	25,00,000	5,00,000	10,00,000	10,00,000
3		Repair and periodic maintenance of public roads near Bandh Basti, Asnapani tola and Kathara Basti.	50,00,000	-	25,00,000	25,00,000
Total Air Environment			1,90,00,000	40,00,000	75,00,000	75,00,000
1	Socio-Economic	Skill development training program including Motor Driving, Sewing, Nursing & skill development programmed by Central Institute of Plastics Engineering & Technology (CIPET)	30,00,000	10,00,000	10,00,000	10,00,000
2		Fogging machine in nearby villages of command area of CCL	9,00,000	3,00,000	3,00,000	3,00,000
3		Organizing Training Sessions for sports and conducting Gramin Football League	30,00,000	10,00,000	10,00,000	10,00,000
4		Additional awareness programs on Environmental protection	3,00,000	1,00,000	1,00,000	1,00,000
5		Development of Community centre at Kathara Area	1,50,00,000	50,00,000	50,00,000	50,00,000
Total Socio-Economic Environment			2,22,00,000	74,00,000	74,00,000	74,00,000
Total Fund for remediation measures			17,42,00,000	2,77,10,000	7,42,70,000	7,22,20,000

B. Natural & Community Resource Augmentation Plan along with action plan with a budget of Rs. 85.00 Lakhs

SN	Particular	Activity Proposed	Total	Action Plan		
				Year 01	Year 02	Year 03
1	Natural Resource Augmentation	Total 05 nos. of Rainwater Harvesting cum Groundwater recharge structures to be installed on rooftop of public buildings in Bandh Basti, Jhirki Basti and Kathara Basti	18,00,000	6,00,000	6,00,000	6,00,000
2		Distribution of Solar Lantern in command areas of CCL (500 numbers)	10,00,000	--	10,00,000	-
Total Proposed Budget under NRAP (in Rs. Lakh)			28,00,000	6,00,000	16,00,000	6,00,000
1	Community Resource Augmentation	Procurement, operation & maintenance of High Speed Fully Automatic Sanitary Pad Making Machine for nearby villages in command area of Kathara	15,00,000	-	10,00,000	5,00,000
2		Battery Operated Handicapped Tricycle distribution to Divyangs of command area of Kathara (20 Numbers)	10,00,000	-	10,00,000	-
3		Distribution of Bench, Desk, Table, Chair, Books and Almirah etc. to various schools of Kathara Area	15,00,000	-	7,50,000	7,50,000
4		Special vaccination drives for children vaccines, Covid vaccine etc. in nearby villages in collaboration with state govt.	5,00,000	1,00,000	2,00,000	2,00,000
5		Providing smart classes at DAV Schools (Swang & Kathara)	12,00,000	4,00,000	4,00,000	4,00,000
Total Proposed Budget under CRAP (in Rs. Lakh)			57,00,000	5,00,000	33,50,000	18,50,000
Total cost of Natural & Community Resource Augmentation Measures			85,00,000	11,00,000	49,50,000	24,50,000

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C. Penalty estimated as recommendation of EAC: Rs. 4.11 Crore

Summary

Sl. No.	Description	Estimated cost (Rs. In Lakhs)
1	Remediation Plan	1742.00
2	Natural Resources Augmentation Plan	28.00
3	Community Resources Augmentation Plan	57.00
	Sub-Total	1827.00
4	Fund provision as per OM dated 30/09/2020 based on Public Hearing requirements (Min. 1% of existing capital cost)	206.00
	Sub total	2033.00
	Penalty	411.00
	Total	2444.0

- (ii) Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 2033 lakhs. Therefore, based on bank guarantee submitted to SPCB vide no. BG No. 0089NDLG00030123 dated 30.09.2022 for an amount of Rs. 2033/- Lakhs, and penalty amount of Rs. 411 Lakhs to Member Secretary, JSPCB through Demand Draft vide DD no. 960699 dated 30th September, 2022, the project proponent shall have to implement the Remediation plan and Natural and Community Resource Augmentation plan.
- (iii) Remediation plan shall be completed in within three years from date of issue of EC only. The bank guarantee will be released after successful implementation of the remediation plan and Natural and Community Resource Augmentation Plan, and after the recommendation by regional office of the Ministry, Expert Appraisal Committee and approval of the Regulatory Authority.
- (iv) PP shall comply all the non-compliance and partial compliance of EC dated 8th January, 2014, highlighted by IRO Ranchi vide its Certified Compliance Report dated 4th May, 2022 within certain timelines
- (v) Further proposal of expansion/amalgamation of mine shall only be considered only when full compliance of existing as well as this EC conditions along with compliance of Remediation plan and Natural & Community Resource Augmentation plan for amount Rs. 2033 lakhs only are accomplished.
- (vi) PP shall implement in-pit conveyor system with silo loading facility till railway siding within 2 years (March-2024) and No road transportation shall be allowed beyond this time.
- (vii) PP to submit the tree implementation plan along the road side of transportation route including mine periphery area within 2 months from date of issue of EC to IRO, MoEF&CC. A detailed report with GIS images of every 3 months subsequently be submitted in every six monthly report to justify the adequate tree plantation.
- (viii) PP to earmark additional Rs. 605.50 lakh to address the issues arose during public hearing, which should be implemented as per the timeline mentioned in ADS rely Vide letter GM/E&F/2022/249 dated 19.04.2022. Plan in this regard should be submitted within 3months to IRO, MoEF&CC.

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EC of Kathara Opencast Mine to M/s CCL

- (ix) PP shall submit a capital cost of Rs 15 Lakhs & revenue cost of Rs. 19 Lakhs/year for the balance life of the project as proposed & allocated for implementation of Wildlife Conservation Plan prepared for Kathara Mine to Forest Department within six months of issue of this letter.
- (x) Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities, if applicable. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.
- (xi) The Environmental Clearance will not be operational till such time the Project Proponent complies with all the statutory requirements and judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xii) State Government concerned shall ensure that mining operation shall not commence till the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department of Mining & Geology in strict compliance of judgment of Hon'ble Supreme Court dated the 2nd August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xiii) PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.
- (xiv) No village road shall be used for transportation of coal and no road transport route shall be adopted, which is passing through any sensitive location such as schools, hospitals etc. PP shall take legal undertaking from its consumers accordingly
- (xv) PP shall implement additional (if already existing) 50 bed capacity hospital within in 2 years in the nearest town of project area within 10 km buffer zone.
- (xvi) Effective dust suppression system shall be adopted at the transportation site and in the other parts of the mining lease to arrest the fugitive dust emission
- (xvii) Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.
- (xviii) PP shall install online water quality monitoring system for checking the quality of mine water and display outside main gate of colliery before discharge from its settling pond.
- (xix) State Government/SPCB to take action against the Project Proponent under the provision of Section 19 of the E(P) Act.
- (xx) In pursuance to the Ministry's OM dated 30.09.2020, Project Proponent shall take up the activities for community development under EMP.
- (xxi) PP shall submit the yearly status of mine closure activity to be pursued for final mine closure and furnish the detail to the respective IRO in April, 2023
- (xxii) PP must obtain 4.5-starrating of MoC in the year 2022-23 and report shall be submitted to IRO.
- (xxiii) Periodical health check-up shall be conducted to monitor the impact of heavy metals present in core zone & buffer zone air quality and also to prepare an action plan to reduce heavy metals concentration and also report to be submitted to concerned regional office of MoEF&CC.
- (xxiv) PP shall take should be implemented all the activities as per the timeline mentioned in ADS rely Vide letter GM/E&F/2022/249 dated 19.04.2022. Plan in this regard should be submitted within 3 months to IRO, MoEF&CC.
- (xxv) Hon'ble Supreme Court in an Writ Petition(s) Civil No. 114/2014, Common Cause vs Union of India & Ors vide its judgement dated 8th January, 2020 has directed the Union of India to



impose a condition in the mining lease and a similar condition in the environmental clearance and the mining plan to the effect that the mining lease holders shall, after ceasing mining operations, undertake re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to a condition which is fit for growth of fodder, flora, fauna etc. Compliance of this condition after the mining activity is over at the cost of the mining lease holders/Project Proponent". The implementation report of the above said condition shall be sent to the Regional Office of the MoEF&CC

4.1 The grant of Environment Clearance (EC) is further subject to compliance of the Standard EC conditions as under:

(a) Statutory compliance

- (i) The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- (ii) The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- (iii) The project proponent shall prepare a Site-Specific Conservation Plan / Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan/Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report (in case of the presence of schedule-I species in the study area).
- (iv) The project proponent shall obtain Consent to Establish/Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- (v) The project proponent shall obtain the necessary permission from the Central Ground Water Authority.
- (vi) Solid/hazardous waste generated in the mines needs to be addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.
- (vii) The Environmental clearance shall be subject to orders of Hon'ble Supreme Court of India, Hon'ble High Courts, NGT and any other Court of Law, from time to time, and as applicable to the project

(b) Air quality monitoring and preservation

- (i) Continuous ambient air quality monitoring stations as prescribed in the statute be established in the core zone as well as in the buffer zone for monitoring of pollutants, namely PM₁₀, PM_{2.5}, SO₂ and NO_x. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board. Online ambient air quality monitoring stations may also be installed in addition to the regular monitoring stations as per the requirement and/or in consultation with the

SPCB. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc to be carried out at least once in six months.

(ii) The Ambient Air Quality monitoring in the core zone shall be carried out to ensure the Coal Industry Standards notified vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board. Data on ambient air quality and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly reported to the Ministry/Regional Office and to the CPCB/SPCB.

(iii) Transportation of coal, to the extent permitted by road, shall be carried out by covered trucks/conveyors. Effective control measures such as regular water/mist sprinkling/rain gun etc shall be carried out in critical areas prone to air pollution (with higher values of PM₁₀/PM_{2.5}) such as haul road, loading/unloading and transfer points. Fugitive dust emissions from all sources shall be controlled regularly. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central/State Pollution Control Board.

(iv) The transportation of coal shall be carried out as per the provisions and route envisaged in the approved Mining Plan or environment monitoring plan. Transportation of the coal through the existing road passing through any village shall be avoided. In case, it is proposed to construct a 'bypass' road, it should be so constructed so that the impact of sound, dust and accidents could be appropriately mitigated.

(v) Vehicular emissions shall be kept under control and regularly monitored. All the vehicles engaged in mining and allied activities shall operate only after obtaining 'PUC' certificate from the authorized pollution testing centres.

(vi) Coal stock pile/crusher/feeder and breaker material transfer points shall invariably be provided with dust suppression system. Belt-conveyors shall be fully covered to avoid air borne dust. Side cladding all along the conveyor gantry should be made to avoid air borne dust. Drills shall be wet operated or fitted with dust extractors.

(vii) Coal handling plant shall be operated with effective control measures w.r.t. various environmental parameters. Environmental friendly sustainable technology should be implemented for mitigating such parameters.

(viii) Major approach roads shall be black topped and properly maintained

(c) Water quality monitoring and preservation

(i) The effluent discharge (mine waste water, workshop effluent) shall be monitored in terms of the parameters notified under the Water Act, 1974 Coal Industry Standards vide GSR 742 (E) dated 25th September, 2000 and as amended from time to time by the Central Pollution Control Board.

(ii) The monitoring data shall be uploaded on the company's website and displayed at the project site at a suitable location. The circular No. J-20012/1/2006-IA.11 (M) dated 27th May, 2009 issued by Ministry of Environment, Forest and Climate Change shall also be referred in this regard for its compliance.

(iii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease area by establishing a network of existing wells and constructing new piezometers during the mining operations. The monitoring of ground water levels shall be carried out four times a year i.e. pre-monsoon, monsoon, post-monsoon and winter. The ground water quality shall be monitored once a year, and the data thus collected shall be sent regularly to MOEFCC/RO.

(iv) Monitoring of water quality upstream and downstream of water bodies shall be carried out once in six months and record of monitoring data shall be maintained and submitted to the Ministry of Environment, Forest and Climate Change/Regional Office.

(v) Ground water, excluding mine water, shall not be used for mining operations. Rainwater harvesting shall be implemented for conservation and augmentation of ground water resources.

(vi) Catch and/or garland drains and siltation ponds in adequate numbers and appropriate size shall be constructed around the mine working, coal heaps & OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. Further, dump material shall be properly consolidated/ compacted and accumulation of water over dumps shall be avoided by providing adequate channels for flow of silt into the drains. The drains/ ponds so constructed shall be regularly de-silted particularly before onset of monsoon and maintained properly. Sump capacity should provide adequate retention period to allow proper settling of silt material. The water so collected in the sump shall be utilised for dust suppression and green belt development and other industrial use. Dimension of the retaining wall constructed, if any, at the toe of the OB dumps within the mine to check run-off and siltation should be based on the rainfall data. The plantation of native species to be made between toe of the dump and adjacent field/habitation/water bodies.

(vii) Adequate groundwater recharge measures shall be taken up for augmentation of ground water. The project authorities shall meet water requirement of nearby village(s) after due treatment conforming to the specific requirement (standards).

(viii) Industrial waste water generated from CHP, workshop and other waste water, shall be properly collected and treated so as to conform to the standards prescribed under the standards prescribed under Water Act 1974 and Environment (Protection) Act, 1986 and the Rules made there under, and as amended from time to time. Adequate ETP /STP needs to be provided.

(ix) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

(x) The surface drainage plan including surface water conservation plan for the area of influence affected by the said mining operations, considering the presence of river/rivulet/pond/lake etc, shall be prepared and implemented by the project proponent. The surface drainage plan and/or any diversion of natural water courses shall be as per the approved Mining Plan/EIA/EMP report and with due approval of the concerned State/GoI Authority. The construction of embankment to prevent any danger against inrush of surface water into the mine should be as per the approved Mining Plan and as per the permission of DGMS or any other authority as prescribed by the law.

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(xi) The project proponent shall take all precautionary measures to ensure riverine/riparian ecosystem in and around the coal mine up to a distance of 5 km. A riverine/riparian ecosystem conservation and management plan should be prepared and implemented in consultation with the irrigation / water resource department in the state government.

(xii) The project proponent shall not alter major water channels around the site. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine. The embankment constructed along the river/nallah boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side, stabilized with plantation so as to withstand the peak water pressure preventing any chance of mine inundation.

(xiii) Garland drains (of suitable size, gradient and length) around the critical areas i.e. mine shaft and low lying areas, shall be designed keeping at least 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. The sump capacity shall also provide adequate retention period to allow proper settling of silt material of the surface runoff

(xiv) The water pumped out from the mine, after siltation, shall be utilized for industrial purpose viz. watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

(d) Noise and Vibration monitoring and prevention

(i) Adequate measures shall be taken for control of noise levels as per Noise Pollution Rules, 2016 in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with personal protective equipments (PPE) like ear plugs/muffs in conformity with the prescribed norms and guidelines in this regard. Adequate awareness programme for users to be conducted. Progress in usage of such accessories to be monitored.

(ii) Controlled blasting techniques shall be practiced in order to mitigate ground vibrations, fly rocks, noise and air blast etc., as per the guidelines prescribed by the DGMS.

(iii) The noise level survey shall be carried out as per the prescribed guidelines to assess noise exposure of the workmen at vulnerable points in the mine premises, and report in this regard shall be submitted to the Ministry/RO on six-monthly basis.

(e) Mining Plan

(i) Mining shall be carried out under strict adherence to provisions of the Mines Act 1952 and subordinate legislations made there-under as applicable.

(ii) Mining shall be carried out as per the approved mining plan (including Mine Closure Plan) abiding by mining laws related to coal mining and the relevant circulars issued by Directorate General Mines Safety (DGMS).

(iii) No mining activity shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980 and also adhering to The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 read with provisions of Indian Forest Act, 1927.



(iv) Underground work place environmental conditions shall be rendered ergonomic and air breathable with adequate illumination in conformance with DGMS standards.

(v) No change in mining method *i.e.* UG to OC, calendar programme and scope of work shall be made without obtaining prior approval of the Ministry of Environment, Forests and Climate Change (MoEFCC).

(vi) Efforts should be made to reduce energy and fuel consumption by conservation, efficiency improvements and use of renewable energy.

(f) Land reclamation

(i) Digital Survey of entire lease hold area/core zone using Satellite Remote Sensing survey shall be carried out at least once in three years for monitoring land use pattern and report in 1:50,000 scale or as notified by Ministry of Environment, Forest and Climate Change(MOEFCC) from time to time shall be submitted to MOEFCC/Regional Office (RO).

(ii) The final mine void depth should preferably be as per the approved Mine Closure Plan, and in case it exceeds 40 m, adequate engineering interventions shall be provided for sustenance of aquatic life therein. The remaining area shall be backfilled and covered with thick and alive top soil. Post-mining land be rendered usable for agricultural/forestry purposes and shall be diverted. Further action will be treated as specified in the guidelines for Preparation of Mine Closure Plan issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(iii) The entire excavated area, backfilling, external OB dumping (including top soil) and afforestation plan shall be in conformity with the "during mining"/"post mining" land-use pattern, which is an integral part of the approved Mining Plan and the EIA/EMP submitted to this Ministry. Progressive compliance status vis-a-vis the post mining land use pattern shall be submitted to the MOEFCC/RO.

(iv) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, along with fly ash for external dump of overburden, backfilling of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

(v) Further, it may be ensured that as per the time schedule specified in mine closure plan it should remain live till the point of utilization. The topsoil shall temporarily be stored at earmarked site(s) only and shall not be kept unutilized. The top soil shall be used for land reclamation and plantation purposes. Active OB dumps shall be stabilised with native grass species to prevent erosion and surface run off. The other overburden dumps shall be vegetated with native flora species. The excavated area shall be backfilled and afforested in line with the approved Mine Closure Plan. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forest and Climate Change/ Regional Office.

(vi) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(vii) Post-mining land be rendered usable for agricultural/forestry purposes and shall be handed over to the respective State Government, as specified in the Guidelines for Preparation of Mine Closure Plan, issued by the Ministry of Coal dated 27th August, 2009 and subsequent amendments.

(viii) Fly ash shall be used for external dump of overburden, backfilling or stowing of mine as per provisions contained in clause (i) and (ii) of subparagraph (8) of fly ash notification issued vide SO 2804 (E) dated 3rd November, 2009 as amended from time to time. Efforts shall be made to utilize gypsum generated from Flue Gas Desulfurization (FGD), if any, alongwith fly ash for external dump of overburden, backfilling or stowing of mines. Compliance report shall be submitted to Regional Office of MoEF&CC, CPCB and SPCB.

(x) Thorough inspection of the mine lease area for any cracks developed at the surface due to mining activities below ground shall be carried out to prevent inrush of water in the mine.

(xii) The project proponent shall make necessary alternative arrangements, if grazing land is involved in core zone, in consultation with the State government to provide alternate areas for livestock grazing, if any. In this context, the project proponent shall implement the directions of Hon'ble Supreme Court with regard to acquiring grazing land.

(g) Green Belt

(i) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered/endemic flora/fauna, if any, spotted/reported in the study area. The Action plan in this regard, if any, shall be prepared and implemented in consultation with the State Forest and Wildlife Department.

(ii) Greenbelt consisting of 3-tier plantation of width not less than 7.5 m shall be developed all along the mine lease area as soon as possible. The green belt comprising a mix of native species (endemic species should be given priority) shall be developed all along the major approach/ coal transportation roads.

(h) Public hearing and Human health issues

(i) Adequate illumination shall be ensured in all mine locations (as per DGMS standards) and monitored weekly. The report on the same shall be submitted to this ministry & it's RO on six-monthly basis.

(ii) The project proponent shall undertake occupational health survey for initial and periodical medical examination of the personnel engaged in the project and maintain records accordingly as per the provisions of the Mines Rules, 1955 and DGMS circulars. Besides regular periodic health check-up, 20% of the personnel identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, as amended time to time.

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(iii) Personnel (including outsourced employees) working in core zone shall wear protective respiratory devices and shall also be provided with adequate training and information on safety and health aspects.

(iv) Implementation of the action plan on the issues raised during the public hearing shall be ensured. The project proponent shall undertake all the tasks/measures as per the action plan submitted with budgetary provisions during the public hearing. Land oustees shall be compensated as per the norms laid down in the R&R policy of the company/State Government/Central Government, as applicable.

(v) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(vi) Skill training as per safety norms specified by DGMS shall be provided to all workmen including the outsourcing employees to ensure high safety standards in mines.

(vii) Effective arrangement shall be made to provide and maintain at suitable points conveniently situated, a sufficient supply of drinking water for all the persons employed.

(i) Corporate Environment Responsibility

(i) The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental/forest/wildlife norms/conditions. The company shall have defined system of reporting infringements/deviation/violation of the environmental/forest/wildlife norms/conditions and/or shareholders/stake holders.

(ii) A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.

(iii) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.

(iv) Self environmental audit shall be conducted annually. Every three years third party environmental audit shall be carried out.

(j) Miscellaneous

(i) The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular

language within seven days and in addition this shall also be displayed in the project proponent's website permanently.

(ii) The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

(iii) The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.

(iv) The project proponent shall monitor the criteria pollutants level namely; PM₁₀, SO₂, NO_x (ambient levels) or critical sectoral parameters, indicated for the projects and display the same at a convenient location for disclosure to the public and put on the website of the company.

(v) The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.

(vi) The project proponent shall follow the mitigation measures provided in this Ministry's OM No.Z-11013/5712014-IA.II (M) dated 29th October, 2014, titled 'Impact of mining activities on habitations-issues related to the mining projects wherein habitations and villages are the part of mine lease areas or habitations and villages are surrounded by the mine lease area'.

(vii) The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.

(viii) The project authorities shall inform to the Regional Office of the MOEFCC regarding commencement of mining operations.

(ix) The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.

(x) The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.

(xi) No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change.

(xii) Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.

(xiii) The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.



(xiv) The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

(xv) The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.

(xvi) The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Trans-boundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report and also that during presentation to the EAC. All the commitments made on the issues raised during public hearing shall also be implemented in letter and spirit.

6. The proponent shall obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

8. The coal company/project proponent shall be liable to pay the compensation against the illegal mining, if any, and as raised by the respective State Governments at any point of time, in terms of the orders dated 2nd August, 2017 of Hon'ble Supreme Court in WP (Civil) No.114/2014 in the matter of 'Common Cause Vs Union of India & others.

9. The concerned State Government shall ensure no mining operations to commence till the entire compensation for illegal mining, if any, is paid by the project proponent through their respective Department of Mining & Geology, in strict compliance of the judgment of Hon'ble Supreme Court.

10. This environmental clearance shall not be operational till such time the project proponent complies with the above said judgment of Hon'ble Supreme Court, as applicable, and other statutory requirements.

This issues with the approval of the competent Authority


(Lalit Bokolia)
Director

Copy to: -

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi

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2. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat Ranchi
3. The APCCF (ECZ), MoEF&CC RO Bungalow no. A-2, Shyamali Colony, Ranchi 834002
4. The Chairman, Jharkhand State Pollution Control Board, TA Building, HEC Complex, PO Dhruva, Ranchi
5. The Chairman, Central Ground Water Authority, Ministry of Jal Shakti, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
6. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
7. The District Collector, Bokaro, Government of Jharkhand
8. Monitoring File /Record File
9. PARIVESH Portal


(Lalit Bokolia)
Director