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No J-11015/84/2005-IA.II(M)
Government of India
Ministry of Environment & Forests

6504
Paryavaran Bhawan,
C.G.O. Complex, Lodi Road,
New Delhi - 110003

Dated: 2nd August 2006

To
Head of Department Env./CE(Civil),
Environment Department,
M/s Western Coalfields Ltd.,
Coal Estate, Civil Lines,
NAGPUR - 440001.

Sub: Satpura-II Underground Expansion Project (from 0.6 MTPA to 0.7 MTPA) of M/s Western Coalfields Ltd. (WCL), located near village Chattarpur, Tehsil Ghoradongri, District Betul Madhya Pradesh - environmental clearance - reg.

Sir,

This has reference to letter of Ministry of Coal of March 2003 and letter of M/s Coal India Ltd. received on 07.03.2005 forwarding your application your letters dated 14.07.2005, 19.07.2005, 29.07.2005, 25.11.2005, 12.12.2005, 05.04.2006, 19.04.2006, and 23.06.2006 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 existing Satpura-II Underground Coalmine Project. The total mine lease area is 458 ha, of which 94.79 ha is agricultural land, 355.40 ha is forestland and 7.81 ha is Govt. land. Forestry clearance has not been obtained. Of the total lease area, 401 ha is for underground mining and 57 ha is surface rights of which 24.69 ha is for infrastructure and 32.31 ha is for green belt. A Pithead Coal Handling Plant (CHP) exists within the lease. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. The project does not involve R&R. Mining will be underground by semi-mechanised method. Drilling and blasting area involved. Expansion of the rated capacity of the mine is from 0.6 MTPA to 0.7 million tonnes per annum (MTPA) of coal production. Mineral transportation of 2120 TPD of coal is by use of trucks to Satpura Thermal Power Station located at a distance of 5 km. Ultimate working depth of the mine is 277 m below ground level (bgl). Water table is in the range of 3-9 m bgl in the core zone 1.5-11.5m bgl in the buffer zone. Mining will intersect water table. An estimated 697 m³/d of water will be used for project of which 120 m³/d is for dust suppression, 20 m³/d is for green belt and 547 m³/d is for domestic use including that of township which is met from mine sump/pit water ad from Tawa Water Reservoir (547 m³/d). Balance life of the mine at the rated capacity is 6 years. Public Hearing was held on 02.11.2004, NOC has been obtained on 01.02.2005. The project has been approved by M/s WCL on 02.04.2005. The capital cost of the project is Rs. 2935 lakhs.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned Satpura-II Underground Expansion Coal Project of M/s WCL for production of coal of 0.7 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) All the conditions stipulated by the SPCB in their NOC shall be effectively implemented.

- (ii) Necessary forestry clearance, as applicable, shall be obtained before initiating any activity on the forestland involved in the project.
- (iii) Regular monitoring of subsidence ~~movement~~ on the surface over and around the working area and impact on natural drainage pattern, water bodies, vegetation, structures, 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.
- (iv) Garland drains (size, gradient and length) around the safety areas such as mine shaft and low lying areas and sump capacity should be designed keeping 30% 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.
- (v) Crushers at the CHP 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.
- (vi) Drills should be wet operated only.
- (vii) Controlled blasting should be practiced with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.
- (viii) A progressive afforestation plan shall be prepared and implemented for the undisturbed area and shall include area brought under green belt development, areas along roads, infrastructure, 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.
- (ix) 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.
- (x) 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.
- (xi) 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, Ahmedabad within a period of one year and the results reported to this Ministry and to DGMS.
- (xii) 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.
- (xiii) 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.

- 2.5.1.1
- (A) Consent to Operate shall be obtained before starting mining operations.

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 and NO_x 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) 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.
- (v) Fugitive dust emissions 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.
- (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 HHA/M, 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 31st 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) Environment's 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 unit 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 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, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Secretariat, Bhopal.
3. Chief Conservator of Forests, Regional office (E2), 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. Shri M.K. Shukla, CGM, Coal India Limited, SCOPE Minar, Core-1, 4th Floor, Vikas Marg, Laxminagar, New Delhi.
8. District Collector, Betul, Government of Madhya Pradesh, New Delhi.
9. Monitoring File 10. Guard File 11. Record File