

No. J-11015/280/2013-IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodhi Road,
New Delhi-110003
Dated: 19th February, 2014

To,

Shri B.C. Tripathy,
General Manager (Env.)
M/s Mahanadi Coal Fields Ltd.,
Bhubaneshwari OCP,
P.O. Jagriti Vihar, Burla,
Dist. Sambalpur-768020,
Orissa.

Sub. : Expansion [under 7(ii) of EIA Notification 2006] of Bhubaneshwari Opencast project from 20 MTPA to 25 MTPA in ML area 638.341 ha (658.724 ha – 20.383 ha = 638.341 ha); Latitude 20° 57' 59" to 20° 58'43" & Longitude 85° 09' 10" to 85° 11'37") of M/s Mahanadi Coalfields Ltd. Village: Hensmul, Dist. Anugul, Orissa – Environment Clearance - reg.

Sir:

This is with reference to letter no. CIL/DIL/EMP/2013/29 dated 24.07.2013 with the application and subsequent letter no. dated 25.12.2013 for Environmental Clearance for Expansion under 7(ii) of EIA Notification 2006 for the above-mentioned project.

2. The Ministry of Environment & Forests has considered the application. It is noted that the proposal is for grant of Environmental Clearance for expansion [under 7(ii) of EIA Notification 2006] of Bhubaneshwari Opencast project from 20 MTPA to 25 MTPA in ML area 638.341 ha (658.724 ha – 20.383 ha = 638.341 ha); Latitude 20° 57' 59" to 20° 58'43" & Longitude 85° 09' 10" to 85° 11'37") of M/s Mahanadi Coalfields Ltd. Village: Hensmul, Dist. Anugul, Orissa. The proposal was considered in the 2nd EAC held on 3-4th October, 2013 and reconsidered in the 9th EAC meeting held on 20th - 21st January, 2014. The proponent has informed that:

- i. It was noted that EC was granted for Bhubaneshwari Opencast vide letter no. J-11015/45/96-IA.II (M) dated 06.06.2003 for 10 MTPA. The project was again granted EC vide letter no. J-11015/128/2007-IA.II (M) dated 30.11.2012 for an expansion in production from 10 MTPA to 20 MTPA in a Mining lease area of 808.294 ha.
- ii. M/s MCL is seeking expansion in production capacity from 20 MTPA to 25 MTPA in ML area 658.724 ha under 7(ii) of EIA Notification 2006 with 25 % expansion.
- iii. The land usage of the project will be as follows:



Bhubaneshwari_EC_Expansion 7(ii)

Post Mining

Sl.	Item	Post Mining Land Use (in ha)					
		Plantation	Water body	Dip side slope and haul road	Undisturbed	Built-up area	Total
1	Quarry excavation	375.900	31.000	55.741	0.000	0.000	462.641
2	Blasting danger zone (excluding the part of OB dump)	83.150	0.000	0.000	0.000	0.000	83.150
3	OB Dumps (external)	94.000	0.000	0.000	0.000	0.000	94.000
4	Infrastructure including CHP, magazine, etc.	0.850	0.000	0.000	0.000	10.083	10.933
5	Railway siding	1.600	0.000	0.000	0.000	6.400	8.000
	Mining lease area (1 to 5)	555.500	31.000	55.741	0.000	16.483	658.724
6	Residential colony	6.400	0.000	0.000	0.000	25.600	32.000
7	Rehabilitation Site	23.520	0.000	0.000	0.000	94.050	117.570
	Outside Lease area (6 to 7)	29.920	0.000	0.000	0.000	119.650	149.570
	Total :	585.420	31.000	55.741	0.000	136.133	808.294

Pre-Mining

Sl.	Item	Pre-Mining Land Requirement (in ha)		
		Forest	Non-forest (Govt. & Tenancy)	Total
1	Quarry excavation	126.191	336.450	462.641
2	Blasting danger zone (excluding the part of OB dump)	--	83.150	83.150
3	OB Dumps (external)	--	94.000	94.000
4	Infrastructure including CHP, magazine, etc.	6.713	4.220	10.933
5	Railway siding	--	8.000	8.000
	Mining lease area (1 to 5)	132.904	525.82	658.724
6	Residential colony	--	32.000	32.000
7	Rehabilitation Site	--	117.570	117.570
	Outside Lease area (6 to 7)	0	149.570	149.570
	Total :	132.904	675.39	808.294

- iv. The total geological reserve is 741.09 MT. The mineable reserve is 374.12 MT, extractable reserve is 374.12 MT. The per cent of extraction would be 100 %.
- v. The coal grades are D to G having stripping ratio of 0.67 m³/t. The average Gradient is 4.5 degree. There will be total ten seams with thickness ranging from 0.42 to 44.99 m.
- vi. The total estimated water requirement is 4.36 MLD. The level of ground water ranges from 80 to 134 m.
- vii. The Method of mining would be opencast mining with shovel-dumper.
- viii. There are one external OB dump covering an area of 62.40 ha having a height upto 52 m



with the quantity of 26658480 m³. The final mine voids will have an area of 31 Ha with 187.5 m depth. There is one internal dumps having an area of 23.25 ha and height 54 m . Out of total quarry area 462.641 Ha. backfilled quarry area will be 375.90 Ha which shall be reclaimed with plantation. A void of 31 ha with depth of about 180 m, which is proposed to be converted into water body.

- ix. The seasonal data for ambient air quality has been documented and all results at all stations are within prescribed limits.
- x. The **life of mine** is 15 Years.
- xi. **Transportation:** Transportation of coal in pit by dumper. Surface to siding by tipper/conveyor, and rakes loading by pay loaders. Provision was by belt to washery and from washery to siding by tube conveyor and rakes loading through silo but the same is delayed.
- xii. There is R & R involved. There are 1012 PAFs.
- xiii. **Cost:** Total capital cost of the project is Rs. 490 Crore. The cost of production would be Rs. 153 /tonnes. CSR Cost (Capital cost: Rs.296 lakhs / tonne of Coal production. R&R Cost Rs. 31.22 crore. Environmental Management Cost is Rs. 71.41 Crore.
- xiv. **Approvals:** Ground water clearance obtained on 09.01.2000. The Mine Closure approval obtained on 28.09.2013. Date of approval of mine plan is 23.06.2011. Board's approval obtained on 22.12.2007.
- xv. **Wildlife issues:** There are no national Parks, wildlife sanctuary, biosphere reserves found in the 10 km buffer zone.
- xvi. **Forestry issues:** Total forest area involved for mining 132.904 ha. FC was granted vide letter no. 8-18/2002-FC dated 6.12.2004 for diversion of 112.521 ha of forest land.
- xvii. **Total afforestation** plan shall be implemented covering an area of 585.42 ha at the end of mining where reclaimed external OB dump is 94 Ha and Internal OB Dump 375.90 ha. Green Belt over an area of 83.13 ha. Density of tree plantation 2500 trees/ ha of plants.
- xviii. There are no court cases/violation pending with the project proponent.
- xix. Earlier EC was obtained on 30.11.2012 for which the Public Hearing was held on 10.02.2009 at Jagannath Kala Kendra, Talchar, Angul district of Orissa.
- xx. Certificate of compliance of earlier EC from MoEF, Regional office, Bhubaneswar has been issued vide their letter no. 106-102/EPE dtd. 16.09.2013.

3. The project proponent further informed on the Report of the RO, MOEF vis-a-vis the commitments made by the proponent which are as follows:

- i. The Source Apportionment Study for which the works order has been placed to ARAI, Pune. The Report will be submitted within 4 months i.e., 27/03/2014.
- ii. Tender for construction of Washery-Conveyor-Silo is under process and award of work and completion of construction will take at least 3 years' time. Completion of the above work is not possible within 18 months. It is committed to implement the Action Plan by 01/01/2017. Land has been acquired and fencing is under construction, NIT ready and to be floated.
- iii. Planning, Design & Engineering, erection/ installation along with all associated civil and structural works, testing, successful commissioning of coal washing plant including PGT with two years critical spares, operation and maintenance for supply of washed coal of requisite quality at the designated delivery places and disposal of washery rejects on BOM is ready. There will not be any tipper for feeding of coal to washery. Coal will come through belt conveyor from the receiving pit.
- iv. EC has been granted for 20 MTPA in Nov.2012 and production achieved during 2013-13 was 17.93 MT. 20 MT will be achieved this year and since there is further scope for additional production from this mine and EC has been sought for 25 MTPA.

- v. The additional 5 MTPA of coal production in Bhubaneswari OCP will be transported to the power plant consumers only through Rail Mode.
- vi. MCL will establish conveyor system from mine to siding, without considering the intermediate washery arrangement, within 24 months' time, and thus our earlier commitment in this regard stands revised.
- vii. MCL will ensure that only native species are planted by the Forest Department in the plantation programme of this project.

4. Reference is invited to the e-mail dated 07 February, 2014 stating that "Stage -I Forest Clearance for 112.521 ha was granted by MoEF vide letter dtd. 6th December, 2004, against total forest diversion proposal of 132.904 ha. Total Forest land involved for the entire life of the Project is 132.904 ha. Forest land involved for 25 years was assessed as per MOEF directive and it was 112.521 ha and this area was approved by MoEF and it was directed to approach MoEF after 25 years for balance 20.383 ha of forest land" and hence will not be diverted. In this regard, you are required to follow the guidelines issued by the FC Division of the Ministry of Environment & Forests vide no. 11-362/2012-FC dated 01-02-2013 "Guidelines for diversion of forest land for non-forest purposes under the Forest (Conservation) Act 1980. Submission of proposals to obtain forest land located within the mining lease and grant of environment clearance to mining projects" addressed to the Principal Secretary (Forests), Principal Secretary (Environment) of all the States/UT Govts. and copy to concerned Government Departments/Organisations which prescribes, inter-alia, the following:

" (iii) As regards Environment Clearance (EC) cases of existing mining operations, where approval under the FC Act for the full forest area in the mining lease area is not available, granting of EC may be considered and the following process will be adopted for processing such cases:

- a) Grant of EC may be considered only for the non-forest area plus the forest area within the mining lease for which FC is available. No mining activities will be allowed in forest area for which the FC is not available; and
- b) The project proponent will seek and obtain approval under the FC Act for diversion of the entire forest land located within the mining lease within a period of two years from the date of issue of these guidelines, failing which the mining lease area will be reduced to the non-forest area plus the forest area for which the project proponent has been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, the project proponent will need to get a revised mining plan approved from the competent authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed."

5. The proposal was reconsidered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 5th meeting held on 26th - 25th November, 2013 for granting Environmental Clearance. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned expansion [under 7(ii) of EIA Notification 2006] of **Bhubaneswari Opencast project from 20 MTPA to 25 MTPA in ML area 638.341 ha (658.724 ha – 20.383 ha = 638.341 ha); Latitude 20° 57' 59" to 20° 58'43" & Longitude 85° 09' 10" to 85° 11'37"**) of M/s Mahanadi Coalfields Ltd. Village: Hensmul, Dist. Anugul, Orissa under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below. You will need to seek and obtain approval under the FC Act for diversion of the entire



forest land located within the mining lease within a period of two years from the date of issue of these guidelines (i.e. 01 February, 2013), failing which the mining lease area will be reduced to the non-forest area plus the forest area for which you have been able to obtain the FC at the end of this time period. In the case of reduction in mine lease area, you will need to get a revised mining plan approved from the competent authority for reduced area and enter into a new mining lease as per reduced lease area. The EC will be construed to be available for the mining lease area as per the revised mining lease deed.

A. Specific Conditions:

- i. No mining operations shall be undertaken in the forestland until clearance has been obtained under the provisions of FC Act, 1980.
- ii. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- iii. The report of ARAI, Pune on Source Apportionment Study be submitted to the concerned State Pollution Control Board and the Regional office of the MoEF submitted within 4 months i.e., 27/03/2014.
- iv. There will not be any tippers for feeding of coal to washery. Coal will come through belt conveyor from the receiving pit
- v. The conveyor system from Mine to Siding, without considering the intermediate washery arrangement, shall be established within 24 months i.e. by January, 2016. This has already been highly delayed.
- vi. Only native species to be planted by the Forest Department in the plantation programme of this project.
- vii. Proponent should expeditiously take up the matter with the Coal India to create an Environment Cadre for future employment in Coal India and its subsidiaries.
- viii. MCL has committed to implement the Action Plan by 01/01/2017
- ix. The coal production in Bhubaneswari OCP will be transported to the power plant and other consumers only through Rail Mode.
- x. Transportation of coal in pit by dumper. Surface to siding by tipper/conveyor, and rakes loading by pay loaders. Provision was by belt to washery and from washery to siding by tube conveyor and rakes loading through silo but the same is delayed. 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.
- xi. Mining operations for the expansion project shall not involve drilling, blasting and rushing operations as a result of use of surface miner.
- 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.
- xiv. Final mine void depth will not be more than 40 m. The void area will be converted into waterbody. The rest of the area will be back filled upto the ground level and covered with about a meter thick top soil and put to use.
- xv. Garland drains be provided.
- xvi. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.
- xvii. The land after mining shall be brought back for agriculture purpose.
- xviii. Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.



- xix. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation. Annual social audit should be got carried out and details furnished as part of compliance report and also uploaded on the company website.
- xx. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xxi. Dust mask to be provided to everyone working in the mining area. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xxii. 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. The lung burden analysis report of workers working in coal mining area should be provided and uploaded on the company website.
- xxiii. R&R for the 1185 PAFs of Hensamul, Jilinda and Naraharipur which are yet to be resettled, shall be implemented within a specified time-frame. R&R norms shall be not less than that of the National R&R Policy.
- xxiv. The topsoil, if any, should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt. The time schedule for development of green cover should be provided.
- xxv. The OB shall be simultaneously backfilled in the decoaled area. No new OB dumps shall be created for the OB to be generated in the balance life of mine. sequential operation of mines should be done so that the voids of adjoining mines can be used for dumping OB
- xxvi. No external OB dump should be left at the Final Mine Closure stage and the mined out area and void should be backfilled up to ground level to the extent possible and the void if left, should be no more than 30-40m depth. Fly ash should not be dumped in mine void.
- xxvii. Water from River Brahmani should not be drawn for these purposes and an awareness campaign should be launched by MCL for proper use of water from various sources. The Committee desired that a trend analysis of the water quality (surface and ground water) including heavy metals, should be carried out and data uploaded on the company website. Mine water be used for irrigation of nearby agricultural land and also for green belt and other uses.
- xxviii. Long-term monitoring on the impacts of simultaneous operation of large opencast mines should be carried out on the confined and unconfined aquifers.
- xxix. The roads should be developed with a 3-tier avenue plantation preferably of 20-30m width using native species. The Committee also desired that road transportation should be by mechanically covered trucks and not tarpaulin covered trucks, which should be introduced within 9-12 months. An 'Action Plan' for the transportation of coal by road to major consumers (during the initial years) should be submitted to ministry for record and the FSA entered with the major linkages should stipulate a condition to the effect that only mechanically covered trucks are used for coal transportation.
- xxx. The mining area should be grounded by green belt having thick closed thick canopy of the tree cover.
- xxxi. 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.
- xxxii. 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.
- xxxiii. OB shall be stacked at two 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 and its concerned Regional office on yearly basis.

- xxxiv. 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.
- xxxv. 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.
- xxxvi. 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.
- xxxvii. Drills shall be wet operated.
- xxxviii. 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,
- xxxix. 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.
- xl. A Progressive afforestation plan shall be implemented covering an area of 585.420 ha at the end of mining, which includes reclaimed External OB dump area (94 ha), Internal OB dump area (375.90 ha), along roads and infrastructure (32.37 ha), and Green belt (83.150 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.
- xli. An estimated total 251.39 Mm³ of OB will be generated during the entire life of the mine. Out of which 52.37 Mm³ of OB will be dumped in two external OB Dumps an earmarked area covering 94 ha of land. 199.02 Mm³ of will be one internal OB dump in covering an area of 279.65 ha. The maximum height of external OB dump for hard OB will not exceed 90 m and that for soft OB shall not exceed 60 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.
- xl.ii. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
- xl.iii. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.
- xl.iv. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
- xl.v. No groundwater shall be used for mining operations.
- xl.vi. Of the total quarry area of 462.641 ha. the backfilled quarry area of 279.65 ha shall be reclaimed with plantation and a void of 182.991 ha at a depth of 30-40 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.
- xl.vii. 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 and to the Central Pollution Control Board quarterly within one month of monitoring.
- xlvi. The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring indicates a decline in water table. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- xlvii. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
- xlviii. 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 a specialised agency /institution within the District/State and the results reported to this Ministry and to DGMS.
- xlix. 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.
- l. 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 and its concerned Regional office
- li. A detailed Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests within 6 months of grant of Environmental Clearance.
- lii. 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.
- liii. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.
- liv. Corporate Environment Responsibility:
- lv. a) The Company shall have a well laid down Environment Policy approved by the Board of Directors.
- lvi. 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.
- lvii. 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.
- lviii. 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 and Forests.
- 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 PM₁₀, PM_{2.5}, SO₂ and NO_x 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 (PM₁₀, PM_{2.5}, SO₂ and NO_x) 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 19th May 1993 and 31st 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 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 PM₁₀, PM_{2.5}, SO₂ and NO_x (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 by e-mail.

6. This EC supersedes the earlier EC, vide letter no. J-11015/128/2007-IA.II (M) dated 30.11.2012, for an expansion in production from 10 MTPA to 20 MTPA in a Mining lease area of 808.294 ha

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

8. 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.

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

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

11. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

12. 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. 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.


(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-I, 4t Floor, Vikas Marg, Laxmi Nagar, New Delhi.
8. District Collector, Angul, Government of Odisha.
9. Monitoring File 10. Guard File 11. Record File. 12. Notice Board


(Dr. Manoranjan Hota)
Director