

**BY SPEED POST**

No. J-11015/183/2008-IA.II (M)  
**Government of India**  
**Ministry of Environment & Forests**

Paryavaran Bhawan,  
CGO Complex, Lodhi Road  
New Delhi-110510.  
Dated: 25<sup>th</sup> February, 2013

To

The Chief General Manager (CP&P)  
Mahanadi Coalfields Ltd.  
At/PO.: Jagruti Vihar, Burla  
Distt: Sambalpur  
Orissa – 768020

**Sub: Samelshwari Opencast Coal mine Project in terms of production capacity from 5 MTPA to 11 MTPA in an ML area of 828.76 ha. and 49.855 ha for colony outside the ML) of M/s Mahanadi Coalfields Ltd. (MCL), located in Ib Valley Area, P.O. Brajrajnagar, Tehsil & District Jharsuguda, Orissa (EC based on TOR granted on 14.07.2008) - Environmental Clearance - reg.**

Sir,

This has reference to letter No. 43011/25/2008 dated 15.08.2008 forwarding your revised application for Terms of Reference (TOR) and this Ministry's grant of TOR on 14.07.2008 and subsequent letter No. CIL/DLI/EMP-TOR/2010-5 of M/s Coal India Ltd. dated 06.09.2010 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It is noted that the project obtained EC vide letter dated No. J-11015/55/2006-IA.II (M) dated 14.07.2006 for 5 MTPA rated capacity in an ML area of 828.764 ha. The present project is for expansion of the existing Samelshwari Opencast Coal mine Project in terms of production capacity from 5 MTPA to 11 MTPA within the existing ML area of 828.76 ha. Of the total ML area of 828.76 ha, 86.448 ha is agricultural land, 313.052 ha is forestland, 415.744 ha is wasteland and 13.52 ha is surface water bodies. Forestry clearance for the 313.052 ha has been obtained -, on 09.08.2001 for 167.232 ha and on 17.02.2009 for 145.82 ha. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. Bikramkhoh Reserve Forest (6.5 km) and Rajpur Protected Forest (6 km) and Rampur Protected Forest (3.6 km) are found within 10km of the buffer zone. River Ib flows at a distance of 1.6 km from the ML boundary. Lilari nala flows at distance of 1 km, Bhedan River 4km east and Pandren Nala flows adjacent to the western boundary of the ML. The ML falls in the Ib Valley Coalfields, which is identified as one of the most critically polluted areas. A large number of mines are located within the study area. The existing drainage is being modified by diversion of the Pandren nala through the western side and construction of an embankment alongside Pandren Nala. The proposed diversion will not affect downstream users of water from the Pandren Nala. Of the total mining lease area, 448.272 is area for excavation, 24.86 ha is for ext. OB dumps, 54.005 ha is for infrastructure and 301.627 ha is for safety zone and area for rationalization. An area of 49.855 ha of non-forestland outside the ML is for residential colony consisting of 564 dwelling units at a distance of about 2 km from the ML. Mining is opencast by mechanized method and involves mainly use of surface miner and use of shovel-dumper to some extent. Mineral transportation of 1515 TPD of coal is by road to nearby consumers and the balance 13,636 TPD of coal is by rail from nearest railway siding and then transported is by rail. Ultimate working depth of the mine is 125m below ground level (bgl). Present working depth is 75 m bgl. Water table is in the range of 0.85m-7.62m bgl during pre-monsoon and 0.30m-10.60m bgl during post-monsoon. Peak water

requirement is 1500 m<sup>3</sup>/d of which 497m<sup>3</sup>/d is for dust suppression, 254m<sup>3</sup>/d is for mine operation, 73 m<sup>3</sup>/d is for drinking and would be met from mine sump water and 427 m<sup>3</sup>/d for domestic consumption in the colony is to be met from Integrated Water Supply Scheme of Ib valley Coalfields. An estimated 15.432 m<sup>3</sup>/d of mine water is discharged from the mine premises during peak monsoon after treatment in settling ponds. Of the quarry area of 448.72 ha, an area of 396 ha has been broken and 94.77 mm<sup>3</sup> of OB has been generated of which 90.71 Mm<sup>3</sup> of OB has been backfilled and the remaining 4.06 Mm<sup>3</sup> of OB has been dumped in 6 external OB dumps. Plantation has been developed in an area of 186 ha along the peripheral boundary of the ML, 119.66 ha of external OB dump and backfilled area, 5 ha in township and avenue plantation along 22 km of roads. The project involves R&R for 416 PAFs which includes 184 PAFS (homestead losers) from 2 villages Chingirguda (121), Bijapada (63) of which 2 PAFs have been resettled and 232 PAFs of land losers only. An R&R Action Plan for 136 P AFs has been prepared for completion by two years. Balance life of mine at the rated capacity of 11 MTPA is about 2 years. Mining Plan for expansion from 5 MTPA to 11 MTPA has been approved by Ministry of Coal on 16.03.2010. Project has been approved by M/s MCL on 21.11.2009. Public hearing was conducted on 10.12.2009. Capital cost of the project is Rs 87.95 crores.

2. This is a violation case. As per the Office Memorandum dated 12.12.2012, issued by the Ministry of Environment and Forests, 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. In this case, the Board's resolution has been received. As regards credible action, the Forest and Environment Department of Govt. of Orissa, vide its letter no.1-37/2012-2231/F&E dated 02.02.2013 has intimated that the District Collectors concerned have filed complaint against the coal mine of Mahanadi Coalfields Ltd in the Court of S.D.J.M., Jharsuguda and Sundergarh for trial under relevant provisions of E(P), Act, 1986.

3. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 39<sup>th</sup> meeting held on 3-4 January, 2012 for granting Environmental Clearance. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned **Samleshwari Opencast (Expansion) Coalmine Project of M/s MCL for expansion in production of coal from 5 MTPA to 11 MTPA rated capacity within the existing ML area of 828.76 ha** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and Circulars there under subject to the compliance of the terms and conditions mentioned below:

#### **A. Specific Conditions:**

- (i) Topsoil, if any created in the balance life of the mine, should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used within a year of its generation for mine reclamation and development of green belt.
- (ii) Balance 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.
- (iii) Diversion of Pandren Nala shall ensure that the downstream users of the water form Pandren Nala are not affected by the proposed diversion. The embankment constructed along the Pandren Nala shall be stabilized by vegetation.

- (iv) Monitoring and management of existing reclaimed dumpsite should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on yearly basis.
- (v) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilized for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.
- (vi) Garland drains (size, gradient and length) and sump capacity should 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 should also provided adequate retention period to allow proper settling of silt material.
- (vii) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (viii) Crushers at the CHP should be operated with high efficiency bag filters, water sprinkling system should be provided to check fugitive emissions from crushing operations, conveyor system, haulage roads, transfer points, etc.
- (ix) Drills should 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.
- (x) The total area brought under afforestation shall include an area of 186 ha along the peripheral boundary of the ML, 119.66 ha of external OB dump and backfilled area, 5 ha in township and avenue plantation along 22km of roads by planting native species in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xi) A Progressive Mine Closure Plan shall be implemented and OB generated shall be simultaneously backfilled so as to backfill and reclaim 448.272 ha of decoaled area and stabilized with plantation.
- (xii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new peizometers. The monitoring for 'quantity should 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 should be submitted to the Ministry of Environment & Forests and to the Central Pollution Control Board quarterly within one month of monitoring.
- (xiii) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource. The project authorities should meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xiv) Sewage treatment plant should be installed in the existing colony, ETP should also -be provided for workshop and CHP wastewater.
- (xv) 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 agency within the district/State and the results reported to this Ministry and to DGMS.
- (xvi) For monitoring land use pattern and for post mining land use, a time series of landuse 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 Regional office at Bhubaneswar.

- (xvii) 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 this letter for approval, in case expansion in ML area is not implemented.
- (xviii) R&R for 416 PAFs which includes 182 PAFs (homestead losers) from 2 villages Chingirguda (119), Bijapada (63) and 232 PAFs of land losers shall be completed within 2 years. R&R norms shall be not less than that of the National R&R Policy.

#### **B. General Conditions:**

- (i) No change in 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 including quantum of mineral coal and waste being produced 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 monitoring PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>x</sub>. Location of the stations shall be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with Pollution Control Board. Monitoring of heavy metals such as Hg, As, Ni, Cd, Cr in particulates shall be carried out at least once in six months.
- (iv) Data on ambient air quality (PM<sub>10</sub>, PM<sub>25</sub>, SO<sub>2</sub> and NO<sub>x</sub> and heavy metals such as Hg, As, Ni, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar 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 recognized under the EP Rules, 1986 shall be furnished as part of the 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, and treated so as to conform to the standards including for heavy metals before discharge 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. 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 transportation of 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 analyzed through a laboratory recognized under EP 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 contraindications due to exposure to dust and to take corrective measures, if needed.
- (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 Regional Office at Bhubaneswar.
- (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 concerned 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 the company's website.
- (xv) A copy of the clearance letter shall 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 Centre 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 EC 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 the public domain. The monitoring data of environmental quality parameters (air, water, noise and soil) and critical pollutants such as PM<sub>2.5</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>x</sub> (ambient and stack if any) and critical sectoral parameters shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
- (xvii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions (both in hard copy and in email) to the respective Regional Office of the MOEF, the respective Zonal offices of CPCB and the SPCB.
- (xviii) The Regional Office of this Ministry located at Bhubaneswar 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<sup>st</sup> March in Form-V is mandated to be submitted by the project proponent tot 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.

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

5. 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.

6. 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.

7. The Environmental Clearance is subject to the outcome of the complaint filed by the District Collectors concerned against the coal mine of Mahanadi Coalfields Ltd in the Court of S.D.J.M., Jharsuguda and Sundergarh for trial under relevant provisions of E (P), Act, 1986.

(Dr. Manoranjan Hota)  
Director

**Copy to:**

1. Secretary, Ministry of Coal, 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, A31, Chandrashekarpur, Bhubaneswar - 751023.
4. Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118, Nilkantha Nagar, Unit VIII, Bhubaneswar - 751012.
5. Chairman, 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, Advsior, M/s Coal India Limited, SCOPE Minar, Core-I, 4<sup>th</sup> Floor, Vikas Marg, Laxmi Nagar, New Delhi.
8. District Collector, Jharsuguda, Government of Orissa.
9. Monitoring File 10. Guard File 11. Record File

(Dr. Manoranjan Hota)  
Director