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**J-11015/30/2004-IA.II(M)**  
Government of India  
Ministry of Environment, Forest and Climate Change  
Impact Assessment Division

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Indira Paryavaran Bhavan,  
Jor Bagh Road, New Delhi-110 003

**Dated: 20<sup>th</sup> March, 2020**

To,

The General Manager (E&F)  
M/s Eastern Coalfields Ltd,  
P.O Sanctoria,  
District PashchimBardhaman (West Bengal)  
Email: [envecl@yahoo.com](mailto:envecl@yahoo.com), [eclenv@gmail.com](mailto:eclenv@gmail.com).

**Sub: Expansion of Rajmahal opencast coal mine project 17.0 MTPA to 23.80 MTPA an mine lease area of 1978.0 ha of M/s Eastern Coalfields Limited, located, in villages Bara Bhorai, Chhota Bhorai, Lohandiya, Paharpur and Talijhari, Tehsil Boarijore, District Godda, State (Jharkhand) - Environment Clearance under Clause 7(ii) of EIA Notification, 2006 - reg.**

Sir,

This is with reference to your online proposal No. IA/JH/CMIN/128369/2004 dated 29<sup>th</sup> November, 2019 on the above mentioned subject.

2. The Ministry of Environment, Forest and Climate Change has considered the proposal for grant of environmental clearance under Clause 7(ii) of EIA Notification, 2006 to Expansion of Rajmahal opencast coal mine project 17.0 MTPA to 23.80 MTPA an mine lease area of 1978.0 ha of M/s Eastern Coalfields Limited, located, in villages Bara Bhorai, Chhota Bhorai, Lohandiya, Paharpur and Talijhari, Tehsil Boarijore, District Godda, (Jharkhand).

3. The proposal was earlier considered by the Expert Appraisal Committee (EAC) in the Ministry for Thermal & Coal Mining Sector in 51<sup>st</sup> meeting held on 5<sup>th</sup> December, 2019 and 52<sup>nd</sup> meeting held on 24<sup>th</sup> January, 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) The project area is covered under Survey of India Topo Sheet No 720/8 and is bounded by the geographical coordinates ranging from 25<sup>o</sup> 01' 16" N to 25<sup>o</sup> 03' 21" N and longitudes 87<sup>o</sup> 18' 16" E and 87<sup>o</sup> 24' 11" E.
- (ii) Coal linkage of the project is proposed for NTPC – Farakka & NTPC - Kahalgaon use for power plant.

- (iii) No Joint venture cartel has been formed.
- (iv) Project does not fall in the Critically Polluted Area (CPA), where the MoEF&CC's vide its OM dated 13<sup>th</sup> January, 2010 has imposed moratorium on grant of environment clearance.
- (v) Employment generation, Departmental Manpower: - 2178 (As on 01.04.2019) Contractual workers: 2269 and employment to 532 persons will be provided from the project due to land acquisition.
- (vi) The project is reported to be beneficial in terms of economic growth of local population, employment generation both direct and indirect and community development under CSR.
- (vii) Earlier, the Environment Clearance to the project was obtained under EIA Notification, 1994 vide Ministry's letter No J-11015/30/2004 – IA.II(M) dated 11.05.2005 for 17.00 MTPA in mine lease area of 1978.00 ha and Revalidation of EC as per EIA Notification, 2006 is recommended in 49<sup>th</sup> EAC held on 22.10.2019.
- (viii) Total mining lease area as per block allotment is 1978.00 ha. Mining Plan has been approved by the Board of Directors of ECL on 26.09.2019.
- (ix) The land usage pattern of the project is as follows:

Pre-mining land use details

(Area in Ha)

Land Use	Within ML Area (Ha)	Outside ML Area (Ha)	Total (Ha)
Agriculture / Cultivable Land	1534.76	143.22	1677.98
Forest Land	107.39		107.39
Waste / Danga Land	73.00	40.05	113.05
Surface Water Bodies / tanks	13.70	-	13.70
Settlements / Village	46.15		46.15
Others(Specify) Govt. land	-	19.73	19.73
<b>Total Area</b>	<b>1775.0</b>	<b>203.0</b>	<b>1978.0</b>

Present-mining land use details

Land Use Classes			Core Zone			
SI N	SI N.	Level-II	Within ML Area (Ha)	Outside ML Area (Ha)	Total Area (Ha)	% of Total
1	i	Dense Forest	-	-	-	-
	ii	Open Forest	-	-	-	-
	<b>Total Forest</b>		-	-	-	-
2	i	Scrubs	203.00	-	203.00	10.26
	ii	Social Forestry	46.00	-	46.00	2.33
	iii	Plantation on OB	6.00	-	6.00	0.30
	iv	Plantation on Backfill	181.00	-	181.00	9.15

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Land Use Classes			Core Zone			
Sl N	Sl N.	Level-II	Within ML Area (Ha)	Outside ML Area (Ha)	Total Area (Ha)	% of Total
		<b>Total Plantation including Scrubs</b>	<b>436.00</b>	-	<b>436.00</b>	<b>22.04</b>
3	i	Crop land	49.00	-	49.00	2.48
	ii	Fallow Land	443.00	-	443.00	22.4
		<b>Total Agriculture Land</b>	<b>492.00</b>	-	<b>492.0</b>	<b>24.87</b>
4	i	Waste Land	73.00	-	73.00	3.69
		<b>Total Waste Land</b>	<b>73.00</b>	-	<b>73.00</b>	<b>3.69</b>
5	i	Advance Quarry area	22.00	-	22.00	1.11
	ii	Coal Quarry	111.00	-	111.00	5.61
	iii	Barren OB Dump	25.00	-	25.00	1.26
	iv	Back Fill	449.00	-	449.00	22.70
	v	Coal Dump	2.00	-	2.00	0.10
	vi	Water Filled Quarry	25.00	-	25.00	1.26
		<b>Total Mining Area</b>	<b>634.00</b>	-	<b>634.0</b>	<b>32.05</b>
6	i	Urban Settlements including Mahagama Colony of the Project	77.00	123.0	200.0	10.11
	ii	Rural Settlements	35.00	-	35.0	1.77
	iii	Project Infrastructure including Industrial Settlements	20.00	80.0	100.0	5.06
		<b>Total Settlement Area</b>	<b>132.00</b>	<b>203.0</b>	<b>335.00</b>	<b>16.94</b>
7	i	River/ Ponds	8.00	-	8.0	0.40
		<b>Total River/ Ponds</b>	<b>8.00</b>	-	<b>8.0</b>	<b>0.40</b>
		<b>Total Area</b>	<b>1775.0</b>	<b>203.0</b>	<b>1978</b>	<b>100</b>

#### Post Mining

Land Use	Plantation (Ha)	Water Body (Ha)	Public Use (Ha)	Others Undisturbed (Ha)	Total (Ha)
External OB Dump	276.00	-	-	-	276.00
Excavation	1144.00	200.00	-	-	1344.00
Social Forestry / Green Belt	-	-	-	46.00	46.00
Plantation	12.00	-	-	-	12.00
Urban Settlements including Mahagama Colony of the Project	-	-	-	200.00	200.00
Project Infrastructure including Industrial Settlements	33.00	-	-	67.00	100.00
<b>Total</b>	<b>1465.0</b>	<b>200.0</b>	<b>0</b>	<b>313.0</b>	<b>1978.0</b>

- (x) Total geological reserve reported in the mine lease area is 493.04 (as on 01.04.1992) with 185.50 MT (as on 01.04.2019) mineable reserve. Out of total mineable reserve of

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185.50MT, 185.50 MT (as on 01.04.2019) are available for extraction. Percent of extraction is 100%.

- (xi) 13 seams with thickness ranging from 1.35 m to 26.53 m are workable. Grade of coal is G13, stripping ratio 2.14 cum/t, while gradient is 2° to 4°.
- (xii) Method of mining operations envisages by Opencast method.
- (xiii) Balance Life of mine is 9 years.
- (xiv) The project has 2 external OB dumps in an area of 276 ha with 60 m height and 113.40 Mm<sup>3</sup> of OB as per approved Mining Plan. Internal OB in an area of 1344.00 ha with 453.25 Mm<sup>3</sup> of OB is envisaged in the project.
- (xv) Total quarry area is 1344 ha out of which backfilling will be done in 1144 ha while final mine void will be created in an area of 200 ha with a depth of 20 m (average). Backfilled quarry area of 1144 ha shall be reclaimed with plantation. Final mine void will be converted to lagoon.
- (xvi) Transportation of coal has been proposed by colliery dumpers in mine pit head, from surface to siding by Silo Loading System situated at MGR (Merry – GO – Round) by conveyer belt and at sidings by railway wagons.
- (xvii) Reclamation Plan in an area of 1511 ha, comprising of 276 ha of external dump, 1144 ha of internal dump. In addition to this, an area of 358 ha, included in the safety zone/rationalization area, has also been proposed for green belt development.
- (xviii) 107.39 ha of forest land has been reported to be involved in the project. Approval under the Forest (Conservation) Act, 1980 for diversion of 107.42 ha of forest land for non-forestry purposes has been obtained vide following MoEF&CC letter No.

Forest Area within the Project Boundary in Ha	Stage – I FC	Stage – II FC
17.64	8-303/89-FC dated 19.07.1992	8-303/89-FC dated 26.10.1993
20.03	8-7/98-FC dated 15.03.1995	8-7/98-FC dated 10.12.2002
69.75	8-89/2003-FC dated 03.10.2003	8-89/2003-FC dated 27.08.2004
Total:- 107.42 Ha		

- (xix) No National Parks, Wildlife Sanctuaries and Eco-Sensitive Zones have been reported with 10 km boundary of the project.
- (xx) The ground water level has been reported to be varying between 5.50 m to 9.15 m during pre-monsoon and between 1.70 m to 6.40 m during post-monsoon. Total water requirement for the project is 4250 KLD.

(xxi) An Online Application for "Permission to Dewater Ground Water for Mining Industry" has been submitted vide application number - 21-4/282/JH/MIN/2018 dated 27.06.2018 and Application Fee has been paid.

(xxii) Public hearing for the project of 17.00 MTPA capacity in an area of 1978.00 ha was conducted on 26.07.2003 at Rajmahal, District: Godda, Jharkhand & Public Notice for EC Revalidation issued on 03.08.2019. Major issues raised in the public hearing include following issues given in the table. Appropriate action to address the issues raised in the Public Hearing have already been taken/proposed to be taken are as under:

Issues raised by the public	Compliance made till date	Suggestions made by the Public Hearing Panel.	Compliance made till date
1. Air & Noise pollution caused due to transport of coal and OB & due to CHP operation in adjacent village of Nimakala	Latest technologies have been adopted. Coal is transported through conveyors to and loaded through silos installed at MGR Railway Siding	1. To install ETP 2. To install water meter 3. Ensure uninterrupted power for pollution control devices	Installed In process Provided
2. Unemployment owing to acquisition of cultivable land	1612 employments provided in lieu of land, further 592 employments to be provided	4. To change to new technologies as and when available.	Latest technologies like mist sprays, mist guns have been adopted
3. Provision of basic amenities to local population	Being provided as per R&R & CSR policies of CIL	5. Prepare and submit plan of rain water harvesting.	Installed, to be augmented further

(xxiii) Consent to Operate for the existing capacity was obtained from the State PCB wide file no. JSPCB/HO/RNC/CTO-1112442/2017/86 on 30.01.2017 and is valid till 31.12.2021.

(xxiv) The drainage of the area is controlled by a seasonal nallah, namely, Dhullia nallah. However, there is no stream within the project boundary.

(xxv) Regular monitoring of ambient air quality is being carried out on fortnightly basis. The documented report is submitted to JSPCB and also to MoEF&CC along with half yearly EC compliance report. 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 except land related.

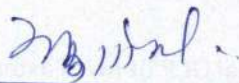
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- (xxvii) The project does not involve violation of the EIA Notification, 2006 and amendment issued thereunder. The coal production from the mine was started from the year 1988 – 89 onwards. No excess production of coal from the sanctioned capacity has been realized since the commencement of mining operations.
- (xxviii) The total number of PAFs envisaged in the PR was 5931 from 13 villages. Out of these, 2647 PAFs have been rehabilitated and the remaining PAFs will be rehabilitated as the project progresses.
- (xxix) Total cost of the project is Rs 2,07,835 lakhs. Cost of production is Rs. 967.33/- per tonne., CSR cost is 2% of average net profit of the company for last three financial years forms the annual budget for CSR (Corporate Social Responsibility) / ESC. (Total Expenditure in Rajmahal OCP on CSR during FY 2016-17, FY 2017-18 AND FY2018-19 were Rs. 232.83 Lakhs, Rs. 97.94 Lakhs AND Rs. 362.87 lakhs respectively), The total approved R&R cost was Rs. 1665.00 Lakh (As per approved PR) while expenditure on R&R in the project till July'19 is Rs. 130.0 crores. Environment Management Cost is Rs 6.00/te of coal produced is kept for Revenue Expenditure on Environment Management for carrying out environmental control measures.
- (xxx) Consent to Operate for the existing capacity was obtained from the State PCB wide file no. JSPCB/HO/RNC/CTO-1112442/2017/86 on 30.01.2017 and is valid till 31.12.2021

4. The Expert Appraisal Committee in 51<sup>st</sup> meeting held on 5<sup>th</sup> December, 2019 and 52<sup>nd</sup> meeting held on 24<sup>th</sup> January, 2020, has recommended the proposal for grant of Environment Clearance. Based on the recommendations of the EAC, the Ministry of Environment, Forest and Climate Change hereby accords approval for expansion of **Rajmahal Opencast Coal Mine from 17.0 MTPA to 23.80 MTPA in mine lease area of 1978.0 ha of M/s Eastern Coalfields Ltd located in village Simra, Tehsil Boarijore, District Godda (Jharkhand)**, under the provision of clause 7(ii) of EIA Notification, 2006 and under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the following terms & conditions / specific conditions in addition to the standard environmental conditions notified by the Ministry and mentioned below:

- (i) The recommendation is subject to approval of revalidation of previous EC dated 11<sup>th</sup> May, 2005.
- (ii) EAC desired that the MoC may direct CIL subsidiaries to comply the EC/FC/CTO conditions strictly within certain time bound manner so that the mining operations will be environmentally sustainable/viable etc.
- (iii) The project proponent shall obtain Consent to Establish/Operate from the State Pollution Control Boards for the proposed peak capacity of 23.80 MTPA prior to commencement of the increased production.

- (iv) Transportation of coal from Coal Handling Plant shall be through covered trucks.
- (v) To control the production of dust at source, the crusher and in-pit belt conveyors shall be provided with mist type sprinklers.
- (vi) Mitigating measures shall be undertaken to control dust and other fugitive emissions all along the roads by providing sufficient water sprinklers. Adequate corrective measures shall be undertaken to control dust emissions, which would include mechanized sweeping, water sprinkling/mist spraying on haul roads and loading sites, long range misting/fogging arrangement, wind barrier wall and vertical greenery system, green belt, dust suppression arrangement at loading and unloading points, etc.
- (vii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (viii) Persons of nearby villages shall be given training on livelihood and skill development to make them employable.
- (ix) Thick green belt of adequate width at the final boundary in the down wind direction of the project site shall be developed to mitigate/check the dust pollution.
- (x) Efforts shall be made for utilizing alternate sources of surface water, abandoned mines or else whatsoever and thus minimizing the dependability on a single source.
- (xi) The company shall obtain approval of CGWA for use of groundwater for mining operations at its enhanced capacity of 21 MTPA.
- (xii) Continuous monitoring of occupational safety and other health hazards, and the corrective actions need to be ensured.
- (xiii) A third-party assessment of EC compliance shall be undertaken once in three years through agency like ICFRI /NEERI/IIT or any other expert agency identified by the Ministry.
- (xiv) The activities and fund provisions for CER shall be made as per the guidelines issued by the ministry regarding CER on 1<sup>st</sup> May, 2018
- (xv) Compliance of all the non-compliances and partially complied conditions by Regional Office, Ranchi for the project of EC dated 11th May, 2005
- (xvi) Project Proponent shall obtain blasting permission from DGMS for conducting mining operation near villages and also explore deployment of rock breakers of suitable capacity in the project to avoid blasting very near to villages. There shall be no damages caused to habitation/structures due to blasting activity.
- (xvii) Project proponent to plant 100,000 nos. of native trees with broad leaves along the villages and transportation route to prevent the effect of air pollution. After completion

  
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of tree plantation, number of trees shall be duly endorsed from District Forest Officer

- (xviii) The Project Proponent shall comply 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. State Government shall ensure that the entire compensation levied, if any, for illegal mining paid by the Project Proponent through their respective Department in strict compliance of judgment of Hon'ble Supreme Court dated the 2<sup>nd</sup> August 2017 in Writ Petition (Civil) No. 114 of 2014 in the matter of Common Cause versus Union of India and Ors.
- (xix) Project Proponent shall obtain the necessary prior permission from the Central Ground Water Authority (CGWA) in case of intersecting the Ground water table. The intersecting ground water table can only be commencing after conducting detailed hydrogeological study and necessary permission from the CGWA. The Report on six monthly basis on changes in Ground water level and quality shall be submitted to the Regional Office of the Ministry, CGWA and State Pollution Control Board.
- (xx) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and maintain records accordingly; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smoking, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. The Recommendations of National Institute for ensuring good occupational environment for mine workers shall be implemented; The prevention measure for burns, malaria and provision of antsnake venom including all other paramedical safeguards may be ensured before initiating the mining activities.
- (xxi) Project Proponent shall follow the mitigation measures provided in Office Memorandum No. Z-11013/57/2014-IA.II (M), dated 29th October, 2014, titled "Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area".
- (xxii) The illumination and sound at night at project sites disturb the villages in respect of both human and animal population. Consequent sleeping disorders and stress may affect the health in the villages located close to mining operations. Habitations have a right for darkness and minimal noise levels at night. PPs must ensure that the biological clock of the villages is not disturbed; by orienting the floodlights/ masks away from the villagers and keeping the noise levels well within the prescribed limits for day light/night hours.
- (xxiii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna, if any, spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. A copy of action plan

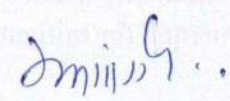
shall be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office.

- (xxiv) Loading and unloading of coal shall be done with silo loading facility for enhance production and proposed facility should be installed in 1 year.
- (xxv) Conditions stipulated during revalidation of EC i.e. letter dated 22<sup>n</sup> d January, 2020 is also to be complied.
- (xxvi) PP shall implement double lined MGR system for Farakka-Rajmahal in 2 years.
- (xxvii) Project proponent shall submit approved Wildlife Conservation Plan within six months i.e. by 30<sup>th</sup> September, 2020. PP shall also ensure that all the steps to be undertaken as committed by the project proponent to conserve and protect wildlife, failure to do so may be considered a case of non-compliance of EC conditions.

**4.1** The grant of Environment 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 addressed in accordance to the Solid Waste Management Rules, 2016/Hazardous & Other Waste Management Rules, 2016.

  
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**(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-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 desilted 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 approved by the Board of Directors. The Environment 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 report 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.
- (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 Environment 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 Environment 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.
11. This issues in supersession of the earlier EC granted vide letter dated 11<sup>th</sup> May, 2005.

*Manoj Kumar Gangeya*  
**(Manoj Kumar Gangeya)**

**Director**

**Copy to:**

1. The Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. The Additional PCCF (Central), MoEF&CC, Regional office (EZ), A-31, Chandrashekarapur, Bhubaneswar - 751023
3. The Secretary, Department of Environment & Forests, Government of West Bengal, Secretariat, Kolkata
4. CMD, M/s Eastern Coalfields Limited.
5. The Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi
6. The Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 32
7. The Member Secretary, West Bengal State Pollution Control Board, Paribesh Bhawan, 10A, Block LA, Sector-III, Salt Lake City, Kolkata - 700098
8. The District Collector, Pashchim Bardhaman, Government of West Bengal
9. Monitoring File    9. Guard File    10. Record File    11. Notice Board

*Manoj Kumar Gangeya*  
**(Manoj Kumar Gangeya)**

**Director**