

No. J-11015/94/2005-IA.II(M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O. Complex, Lodi Road,
New Delhi - 110003

Dated: 18th May 2006

To
Chief General Manger (Civil/Env./Forest),
M/s South Eastern Coalfields Ltd.,
Bilaspur,
Chhattisgarh.

Sub: Expansion of Jamuna Underground Coal Mine Project (from 0.30 MTPA to 0.516 MTPA) of M/s South Eastern Coalfields Ltd. (SECL), located in village Jamuna, Anuppur Development Block, District Shahdol, Madhya Pradesh - environmental clearance - reg.

Sir,

This has reference to Ministry of Coal's letter No. 43011/15/2002-CPAM dated 24.03.2003 and your letter No. SECL/BSP/ENV/2005/EMP/134 dated 23.02.2005 submitting the application on the aforesaid project and to M/s Coal India Ltd.'s letter No. CIL/DLI/ENV/2005/47 dated 15.03.2005 and 27.04.2005 and your subsequent letter dated 18.03.2006 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for expansion in production of the existing Jamuna Underground Coalmine Project (UGP). **The total project area is 915 ha of which 454.00 ha is agricultural land, 429 ha is forestland and 32 ha is Govt. land. Forestry clearance has not been obtained so far. Of the total project area, area to be mined is 805 ha, 50 ha is for infrastructure and 60 ha is for township located at a distance of 1 km outside the lease area. There area no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. The nearest River Kewal flows at a distance of 3.5 km from the MI. The project does not involve modification of the natural drainage. Project does not involve R&R. Mining will be underground by mechanised method. Expansion of the rated capacity of the mine is from 0.30 million tonnes per annum (MTPA) to 0.516 MTPA of coal production. Mineral transportation of 1450 TPD of coal is by road. Ultimate working depth of the mine is 100m below ground level (bgl). Water table is in the range of 7.25m - 12.53 m during pre-monsoon and from 2.12m to 6.63 m bgl during post-monsoon. Mining will intersect water table. Average water requirement is 2173 m³/d, which will be met from River Kewal (1050 m³/d) and mine pit water (1,125 m³/d). Public Hearing was held on 26.08.2003. NOC has been obtained on 17.11.2003. Balance life of the mine at the rated capacity is 10 years. The project has been approved by M/s SECL on 28.03.2005. The capital cost of the project is Rs. 1060 lakhs.**

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Jamuna Underground Coal Mine Project of M/s SECL for production of coal at 0.516 MTPA rated capacity under the provisions of the Environmental Impact Assessment Notification, 1994 and subsequent amendments thereto subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) Mining shall not be carried in forestland for which forestry clearance has not been obtained under the provisions of FC Act, 1980.
- (ii) Sufficient coal pillars shall be left unextracted around the air shaft (within the subsidence influence area) to protect from any damage from subsidence, if any.

- (iii) Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- (iv) Depression due to subsidence resulting in water accumulating within the low lying areas shall be filled up or drained out by cutting drains.
- (v) While extracting panels in the lower seam, all water bodies in the subsidence area shall be drained. Dewatering of the old goaves of the upper seam shall be continued as long as the lower seam is worked to prevent accumulation of large water bodies over working area.
- (vi) 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 should be continued till movement ceases completely. In case of observation of any high rate of subsidence movement, appropriate effective corrective measures should be taken to avoid loss of life and material. Cracks should be effectively plugged with ballast and clayey soil/suitable material.
- (vii) Garland/surface drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should 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 should also provided adequate retention period to allow proper settling of silt material. Sufficient number of pumps of adequate capacity shall be deployed to pump out mine water during peak rainfall.
- (viii) Crushers at the CHIP 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.
- (x) Controlled blasting should be practiced with use of delay detonators.
- (xi) A progressive afforestation plan shall be prepared and implanted for the undisturbed area and shall include area brought under green belt development, areas along roads, infrastructure, over surface where mining is being done below, along ML boundary and township outside the lease areas, etc, by planting native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xii) Conservation Plan for endangered species found in and around the project area shall be formulated in consultation with the State Forest and Wildlife Departments.
- (xiii) Regular monitoring of groundwater level and quality should be carried out by establishing a network of existing wells and construction of new piezometers. 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.
- (xiv) 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.
- (xv) The company shall obtain approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.

- (xvi) Sewage treatment plant should be installed in the existing colony. ETP should also be provided for workshop and CHP wastewater.
- (xvii) Digital processing of the entire lease area using remote sensing technique should be done regularly once in 3 years for monitoring land use pattern and report submitted to MOEF and its Regional office at Bhopal.
- (xviii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.
- (xix) Consent to Operate shall be obtained before expanding mining operations.

D. General Conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment and Forests
- (ii) No change in the calendar plan including excavation, quantum of mineral coal and waste should be made.
- (iii) Four ambient air quality monitoring stations should be established in the core zone as well as in the buffer zone for SPM, RPM, SO₂, NO_x and CO monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board.
- (iv) Fugitive dust emissions (SPM and RPM) from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points should be provided and properly maintained.
- (v) Data on ambient air quality (SPM, RPM, SO₂ and NO_x) should 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.
- (vi) Adequate measures should 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 should be provided with ear plugs/muffs.
- (vii) Industrial wastewater (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (F) dated 19th May 1993 and 1st December 1993 or as amended from time to time before discharge. Oil and grease trap should be installed before discharge of workshop effluents
- (viii) Vehicular emissions should be kept under control and regularly monitored. Vehicles used for transporting the mineral should be covered with tarpaulins and optimally loaded.
- (ix) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board
- (x) Personnel working in dusty areas should wear protective respiratory devices and they should also be provided with adequate training and information on safety and health aspects.

Occupational health surveillance programme of the workers should 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 should 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 should be kept in separate account and should not be diverted for other purpose. Year-wise expenditure should be reported to this Ministry and its Regional Office at Bhopal.
- (xiii) 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.
- (xiv) A copy of the clearance letter will be marked to concerned Panchayat/ local NGO, if any, from whom any suggestion/representation has been received while processing the proposal.
- (xv) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's Office/Tehsildar's Office for 30 days.
- (xvi) The Project authorities should 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>.

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.



(Dr. T. Chandini)
Additional Director

Copy to:

1. Secretary, Ministry of Coal, Shahstri 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 Area Colony, Bhopal - 462016.
4. Chairman, Madhya Pradesh State Pollution Control Board, Paryavaran Parisar, E-5, Area 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. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-1, 4th Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Shahdol, Government of Madhya Pradesh, New Delhi.
9. Monitoring File 10. Guard File 11. Record File