

No. J-11015/189/2008-IA.II (M)  
Government of India  
Ministry of Environment, Forests & Climate Change  
IA Division (Coal mining)

Indira Paryavaran Bhawan,  
Jorbagh Road,  
New Delhi-110003

Dated: 22<sup>nd</sup> January, 2015

To,

The General Manger (CP & P),  
M/s Mahanadi Coalfields Ltd.,  
At PO: JagrutiVihar,  
Burla, Dist. Sambalpur – 768020,  
ODISHA.

Email: [gmenvt\\_mcl@yahoo.co.in](mailto:gmenvt_mcl@yahoo.co.in)

**Sub.: Expansion of Belpahar Opencast Coalmine Project (6 MTPA to 9 MTPA in an ML area of 1444.053 ha + 59.63 Ha outside ML area) total area 1503.683 Ha; latitude 21<sup>o</sup>42'20" to 21<sup>o</sup>47' 00" N and longitude 83<sup>o</sup> 49' 35" to 83<sup>o</sup>53'00" E of M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, in villages Darlipali, Chharla, Jurabaga (South) and Kirarama, Tehsil Banaharpali, District Jharsuguda, Odisha - EC under 7(ii) of EIA Notification, 2006 – Environmental Clearance - reg.**

Sir:

This is with reference to letter no. MCL/HQ/Env/F-47(xv)/2014/4532 dated 07.08.2014 with the application and subsequent letter no. dated 29.09.2014; 15.10.2014; 20.10.2014; 25.11.2014; 16.12.2014 and 25.11.2014 for Environmental Clearance for Expansion under 7(ii) of EIA Notification 2006 for the above-mentioned project.

2. The Ministry of Environment, Forests & Climate Change has considered the application. It is noted that the proposal is for grant of Environmental Clearance for **Expansion of Belpahar Opencast Coalmine Project (6 MTPA to 9 MTPA in an ML area of 1444.053 ha + 59.63 Ha outside ML area) total area 1503.683 Ha; latitude 21<sup>o</sup>42'20" to 21<sup>o</sup>47' 00" N and longitude 83<sup>o</sup> 49' 35" to 83<sup>o</sup>53'00" E of M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, in villages Darlipali, Chharla, Jurabaga (South) and Kirarama, Tehsil Banaharpali, District Jharsuguda, Odisha under 7(ii) of EIA Notification, 2006.** The proposal was considered in the 25<sup>th</sup> EAC meeting held on 13<sup>th</sup> -14<sup>th</sup> November, 2014 and 27<sup>th</sup> EAC meeting held on 18<sup>th</sup> -19<sup>th</sup> December, 2014. The proponent has informed that:

- i. The project was accorded EC vide letter no. J-11015/189/2008 –IA.II(M) dt.25.02.2013.
- ii. The latitude and longitude of the project are 21<sup>o</sup>42'20" to 21<sup>o</sup>47' 00" N and 83<sup>o</sup> 49' 35" to 83<sup>o</sup>53'00" E respectively.
- iii. The land usage of the project will be as follows:



Pre-Mining:

Sl.#	Purpose	Land in ha (for 6.0 Mty)			Addl. land required (for 3.0 Mty incremental) (in ha)			Total Land (in ha) For 9.0 MTPA		
		Forest	Non-forest	Total	Forest	Non-forest	Total	Forest	Non-forest	Total
1.	Quarry excavation	79.010	527.493	606.503	0.00	0.00	0.00	79.010	527.493	606.503
2.	Safety zone for blasting	0	259.910	259.910	0.00	0.00	0.00	0.000	259.910	259.910
3.	OB dump	0	55.330	55.330	0.00	0.00	0.00	0.000	55.330	55.330
4.	Infrastructure	44.210	338.300	382.510	0.00	0.00	0.00	44.210	338.300	382.510
5.	Rationalization of project boundary	0	139.800	139.800	0.00	0.00	0.00	0.000	139.800	139.800
	Mining lease area [Sub-total of (1 to 5)]	123.220	1320.833	1444.053	0.00	0.00	0.00	123.220	1320.833	1444.053
6.	Residential Colony	0	59.630	59.630	0.00	0.00	0.00	0.000	59.630	59.630
7.	Resettlement site	0	0	0	0.00	0.00	0.00	0.000	0	0
<b>Grand Total :</b>		<b>123.220</b>	<b>1380.463</b>	<b>1503.683</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>123.220</b>	<b>1380.463</b>	<b>1503.683</b>

Post-Mining:

Sl.No.	Land use during Mining	Land Use(ha)				
		Plantation/Agriculture	Water Body	Public Use	Undisturbed	TOTAL
1	External OB Dump	50.33	0	0	0	<b>50.33</b>
2	Excavation	448.94	157.563	0	0	<b>606.503</b>
3	Top soil Dump	5	0	0	0	<b>5</b>
4	Roads& Infrastructure	76.502				<b>76.502</b>
5	Built up area				355.638	<b>355.638</b>
6	Green Belt	10	0	0	0	<b>10</b>
7	Undisturbed Area	209.8			189.91	<b>399.71</b>
	<b>TOTAL</b>	<b>800.572</b>	<b>157.563</b>	<b>0</b>	<b>545.548</b>	<b>1503.683</b>

## Core area :

Sl.#	Purpose	Land in ha (for 6.0 Mty)			Addl. land required (for 3.0 Mty incremental) (in ha)			Total Land (in ha)		
		Forest	Non-forest	Total	Forest	Non-forest	Total	Forest	Non-forest	Total
1.	Quarry excavation	79.010	527.493	606.503	0.00	0.00	0.00	79.010	527.493	606.503
2.	Safety zone for blasting	0	259.910	259.910	0.00	0.00	0.00	0.000	259.910	259.910
3.	OB dump	0	55.330	55.330	0.00	0.00	0.00	0.000	55.330	55.330
4.	Infrastructure	44.210	338.300	382.510	0.00	0.00	0.00	44.210	338.300	382.510
5.	Rationalisation of project boundary	0	139.800	139.800	0.00	0.00	0.00	0.000	139.800	139.800
	<b>Mining lease area [Sub-total of (1 to 5)]</b>	<b>123.220</b>	<b>1320.833</b>	<b>1444.053</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>123.220</b>	<b>1320.833</b>	<b>1444.053</b>

- iv. The total geological reserve is 43.23 MT. The mineable reserve 39.34 MT, extractable reserve is 39.34 MT. The per cent of extraction would be 91%.
- v. The coal grade is G-13. The stripping ratio is 1: 3.04 Cum/tonne. The average Gradient is 4 to 6 degree. There will be 2 seams with thickness ranging 22 mtr
- vi. The total estimated water requirement is 3.285 MLD. The level of ground water ranges from 1.53m to 8.99 m bgl.
- vii. The Method of mining would be by opencast with shovel-dumper combination
- viii. There is five external OB dump with Quantity of 19 Mbcm in an area of 55.33 ha with height of 20 to 30 meter above the surface level and one internal dump with Quantity of 95.008 Mbcm in an area of 153.335 ha.
- ix. The final mine void would be in 157.563 Ha with depth of 15 to 40 m. and the total quarry area is 606.503 Ha. Backfilled quarry area of 448.94 Ha shall be reclaimed with plantation. A void 157.563 Ha with depth of 15 to 40 m which is proposed to be converted into a water body
- x. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- xi. The **life of mine** is 6 Years.
- xii. **Transportation:** for 6.0 MTPA Coal is transported from pit head to UTLS and BOCM -6 railway sidings by tippers. The distance of coal transportation is 3-4 km. 75 % of coal produced (4.5 Mt) was transported by rail. The remaining coal 1.5 Mty was transported by road. And for incremental production 3.0 MTPA Transportation of coal from the mine to consumers shall be 100% through Railway rakes.
- xiii. There is **R & R** involved. There are 657 PAFs.
- xiv. **Cost:** Total capital cost of the project is Rs. 181.19 Crores. CSR Cost Rs. 19 crores/year. R&R Cost Rs. 472.35 lakhs. Environmental Management Cost Rs. 21.16 crores.



- xv. **Water body:** LilariNallah is flowing adjacent to mine.
- xvi. **Approvals:** Ground water clearance is not applicable. Board's approval obtained on 04.02.2011. Mining plan has been approved on 11.12.2012. Mine Closure Plan approved by MCL, Board sent to MOC for approval.
- xvii. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xviii. **Forestry issues:** Total forest area involved 123.22 ha for mining. Stage II FC obtained for complete forest land.

Area (in ha)	Stage-I FC issued vide letter No.& date
103.52	8-104/91FC dt.02.06.2000
19.70	8-104/1991 FC dt.16.09.2014
123.22	Total

- xix. Total **afforestation** plan shall be implemented covering an area of 756.77 ha at the end of mining. Green Belt over an area of 70 ha. Density of tree plantation 2500 trees/ ha of plants.
- xx. **Court cases/ violation:** State Govt. has filed a case against the proponent under section 15 and 16 of the Environment (Protection) Act, 1986 in the court of Chief Judicial Magistrate vide case no. 288/2013 dated 23.02.2013 for exceeding production beyond EC capacity . Case is presently in High Court, Odisha.
- xxi. **Public Hearing** was held on 07.03.2003. The issues raised in the PH includes Air pollution due to coal transportation roads; to ensure minimum pollution with regard to water, air and noise pollution; employment for the affected areas; Compensation for the persons in close proximity of the mines; Maintenance of the tree plantation etc.
- xxii. The project is located in IB Valley Coalfield, in Jharsuguda District, categorized as Critically Polluted Area (CPA) but the moratorium has been lifted on 17 Sep 2013, due to implementation of Action Plan prepared by Odisha SPCB for the abatement of pollution resulting in decline in pollution Index below the CPA minimum criteria.
- xxiii. Initially the project was planned for 2 MTPA capacities for which 103.52 Ha forest land was involved in the quarry excavation and for infrastructure and accordingly Stage I FC was obtained vide Letter No. 8-104/91 FC Dated. 02/06/2000. Afterwards the project was planned to enhance capacity from 2 MTPA to 4.5 MTPA and excavation area increased from 431.79 ha to 606.503 ha and accordingly additional 19.70 Ha forest land was required for mining and safety zone purpose for which Stage-II FC was obtained on 15.09.2014.
- xxiv. CMPDI procures the Remote Sensing Data from NRSA and prepares land use map of the core and buffer zone of each project of MCL every year, which includes Forest Cover Data and the Map prepared in 2014 based on satellite data of 2013.
- xxv. Baseline Air and Water quality of the pre-project, present situation and the expansion are well within the limit.
- xxvi. Proposal for construction and installation of 17 nos of new piezometers covering Ib Valley Coalfield has been approved by the competent authority and Tendering and Award of work is under process.
- xxvii. Mine closure Plan already approved by MCL Board.
- xxviii. The compliance report of the RO. MoEFCC on the conditions of the earlier EC, inter alia, are as follows:



- a. Project has set up an additional AAQ monitoring station at Bandbahal township and provided the latest analysis report for July, 2014. PM<sub>2.5</sub> and other parameters are within the limits.
- b. All the drains including side weeds and vegetation are cleaned. Sedimentation tank cleaning etc. have been completed. The treated mine water and workshop water are recycled and reused for vehicle washing and water spraying for dust suppression.
- c. Project has submitted details of year-wise and item-wise expenditure for 2009-10 to 2013-14.
- d. The renovation of MDTP completed. The treated effluent are fully recycled and reused for mine purpose and plantation.
- e. Artificial recharge of ground water in the ML area is being done by 4 numbers of mine sumps inside the mine as well as one Eco-pond nearby the mine. Further, four number of roof top rain water harvesting system at the mine offices are also contributing towards the rain water harvesting for ground water recharge. We are going to construct 4 number of check dams inside the mine for ground water recharge and to check soil erosion. The same for nearby surrounding villages will be taken up in coming years.
- f. Letter of permission from Addl. Secretary to Government, Deptt. of Water Resources, Govt. of Odisha dated 20.10.2010 for drawl of 4 MGD (7.43 cusecs) from Hirakud reservoir for domestic consumption has been submitted.
- g. Report of site Specific Conservation Plan & Wildlife Management Plan prepared by Sri P.K. Sarangi, IFS, (Retd.) and approved by the PCCF (Wildlife) & CWW of Odisha on 15.01.2014. As per the study, there are no endangered species in the core and buffer zone of the mine lease area.

xxix. Out of the total coal production 81% is transported to the end users by Rail and 19% by Road which significantly contributes to reduction in dust pollution Govt. of Odisha, through IDCO, is separately taking up Dedicated Rail and Road corridor for evacuation of coal. Action have been taken up for strengthening and improving the Rail and Road Infrastructure at Ib Valley Coalfield . Roads have been re-aligned to bye-pass the populated areas to reduce the pollution.

3. **EC Compliance report:** The Compliance Monitoring Report of the RO, MOEFCC at vide letter no. No.101-856/EPE dt.13.10.2014 was deliberated in the EAC meeting. The Committee has noted the Action taken, which inter-alia as follows:

- i. One additional AAQ monitoring station has been already set up and thus increasing the total number from 3 to 4 number of air monitoring station viz., Bandbahal township, near MDTP, near quarry No.5 and near quarry No.3 (Tiffin point) has already been made based on environmentally and ecologically sensitive location criteria in consultation with State Pollution Control Board, SPM, RPM, SO<sub>2</sub> and NO<sub>x</sub> level in the ambient air is monitored. The monitoring of PM<sub>2.5</sub> has already started from February, 2014, PM<sub>10</sub> and monitoring of the heavy metals begin in our nearby mine.
- ii. All the drains including side weeds and vegetation are cleaned. Sedimentation tank cleaning etc. have been completed. The treated mine water and workshop water are recycled and reused for vehicle washing and water spraying for dust suppression.
- iii. The renovation of MDTP has been completed. The treated effluent are fully recycled and reused for mine purpose and plantation. Artificial recharge of ground water in the ML area is being done by four mine sumps inside the mine as well as one Eco-pond nearby the mine.



Further, four number of roof top rain water harvesting system at the mine offices are also contributing towards the rain water harvesting for ground water recharge. Four more check dams are going to be constructed inside the mine for ground water recharge and to check soil erosion. Rain water harvesting system has been provided. Further, the total surface run-off water of the mine is being collected and stored in the various mined out sump.

- iv. The drivers of the vehicles operating in the mine have been asked to carry the PUC certificate with them.
- v. A study was carried out by the Department of Environmental Sciences and the Department of Life Sciences, Sambalpur University on flora and fauna (Biodiversity) in the Core and buffer zone of the mine. The report was included in the EMP of 4.50 Mty.-VI. No. endangered or endemic species were found in the area. Further, this area is not the migratory route for any wild animal.
- vi. The renovation of MDTP almost complete. The treated effluent are fully recycled and reused for mine purpose and plantation.

4. The proposal was re-considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in 27<sup>th</sup> EAC meeting held on 18<sup>th</sup> -19<sup>th</sup> December, 2014 for granting Environmental Clearance. The Ministry of Environment, Forests and Climate Change hereby accords environmental clearance for the above-mentioned **Expansion of Belpahar Opencast Coalmine Project (6 MTPA to 9 MTPA in an ML area of 1444.053 ha + 59.63 Ha outside ML area) total area 1503.683 Ha; latitude 21°42'20" to 21°47' 00" N and longitude 83° 49' 35" to 83°53'00" E of M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, in villages Darlipali, Chharla, Jurabaga (South) and Kirarama, Tehsil Banaharpali, District Jharsuguda, Odisha under 7(ii) of EIA Notification, 2006** under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto subject to the compliance of the terms and conditions mentioned below:

**A. Specific Conditions:**

- i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- ii. The validity of the EC is for the life of the Mine or as specified in the EIA Notification, 2006, whichever is earlier.
- iii. The modification of the natural drainage of Lilari Nala flowing through the ML by its proposed diversion shall be done so that it is realigned to its natural course at the mine boundary and ensure that the downstream users of the water from Lilari Nala are not affected by the proposed diversion. Any embankment constructed along the Lilari Nala shall be stabilised by vegetation
- iv. No fly ash shall be dumped into the de-coaled void without feasibility studies on long-term impacts on the aquifers and life systems and without prior approval of the Ministry
- v. R&R for 657 PAFs shall be resettled within an agreed time-frame. R&R norms shall be not less that of the National R&R Policy.
- vi. 17 to 20 nos of new piezometers covering Ib Valley Coalfield shall be installed.
- vii. Dedicated Rail and Road corridor be provided for evacuation of coal as planned by MCL for strengthening and improving the Rail and Road Infrastructure at Ib Valley Coalfield be expedited.
- viii. Coal is transported from pit head to UTLS and BOCM -6 railway sidings by tippers. The distance of coal transportation is 3-4 km. 75 % of coal produced (4.5 Mt) was transported by rail. The remaining coal 1.5 Mty was transported by road. And for incremental production 3.0 MTPA Transportation of coal from the mine to consumers shall be 100% through Railway rakes.
- ix. The production shall be within the same Mining Lease area.

- x. The depth of the internal void shall be 35 m from the ground level and should be adequate for fishery purpose.
- xi. All safety measures shall be taken as per CMR, 1957 & related Circulars.
- xii. The production shall be within the same Mining Lease area.
- xiii. The OB shall be completely re-handled at the end of the mining and will be back filled upto the ground level and covered with about a meter thick top soil and put to use. The land after mining shall be brought back for agriculture purpose.
- xiv. Garland drains be provided.
- xv. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.
- xvi. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xvii. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xviii. Dust mask to be provided to everyone working in the mining area.
- xix. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xx. People working in the core area should be periodically tested for the lung diseases and the burden of cost on account of working in the coal mine area.
- xxi. The mining area should be surrounded by green belt having thick closed thick canopy of the tree cover.
- xxii. The embankment constructed along the river boundary shall be of suitable dimensions and critical patches shall be strengthened by stone pitching on the river front side and stabilised with plantation so as to withstand the peak water flow and prevent mine inundation.
- xxiii. There shall be no overflow of OB into the river and into the agricultural fields and massive plantation of native species shall be taken up in the area between the river and the project.
- xxiv. OB shall be stacked at five earmarked external OB dumpsite(s) only. The ultimate slope of the dump shall not exceed 28°. Monitoring and management of existing reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment, Forests & Climate Change and its concerned Regional office on yearly basis.
- xxv. Catch drains and siltation ponds of appropriate size shall be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected shall be utilised for watering the mine area, roads, green belt development, etc. The drains shall be regularly desilted and maintained properly. Garland drains (size, gradient and length) and sump capacity shall be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material.
- xxvi. Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- xxvii. Crushers at the CHP of adequate capacity for the expansion project shall be operated with high efficiency bag filters, water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- xxviii. Drills shall be wet operated. Roads shall be metal topped and mechanical sweepers shall be regularly deployed to clear the dust off the main approach and mineral transportation roads. Water sprinkling (fixed and mist type, mobile) shall be regularly done along the main haul roads.
- xxix. The project authorities shall undertake regular repairing and tarring of roads used for mineral transportation. A 3-tier green belt comprising of a mix of native species shall be developed all along the major approach roads,
- xxx. Controlled blasting shall be practiced with use of delay detonators and only during daytime. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.



- xxxi. A Progressive afforestation plan shall be implemented covering an area of 800.572 ha at the end of mining, which includes reclaimed External OB dump area (50.33 ha), Excavation area (448.94ha), top soil dump (5 Ha), Road and Infrastructure (76.502 Ha) , un-disturb area and Green belt (10 ha) and in township located outside the lease by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Massive plantation shall be carried out in open spaces in and around the mine and a 3-tier avenue plantation along the main approach roads to the mine.
- xxxii. An estimated total 234.968 Mm<sup>3</sup> of OB will be generated during the entire life of the mine. Out of which 19.00 Mm<sup>3</sup> of OB will be dumped in five external OB Dumps an earmarked area covering 55.33 ha of land with height of 20 to 30 m. 215.968 Mm<sup>3</sup> of will be one internal OB dump in covering an area of Final Area 448.94 ha with height of 40 m upto ground level. The maximum height of external OB dump for hard OB will not exceed 90 m. The maximum slope of the dump shall not exceed 28 degrees. Monitoring and management of reclaimed dump sites shall continue till the vegetation becomes self- sustaining and compliance status shall be submitted to MOEF and its Regional Office on yearly basis.
- xxxiii. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
- xxxiv. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.
- xxxv. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
- xxxvi. No groundwater shall be used for mining operations.
- xxxvii. Of the total quarry area of 606.503 ha. the backfilled quarry area of 448.94 ha shall be reclaimed with plantation and a void of 157.563 ha at a depth of 40 m which is proposed to be converted into a water body shall be gently sloped and the upper benches shall be terraced and stabilised with plantation/afforestation by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- xxxviii. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for quantity shall be done four times a year in pre-monsoon (May), monsoon (August), post-monsoon (November) and winter (January) seasons and for quality in May. Data thus collected shall be submitted to the Ministry of Environment, Forests & climate change and the Central Pollution Control Board quarterly within one month of monitoring.
- xxxix. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xl. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
- xli. Besides carrying out regular periodic health check-up of their workers, 10% of the workers identified from workforce engaged in active mining operations shall be subjected to health check-up for occupational diseases and hearing impairment, if any, through an specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- xlii. Land oustees shall be compensated as per the norms laid out R&R Policy of CIL or the National R&R Policy or R&R Policy of the State Government whichever is higher.
- xliii. For monitoring land use pattern and for post mining land use, a time series of land use maps, based on satellite imagery (on a scale of 1: 5000) of the core zone and buffer zone, from the start of the project until end of mine life shall be prepared once in 3 years (for any one particular season which is consistent in the time series), and the report submitted to MOEF&CC and its concerned Regional office
- xliv. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment, Forests & Climate Change within 6 months of grant of Environmental Clearance.



- xlv. The project authorities shall in consultation with the Panchayats of the local villages and administration identify socio-economic and welfare measures under CSR to be carried out over the balance life of the mine.
- xlvi. Corporate Environment Responsibility:
- a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
  - b) The Environment Policy shall prescribe for standard operating process/procedures to bring into focus any infringements/deviation/violation of the environmental or forest norms/conditions.
  - c) The hierarchical system or Administrative Order of the company to deal with environmental issues and for ensuring compliance with the environmental clearance conditions shall be furnished.
  - d) To have proper checks and balances, the company shall have a well laid down system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the company and/or shareholders or stakeholders at large.

## B. General Conditions

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment, Forests & Climate Change.
- ii. No change in the calendar plan of production for quantum of mineral coal shall be made.
- iii. Four ambient air quality monitoring stations shall be established in the core zone as well as in the buffer zone for PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> monitoring. 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. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr, etc carried out at least once in six months.
- iv. Data on ambient air quality (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub>) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data shall be regularly submitted to the Ministry including its concerned Regional Office and to the State Pollution Control Board and the Central Pollution Control Board once in six months. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of compliance report.
- v. Adequate measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in blasting and drilling operations, operation of HEMM, etc shall be provided with ear plugs/muffs.
- vi. Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
- vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
- viii. Monitoring of environmental quality parameters shall be carried out through establishment of adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board and data got analysed through a laboratory recognised under EPA Rules, 1986.
- ix. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
- x. Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and to take corrective measures, if needed and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.



- xi. A separate environmental management cell with suitable qualified personnel shall be set up under the control of a Senior Executive, who will report directly to the Head of the company.
- xii. The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year-wise expenditure shall be reported to this Ministry and its concerned Regional Office.
- xiii. The Project authorities shall advertise at least in two local newspapers widely circulated around the project, one of which shall be in the vernacular language of the locality concerned within seven days of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution control Board and may also be seen at the website of the Ministry of Environment, Forests & Climate Change at <http://envfor.nic.in>.
- xiv. A copy of the environmental clearance letter shall be marked to concern Panchayat/Zila Parishad, Municipal Corporation or Urban local body and local NGO, if any, from whom any suggestion/representation has been received while processing the proposal. A copy of the clearance letter shall also be displayed on company's website.
- xv. A copy of the environmental clearance letter shall be shall also be displayed on the website of the concerned State Pollution Control Board. The EC letter shall also be displayed at the Regional Office, District Industry Sector and Collector's Office/Tehsildar's Office for 30 days.
- xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance conditions shall also be uploaded by the project authorities on their website and updated at least once every six months so as to bring the same in public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant such as PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mine office and in corporate office and on company's website.
- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region shall monitor compliance of the stipulated conditions. The Project authorities shall extend full cooperation to the office(s) of the Regional Office by furnishing the requisite data/ information/monitoring reports.
- xix. The Environmental statement for each financial year ending 31 March in For -V is mandated to be submitted by the project proponent for the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be uploaded on the company's website along with the status of compliance of EC conditions and shall be sent to the respective Regional Offices of the MoEF&CC by e-mail.

5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

6. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent

7. The proponent is required to 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.

8. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

9. The Proponent shall setup an Environment Audit cell with responsibility and accountability to ensure implementation of all the EC Conditions.

10. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

11. The above conditions will 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 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. The proponent shall ensure to undertake and provide for the costs incurred for taking up remedial measures in case of soil contamination, contamination of groundwater and surface water, and occupational and other diseases due to the mining operations.

12. 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.

13. This EC supersedes the earlier EC, vide letter no. letter J-11015/189/2008-IA.II(M) dt.25<sup>th</sup> February, 2013 for 6.00 MTPA.

  
(Dr. Manoranjan Hota)  
Director

**Copy to:**

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar, Orissa.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarapur, Bhubaneswar – 751023, Orissa.
4. Member Secretary, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar – 751012, Orissa.
5. Member Secretary, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
6. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
7. Dr. R.K. Garg, Advisor, Coal India Limited, SCOPE Minar, Core-1, 4t Floor, Vikas Marg, Laxmi Nagar, New Delhi.
8. District Collector, Jharsuguda, Government of Odisha.
9. Monitoring File    10. Guard File    11. Record File.    12. Notice Board

  
(Dr. Manoranjan Hota)  
Director