



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

To,

The Project Officer  
Central Coalfields Limited  
Bhurkunda PO Office, PO-Bhurkunda,,Ramgarh,,Jharkhand-829135

**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/74128/2018 dated 31 Dec 2021. The particulars of the environmental clearance granted to the project are as below.

- |  |                            |
|--|----------------------------|
| 1. EC Identification No.                   | EC22A042JH164302           |
| 2. File No.                                | 23-266/2018-IA.III (V)     |
| 3. Project Type                            | New                        |
| 4. Category                                | A                          |
| 5. Project/Activity including Schedule No. | 1(a) Mining of minerals    |
| 6. Name of Project                         | Bhurkunda Colliery         |
| 7. Name of Company/Organization            | Central Coalfields Limited |
| 8. Location of Project                     | Jharkhand                  |
| 9. TOR Date                                | 27 Apr 2021                |

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

Date: 13/07/2022

(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.*

*This is a computer generated cover page.*



**F. No. J- 23-266/2018-IA.III (V)**  
Government of India  
Ministry of Environment Forest and Climate Change  
(Impact Assessment Division)

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Indira Paryavaran Bhavan,  
JorBagh Road, New Delhi-110 003  
Email: lk.bokolia@nic.in Tel: 01120819417  
**Dated: 13<sup>th</sup> July, 2022**

To,

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

**Sub: Bharkunda OCP for production capacity of 2.05 MTPA (1.75 MTPA for OC and 0.30 MTPA for UG) in an area of 910.16 Ha by M/s Central Coalfields Limited, located at village Balkudra, Kurse, Deoria-Bargawan and Dhundua, Tehsil Patratu, District Ramgarh (Jharkhand)- For Environmental Clearance (under violation category) –reg.**

Sir,

This has reference to your online proposal No. IA/JH/CMIN/74128/2018 dated 31<sup>st</sup> December, 2021 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 Bharkunda OCP for production capacity of 2.05 MTPA (1.75 MTPA for OC and 0.30 MTPA for UG) in an area of 910.16 Ha by M/s Central Coalfields Limited, located at village Balkudra, Kurse, Deoria-Bargawan and Dhundua, Tehsil Patratu, District Ramgarh (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 25<sup>th</sup> EAC meeting held on 18-20<sup>th</sup> January, 2022, 29<sup>th</sup> EAC meeting held on 25<sup>th</sup> -26<sup>th</sup> April, 2022 and on 30<sup>th</sup> meeting held on 20<sup>th</sup> 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/6 and is bounded by latitudes 23° 38' 51.52"N & 23° 40' 26.02"N and longitudes 85° 19' 42.88"E & 85° 23' 0.56"E.
- ii. Coal linkage of the washery is proposed 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 1092 persons.

EC of Bharkunda OCP by M/s CCL

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- 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. Terms of reference granted vide F. No. 23-266/2018-IA.III(V) Dated: 27.04.2021.
- viii. Total mining lease area as per block allotment is 910.16 Ha. Mining Plan (Including Progressive Mine Closure Plan) has been approved in the 479th Board meeting of CCL held on 04.11.2019.
- ix. The land use of the project is as follows:

**Pre-mining Land use detail (Area in ha)**

SN	Type of Land	Area In Ha.
1	Forest Land (Notified Forest & GM JJ)	621.14
2	Tenancy Land	216.17
3	GM Land	72.85
<b>TOTAL</b>		<b>910.16</b>

**Land Use During Mining:**

SN	Type	Total (in Ha)
1.	Quarry I & II	196.73
2.	External Dumps	177.07
4.	Infrastructure	19.95
5.	Old UG and OC Workings including Colony and Residential area	424.28
6.	Water Bodies	19.5
7.	Safety Zone	10.75
8.	Underground Workings	61.88
<b>Total land</b>		<b>910.16</b>

**Post Mining Land use:**

SN	Land Use	Plantation	Water Body	Public Use	Un-disturbed	Total (in Ha)
1.	Quarry I & II	8.71	188.02	0	0	196.73
2.	External Dumps	121.41	0	55.66	0	177.07
4.	Infrastructure	0	0	19.95	0	19.95
5.	Old UG and OC Workings including Colony and Residential area	127.12	0	297.16	0	424.28
6.	Water Bodies	0	19.5	0	0	19.5
7.	Safety Zone	10.75	0	0	0	10.75
8.	Underground Workings	61.88	0	0	0	61.88
<b>Total land</b>		<b>329.87</b>	<b>207.52</b>	<b>372.77</b>	<b>0</b>	<b>910.16</b>



- x. As per the approved Mining Plan of Bhurkunda Colliery, total geological reserve reported in the mine lease area is 257.98 MT with 18.07 MT mineable reserve. Out of the total mineable reserve of 18.07 MT, 18.07 MT is mineable reserve. Percent of extraction is 100 %.
- xi. 24 seams with thickness ranging from 0.07 meter to 28.63 meter are workable. Grade of coal is G-6 to G-9. Stripping ratio is 4.30 while gradient is 1 in 5 to 1 in 6.
- xii. Method of mining operation is by open-cast mining using Shovel-dumper mining system & underground mining by depillaring with caving.
- xiii. Life of mine is 9 years for OCP mining & 20 years for UG mining.
- xiv. The project has 2 external OB dumps in an area of 177.07 ha with 45 – 90 m height and 56.79 Mm<sup>3</sup> of OB. 1 internal OB in an area of 8.71 ha with 2.42 Mm<sup>3</sup> of OB is envisaged in the project.
- xv. Total quarry area, combining Quarry I & II, is 196.73 ha out of which backfilling will be done in 8.71 Ha area in Quarry-II. Final mine void will be created in an area of 188.02 Ha with average depth of 60-90 m. Backfilled quarry area of 8.71 Ha shall be reclaimed with plantation. Final mine void will be converted into a water body.
- xvi. Transportation of coal has been proposed by internal roads & Dumpers from mine pit head, from surface to siding at present by covered tipping trucks and at sidings by payloaders.
- xvii. Reclamation Plan in an area of 329.87 Ha comprising of 8.71 Ha of internal dump, 121.44 Ha of external dump and 10.75 Ha of green belt and safety zone. In addition to this, an area of 127.12 ha, included for Old UG and OC Workings including Colony and Residential area & 61.88 Ha included for Underground Workings, has also been proposed for green belt development.
- xviii. 621.14 ha of forest land has been reported to be involved in the project. The application for 621.14 Ha applied vide FP/JH/MIN/39387/2019 on 29.03.2019 for approval under the Forest (Conservation) Act, 1980.
- xix. No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones fall within 10 km boundary of the project.
- xx. The ground water level has been reported to be varying between 10.55 m (Pre-monsoon) to 4.3 m (Post-monsoon) (Average). Total water requirement for the project is 1823 KLD.
- xxi. Application for obtaining the NOC of the Central Ground Water Authority has been approved in-principle vide application no: 21-4/731/JH/MIN/2021 Dated: 27.01.2022. Payment of demand is under progress.
- xxii. Public hearing for the project of 2.05 capacity in an area of 910.16 Ha was conducted on 27.11.2021 at Officers Club, Bhurkunda, Dist: Ramgarh under the Chairmanship of Shri. Nelson Aeon Bage, Additional Collector. Major issues raised in the public hearing include employment, R & R, School, electricity, hospital drinking water facilities etc. Appropriate action to address the issues raised in the Public Hearing have been proposed.
- xxiii. Last Consent to Operate for the existing capacity was obtained from the Jharkhand State PCB on 12.03.2020 and was valid upto 30.09.2020.
- xxiv. The drainage of the block is controlled by the Easterly flowing Damodar River in the North and East of the block and Naikari nadi in the North-West and West of the block.
- xxv. 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.



- xxvi. No court cases, violation cases are pending against the project of the PP.
- xxvii. The project involves no R & R.
- xxviii. Total cost of the project is Rs. 146.375 Crores. Cost of production is Rs. 2355.89/Tonne. The fund for the CSR should be allocated based on 2% of the average net profit of the Company for the three immediately preceding financial years. Capital Cost of Environmental Control Measures is Rs. 34.14 Crore. Estimated Revenue Cost of Environmental Control Measures is Rs 17.77 9 Crore.

4. The Expert Appraisal Committee (EAC) in its 30<sup>th</sup> EAC meeting held on 20<sup>th</sup> May, 2022 recommended the project for grant of Environment Clearance (EC) under violation category based on Ministry's Notification dated 14<sup>th</sup> March, 2017 through Video Conferencing. Based on recommendations of the EAC, Ministry of Environment, Forest and Climate Change hereby accords approval to Environment Clearance of Bhurkunda Opencast mining cum underground for production capacity of 2.05 MTPA (1.75 MTPA for OC and 0.30 MTPA for UG) in an area of 910.16 Ha by M/s Central Coalfields Limited, located at village Balkudra, Kurse, Deoria-Bargawan and Dhundua, Tehsil Patratu, District Ramgarh (Jharkhand), under the provisions of EIA Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions for environmental safeguards:-

- i. EAC recommended an amount of Rs. 115550000 towards Remediation plan and Rs 7600000 towards Natural and 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 above.

**A. Remediation plan along with the action plan with a budget of Rs. 115550000**

Remediation plan & budgetary provisions					Action Plan		
SN		Activity Proposed	Name of Villa ge(s)	Total (₹)	Year 0 1	Year 0 2	Year 0 3
1	Water Environmen t	Stone pitching of emban kment with construction of PCC Prot ective wall of length 700 m against Nakari River at Balkudra Opencast min e under Bhurkunda Proje ct. (Proposal Initiated on 21. 01.2022)	Balkudra & Ku rse	100000 00	100000 00	0	0
2		Plantation along the bank s (6 Ha.) of Nakari Nadi	Balkudra & Ku rse	300000 0	150000 0	150000 0	0
3		Protection and Clean ing of Kurse Strea m	Kurse	250000 0	500000	100000 0	100000 0

Total Water Environment				155000	120000	250000	100000
				00	00	0	0
1	Ecology	Distribution of fruit bearing Saplings like Amla, Guava, Mango, Lichi etc. to nearby villagers (7000 Saplings)	Balkudra, Kurse, Deoriya and Dunduwa (Rs 3,75,000 in each of 4 villages in course of three years)	1500000	500000	500000	500000
2		Development of Sal Nursery (9 Ha) for raising saplings, training and distribution to nearby villagers	Balkudra	1000000	0	750000	250000
3		Development of Ecological Park (About 10 Ha. At Barka-Sayal Area)	Kurse	7370000	0	500000	237000
<b>Total Ecological Environment</b>				<b>8520000</b>	<b>500000</b>	<b>580000</b>	<b>267000</b>
				<b>00</b>		<b>00</b>	<b>00</b>
Remediation plan & budgetary provisions				Action Plan			
SN		Activity Proposed	Name of Village(s)	Total (₹)	Year 01	Year 02	Year 03
1	Air & Noise Environment	Additional Health Camps to monitor the respiratory and E&T health status of nearby villages (Kurse, Saunda, Devariya etc.) @ quarterly for 3 years	Balkudra, Kurse, Deoriya, Saunda and Dunduwa (Rs 4,00,000 in each of 5 villages in course of 3 years)	2000000	666667	666667	666667
2		Additional avenue Plantation and maintenance in subsequent years on village roads adjacent to project boundary	Balkudra, Kurse, Deoriya, and Dunduwa. (Rs 3,75,000 in each of 4 villages in course of three years)	1500000	500000	500000	500000
3		Provision of 1 no. of Road Sweeping machines for dust extraction in villages Kurse, Bh	Balkudra, Kurse, Deoriya, Saunda and Dunduwa	8000000	0	800000	0

		urkunda & Saunda						
<b>Total Air Environment</b>				<b>1150000</b>	<b>1166666.67</b>	<b>9166666.667</b>	<b>1166666.667</b>	
1	Land Environment	Provision of community level waste collection bins in the villages Bhurkunda, Kurse, Deoria and Saunda etc. (50 nos.)	Balkudra, Kurse, Deoriya, Saunda and Dunduwa	150000	100000	50,000	-	
<b>Total Land Environment</b>				<b>150000</b>	<b>100000</b>	<b>50000</b>	<b>0</b>	
<b>Remediation plan &amp; budgetary provisions</b>					<b>Action Plan</b>			
SI NO		Activity Proposed	Name of Village(s)	Total (₹)	Year 01	Year 02	Year 03	
1	Socio-Economic	Additional Skill development training Programme to the unemployed Youth (Computer Training, Mobile repairing, Beautician training, Mason, Plumber etc.)	Balkudra, Kurse, Deoriya, Saunda and Dunduwa (Rs 3,00,000 in each of the 5 villages in course of 3 years)	1500000	500000	500000	500000	
2			Construction of additional community toilets in Hurungara village (3 nos.)	Deoriya	1000000	300000	300000	400000
3			Organizing additional Sports and cultural festivals	Balkudra	40000	10000	15000	15000
				Kurse	40000	10000	15000	15000
				Deoriya	40000	10000	15000	15000
	Dunduwa	40000		10000	15000	15000		
4	Additional awareness programs on Environmental protection	Balkudra	100000	40000	40000	20000		
		Kurse	100000	40000	40000	20000		
		Deoriya	100000	40000	40000	20000		



		Dunduwa	100000	40000	40000	20000
		Saunda	100000	40000	40000	20000
<b>Total Socio-Economic Environment</b>			<b>3200000</b>	<b>1050000</b>	<b>1075000</b>	<b>1075000</b>
<b>Total Fund for remediation measures</b>			<b>115550000</b>	<b>14816666.67</b>	<b>70791666.67</b>	<b>29941666.67</b>

**B. Natural & Community Resource Augmentation Plan along with action plan with a budget of Rs. 7600000/-**

SN	Head	Activity Proposed	Name of Village(s)	Total (₹)	Year 1	Year 2	Year 3
1	NRAP	Provision for rooftop Rain water Harvesting structures at 8 locations in adjacent villages	Balkudra	1000000	500000	500000	0
			Kurse	1000000	500000	500000	0
			Deoriya	1000000	500000	500000	0
			Dunduwa	1000000	500000	500000	0
		Total NRAP		4000000			
2	CRAP	Installation of solar street lights (100 nos.) at different places in Barkagaon Block falling in the buffer zone	Potanga (25 Nos)	250000	125000	125000	0
			Urimari (25 Nos)	250000	125000	125000	0
			Aswa (25 Nos)	250000	125000	125000	0
			Tillaiya (25 Nos)	250000	125000	125000	0
3		Providing solar lamps along the roads and supply of Solar lights to households in nearby villages (50 Nos Approx.)	Balkudra	250000	75000	75000	100000
			Kurse	250000	75000	75000	100000
			Deoriya	250000	75000	75000	100000
			Dunduwa	250000	75000	75000	100000
4		Provision of solar based handpumps/ borewells for drinking water at Upar tola, kamla	Kurse	1600000	800000	800000	0

		tand in Kurse village				
		Total CRAP		3600000		
<b>Grand Total</b>				<b>7600000</b>	<b>3600000</b>	<b>3600000</b>
						<b>400000</b>

### Summary

Sl. No.	Description	Estimated cost (Rs.)
1	Remediation Plan	11,55,50,000
2	Natural Resources Augmentation Plan	40,00,000
3	Community Resources Augmentation Plan	36,00,000
	<b>Total</b>	<b>12,31,50,000</b>

- ii. Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 1231.5/- lakhs . The project proponent has submitted a bank guarantee of an amount of Rs. 1231.5 Lakhs towards Remediation plan and Natural and Community Resource Augmentation plan with the SPCB in favour of Member Secretary, Jharkhand Pollution Control Board vide receipt no. 0089NDLG00014123 issued by bank.
- iii. Remediation plan shall be completed within three years from date of issue of EC only whereas bank guarantee shall be applicable for 5 years. 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.

### Specific Conditions w.r.t. SPA

- iv. 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.
- v. 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.
- vi. ETP shall be based on Zero Liquid Discharge and no untreated wastewater shall be discharged beyond mine boundaries
- vii. PP shall submit the progressive status of STP construction at Hospital colony, Patel Nagar and Lapanga proposed at estimated cost of 1311 Lakhs to IRO by March, 2023.
- viii. 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.
- ix. 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.

- x. PP must obtain 4.5-star rating of MoC in the year 2022-23 and report shall be submitted to IRO.
- xi. Within mine lease area, transportation OB dump shall be done by vehicle using cleaner fuels ( LNG/CNG ).
- xii. Green belt cover upto 40% of the total land area beyond the permissible requirement of 33%, wherever feasible.
- xiii. Stipulation of greenbelt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc.
- xiv. Assessment of carrying capacity of transportation load on roads inside the mine. If the roads required to be widened, shall be prescribed as a condition.
- xv. A detailed water harvesting plan may be submitted by the project proponent
- xvi. More stringent norms for management of hazardous waste. The waste generated should be preferably utilized in co-processing.
- xvii. PP shall comply with the observations by Sub -committee of EAC (Violation), MOEF&CC during their visit on 19/01/19 within one year from the date of issue of EC.
- xviii. Monitoring of compliance of EC conditions may be submitted with third party audit every year.
- xix. Further proposal of expansion/amalgamation of mine shall only be considered only when full compliance of existing EC conditions along with compliance of Remediation plan and Natural & Community Resource Augmentation plan for amount Rs. 1231.5/- lakhs are accomplished.
- xx. PP to implement the State Action Plan drawn for severely polluted area and it shall be implemented in time bound manner. PP to interact with SPCB in this regard.
- xxi. PP must accomplish the proposal for development of Hi-Tech SAL nursery in an area of approximately 9 Ha near the bank of Naikari River which has been submitted to DFO, Ramgarh vide Ref no. CCL/GM(E&F)/2022/137 dt 28/2/2022
- xxii. PP to earmark additional Rs. 306 lakhs 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/2022/234 dated 16.04.2022. Plan in this regard should be submitted within 3months to IRO, MoEF&CC.
- xxiii. 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.
- xxiv. 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.
- xxv. 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.
- xxvi. PP shall engage third party independent expert agency for monitoring/auditing of compliance of EC conditions every year.
- xxvii. PP to keep a proper record of the respective committee constituted, its visits & recommendations with latest work order for filling the surface cracks due subsidence.
- xxviii. 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
- xxix. Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.





- xxx. In pursuance to the Ministry's OM dated 30.09.2020, Project Proponent shall take up the activities for community development under EMP
- xxxii. PP shall plant Additional 2000 numbers of native/fruit bearing plants around the colony/guesthouse in before commencement of monsoon and furnish the detail within 3 months to the respective IRO, MoEF&CC
- xxxiii. 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.
- xxxiiii. PP shall take necessary action to implement all the activities as per the timeline mentioned in ADS rely Vide letter GM/E&F/2022/234 and 345 dated 16.04.2022 & 18.05.2022 on PARIVESH Portal. In case of same activity, the updated version may be considered Plan in this regard, should be submitted within 3 months to IRO, MoEF&CC. Total 9.6 crores have been proposed for Air pollution control measures in EIA/EMP report of Bhurkunda Colliery which will further help in mitigation of air pollution at the two sites. Black topping for black topping of Approx. 1.5 km of permanent coal transportation road from UG Incline to Check Post near PO Office.
- xxxiv. 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 with 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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>. 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 25<sup>th</sup> 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 PM<sub>10</sub>/PM<sub>2.5</sub>) 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 25<sup>th</sup> 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 27<sup>th</sup> 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.

(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 27<sup>th</sup> 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 27<sup>th</sup> August, 2009 and subsequent amendments.

(viii) Regular monitoring of subsidence movement on the surface over and around the working areas and its impact on natural drainage pattern, water bodies, vegetation, structure, roads and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence beyond the limit prescribed, appropriate effective mitigation measures shall be taken to avoid loss of life and materials. Cracks should be effectively plugged in with ballast and clay soil/suitable material.



(ix) 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 3<sup>rd</sup> 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) A separate team for subsidence monitoring and surface mitigation measures shall be constituted and continuous monitoring & implementation of mitigation measures be carried out.

(xi) 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) Native tree species shall be selected and planted over areas affected by subsidence.

(xiii) 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.

(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 29<sup>th</sup> 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; PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> (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 29<sup>th</sup> 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.

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(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 2<sup>nd</sup> 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
2. Director General, Ministry of Environment, Forest and Climate Change, Indira Paryawaran Bhawan, Jor Bagh, New Delhi-110001.
3. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat Ranchi
4. The APCCF (ECZ), MoEF&CC RO Bunglow no. A-2, Shyamali Colony, Ranchi 834002
5. The Chairman, Jharkhand State Pollution Control Board, - -TA Building, HEC Complex, PO Dhruva, Ranchi
6. The Chairman, Central Ground Water Authority, Ministry of Jal Shakti, Jamnagar House, 18/11, Man Singh Road Area, New Delhi, Delhi 110001
7. The District Collector, Ramgarh, Government of Jharkhand
8. Monitoring File /Record File
9. PARIVESH Portal

  
(Lalit Bokolia)