

No. J-11015/397/2008-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: 10<sup>th</sup> December, 2014

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

**Sub.: Ananta OCP Expansion Project, Phase-III (From 15 MTPA to 20 MTPA in the existing ML area of 1181.968 Ha (1419.821 Ha – 237.853 Ha = 1181.968 Ha); Latitude 20°57'16" to 21°00'00" N and Longitude 85°07'14" to 85°09'09" E) of M/s Mahanadi Coalfields Ltd., Tehsil Talcher, Dist. Angul, Odisha. – Environment Clearance - reg.**

Sir:

This is with reference to letter No. 43011/85/2008-CPAM dated 27.08.2008 of Ministry of Coal forwarding the aforesaid application and this Ministry's grant of Terms of Reference (TOR) dated 18.11.2008 and Reference is also invited to the letter no CIL/DEL/EMP-TOR/2012/16 dated 24.09.2012 and subsequent letter nos. dated 11.12.2012; 24.07.2013; 16.09.2013; 18.10.2013; 5.03.2014; 25.03.2014; 30.06.2014; 23.07.2014 and 04.09.2014 for environmental clearance on the above-mentioned subject.

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 **Ananta OCP Expansion Project, Phase-III (From 15 MTPA to 20 MTPA in the existing ML area of 1181.968 Ha (1419.821 Ha – 237.853 Ha = 1181.968 Ha); Latitude 20°57'16" to 21°00'00" N and Longitude 85°07'14" to 85°09'09" E) of M/s Mahanadi Coalfields Ltd., Tehsil Talcher, Dist. Angul, Odisha.** The proposal was considered in the 63<sup>rd</sup> EAC meeting held on 17<sup>th</sup> -18<sup>th</sup> December, 2012. The proponent has informed that:

- i. It was noted that EC was granted for Ananta Opencast vide letter no. J-11015/4/94 dated 02.05.2005. The project was again granted EC vide letter no. J-11015/83/2005-IA.II (M) dated 14.07.2006 for an expansion in production from 8 MTPA to 12 MTPA. Now application submitted for expansion in production capacity from 15 MTPA to 20 MTPA.
- ii. The latitude and longitude of the project are 20°57'16" to 21°00'00" N and 85°07'14" to 85°09'09" E respectively.
- iii. The land usage of the project will be as follows:

| Sl. No. | Item            | For exiting 12.0 MTPA (Ha.) | Addl. Land for incremental production (8.0 MTPA) (Ha.) | Total for 20 MTPA (Ha.) |
|---------|-----------------|-----------------------------|--|-------------------------|
| 1       | Forest Land     | 93.69                       | 237.853  | 331.543                 |
| 2       | Non-Forest Land | 597.401                     | 490.877  | 1088.278                |
|         | Total           | 691.091                     | 728.73   | 1419.821                |

Ananta\_Expansion\_EC

a. Pre mining land use (in Ha.)

| <b>Pre-mining land use</b>             |                                     |                          |                                 |                 |
|--|-------------------------------------|--------------------------|---------------------------------|-----------------|
| S.N.                                   | Item/Purpose                        | Land Requirement (in ha) |                                 |                 |
|  |                                     | Forest                   | Non-forest<br>(Govt. & tenancy) | Total           |
| 1                                      | Quarry excavation                   | 306.703                  | 661.359                         | 968.062         |
| 2                                      | Blasting danger zone                | 80.776*                  | 327.619                         | 327.619         |
| 3                                      | OB dumps (external)                 | --                       | 23.200                          | 23.200          |
| 4                                      | Infrastructure                      | --                       | 90.000                          | 90.000          |
| 5                                      | Diversion of road                   | --                       | 4.000                           | 4.000           |
| 6.                                     | Rationalisation of project boundary | --                       | 6.940                           | 6.940           |
| <b>Mine lease area (1+2+3+4+5+6)</b>   |                                     | <b>306.703</b>           | <b>1113.118</b>                 | <b>1419.821</b> |
| 7.                                     | Residential colony                  | --                       | 243.559                         | 243.559         |
| 8.                                     | Resettlement site                   |                          |                                 |                 |
| <b>Total Land Requirement (1 to 8)</b> |                                     | <b>306.703</b>           | <b>1356.677</b>                 | <b>1663.380</b> |

\* Does not include in the ML area of 1419.821 Ha.

b. Post Mining land use (in Ha.)

| <b>Post-mining land use</b> |                                     |                  |               |                            |                |                |                 |
|-----------------------------|-------------------------------------|------------------|---------------|----------------------------|----------------|----------------|-----------------|
| Sl. No.                     | Category                            | Land use (in ha) |               |                            |                |                | Total           |
|                             |                                     | Plantation       | Water body    | Dip side slope & haul road | Undis-turbed   | Built-up area  |                 |
| 1                           | Quarry excavation                   | 705.580          | 32.010        | 230.472                    | 0.000          | 0.000          | 968.062         |
| 2                           | Blasting danger zone                | 41.150           | 0.000         | 0.000                      | 286.469        | 0.000          | 327.619         |
| 3                           | OB dumps (external)                 | 10.800           | 0.000         | 0.000                      | 12.40          | 0.000          | 23.200          |
| 4                           | Infrastructure                      | 18.000           | 0.000         | 0.000                      | 0.000          | 72.000         | 90.000          |
| 5                           | Diversion of the road               | 0.800            | 0.000         | 0.000                      | 0.000          | 3.200          | 4.000           |
| 6                           | Rationalisation of project boundary | 6.940            | 0.000         | 0.000                      | 0.000          | 0.000          | 6.940           |
| 7                           | Residential colony                  | 48.700           | 0.000         | 0.000                      | 0.000          | 194.859        | 243.559         |
| 8                           | Resettlement site                   |                  |               |                            |                |                |                 |
| <b>Total</b>                |                                     | <b>831.970</b>   | <b>32.010</b> | <b>230.472</b>             | <b>298.869</b> | <b>270.059</b> | <b>1663.380</b> |

c. Core Area Land Use (in Ha)

| Type of Land                       | Existing<br>12.0 Mty | Addl. land for incremental<br>production 8.0 Mty | Total for<br>20.0 Mty |
|------------------------------------|----------------------|--|-----------------------|
| Agricultural                       | 206.74               | 152.32   | 359.06                |
| Forest                             | 93.69                | 237.853  | 331.543               |
| Waste land                         | 357.891              | 304.347  | 662.238               |
| Grazing                            | --                   | --   | --                    |
| Surface water bodies               | 15.87                | 20.87  | 36.74                 |
| Others (specify) (Govt. land)      | 16.90                | 13.34  | 30.24                 |
| <b>Total for mining lease area</b> | <b>691.091</b>       | <b>728.73</b>                                    | <b>1419.821</b>       |

- iv. The total geological reserve is 342.11 MT. The mineable reserve 329.59 MT. The percent of extraction would be 96.34%.
- v. The coal grade is Mostly F & G grade. The stripping ratio is 2.21 m<sup>3</sup>/tone. The average Gradient is 2<sup>0</sup> to 4<sup>0</sup>. There will be seams of -18 (excluding local seams) with thickness ranging from 1.0 m to 18.50 m.
- vi. The total estimated water requirement is 4.175 MLD. The level of ground water ranges from Pre- monsoon- less than 6.70 m bgl to about 10.55 m bgl(core zone). & Post- monsoon- less than 2.00 m bgl to about 11.90 m bgl( core zone). A void of area 235.21 ha at a depth of average 20-40 mt. is proposed to be converted into a water body.
- vii. The Method of mining would be Opencast Mining by Shovel – Dumper in overburden & surface miner, loader & tipper in coal.
- viii. There are no external OB Dumps covering an area. There is one internal dumps with several tiers covering an area 732.852 ha, with the height upto 265 mts on mine floor. The quantity will be 791.61 m<sup>3</sup>. The final void area 235.21 ha with a depth of 265 m.
- 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 22 Years.  
**Transportation:** Coal transportation in pit by By Dumpers/Tipper, Surface to Siding by conveyor from quarry mouth to SILO/Siding after construction of SILO and siding to loading by after construction of SILO directly into wagon through conveyor, SILO and rapid loading system.
- xi. There is R & R involved. There are additionally 689 displaced families.
- xii. **Cost:** Total capital cost of the project is Rs. 446.63 Crores. CSR Cost Rs. 276.99 Crores. R&R Cost Rs 14.79 Crores. Environmental Management Cost Rs. 75.02 Crore. Sale price is Rs.484.89 per tone
- xiii. **Water body:** Bangaru Jahr nallah flowing adjacent to the proposed mine.
- xiv. **Approvals:** Ground water clearance has not been obtained. Board's approval obtained on 31<sup>st</sup> July 2008, by MCL in it's 99<sup>th</sup> board meeting. Mining plan approval obtained on 30.03.2009 by Ministry of Coal. Mine Closure Plan obtained on 22/06/2011 Approved by MCL Board.
- xv. **Wildlife issues:** Tree Enumeration, Pillar posting, Compensatory Afforestation Scheme, Wild Life Management Plan etc already completed. Compliance under FRA (Forest Right Act) completed for Nine villages out of Total Ten villages involved.
- xvi. There are no national Parks, biosphere reserves found in the 10 km buffer zone.
- xvii. **Forestry issues:** Total forest land is 306.703 ha. The FC for 237.85 Ha forest land is not available. FC has been granted for diversion of 93.69 Ha of forest land (vide letter No.11-144/89.F.C. dated 28.09.1990 for 31.02 ha and vide letter No.8-43/2004-FC dated 18.11.2004 for 62.67 ha by MoEF).
- xviii. Total **afforestation** plan shall be implemented covering an area of 831.97 ha at the end of mining. Green Belt over an area of 831.970 ha. Density of tree plantation 2500 trees/ ha of plants.
- xix. **Board Resolution:** Project proponent has submitted Boards Resolution vide letter no. MCL/SBP/CS/Bd-150/Exct/2013/7364 dated 24.07.2013 for not repeating violation.
- xx. **Legal Credible Action** by State Government has been submitted vide letter Env-I-37/2012(Pt)21098/F&E dated 14.10.2013.
- xxi. There is an excess production during FY: 1993-1994 to 2009-2010.
- xxii. The 80.776 ha falling in the blasting danger zone is neither a part of the total mining lease area of 1419.821 ha nor a part of the Forest Diversion Proposal of 237.853 ha excluding safety zone (240.67 ha including safety zone).
- xxiii. Expansion area of 728.73 ha (from 691.091 ha to 1419.821 ha) is not a new area but is extension area which is adjacent / in continuation to the present mining area.

3. The project proponent submitted the compliance report to the earlier EC conditions authenticated by RO, MoEF&CC, Bhubaneswar (vide letter no.106-102/EPE dated 11.12.2012) vis-a-vis the commitments made by the proponent which were deliberated by the EAC. The proponent has, vide letter no. MCL/HQ/Dir.plan.& project Secr./13-14/506 dated 18.10.2013, submitted the action plan for compliance for the earlier EC conditions (vide letter no. MCL/JAG/ENVT/2013/6901 dated 04.10.2013), which include the following:

1. Subsoil excavated is stacked and used for reclaimed back-filled area before grass seeding during monsoon.
2. The entire O.B. of internal dump, above the ground level shall be re-handled and used for back-filling reclamation as per the mine closer plan.
3. Garland drains have already been de-silted before monsoon and are de-silted before monsoon every year during 'monsoon-preparation drive'. The 'Mine-Sump' works as setting Tank and only mine water is used for dust suppression, fire fighting etc.
4. Sprinkling arrangement at hopper of CHP has been improved by improving Maintenance by fixing additional misters.
5. After re-handling the internal dumps, plantation shall be done over backfilled area.
6. For installation of new piezometers, scope of work for tendering purpose has been prepared by CMPDIL and tending and finalization of contract will be done within 6 months by CMPDIL.
7. Waste water from CHP is collected in setting tank and re-circulated for use of water spraying for dust suppression and no discharge is outside the mine.
8. Mine Closure Plan approved by MCL Board in June 2011 and submitted to MOC.
9. As per the MCL,s Board resolution, on 11.07.2013 Ananta OCP will not violate provisions of EP (Act) in future.
10. Complied. Except monitoring of PM 2.5, for which will be started from Jan 2014 as per CMPDIL procurement schedule of the monitoring equipment.
11. Environment mgmt Cell has been created at project level. The Cell reviews the progress of implementation of environmental Mgmt. and initiate measures for completion of various Environment activities.

4. **This is a violation case.** The proponent has exceeded the production limit. As per the Office Memorandum dated 12.12.2012 and 27<sup>th</sup> June, 2013 issued by the Ministry of Environment, Forests & Climate Change with regard to the consideration of proposals for ToR/Environment Clearance/CRZ clearance involving violation of the Environment (Protection) Act, 1986/EIA notification, 2006/CRZ notification, 2011, the Environmental Clearance will be granted after the written commitment in the form of a formal resolution by the Board of Directors submitted to the MoEF to ensure that violations will not be repeated and the State Government concerned initiates credible action on the violation by invoking powers under Section 19 of the Environment (Protection) Act, 1986 for taking legal action under section 15 of the Act for the period for which the violation has taken place and evidence provided to the MoEF of the action taken. As regards credible action, Regional Office, MOEF, Bhubaneswar has filed the complaints in the court of SDJM, Talcher under Sec., 19 of the Environment (Protection) Act, 1986 (Case No. 2(C) C31/2014 dated 21.06.2014) against the collieries for operating with excess production. Project proponent has submitted Boards Resolution vide letter no. MCL/SBP/CS/Bd-150/Exct/2013/7364 dated 24.07.2013 for not repeating violation



5. Out of the total ML area is 1419.821 Ha, of which forest land is 331.543 Ha. FC has been granted for diversion of 93.69 Ha of forest land vide letter No.11-144/89.F.C. dated 28.09.1990 for 31.02 ha and vide letter No.8-43/2004-FC dated 18.11.2004 for 62.67 ha by MoEF. The FC for 237.85 Ha forest land is not available. Therefore, EC for ML area of 1181.968 Ha (1419.821 Ha – 237.853 Ha = 1181.968 ha) = 1181.968 Ha. may be granted. In this regard, you are required to follow the guidelines issued by the FC Division of the Ministry of Environment, Forests & Climate Change 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. However, 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.”

However, diversion of forest land shall not be done under the paragraph (iii) (b) of the guidelines of FC dated 01.02.2013 in view of the Supreme Court’s Order dated 27.01.2014 which stayed paragraph (iii) (b) of the Guidelines of FC Division dated 01.02.2013 till further orders. Para (iii) (b) is not being prescribed in view of the Supreme Court’s Order dated 27.1.2014.

6. The proposal was reconsidered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 63<sup>rd</sup> EAC meeting held on 17<sup>th</sup> -18<sup>th</sup> December, 2012 for granting Environmental Clearance. The Ministry of Environment, Forests & Climate Change hereby accords environmental clearance for the above-mentioned **Ananta OCP Expansion Project, Phase-III (From 15 MTPA to 20 MTPA in the existing ML area of 1181.968 Ha (1419.821 Ha – 237.853 Ha = 1181.968 Ha); Latitude 20<sup>o</sup>57’16” to 21<sup>o</sup>00’00” N and Longitude 85<sup>o</sup>07’14” to 85<sup>o</sup>09’09” E) of M/s Mahanadi Coalfields Ltd., Tehsil Talcher, Dist. Angul, Odisha** 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. Grant of EC is accorded 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

#### A. Specific Conditions:

- i. Grant of EC is 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. Para (iii) (b) of the guidelines of FC Division dated 01.02.2013 is not being prescribed in view of the Supreme Court's Order dated 27.1.2014.
- ii. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- iii. Mining shall be carried out as per statuette from the streams/nallahs flowing within the lease and maintaining a safe distance from River Konar flowing along the lease boundary.
- iv. Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used for reclamation and development of green belt.
- v. The OB should be re-handled and filled in the void to be filled up to ground level. Voids with 265mt depth are not permitted.
- vi. Permission should be obtained from Water Resource Dept, State Govt. for diversion Bangaru jhar stream.
- vii. The presence of Arsenic, Mercury (Hg), Geranium (Ge) may be investigated.
- viii. Forest cover should be provided around Dera village.
- ix. Investigation for effect of fluoride on human health specifically on children be done. Alternate fluoride free water be supplied to villagers.
- x. Continuous monitoring in the change in ecology be carried out by ecologist, biologist, social scientist.
- xi. Garland drains be provided and should be de-silted regularly.
- xii. Sprinkling arrangement at hopper of CHP to be further improved by improving Maintenance by fixing additional misters.
- xiii. Piezometers should be installed at the aquifer level for regular monitoring of underground water.
- xiv. Waste water from CHP be collected in setting tank and re-circulated for use of water spraying for dust suppression and no discharge is outside the mine.
- xv. Monitoring of PM 2.5 for shall be carried out.
- xvi. Environment management Cell shall be established for reviewing the progress of implementation of environmental management in the project.
- xvii. Approved Mine closure plan should be submitted to RO, MoEF for record.
- xviii. Coal transportation in pit by By Dumpers/Tippers, Surface to Siding by conveyor from quarry mouth to SILO/Siding after construction of SILO and siding to loading by after construction of SILO directly into wagon through conveyor, SILO and rapid loading system.
- xix. The OB shall be completely re-handled at the end of the mining.
- xx. The void area will be converted into water body. 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.
- xxi. Appropriate embankment shall be provided along the side of the river/nallah flowing near or adjacent to the mine.
- xxii. The land after mining shall be brought back for agriculture purpose.
- xxiii. Mine water should be treated for discharge into the lagoon. The quality of lagoon water shall be regularly monitored and mitigation measures taken.
- xxiv. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xxv. Everybody in the core area should be provided with mask for protection against fugitive dust emissions.
- xxvi. Dust mask to be provided to everyone working in the mining area.

- xxvii. The supervisory staff should be held personally responsible for ensuring compulsory regarding wearing of dust mask in the core area.
- xxviii. 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.
- xxix. The mining area should be grounded by green belt having thick closed thick canopy of the tree cover.
- xxx. 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.
- xxxi. 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.
- xxxii. OB shall be stacked at three 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.
- xxxiii. 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.
- xxxiv. 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.
- xxxv. 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.
- xxxvi. Drills shall be wet operated.
- xxxvii. 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,
- xxxviii. 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.
- xxxix. A Progressive afforestation plan shall be implemented covering an area of 831.97 ha at the end of mining, which includes reclaimed Internal OB dump area (705.58 ha) and Green belt (831.970 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.
- xl. An estimated total 791.61 Mm<sup>3</sup> of OB will be generated during the entire life of the mine. There will be no external OB dump. 791.67 Mm<sup>3</sup> of will be one internal OB dump in covering an area of 732.852 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&CC and its Regional Office on yearly basis.
- xli. The proponent should prepare restoration and reclamation plan for the degraded area. The land be used in a productive and sustainable manner.
- xlii. Compensatory Ecological & Restoration of waste land, other degraded land and OB dumps in lieu of breaking open the land be carried out.

- xl.iii. The mining should be phased out in sustainable manner. No extra over burden dumps are permitted.
- xl.iv. Of the total quarry area of 968.062 ha. the backfilled quarry area of 732.852 ha shall be reclaimed with plantation and a void of 235.21 ha at a depth of 20-40 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.v. 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.
- xl.vi. 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.
- xl.vii. Sewage treatment plant shall be installed in the existing colony. ETP shall also be provided for workshop and CHP wastewater.
- xl.viii. 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.
- xl.ix. 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.
  - I. 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
  - ii. 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.
  - iii. 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.
  - iiii. The commitment made by the Proponent to the issue raised during Public Hearing shall be implemented by the Proponent.
- xl.iv. 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.

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 alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

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

11. This EC supersedes the earlier EC, vide letter no. J-11015/83/2005-IA.II (M) dated 14.07.2006, for an expansion in production from 8 MTPA to 12 MTPA.

12. 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.

13. 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 also any other orders passed by the Hon'ble Supreme Court of India/ High Court 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.



14. 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.

15. The EC is subject to the outcome of the case filed in the SDJM's Court, Talcher and the outcome of the Supreme Court case.

  
(Dr. Manoranjan Hota)  
Director

**Copy to:**

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment, Forests & Climate Change, A/3 Chandrashekarapur, Bhubaneswar 751023.
4. Member-Secretary, State Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar – 751012.
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 Orissa.
9. IG (Wild life), Ministry of Environment, Forests & Climate Change, New Delhi
10. Monitoring File    11. Guard File    12. Record File.    13. Notice Board

  
(Dr. Manoranjan Hota)  
Director