



F. No. J-11015/373/2013- IA.II(M)

Government of India

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

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**Dated: 1<sup>st</sup> February, 2021**

To

The General Manager  
M/s Bharat Coking Coal Limited,  
Kusunda Area, Koyla Bhawan,  
Koyla Nagar, Dhanbad - 5 (Jharkhand).  
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**Sub: Cluster XVII including Kalyaneshwari Opencast Coal Mining Project of capacity 4.0 MTPA in ML area 1397.18 ha of M/s Bharat Coking Coal Limited located at District Burdwan (West Bengal) - Environmental Clearance under Ministry's Notification dated 14<sup>th</sup> March, 2017-reg.**

Sir,

This has reference to your online proposal no. IA/WB/CMIN/ 85880 /2018 dated 3<sup>rd</sup> December, 2018, on the above-mentioned subject submitted to this Ministry for grant of Environmental Clearance (EC) in terms of the provisions of the Environment Impact Assessment (EIA) Notification, 2006 under the Environment (Protection) Act, 1986 for Cluster XVII including Kalyaneshwari OCP Coal Mining Project of capacity 4.0 MTPA in ML area 1397.18 ha of M/s Bharat Coking Coal Limited located at District Burdwan (West Bengal).

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

2. The proposal was considered by the Expert Appraisal Committee (EAC) in its 17<sup>th</sup> EAC meeting held on, 29-31 January, 2019, 23<sup>rd</sup> EAC meeting held on 25-26<sup>th</sup> June 2019, 26<sup>th</sup> EAC meeting held on 01.10.2019 and 35<sup>th</sup> EAC meeting held on 6 - 7 August, 2020. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be as under:

- (i) Latitude and Longitude of the project: Begunia Colliery and Victoria West Colliery: Point 1 - Latitude: 23°43'25.50"N, Longitude: 86°48'9.81"E; Point 2 - Latitude: 23°43'8.08"N, Longitude: 86°48'52.08"E; Point 3 - Latitude 23°44'9.20"N, Longitude: 86°48'31.89"E ; Point 4 - Latitude 23°43'57.88" N, Longitude: 86°49'49.02"E; Point 5 - Latitude: 23°44'57.01"N, Longitude: 86°49'23.16"E; Point 6 - Latitude: 23°44'43.88"N, Longitude: 86°50'1.84"E; Kalyaneshwari OCP : Point 1- Latitude: 23°46'15.49"N, Longitude: 86°51'29.78"E; Point 2 - Latitude: 23°46'19.24"N, Longitude: 86°52'12.93"E; Point 3 - Latitude: 23°45'55.46"N, Longitude:



86°52'8.83"E; Point 4 - Latitude: 23°45'54.45"N, Longitude: 86°51'45.58"E; Point 5 - Latitude: 23°45'30.57"N, Longitude: 86°52'14.47"E; Point 6 - Latitude: 23°44'25.31"N, Longitude: 86°51'11.09"E; Point 7 - Latitude: 23°44'49.94"N, Longitude: 86°51'3.44"E; Point 8 - Latitude: 23°44'58.82"N, Longitude: 86°50'41.54"E; Point 9 - Latitude: 23°44'42.13"N, Longitude: 86°50'11.22"E; Point 10 - Latitude: 23°45'58.56"N, Longitude: 86°50'40.86"E

- (ii) Project is not located in the Critically Polluted Areas as per CEPI Score.
- (iii) Cost of the project: Estimated Capital Cost of the Project is Rs. 1503.67 crores.
- (iv) Employment generated/to be generated: - BCCL has existing manpower. However, 200 nos. of additional employment will be provided against land acquisition and also indirect employment may be generated through contract works. (As per Draft PR of Kalyaneshwari OCP and revised land requirement as per revised mining plan of Proposed Kalyaneshwari OCP for 4.0 MTPA).
- (v) Benefits of the project: -
  - Ensuring Safety to Life and Property of local people and Property of State.
  - The developments of mining in the area will provide direct and indirect employment opportunities
  - Bridge the gap of demand and supply of Coal in India.
  - To meet the requirement of Coking coal, substantial savings in Foreign Exchange.
  - Boost to local and regional economy, direct contribution to the state exchequer
  - To bring about enhanced Socio-economic benefits to local population as per CIL's CSR Policy.
  - Implementation of Natural and Community Resource Augmentation Plan.
- (vi) The project is New Project over old mine leasehold taken through nationalization & re-allocated block.
- (vii) Terms of Reference granted by Ministry under Violation category vide letter no. J-11015/373/2013-IA.II(M) dated 16<sup>th</sup> October, 2018.
- (viii) Mine Lease Area
  - As per block allotment: Block Area as per approved Mining Plan is 703 Ha.
  - As per approved mine plan: As per approved mine plan, the Mining Lease already with CV Area is 802.158 ha and the Proposed Project Area for Kalyaneshwari OCP is 781.18 Ha.
- (ix) Date of approval of mine plans, mine closure plan Status & date: Mining Plan and Mine Closure Plan for Proposed Kalyaneshwari OCP was approved in 364<sup>th</sup> BCCL Board Meeting held on 06.05.2020. Mine Closure Plan of Mines of Begunia Colliery was approved in 345<sup>th</sup> BCCL Board meeting held on 03.08.2018.
- (x) Date of Board's approval: Mining Plan and Mine Closure Plan for Proposed Kalyaneshwari OCP was approved in 364<sup>th</sup> BCCL Board Meeting held on 06.05.2020. Mine Closure Plan of Mines of Begunia Colliery was approved in 345<sup>th</sup> BCCL Board meeting held on 03.08.2018.
- (xi) Date of Ground water clearance and Surface water approval: As per West Bengal State authority looking after Ground Water Clearance, the application will be processed once EC is granted.
- (xii) Existing Ground water level: Core Zone Pre-monsoon : 0.45-5.27 m; Post-monsoon : 0.35-3.29 m





- (xiii) Barakar River is flowing along west boundary i.e adjacent to the proposed Cluster from north to south.
- (xiv) Details of mine lease:- Date of entering into original lease deed.- 01.05.1973; Date of expiry of original lease deed-30.04.2003; Date of 1<sup>st</sup> lease renewal: 08.12.2000; Whether renewal or deemed renewal – Deemed; Date of expiry of 1<sup>st</sup> lease renewal/deemed Renewal.- 07.12.2030
- (xv) Technical Details: Geological Reserve: Total geological reserve: 20.20 MT; Mineable reserve: 18.18 MT; Extractable reserve: 18.18 MT; Percent (%) of extraction: 13.31%
- (xvi) Total estimated water requirement: 875 m<sup>3</sup>/day industrial water requirement and 1715 m<sup>3</sup>/day water requirement for township.
- (xvii) Method of mining: Opencast mining using Shovel Dumper Combination.
- (xviii) Life of mine (yrs): Kalyaneshwari OCP – 12 years
- (xix) Whether ambient air quality seasonal data has been monitored. If so, from which season to which season and whether the results are within the prescribed limits: Yes. Baseline data has been generated from 1st January 2016 to 31st March 2016. Results are found to be within prescribed limit.
- (xx) Details of External O.B. Dumps : No of Dumps : 5; Area of each dump (Ha) : 359.46 Ha (Total for all the external dumps); Height of each dump (m) : 90 m ; Quantity(Mcum) of OB in each dump : 132.10 Mm3; Year of back filling : No backfilling is proposed in Kalyaneshwari OCP; No. of OB Dumps reclaimed: One OB dump is being reclaimed technically and eco-restoration is being carried out over it ; Whether runoff water being utilized : A part of runoff water will be utilized by the mine and remaining will be allowed to flow through natural drainage to Barakar River which is essential for maintaining flow of river and also for safety of mines.
- (xxi) Details of Internal Dumps: No internal dump is proposed in approved mining plan of Proposed Kalyaneshwari OCP.
- (xxii) Utilization of potential of wastes
- Within the mines: External OB dumps will be technically and biologically reclaimed.
  - Outside mines: Oil & Grease will be disposed through auction to authorized reprocessor.
  - Efforts made by proponent: External OB is being technically and biologically reclaimed and Top Soil is being stored for further use in future.
- (xxiii) Details of final Mine Voids: Area: 240 Ha; Depth: 190 m
- (xxiv) Details of Quarry: Total quarry area: 240 Ha; Backfilled quarry area of Nil ha shall be reclaimed with plantation; A void of 240 ha at a depth of 190 m (in post-mining period) which is proposed to be converted into a water body; Green belt created in 5 ha.
- (xxv) Details of Land usage

Pre-mining

S. No.	Land Use	Within ML Area (Ha)	Outside ML Area (Ha)	Total
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1.	Agriculture	806.78	-	806.78
2.	Forest land	0	-	0
3.	Wasteland	261.21	-	261.21
4.	Grazing Land	Included in Agriculture and Wasteland	-	Included in Agriculture and Wasteland
5.	Surfacewater bodies	126.10	-	126.10
6.	Settlements	158.43	-	158.43
7.	Other (Specify)	44.66 (Road/Rails and service building)	-	44.66 (Road/Rails and service building)
	<b>TOTAL</b>	<b>1397.18</b>	<b>-</b>	<b>1397.18</b>

#### Core area

#### Present Land Use of Cluster XVII

Sl. No.	Type of land use		Present mining land use (in Ha)
1	Running Quarry	Backfilled	0
		Not Backfilled	128.18
2	Abandoned Quarry	Backfilled	Included in External OB dump
		Not Backfilled	0
3	External OB dump		86.53
4	Service building/ Mine Infrastructure		25.06
5	Homestead land		212.25
6	Coal dump		1
7	Road and rail including Haul Road		26.81
8	Ag/Fallow Land		119.25
9	Forest Land		0
10	Plantation	Plantation	5
		Grass Carpeting	0
11	Water Body		122.75
12	Barren Land		670.35
	<b>Total</b>		<b>1397.18</b>

#### (xxvi) Details of Forest issues

- Total forest area involved (in ha) for mining lease.: No Forest Land is involved in Core Zone of Cluster XVII.
- Details of wild life issues involved, if any. If so, whether WL management plan has been

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prepared and please indicate the status. - NA

- Whether Schedule-I species, if yes conservation plan is approved by CWLW? No Schedule-I species was found during baseline survey of Flora and Fauna.

(xxvii) Costs of the project: Total capital Cost(Crores): Rs. 1503.67 Crores; Cost of Production (Rs/te): Rs. 2532.96; Sale Price (Rs/te) : Rs. 4220.46; CSR cost: Fund for CSR will be allocated based on 2% of the average net profit of the company for the three immediate preceding financial years or Rs. 2.00 per tonne of coal production of the previous year whichever is higher.; R&R Cost (Rs.in Lakhs) : Rs. 28982.29 lakhs for rehabilitation under Master Plan, Rs. 28011.10 lakhs for proposed rehabilitation for Kalyaneshwari OCP; No of PAFs: 3025 as per Master Plan and 940 PAFs (out of which 23 covered under master plan); Cost for implementing EMP: Capital Cost: Rs. 1783.17 lakhs, Revenue Cost: Rs. 95 lakhs/year

(xxviii)Details of villages/habitation in mine leasearea:

- Inside the lease: Muchi Para, Kora Para, Tetul Dhawra, Bindu Dhawra, Samaj Dhawra, Borira, Damagoria, Kurkutia Basti, Old Kalyaneshwari Mandir
- Surrender by lease- Total no. of 940 PAFs(out of which 23 covered under master plan)
- Extent of cropland acquired/ being acquired inha: Land use of 2.66 Ha agricultural land will be converted.

(xxix) Details of transportation of mineral (Kalyaneshwari OCP):\_In pit (km): 0.02 – 4.6 km (within pit); Surface to siding (km) :1 to 2 km (through road transport); Siding to loading (km): Nil; Quantity being transported by Road/Rail/Conveyor/ropeway: 90% of coal will be dispatched through rail to consumers, 10 % coal will be dispatched through roads; Proposed change in transportation means, if any, give details: NA

(xxx) Details of reclamation: Afforestation shall be done covering an area of: 529.64 ha at the end of mining. This will include:

- Reclaimed external OB dump (in ha): 359.26 ha
- Internal Dump: Nil.
- Green belt (inha) 170.38 ha
- Density of tree plantation (in no of plants) 2500 per ha.
- Void 240 ha at a depth 190 m (Maximum depth) which is proposed to be converted into water body
- Agriculture and horticulture: Nil.
- Fisheries: Nil
- ECO Tourist/recreation spot: Eco-restoration will be carried out in 75 ha in Cluster XVII. An eco-park will be created over 2-3 ha of degraded mined area which will provide a space for recreation. Eco-Tourism will be promoted over eco-restored Area.

(xxxi) Legal Issues: Any court case pending. If so, please provide a list with details as annexure. No court cases are pending for Cluster XVII.; Any violation cases pending. If so, please provide a list with details as annexure. No Violation case by SPCB

(xxxii) Public Hearing: Date and Place of public hearing: Public Hearing was held on 27.04.2018 at New Kali Mandir Premises in Damagoria Colliery. The designation of officer presided over the PH: Dy. Collector and Dy. Magistrate.



(xxxiii) Consultant: Name of the EIA consultant who prepared the EIA/EMP report- Central Mine Planning and Development Institute Ltd. (CMPDIL) accredited by the QCI and NABET as per the MoEF OM dated 2nd December, 2009.

3. The sectoral Expert Appraisal Committee (Violation) in its 35<sup>th</sup> meeting held on 6-7 August, 2020 has recommended the proposal for grant of Environment Clearance. Based on recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval for Cluster XVII including Kalyaneshwari OCP Coal Mining Project of capacity 4.0 MTPA in ML area 1397.18 ha of M/s Bharat Coking Coal Limited located at District Burdwan (West Bengal), under the provisions of Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions as stated below:-

(i) EAC recommended for an amount of Rs 5375.00 lakhs towards Remediation plan and Natural and Community Resource Augmentation plan to be spent within a span of three years. The details are given below:

#### Remediation plan alongwith budgetary provision

Sl No		Activity Proposed	Proposed Location	Year 1	Year 2	Year 3	Total (in Rs. Lakhs)
				In Rs lakhs			
1	<b>Air &amp; Noise Environment</b>	Installation of CAAQMS	1. Damagoria Siding	-	-	100	100
2		Avenue plantation along NH2.	From Kalyaneshwari Check Post to Rampur MV check post.(6 KM)	100	-	-	100
3		Vertical Greenery System and wind barrier at Damagoria Siding & NLOCP Siding	1. Vertical Greenery 800 Meter length at Damagoria Siding.	100	100	100	300
4		Construction of DB road.	Lalbazar to Rampur MV check post- 4 KM	-	-	2000	2000
5		Construction of Pucca road from Ramanagar Village to Nakajuria Basti.	Ramanagar Village to Nakajuria Basti Via Damagoria Office- 2 KM	- 150	-	-	150
6		Construction of transportation road from Kalyanchak to Rakhapara Basti along with bridge	From Jamdahi Basti to Rakhapara Basti Via Panchmohani Basti- 3 KM	-	1500	-	1500
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		construction on Khudia River.					
<b>Sub Total (Air Environment)</b>				<b>350</b>	<b>1600</b>	<b>2200</b>	<b>4150</b>

Sl No	Head	Activity Proposed	Proposed Location	Year 1	Year 2	Year 3	Total
				In Rs lakhs			
1	Water Environment	Cleaning of Nearby Pond /Jor/Nalah.	1. Jhilia Nalah 2. Haji Nagar Pond 3. Lal Bazar Pond 4. Borira Pond 5. Baltoria Pond 6. C-9 Nalah 7. Chungari Basti Nalah	30	30	40	100
Sub Total Water Environment				30	30	40	100
1	Energy Conservation	Distribution of solar powered submersible Pump to nearby Villages (05 Nos.)	To be made available to Kulti Block municipality for distribution to nearby village.	50	50	-	100
2		Solar power generation at Kulti block	Begunia village	-	75	-	75
Sub Total Energy Environment				50	125	-	175
Grand Total (Air + Water + Energy)				430	1755	2240	4425

#### Natural Resource Augmentation Plan with budgetary provision

SN	Activity Proposed	Proposed Location	Year 1	Year 2	Year 3	Total
			(In Rs lakhs)			
1.	Rain water Harvesting in BCCL Colonies & Nearby Villages	1. Dahibari Colony BCCL 2. Lalbzar Village 3. Sabanpur Village	30	30	40	100
<b>Total</b>			<b>30</b>	<b>30</b>	<b>40</b>	<b>100</b>

#### Community Resource Augmentation Plan



S No	Activity Proposed	Year 1	Year 1	Year 2	Year 3	Total
		(In Rs lakhs)				
1	Stone Pitching on banks of Khudia River along with construction of Ghat.	Khudia River between Pachet road Bridge & Kalyanchak road Bridge- 1 KM	-	700	-	700
2	Construction of School in nearby village.	Primary school at Laikdih, Chirkunda	-		50	50
	Construction of stadium & temple for nearby village people	Stadium at Begunia Football ground Temple at Dahibari village	50		50	100
<b>Total</b>			<b>50</b>	<b>700</b>	<b>100</b>	<b>850</b>

### Summary

S. No.	Head	Amount (in Rs. Lakhs)
1.	Remediation Plan	4425
2.	Natural Resource Augmentation Plan	100
3.	Community Resource Augmentation Plan	850
<b>Total</b>		<b>5375</b>

- (ii) Total budgetary provision with respect to Remediation plan and Natural & Community Resource Augmentation plan is Rs. 5375.00 lakhs. Therefore, project proponent shall be required to submit a bank guarantee of an amount of Rs. 5375.00 lakhs towards Remediation plan and Natural and Community Resource Augmentation plan with the SPCB prior to the grant of EC.
- (iii) Remediation plan shall be completed in 3 years whereas bank guarantee shall be 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.
- (iv) Fund allocated for CER of Rs. 1532 lakh/- may be utilized as per Ministry's OM dated 20th September, 2020 i.e shall be utilised as part of EIA/EMP and compliance of issues of Public Hearing. The details of the implementation shall be submitted to the Ministry's Regional Office and to be spent in three years from the issue of this letter
- (v) Approval/permission of the CGWA/SGWA shall be obtained before drawing ground water for the project activities. State Pollution Control Board (SPCB) concerned shall not issue Consent to Operate (CTO) till the project proponent obtains such permission.





- (vi) 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.
- (vii) 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.
- (viii) Solid waste management as per SWM rules 2016 shall be complied within their colony.
- (ix) 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.
- (x) Project proponent shall take necessary other clearances/permissions under various Acts and Rules if any, from the respective authorities / department.
- (xi) The mining lease holder shall, after ceasing mining operations, under take re-grassing the mining area and any other area which may have been disturbed due to their mining activities and restore the land to condition which is fit for growth of fodder, flora and fauna etc.
- (xii) Greenbelt development/Bio-diversity Conservation Plan shall be implemented to mitigate the impacts as predicted in the EIA/EMP

**3.1** The grant of environmental clearance 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.

**(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.

**(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-20012/1/2006-1A.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.

**(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 shall be carried out in forest land without obtaining Forestry Clearance as per Forest (Conservation) Act, 1980.

(iv) 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.

**(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'.

**(i) Corporate Environment Responsibility**

(i) The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No.22-65/2017-IA.III dated 1<sup>st</sup> May 2018, as applicable, regarding Corporate Environment Responsibility.

(ii) The company shall have a well laid down environmental policy duly approve 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.

(iii) 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 to the head of the organization.





(iv) 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.

(v) 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.

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(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 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.

  
(Lalit Bokolia)  
Director

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi
2. The Additional Principal Chief Conservator of Forests, Regional office (ECZ), Ministry of Environment & Forests, Bungalow No. A-2, Shyamali Colony, Ranchi - 834002
3. The Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi
4. The Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, Delhi - 32
5. The Chairman, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
6. The Chairman, West Bengal State Pollution Control Board, TA Building, HEC Complex, PO Dhurwa, Ranchi
7. The District Collector, Burdwan, Government of West Bengal
8. Monitoring File/Guard File
9. PARIVESH

  
(Lalit Bokolia)  
Director