

No. J-11015/265/2009 -IA.II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
CGO Complex, Lodi Road
New Delhi-110510

Dated: 2nd January, 2013

To,

Shri S. K. Dube,
General Manager
M/s The Madhya Pradesh State Mining Corp. Ltd.,
Paryavas Bhawan,
Block No. 1 (A), Second Floor,
Jail Road, Arera Hills,
BHOPAL – 462011.

Sub: Mandla South Underground Project for a production capacity of 0.3MTPA in a ML Area of 560 ha of M/s The Madhya Pradesh State Mining Corp. Ltd., located in Pench-Kanhan Coalfields, dist. Chindwara, Madhya Pradesh. - Environmental Clearance – reg.

Sir,

This is with reference to letter No1316/8/2007-CA-I dated 25.07. 2007 for Terms of Reference, which was granted vide MoEF letter dated 30.05.2011 and with reference to application for environmental clearance based on the prescribed Terms of Reference vide letter no. Geology/2012-13 dated 04.05.2012 and 11.09.2012 on the above-mentioned subject. The proponent informed the salient features of the project that include the following:

- (i) Mandla (South) Coal Block was allotted to Madhya Pradesh State Mining Corporation Limited. M/s Jai Prakash Associates Limited has been selected as a JV Partner by MPSMCL to develop and mine the coal from this block and a JV – M.P. Jaypee Coalfield Ltd has been constituted. As per the Allocation Letter of MOC, coal mined out from the block would be used for commercial use.
- (ii) The proposal is for opening **underground Project for a production capacity of 0.3 MTPA in a ML Area of 560 ha** of which, of which 210.807 ha is forestland and 311.99 ha is agricultural land and 17.347 ha is wasteland. Of the total ML area, area under Surface rights is 18 ha of which 11 ha is for infrastructure, 3 ha is for CHP, road and coal storage area and 4 ha is for green belt. Rated capacity of the mine is 0.3 MTPA. It was informed that the coal block lies in the catchment area of River Pench which flows at a distance of 5 km from the mine and is a tributary of River Wainganga. Three seasonal nalas originate from core zone and flows along South Eastern side and joins River Pench.
- (iii) Incline would be for about 1km length and it may take 1-2 years before production can begin. The report on the subsidence prediction of Mandla South underground mine by

- three dimensional FEM has been prepared by BHU, Varanasi, as per which the tensile strain is 8 mm/m up to 25 years and maximum subsidence value would be 0.691 m.
- (iv) It was informed that surface drainage of the area would not be disturbed due to underground mining. Mining would be mechanised by Bord & Pillar Method and extraction with continuous miner (no drilling and blasting). Ultimate working depth would be more than 350m. Mining would disturb the confined aquifer but not the unconfined aquifer. Grade of coal is C to E.
 - (v) Coal transportation on surface would be by mechanically covered trucks through existing road which is two lane black topped road to railway siding proposed to be constructed at Khirsadah about 18 km from the project site, until their own railway siding is conducted. The mine would generate additional road traffic of 5-7 10-T trucks/hour. Railway wagons would be loaded by belt conveyor through hopper and to linked project by rail. Mine entry would be by two inclines - 1st incline for main intake and coal transportation and 2nd incline for transportation of material and manpower.
 - (vi) Native species such as Bel (*Aegle marmelos*), Amla (*Embllica officinalis*), Gular (*Ficus glomerata*) would be used for developing green belt in 4 ha area.
 - (vii) Water requirement would be 207 m³/d, of which 87m³/d is for drinking and 120 m³/d is for the mine operations. Water table is in the range of 3.5-7.5 m. It was informed that permission of State Ground Water Board has been obtained for drawl of ground water.
 - (viii) Total PAFs would be 16 and land losers would be 75. The R&R cost would be Rs 207.50 lakhs. The CSR combined for Mandla (North) and Mandla (South)] would be implemented at a capital cost of Rs 5 crores and Rs 5/T of coal annually.
 - (ix) Life of the project would be 45 years. The capital cost of the project has been estimated to be Rs 300 crores. The cost for EMP would be Rs 147 lakhs (capital) and Rs 50 lakhs would be annual recurring cost. Final mine closure plan has been prepared and a total area of 14 ha (under Surface Rights) would be reclaimed with plantation. Life of the project is 45 years. The cost for EMP is Rs 147 lakhs (capital) and Rs 50 lakhs is annual recurring cost.
 - (x) The Public Hearing was held on 04.04.2012. The issued raise during the public herring, include that adequate compensation for land, generation of employment opportunity, check on environment pollution, plantation, free medical facility for villagers, educational facility for local population, drinking water arrangements, training for technical & vocational, developmental work, construction of culvert on Mandla nalla .
 - (xi) The Proponent had responding to the issues raised during the public hearing that include that compensation for land and other immovable properties will be assessed and paid as fixed by Dist administration, Proponent will open an ITI in the area for technical training of local youths, preference will be given to local eligible persons for employment and imparting necessary training, employment opportunity will be generated in secondary & tertiary sectors, proposed to open a hospital in area. Presently, the proponent has arranged for a doctor to treat ailing villagers for last two years with free medicines. The Proponent will allocate funds on annual basis for physical development of area. Annual plan will be made on consultation with panchayats, pollution control measures will be taken up as recommended in EIA/EMP, trees will be planted as green belt around lease area & along the roads, arrangements for tube well will be made in villages around the mine for drinking water.
 - (xii) The proponent has informed and submitted that the Stage-I FC has been granted to them. Satpura Tiger Reserve is 35 km away and Pench tiger reserve is 25 km away from proposed site. The proponent informed that the project also does not fall in the Pench-Satpura Tiger Corridor.

2. The Ministry of Environment & Forests has examined the application hereby accords environmental clearance for the above-mentioned **Mandla South Underground Project Mandla South Underground Project of M/s M.P. State Mining Corp. Ltd. for a production capacity of 0.3MTPA in a ML Area of 560 ha** under the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendments thereto and under MOEF Circulars there under subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) 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.
- (ii) If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
- (iii) DGMS stipulations should be followed for two exit routes. safety features and sufficient ventilation of mine should be as per DGMS Regulations and a Disaster Preparedness and Management Plan should be prepare
- (iv) Mining shall be carried out as per statuette at a safe distance from the river/nallah flowing adjacent to the lease boundary.
- (v) High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- (vi) Coal Extraction shall also be optimised in areas where agricultural production is continuing. Some pillars shall be left below the agricultural land. No depillaring & coal extraction should be carried out below habitation, H.T. Lines & beneath road, water bodies
- (vii) 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.
- (viii) 3-tier plantation should be developed 2 km stretch of road from the mine using native species
- (ix) 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 provide adequate retention period to allow proper settling of silt material.
- (x) 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.
- (xi) Transportation of coal from the mine to Khirsadah railway siding proposed at a distance of about 18 km from the project should be by 20T mechanically covered trucks

- (xii) 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.
- (xiii) 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.
- (xiv) Water quality report has indicated high levels of nitrate (40-45 mg/l) and Dissolved Oxygen is (4.8 mg/l) is low. The Committee desired that the water quality data should be rechecked by a laboratory recognised under EPA Rules, 1986.
- (xv) Mine discharge water outside the ML shall be monitored, particularly for TDS and treated to conform to prescribed levels before discharge into the natural environment.
- (xvi) 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.
- (xvii) 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.
- (xviii) the user agency shall contribute on proportionate basis, the amount required for implementation of the Habitat Restoration of Pench-Satpura Tiger corridor plan to be prepared by the NTCA for rejuvenation and restocking of the flora-fauna found in the viable corridor to ensure the long-term survival of the tiger population and the mitigative measures to eliminate/minimise the adverse impact of the transportation of coal to be extracted from the Pench-Kanhan coal fields on the viable corridor.
- (xix) The mining in the existing mines would be phased out after expiry of the current mining lease and after reclamation of mined over area. The operating mines may be analysed and monitored for compliance of conditions, having bearing with movement of wild life until such time they are closed/phased out
- (xx) Project specific CSR for an amount of Rs 5 crores (capital) as CSR budget should be prepared & activities under CSR undertaken for the neighboring 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. Monitoring of the impacts of activities under CSR shall be carried out periodically.
- (xxi) 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.
- (xxii) 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 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 RSPM etc. shall be carried out at least once in six months.
- (iv) Data on ambient air quality (PM10, PM2.5, 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 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.
- (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. Manoranjan Hota)
Director

Copy to:

1. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat, Bhopal.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal – 462016.
4. Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Arera Colony, Bhopal – 462016.
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. CGM, Coal India Limited, SCOPE Minar, Core-I, 4t Floor, Vikas Marg, Laxm Nagar, New Delhi.
8. District Collector, Chindwara, Government of Madhya Pradesh, New Delhi.
9. Monitoring File 10. Guard File 11. Record File

(Dr. Manoranjan Hota)
Director