



Ministry of Environment & Forests (MOEF)

No.J-11015/1005/2007-IA.II(M)

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

Dated: 25th January 2012

To
Chief General Manger (Env. & Forests),
M/s Central Coalfields Ltd.,
Ranchi, Jharkand.

Sub: Churi Benti Underground Coalmine Expansion Project (expansion from 0.16 MTPA to 0.81 MTPA (nominal) with a peak capacity of 0.93 MTPA in a total ML area of 604.30ha) of M/s Central Coalfields Ltd., located in village Churi, Block Burmu, Dist. Ranchi, Jharkhand - environmental clearance – reg.

Sir,

This has reference to letter No. 43011/110/2007-CPAM dated 07.09.2007 forwarding the application for Terms of Reference (TOR) and this Ministry's grant of TOR vide letter dated 17.01.2008 and your subsequent application vide letter No. CIL/DLI/EMP-TOR/2011/04 dated 30.03.2011 and letter dated 07.09.2011. The Ministry of Environment & Forests has considered your application. The project proposal is for obtaining environmental clearance for **Churi-Benti underground colamine for expansion in production from 0.16 MTPA to 0.81 MTPA (nominal) with a peak capacity of 0.93 MTPA**. There are two blocks within the ML – Churi and Benti. Details of land use of Churi-Benti Coal Blocks are given below:

| Landuse | Churi-Benti (ha) | Actual Mining Area (ha) |
|-------------------|------------------|-------------------------|
| Forestland | 493.46 | 432.32 |
| Non-forestland | 274.52 | 171.98 |
| TOTAL (ha) | 767.98 | 604.30 |

River Damodar flowing between the two Blocks through the middle of the lease and a 60m barrier along the River Damodar is proposed. River Saphi flows on the eastern side. No river/nala diversion is proposed in the project. Forestry clearance has been obtained for 312.76 ha of forestland in Churi Block consisting of 302.49 ha of forestland for underground mining and 10.26 ha is for surface rights. Application for forestry clearance for 65.84 ha of forestland consisting of 48.59 ha of forestland and 17.25 ha of GMKJJ land in Benti Block is awaited. Maximum production was 0.246 MTPA during the year 1993-94. Presently, mining is being done only in the Benti block by semi-mechanised Board and Pillar method with caving. The expansion would be done by extending mining to cover the Churi block and also by introducing the use of continuous miner for depillaring and in the virgin areas of the Benti Block. Three more drivages are proposed in the expansion project. Grade of coal is B. Coal seams are 90 below the surface in the Benti block and 40m below surface in the Churi block as a result of which subsidence may not be significant. Continuous miner is to be deployed in 244 ha of the ML involving depillaring by caving. Maximum depth of mining would be 121.68 m. Hard rock is found between river and the coal seams. Anticipated subsidence is within prescribed limits. Total water requirement is 1860 m³/d, which includes 1000m³/d for the township, which would be met from mine water. Balance life of the mine is 40 years. A total area of 538.32 ha would be afforested at the post mining stage. R&R for 6 PAFs is to be completed in 2011-

12. An estimated 2820 of coal would be transported by trucks (20 trips/day) to Churi Railway siding located at 12km and thereafter by rail. An amount of Rs 5/T of coal has been earmarked for CSR activities. The project has been approved on 01.08.2007. Public Hearing was held on 28.01.2010. Capital cost of the project is Rs. 163.41 crores.

2. The Ministry of Environment & forests hereby accords environmental clearance for the above-mentioned **Churi Benti UGP (expansion from 0.16 MTPA to 0.80 MTPA (nominal) with a peak capacity of 0.93 MTPA in a total ML area of 244.60 ha) of M/s Central Coalfields Ltd., Dist. Ranchi, Jharkhand** under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars there under to subject to the compliance of the terms and conditions mentioned below:

A. Specific Conditions

- (i) No mining operations shall be undertaken in the 65.84 ha of forestland consisting of 48.59 ha of forestland and 17.25 ha of GMKJJ land in Benti Block for which forestry clearance has not been obtained.
- (ii) Mining shall be carried out as per statuette from River Damodar flowing between Churi and Benti Blocks within the lease and maintaining a safe distance of a minimum 60m barrier from River Saphi flowing along the lease boundary.
- (iii) No depillaring shall be undertaken below the two rivers and nalas. A depth of at least 80-90m of cover between River Damodar and drirage crossing shall be maintained with DGMS approval
- (iv) In other areas, at the time of depillaring, protective bunds and garland drains shall be provided so that no water from the surface enters the subsidence area and the shaft.
- (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) 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.
- (vii) No depillaring operation shall be carried out below the roads and village area found within the lease. Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- (viii) High capacity pumps shall be deployed for dewatering of mine.
- (ix) 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.
- (x) 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 50% safety margin over an above the peak sudden rainfall and maximum discharge in the area adjoining the mine sites. Sump capacity should also provide for adequate retention period to allow proper settling of silt material.
- (xi) Water sprinkling system should be provided to check fugitive emissions from crushing operations, storage area, conveyor system, haulage roads, transfer points, etc.
- (xii) Drills should be wet operated only.

- (xiii) No additional water shall be consumed for the project. No ground water (bore well) shall be used for mining operations.
- (xiv) 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.
- (xv) A total area of 538.32 ha would be afforested at the post mining stage. These include afforestation developed along ML boundary, infrastructure including CHP and along roads, vacant land, and green belt by planting native species in consultation with the local DFO/Agriculture Department/relevant institution. The density of the trees should be around 2500 plants per ha.
- (xvi) R&R for 6 PAFs is to be completed in 2011-12.
- (xvii) Mine closure activities shall include sealing of incline mouth, dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine, A total
- (xviii) 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 Bhubaneswar.

B. General Conditions

- (i) No change in mining 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 excavation, quantum of mineral coal and waste 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, PM_{2.5}, SO_x, NO_x. 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. In addition continuous monitoring of CO within the underground mining area shall be undertaken and data regularly furnished as part of Monitoring report.
- (iv) Fugitive dust emissions (PM₁₀ and PM_{2.5}) from all the sources shall be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump trucks (loading and unloading) points shall be provided and properly maintained.
- (v) Data on ambient air quality (PM₁₀, PM_{2.5}, SO_x, NO_x) and on CO levels within the mine shall be regularly submitted to the Ministry including its Regional Office at Bhubaneswar and to the State Pollution Control Board and the Central Pollution Control Board once in six months.
- (vi) 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.

- (vii) Industrial wastewater (workshop and wastewater from the mine) shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May 1993 and 31st December 1993 or as amended from time to time before discharge. Oil and grease trap shall be installed before discharge of workshop effluents.
 - (viii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting the mineral shall be covered with tarpaulins and optimally loaded.
 - (ix) Environmental laboratory shall 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 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.
 - (xi) 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.
 - (xii) 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 Bhubaneshwar.
 - (xiii) The Regional Office of this Ministry located at Bhubaneshwar 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 shall 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 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>. The compliance status shall also be uploaded by the project authorities in their website and regularly updated at least once in six months so as to bring the same in the public domain. The data shall also be displayed at the entrance of the project premises and mines office and in corporate office.
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 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. DG (F), MOEF, New Delhi w.r.t Specific Condition No. (i).
2. Secretary, Ministry of Coal, Shastri Bhawan, New Delhi.
3. Secretary, Department of Environment & Forests, Government of Jharkhand, Secretariat, Ranchi.
4. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A-31, Chandrashekarpur, Bhubaneswar – 751023.
5. Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), H.E.C., Dhurwa, Ranchi – 834004.
6. Chairman, Central Pollution Control Board, CBD-cum-Office Complex, East Arjun Nagar, New Delhi -110032.
7. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, Curzon Road Barracks, A-2, W-3 Kasturba Gandhi Marg, New Delhi.
8. Dr.R.K.Garg, Advisor, M/s Coal India Ltd., SCOPE Minar, New Delhi.
9. District Collector, Chatra, Government of Jharkhand.
10. Monitoring File11.Guard File12.Record File.

