



Ministry of Environment & Forests (MOEF)

Paryavaran Bhawan,
C.G.O. Complex,
New Delhi -110510

No.J-11015/25/2008-IA.II (M)

Dated: 18th February 2011

To,
Chief General Manager
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR – 440001.

Sub: New Majri UG to OC Mine (0.35 MTPA to 0.8MTPA ML area from 479.16 ha) of M/s Western Coalfields Ltd. (WCL), located in village Shivji Nagar Majri, Tehsil Bhadrawati, District Chandrapur, Maharashtra - environmental clearance – reg.

Sir,

This is with reference to letter No43011/129/2007-CPAM dated 09.01.2008 of Ministry of Coal forwarding the application for Terms of Reference (TOR) and this Ministry's letter dated 19.03.2008 granting TOR to the above-mentioned project and subsequent letter No. WCL/ENV/HQ/5-H/225 dated 8.06.2010 for environmental clearance and letters dated 27.07.2010, 12.11.2010 and 31.12.2010 on the aforesaid subject. The Ministry of Environment & Forests has considered the application. It is noted that the present proposal is to **convert existing New Majri Underground mine to Opencast Mine project and for expansion in production from 0.35 MTPA to 0.8MTPA in an ML area from 479.16 ha.** There are no ecologically sensitive areas such as National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. The mine is located at a distance of 28.5km, 15.4km and 37.2 km from the critically polluted areas of MIDC Chandrapur, Ghuggus and Ballarpur which also fall in between the mine and the Tadoba Andheri Tiger Reserve. River Wardha flows at distance of 1.5 km to 2.5 km. The project involves diversion of Koradi nalla of 2.5 km length. As the whole mine area falls below HFL of the river, an embankment has been proposed at the periphery of mine.

Of the total lease area of **479.16 ha**, 24.50 ha is in possession of the company and the balance 435.74 ha is to be acquired. The lease area consists of the 460.24 ha agricultural land, 15.24 ha of wasteland and 3.68 ha of forest land. Forest land of 3.68 ha is judpi jungle. Forestry clearance has been applied for. Coal grade is 'C-D'. ultimate working depth mining will be 300m bgl. Mining will be opencast by mechanised method involving shovel-dumper. Of the total ML area of 479.16 ha, area for excavation is 114.35 ha, external OB dump area 101.70 ha, infrastructure 10.00 ha, blasting zone/safety zone-64.62 ha, area for future extension 137.10 ha, area for rationalization of boundary 51.39 ha. Water table is in the range of 10-15.90 m bgl during pre-monsoon and 9.80-15.60m bgl during post-monsoon. Estimated peak water requirement is 256 m³/day which will be met from mine pit water. Peak mine water discharge is estimated to be 5000m³/day. Estimated total OB generation from the mine is 43.05 Mm³ over the life; which is to be stored almost entirely in one external OB dump of 101.07 ha of a max. height of 60m and a small quantity of 1.5 Mm³ OB is proposed to be used in construction of embankment. No internal dumping is proposed due to steepness of gradient. At the post mining stage, the decoaled void of 114.35 ha would be left as a water body. An estimated 2424 TPD of coal from CHP is to be transported by truck to New Majri UG/and thereafter by rail. Balance life of the project is about 20 years. The project involves R&R of one village-Dafai comprising 261 houses of WCL employees and 129 Private houses. Public Hearing was held on 9.09.2008. Project was approved by WCL on 17.12.2007. Capital cost of the project is **Rs. 77.1055 crores.**

2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned **New Majri UG to OC Mine of M/s Western Coalfields Ltd. (WCL), for change of method of mining from underground to opencast and for expansion in production from 0.35 MTPA to 0.8 MTPA ML in area 479.16 ha** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and Circulars there under and subject to conditions specified below:

A. Specific Conditions

- (i) No mining operations shall be undertaken in 3.68 ha forestland, until forestry clearance has been obtained under the provisions of FC Act, 1980.
- (ii) Prior approval of the Flood and Irrigation Dept. shall be obtained for diversion of a Nala of 2.5 km stretch flowing within the ML areas. Mining operations shall be undertaken maintaining a minimum safe distance from river/nala. Stone pitching should be done on the embankment of nalla/river side. OB for construction of embankment shall be first ascertained for suitability for construction purpose. Stone pitching shall be undertaken along the river/nala.
- (iii) Top soil shall be stored in the earmarked site and shall be used within a year of its generation for green belt development and for plantation/reclamation.
- (iv) OB shall be stacked at the earmarked one external OB dumpsite of 101.70 ha. Ultimate slope of the dump shall not exceed 28°. Monitoring and management of reclaimed dumpsite shall continue until the vegetation in all the dumps becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhopal on a yearly basis. An Action Plan to reclaim the old OB dumps along River Wardha be prepared and implemented. Action Plan for reclamation of old abandoned dump should be furnished to ministry.
- (vii) Garland drains (size, gradient and length) around the safety areas and low lying areas 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 be provided adequate retention period to allow proper settling of silt material.
- (ix) 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 utilized 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.
- (x) 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.
- (xi) Crushers at the CHP shall be operated with high efficiency bag filters/water sprinkling system shall be provided to check fugitive emissions from crushing operations, conveyor system which shall be closed, haulage roads, transfer points, etc.
- (xii) Drills shall be wet operated only.
- (xiii) 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.

- (xiv) Transportation of coal from mine pit to railway siding for a distance of 2 km shall be by closed conveyors only. Road used for transportation of coal from CHP to railway siding shall be black topped and developed with 3-tier avenue plantation using a mix of species suitable for controlling fugitive dust emissions.
- (xv) No groundwater of water from River Wardha shall be used for mining operations. Any additional water requirement shall be met from mine pit water and from rainwater harvesting systems.
- (xvi) 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.
- (xvii) The Company shall put up artificial groundwater recharge measures for augmentation of groundwater resource in case monitoring of groundwater levels indicate decline of water table. Any additional water requirement for mining operation shall be met from rainwater/recycling of water only. The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xviii) ETP shall also be provided for treatment of effluents from workshop, CHP and an STP shall be provided for treating wastewater from the township and the treated effluents shall be used for green belt development. Wastewater generated from the mine shall be treated and recycled for mine operations to the extent possible and the balance shall be treated to prescribed standards before discharge into the surface waters/agricultural use.
- (xix) 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 such as NIOH, Ahmadabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xx) A Plan for afforestation of the mine lease of an area not less than 133 ha shall be implemented; which includes reclaimed external OB dump (90 ha), vacant land (43ha) along ML boundary, along roads & infrastructure (3 ha), green belt, and area for rationalisation area within the lease and vacant land (40 ha) and within the in township by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xxi) The entire decoaled void of 114.35 ha being left as a water body shall be reclaimed along the upper slopes of the void/water body which is gently sloped with grass and plantation. The quality of water in the water body shall be closely monitored.
- (xx) 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 Regional office at Bhopal.
- (xxi) R&R for the expansion project for the Dafai village involving 261 houses of WCL & 129 houses of private owners shall be completed within agreed time frame. R&R shall follow the norms of the National R&R Policy or the R&R Policy of the State Government whichever is higher.

- (xxii) The socio-economic development of the villages covered under CSR shall be not less than Rs 5/tonne of coal and shall be monitored over the life of the project using UNDP Human Development Indices and reported as part of the Report submitted to MOEF RO, Bhopal.
- (xxiii) A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests three years before completion of this project. A Habitat Restoration Plan of the mine area shall be prepared and implemented using a mix of native species found in the original ecosystem, which were conserved in-situ and ex-situ in an identified area within the lease for reintroduction in the mine during mine reclamation and at the post mining stage for habitat restoration. including grazing land and agricultural land.

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, PM2.5, SO2 and NOx. 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 particulates shall be carried out at least once in six months.
- (iv) Data on ambient air quality (PM10, PM 2.5, SO2 and NOx 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 Bhopal 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 31st 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 analysed through a laboratory recognised 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.
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.

- (x) 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.
 - (xi) 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 Bhopal.
 - (xii) 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>
 - (xiii) 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.
 - (xiv) 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.
 - (xv) 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 parameters such as PM₁₀, PM_{2.5}, SO₂ and NO_x shall also be displayed at the entrance of the project premises and mines office and in corporate office and on the company's website.
 - (xvi) 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.
 - (xvii) The Regional Office of this Ministry located at Bhopal 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.
 - (xviii) The environmental statement for each financial year ending 31st 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.
3. The Ministry or any other competent authority may stipulate any further condition for environmental protection.
4. 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.
5. 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.T.Chandini)
Director

Copy to:

1. Secretary, Ministry of Coal, New Delhi.
2. Secretary, Department of Environment, Government of Maharashtra, 15th Floor, New Admn. Bldg., Madam Cama Road, MUMBAI – 400032.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arear Colony, Bhopal – 462016.
4. Chairman, Maharsashtra State Pollution Control Board, Kalapataru Point, 3rd & 4th Floors, Sion, Matunga Scheme Road No. 8, Opp. Cine Planet Cinema, Near Sion Circle, Sion (E), Mumbai – 400002.
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. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-I, 4th Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Chandrapur, Government of Maharashtra.
9. Monitoring File 10. Guard File 11. Record File.

(Dr.T.Chandini)
Director