

पर्यावरण विभाग/ENVIRONMENT DEPTT
महानदी कोयलीन्डस् लिमिटेड
Mahanadi Coalfields Limited
प्राप्ति सं/Receipt No. 4637
दिनांक/Date 05/03/2013

BY SPEED POST

No. J-11015/37/2007-IA.II (M)
Government of India
Ministry of Environment & Forests

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

To

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

Sub: Orient-4 UGP (Expn. from 0.15 MTPA to 0.50 MTPA in ML area of 511.215 ha (519.474 ha - 8.259 ha = 511.215) of M/s Mahanadi Coalfields Ltd located in Ib Valley Coalfields, located in Ib Valley Coalfields, dist. Jharsuguda, Orissa (EC based on TOR granted on 16.04.2007)

Sir,

This has reference to letter No 43011/03/2007-CPAM dated 15.01.2007 of Ministry of Coal forwarding your application for TOR, which was granted on 16.04.2007 and your application No. CIL/DLI/EMP-TOR/2010/18 dated 31.12.2010 for environmental clearance and letter dated 12.12.2012 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It is noted that the application is for environmental clearance for **Orient No.4 Underground Coalmine Project for a production capacity of 0.5 million tonnes per annum (MTPA) in an area of 519.474 ha.** There are no ecologically sensitive areas such as National Parks, Wildlife Sanctuary, Biosphere Reserves found within the 10 km buffer zone. A large number of Reserve Forests and protected Forests are found in the 10km radius of the buffer zone. The drainage of the coal mine is controlled by River Ib which flows at a distance of 2.5km from the block. Bhagharachaka nala flows at 1km. Hirakud Reservoir is at a distance of 3.5km from the ML. There are no major drainages except for Khairol Stream passing through the ML. Of the total ML area, 63.665 ha is agricultural land, 397.439 ha is forestland, 51.09 ha is grazing land and 7.28 ha is surface water bodies. Of the total ML area of 519.474 ha, 391.43 ha is for Mining Rights and 8 ha is for Surface Rights. Underground mining is being carried out in the entire ML area of 519.474 ha. Grade of coal is mostly 'C'. Mining methodology is Bord & Pillar. The seams occurring in the mine lease consist of Hingir-Rampur Top, Hingir-Rampur bottom and Ib seam. The mine has 2 Incline air intake ways and with a PV of a capacity of 3500 m³/min has been provided for mine ventilation. Depillaring with caving proposed for 3 panels and with stowing for others. Nala diversion is proposed during depillaring stage. A Subsidence study would be carried out before depillaring operation and for mine safety. Two villages namely Jananimunda and Adivasi Colony (Basti) are located within the ML. No R&R is proposed. Ultimate working depth is 210m bgl. Water requirement is 240 m³ / d, of which 80 m³/ d is for mine operation and 160 m³/ d is for colony and is

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met from the Integrated Water Supply Scheme. Mine discharge water after treatment would be supplied for the nearby villages. Water table is in the level of 1.30m-9.65m bgl during pre-monsoon and 0.5m-5.27m bgl during post-monsoon. Coal is loaded from mine face by LHD on belt conveyor and transferred to surface bunkers, from where a total of 500 TPD of coal is dispatched by road to miscellaneous consumers. Balance life of the mine is 18 years. Mining Plan has been approved on 03.02.2009. Project has been approved by M/ s MCL on 21.11.2009. An amount of Rs 219 lakhs would be spent on CSR for the balance life of mine. A revenue expenditure of Rs 5/ tonne of coal is proposed. Capital cost of the project is Rs 652.71 lakhs. Forestry clearance for 389.180 ha of forestland has been obtained vide letter of the FC dated 31st January, 2013. Public Hearing was held on 24.04.2010.

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. As per your submission the total forest area involved in the project is 397.439. However, the FC has been given to the area of 389.180. In this regard, reference is invited 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.”

4. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 41st meeting held on 23rd-24th January, 2012 for granting Environmental Clearance. The Ministry of Environment & Forests has examined the application in accordance with the EIA Notification 2006 and under the provisions thereof, hereby accords environmental clearance for the above-mentioned Orient-4 UGP (Expn. from 0.15 MTPA to 0.50 MTPA in ML area of 511.215 ha) of M/s MCL located in Ib Valley Coalfields, located in Ib Valley Coalfields, dist. Jharsuguda in a combined ML Area of 511.215 ha (519.474 ha – 8.259 ha = 511.215) under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and 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 aforesaid guidelines of FC Division (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) A Subsidence study shall be carried out before depillaring operations.
- (ii) Regular monitoring of subsidence movement on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structure, roads, and surroundings shall be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures shall be taken to avoid loss of life and material. Cracks shall be effectively plugged with ballast and clayey soil/ suitable material.
- (iii) Mining shall be carried out as per statuette at a safe distance from the river/nallah flowing within/adjacent to the lease boundary.
- (iv) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (v) Coal extraction shall also be optimised in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No coal depillaring shall be undertaken below areas of habitation without stowing and with prior approval of DGMS.
- (vi) Subsidence shall be monitored closely and if subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement with the landowners or the land shall be acquired.
- (vii) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity shall be designed keeping 50%

safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity shall also provided adequate retention period to allow proper settling of silt material.

- (viii) Water sprinkling system shall be provided to check fugitive emissions from loading operations, conveyor system, haulage roads, transfer points, etc. Major approach roads shall be black topped and properly maintained.
- (ix) A progressive afforestation plan shall be prepared and implemented over the mine lease area acquired and shall include areas under green belt development, areas along roads, infrastructure, along ML boundary and township etc, by planting native species in consultation with the local DFO / Agriculture Department.
- (x) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of exiting 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.
- (xi) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource, in case water table shows a declining trend. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xii) 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 in the district/State and the results reported to this Ministry and to DGMS.
- (xiii) Activities under CSR undertaken for the neighbouring villages shall be for not less than Rs 5 per tonne of coal and the progress made thereon shall be uploaded on the company annually on the company website.
- (xiv) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

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 PM₁₀, PM_{2.5}, SO₂ and NO_x. 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, in RSPM etc. shall be 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, Cr, etc) and other monitoring data shall be regularly submitted to the Ministry including its Regional Office at Bhubaneshwar 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 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 19th May 1993 and 31 st 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 contractions 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](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 PM10, PM25, SO2 and NOx (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 e-mail) 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 st March in Form V is mandated to be submitted by the project proponent to 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.

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

6. 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.

7. 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.

8. 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, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.

3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarapur, Bhubaneswar – 751023.
4. Member Secretary, Orissa State Pollution Control Board, Neelakanth Nagar, Unit-VIII, Bhubaneswar.
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. District Collector, Chatra, Government of Jharkhand.
8. Monitoring File 9. Guard File 10. Record File



(Dr. Manoranjan Hota)
Director

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