



Ministry of Environment & Forests (MOEF)

BY SPEED POST

No. J-11015/338/2008-IA.II (M)

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

Dated: 18th February 2011

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

Subject: Gauri Deep OCP (0.40 MTPA in an ML area of 356.11 ha) of M/s Western Coalfields Ltd. (WCL), Chandrapur, Maharashtra located District Chandrapur, Maharashtra - Environment Clearance - reg.

Sir,

This is with reference to letter No. 43011/41/2008-CPAM dated 09.07.2008 of Ministry of Coal forwarding the application for Terms of Reference (TOR) and this Ministry's letter in 11.12.2008 granting TOR to the aforesaid project and subsequent letter No. WCL/ENV/HQ/1-F/121 dated 31.03.2010 of M/s WCL forwarding the application for environmental clearance and letters dated 17.06.2010 and 23.12.2010 on the above-mentioned subject. The Ministry of Environment and Forests has considered your application. The proposal is for **opening a new Gauri Deep Opencast Coal Mine Project of 0.4 MTPA capacity in a total lease area of 356.11 ha**. There are no ecologically sensitive areas such as National Park, WL Sanctuary or Protected Area found within the core zone or 15km buffer zone. Out of total ML area of 356.11 ha, 339.43 ha is agricultural land and 16.68 ha is Govt. waste land. No forestland is involved. The project does not involve changes in the existing topography or modification of surface drainage.

Of the total ML area, 92.45 ha is quarry area, 94.120 ha is for ext. OB dumps, 5 ha is for infrastructure including a CHP, 10 ha is for colony and 154.54ha area is required for rationalisation of boundaries. Mining method is opencast by semi-mechanised method using shovel and dumper. Ultimate working depth is 130m bgl. Grade of coal is 'E'. Transportation of 1330 TPD of coal from mine by tarpaulin covered trucks covering a distance of 15km. Groundwater table in the study area is in the range of 4.25-19.55 bgl during pre-monsoon and in the range of 2-17.70m bgl during post-monsoon. Peak Water requirement is 355m³/day which would be met from mine sump water. The total estimated OB generation over the life of mine is 46.81 Mm³ of which 23.94 Mm³ would be backfilled and the balance 22.87 Mm³ of OB would be stored in two external OB dumps of a max. area of 94.120 ha. A total of 282.38 ha area would be developed with plantation at the post mining stage. Backfilling would begin from the 10th year onwards. At the post mining stage a void of 58.73 ha would be left as a water body. The project has 257 land losers all of whom would be provided employment. Public Hearing held on 10.07.2009. Project has been approved by M/s WCL. Life of the project is 21 years. Capital cost of project is Rs 86.21 Crores.

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2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned **Gauri Deep OCP of M/s Western Coalfields Limited for a rated capacity of 0.4 MTPA coal production in total ML area of 356.11 ha** 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:

A. Specific Conditions

- (i) Topsoil shall be stacked properly with proper slope at earmarked site(s) and shall not be kept active and shall be used within a year of its generation for reclamation and development of green belt.
- (ii) OB shall be stacked at the earmarked two external OB dumps. The ultimate slope of the dumps shall not exceed 28°. Monitoring and management of reclaimed dumpsites shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on yearly basis.
- (iii) 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.
- (iv) 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 provided adequate retention period to allow proper settling of silt material.
- (v) 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.
- (vi) Mineral transportation from mine to Umrer Railway Siding by road shall be by use of trucks of a minimum capacity of 20-T. All internal roads and approach shall be black topped. A 3-tier Green belt shall be developed on both sides of the roads. Green belt shall be developed at the Railway siding.
- (vii) High efficiency water sprinkling system provided to check fugitive emissions at the transfer points, haulage roads, etc shall be provided for crushing/loading operations for dust control at the CHP.
- (viii) Drills shall be wet operated only.
- (ix) Controlled blasting shall be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders shall be implemented.
- (x) Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new piezometers. 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.



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- (xi) No groundwater (bore well) shall be used for mining operations. Additional water if any shall be from mine pit water or from harvesting of rainwater. Rainwater harvesting structures including check dams for recharge of ground water shall be erected within and around the ML, in case monitoring of groundwater indicated a declining trend.
- (xii) The project authorities shall meet water requirement of nearby village(s) in case the village wells go dry due to dewatering of mine.
- (xiii) Sewage treatment plant of adequate capacity shall be installed in the colony. ETP shall also be provided for workshop and CHP wastewater. Treated wastewater meeting prescribed norms only shall be permitted to be discharged in to the natural water courses.
- (xiv) The total area that shall be brought under plantation at the time of mine closure shall not be less than 282.38 and shall include reclaimed backfilled area (33.72 ha), external OB dump area (94.12 ha), roads, colony, infrastructure, blasting zone and area for rationalisation (154.38 ha) by planting native species found in the study area during pre-mining phase in consultation with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha.
- (xv) A Progressive Mine Closure Plan shall be implemented by reclamation of 33.72ha of total quarry area of 92.45 ha which is proposed to be backfilled and afforested 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. The balance 58.73 ha of decoaled void is to be left as water body shall be gently sloped along the upper benches and stabilised with grass and plantation.
- (xvi) 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 detailed project specific R&R Plan shall be prepared for Piraya village comprising about 365 PAFs and land losers and implemented in consultation with the stakeholders and local administration. R&R shall not be inferior to that in the National R&R Policy and shall be completed within the agreed time-frame. R&R shall include specific income generation schemes. A Corpus Fund shall be created for maintenance of the R&R colony. Annuities shall be provided for the vulnerable sections of the displaced population. Alternate livelihood schemes shall be implemented for the persons not being absorbed for employment.
- (xxi) A detailed CSR Plan shall also be prepared for and in consultation with the local communities. CSR should be for a minimal Rs.5T/Coal /year or 2.5% of the retain profit shall be implemented which is to be adjusted for depreciation in the value of the rupee over the life of the project. The activities undertaken for the specific villages adopted under CSR shall be displayed on the company website and updated at least once a year.
- (xxii) 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.
- (xxiii) 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, 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 pollutants such as PM₁₀, PM_{2.5}, SO₂ and NO_x (ambient) and critical sectoral parameters shall also be displayed at the entrance of the project premises and 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, Maharashtra 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. Dr.R.K.Garg, Advisor, M/s Coal India Ltd., SCOPE Minar, New Delhi.
8. District Collector, Chandrapur, Government of Maharashtra.
9. EI Division, Ministry of Environment & Forests, New Delhi.
10. Monitoring File 10. Guard File 11. Record File.
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