

No. J-11015/48/2009-IA-II(M)
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT AND FORESTS
IA-II (Coal-Mining) Division

देकोरि / मन्त्रालय (पर्यावरण) / मुख्यालय, नए दिल्ली
WCL/GM(Env)/HQ/Nagpur
प्राप्ति / Rec. 11.02.2014 दिनांक / Date 20/11/14

Paryavaran Bhawan
CGO Complex, Lodhi Road
New Delhi- 110 003

Dated: 03 January, 2014

To

The General Manager
Western Coal Field
Coal Estate
Civil Lines,
NAGPUR-440001

Subject: Bhakra UGP (0.27 MTPA in 183.731 ha in non-forest area) of M/s WCL, located in Chindwara Dist., M.P. (EC based on TOR granted on 20.03.2009) - Environment Clearance- reg.

Sir:

This is with reference to letter no. 43011/10/2009-CPAM dated 11.02.2009 along with the application for Terms of Reference (TOR) and this Ministry's letter dated 20.3.2009 granting TOR. Reference is also invited to the letter no. CIL/DLY/ENV/2009 dated 22.12.2009 and subsequent letter dated 05.03.2010, 9.7.2011, 17.8.2011, 16.7.2012, 05.09.2012, 16.7.2013, 7.12.2013 and 23.12.2013 for environmental clearance on the above-mentioned subject.

2. The proposal is for Bhakra UGP (0.27 MTPA in 227.141 ha) of M/s WCL, located in Chindwara Dist., M.P. for seeking EC. The proposal was considered in the Expert Appraisal Committee (EAC) (Thermal & Coal Mining) and recommended in its 65th Expert Appraisal Committee held on 8-9 January, 2013 for granting Environmental Clearance. The EAC has recommended the project for environmental clearance.

3. The Ministry of Environment & Forests has considered the application. The proposal was considered in the January, March, 2010 and in the 65th Expert Appraisal Committee held on 8-9 January, 2013. It is noted that the proposal is for grant of Environmental Clearance for Bhakra UGP (0.27 MTPA in 227.141 ha) of M/s WCL, located in Chindwara Dist., M.P. The proponent informed that:

- i. The UG mine over 227.141 ha of which 221.71 ha is for mining rights and 6.431 ha is for surface rights.
- ii. Life of the project is 15 years.

Bhakra_EC

- iii. There are no National parks/Sanctuaries /Biosphere Reserves within 15 m radius of the project site.
- iv. The mine would be mechanised using LHD onto belt conveyors.
- v. A CHP is proposed on within the ML for which dust suppression measures would be taken up and from which coal would be dispatched.
- vi. Coal transportation road would be black topped.
- vii. The proponent has studied the impact of UG mining on the aquifers and ground water flow system especially in the context of underground mining and the likely subsidence in the study area. Max. working depth is 343m. Since the strata would be disturbed due to subsidence/caving which is in the range of 100-300m, water would percolate because of the cracks developed in the lower strata.
- viii. With regard to measures on impact on hydrogeology, it was observed that the issues raised by EAC have by and large been addressed by the proponent. However, as lower Gondwana aquifers normally exhibits wide variation in aquifer characteristics (both laterally and vertically), there is further scope of improvement /refinement of hydrogeology reports as submitted by the proponent so as to address the ground water issues expeditiously on long term perspectives. The suggested refinements include generation of site specific aquifer characteristics though detailed study, well inventories, pumping test at sites, subsidence prediction (in quantitative terms) and its correlation with hydro-geological attributes, the details of mine discharge and its reuse/ disposal etc.
- ix. There is also need for a comprehensive 'Ground Water Monitoring Plan' to be implemented by the proponent. The plan may incorporate details of piezometer/wells (depth, locations), monitoring parameters (quality and quantity), site characteristics, time frame of implementation and budgetary provisions etc. AQIP details were presented. The Plan showing the location of the proposed Bhakra UG mine project w.r.t. Satpura & Pench Tiger reserve duly certified by DFO, Chindwara. It was informed that the proposed Bhakra UG project is 18.75 km from Satpura Tiger reserve & 85.00 km from Pench Tiger Reserve was furnished.
- x. The total land requirement of the proposed Bhakra underground project is 227.141 ha which involves 43.41 ha of Forest Land and 183.731 ha non-forest land. Out of which 5.431 ha of non-forest land has already been acquired by the proponent under Surface Right for starting drive of inclines and for construction of surface infrastructure.
- xi. The balance land proposed to be acquired is 221.71 ha.
- xii. The Proponent informed the following break-up of balance land requirement of 221.71 ha:

Type of Right	Govt.	Tenancy	Forest	Total
All Right	1.00	----	----	1.00
Surface Right	----	----	----	----
Mining Right	31.61	145.68	43.41	220.71
Total	32.61	145.68	43.41	221.71

- xiii. There is no forest land required under the Surface Right. The application of Forestry Clearance of 43.41 ha land under Mining Right as per Forest Conservation Act,1980 has already been submitted vide letter no. 5/W/CWA/MMM/2012-76 dated 25.01,2012 and is pending with state Govt..Proponent sought Environment Clearance of First Phase with same production in an area of 183.731 ha without Forest land as the Forest Clearance takes considerable time.

- xiv. Public Hearing for the entire project of 227.141 ha was held on 17.07.2009.
- xv. There is no change in mining method.
- xvi. As there is no forest land under surface /all right, the initial mining activities namely incline drivage can start after receipt of EC. There are two incline of 840 m each and drivage will take about 2-3 years. Once the Stage -I Forest Clearance is obtained, then fresh EC application would be made annexing additional land (Forest Land) within same capacity.
- xvii. Proponent requested for issuance of Environment Clearance to Bhakra underground project for normative capacity of 0.27MTPA in an ML area of 183.73 ha without Forest Land in the first phase
- xviii. The MOEF. Vide its OM No. 11-164/2010 – FC dated 17.06.2011 has identified 12 coal blocks which are falling within Pench Satpura Tiger Corridor. The present proposal Bhakra does not figure in the list and therefore does not fall in the said corridor.
- xix. The proposed Bhakra UG Project is 14.5 km from the proposed Tiger Corridor identified by NTCA and the buffer zone of the proposed Bhakra UG mine is 4.5 km from the proposed Tiger Corridor identified by NTCA. As such, the subject project does not come under the proposed viable Tiger Corridor. Therefore, clearance from NSWI is not required. The proposed Bhakra UG Project is 18.75 km and 85 km from Pench Tiger Reserve.
- xx. The total lease area is 227.141 ha, including 43.41 ha of forest land. The scope of work of the proposed Bhakra UG has not been changed. The approved Project Report of Bhakra UG, on which the EIA/EMP has been prepared has not been changed and shall not undergo any changes with the present proposal. There is no change in the land use plan, therefore the issue of surrendering 43.41 ha of forest land does not arise.
- xxi. As per the proponent, the total land involved in Bhakra UG i.e. 221.71 ha is covered under CBA(A&D) Act, 1957. There is no requirement of obtaining lease under Mineral Concession Rule (MCR), 1960. The land area of 221.71 ha under Mining Right has been vested with the Company under Section 11 of CBA (A&D) Act, 1957 (Notified on 28.02.2013) by Ministry of Coal, Government of India.

4. The proposal was considered in the January, March, 2010 and in the 65th Expert Appraisal Committee held on 8-9 January, 2013 which recommended for granting Environmental Clearance. The Ministry of Environment & Forests has examined the application in accordance with the EIA Notification, 2006 and under the provisions thereof, hereby recommends for environmental clearance for the above-mentioned Bhakra UGP (**0.27 MTPA in 183.731 ha in non-forest area**) of M/s WCL, located in Chindwara Dist., M.P under the provisions of the Environmental Impact Assessment Notification, 2006 and amendments thereto and Circulars issued thereon and subject to the compliance of the following specific and general conditions.

A. Specific Conditions:

- i. The maximum production from the mine at any given time shall not exceed the limit as prescribed in the EC.
- ii. Environmental clearance to the proposal is subject to obtaining clearance under the Wildlife (Protection) Act, 1972, as applicable.

- iii. The project proponent would be required to obtain the Stage-I FC for the entire forest area within mining lease by 31/01/2015. If not, they would surrender forest land for which such clearance has not been obtained and enter into a revised mining lease accordingly.
- iv. The approved mine plan includes forest land. Since forest clearance is awaited and there is urgency to meet coal demand the proponents have divided the project in two phases- phase - 1 without forest land for opening of mine construction and development in non-forest area and phase- 2 with forest area after forest clearance. Phase - 1 in ML area of 183.731 ha in non-forest area only is recommended.
- v. The proponents may come again to the Committee for Bhakra Phase-II project after obtaining the Stage -I Forestry Clearance.
- vi. A separate team for subsidence monitoring and surface mitigation measures be constituted and continuous monitoring and mitigation measures be carried out.
- vii. 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 clay soil/suitable material.
- viii. If subsidence is found exceeding the permitted limits, then the landowners shall be adequately compensated with mutual agreement of the landowners.
- ix. Mining shall be carried out as per statuette at a safe distance from river/nalla following within adjacent to the lease boundary 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.
- x. 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.
- xi. Solid barriers shall be left below the roads falling within the blocks to avoid any damage to the roads.
- xii. Diversion of Land shall be done with approval of the Competent Authorities.
- xiii. Coal Extraction shall 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, railway track.
- xiv. The mined out land should be used for agriculture purpose.
- xv. Safety measures and health issues need to be addressed for workers and surrounding villagers.
- xvi. Proponent shall implement all the related safety measures with safety equipments.
- xvii. The CSR cost should be Rs 5 per Tonnes of Coal produced which should be adjusted as per the annual inflation.
- xviii. Coal transportation in pit by Belt Conveyors up to surface, Surface to Siding by Trucks to Nandan Washery and siding to loading by pay loaders..
- xix. At the time of establishing the CHP, it is proposed to establish mist spray arrangements and also enclosing the ground level bunkers up to the level of gantry.
- xx. An afforestation plan to be prepared for implementation after stabilization of subsidence.
- xxi. Water spraying arrangements at loading points and mist spray arrangements are to be provided.
- xxii. No additional land, manpower and equipment and water shall be used for the expansion project.
- xxiii. Mine closures activities include sealing of incline mouth dismantling of haulage system, clearing and afforestation of coal stock area, plantation on barren land and old abandoned mine.
- xxiv. 3-tier plantation should be developed 2 km stretch of road from the mine using native species
- xxv. 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 and 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.

- xxvi. 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.
- xxvii. Transportation of coal from the mine to railway siding should be by 20T mechanically covered trucks.
- xxviii. 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.
- xxix. Regular monitoring of groundwater level and quality shall be carried out by establishing a network of existing wells and construction of new peizometers. 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.
- xxx. Acid Water Treatment Plant, volume of water to be treated and disposal of brine should be provided.
- xxxi. High root density tree species shall be selected and planted over areas likely to be affected by subsidence.
- xxxii. Monitoring of drinking water should be carried out regularly.
- xxxiii. Sewage treatment plant shall be installed in the township. ETP shall also be provided for treating workshop and CHP effluents.
- xxxiv. 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 Bangalore.
- xxxv. If the water quality parameters such as F, pH, heavy metals, etc. exceed the prescribed limits, suitable measures by the proponent be taken to ensure that the local communities are provided alternate source of water for their livelihood
- xxxvi. Medical camps should be organized in the area for regular check-up of workers/villagers/population. Detailed prevalent disease pattern in the area should be documented and details of medical facilities provided for the same be made available to the MoEF
- xxxvii. Proponent should make written submission on the compliances/clarifications to the MoEF on the above cited issues.
- xxxviii. 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.
- xxxix. 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.
- xl. 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.
- xli. The mining in the existing mines should 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, bearing with movement of wildlife and until such time they are closed/phased out.

- xlii. Project specific CSR for an amount of Rs5/Tonne of coal production, as adjusted as per the annual inflation, should be provided for the CSR activities undertaken and the progress made thereon shall be uploaded annually on the company website. Monitoring of the impacts of activities under CSR shall be carried out periodically.
- xlili. 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.
- xliv. 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 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 of production for quantum of mineral coal 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 PM₁₀, PM_{2.5}, SO₂ and NO_x monitoring. 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, etc carried out at least once in six months.
- iv. Data on ambient air quality (PM₁₀, PM_{2.5}, SO₂ and NO_x) and heavy metals such as Hg, As, Ni, Cd, Cr and other monitoring data 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. Random verification of samples through analysis from independent laboratories recognised under the EPA rules, 1986 shall be furnished as part of 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, 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.
- vii. Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transporting 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 EPA 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.

- x. 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 and records maintained thereof. The quality of environment due to outsourcing and the health and safety issues of the outsourced manpower should be addressed by the company while outsourcing.
- 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 concerned Regional Office.
- xiii. 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>.
- xiv. A copy of the environmental clearance letter shall be marked to concern 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 company's website.
- xv. A copy of the environmental clearance letter shall be shall also 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 Sector and Collector's Office/Tehsildar's Office for 30 days.
- xvi. The clearance letter shall be uploaded on the company's website. The compliance status of the stipulated environmental clearance 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 public domain. The monitoring data of environmental quality parameter (air, water, noise and soil) and critical pollutant 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 mine office and in corporate office and on company's website.
- xvii. The project proponent shall submit six monthly compliance reports on status of compliance of the stipulated environmental clearance conditions (both in hard copy and in e-mail) to the respective Regional Office of the Ministry, respective Zonal Office s of CPCB and the SPCB.
- xviii. The Regional Office of this Ministry located in the Region 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.
- xix. The Environmental statement for each financial year ending 31 March in For -V is mandated to be submitted by the project proponent for 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.

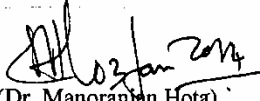
5. The proponent shall abide by all the commitments and recommendations made in the EIA/EMP report so also during their presentation to the EAC.

6. The proponent is required to obtain all necessary clearances/approvals that may be required before the start of the project. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

7. The Ministry or any other competent authority may stipulate any further condition for environmental protection.

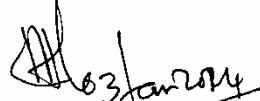
8. Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract the provisions of the Environment (Protection) Act, 1986.

9. 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, New Delhi.
2. Secretary, Department of Environment & Forests, Government of Madhya Pradesh, Bhopal
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, E-2/240 Arera Colony, Bhopal 462016.
4. Member Secretary, Madhya Pradesh State Pollution Control Board, Area Colony, Bhopal-462016.
5. Member Secretary, 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. Monitoring File 8. Guard File 9. Record File 10. Notice Board


(Dr. Manoranjan Hota)
Director