

EC  
No J-11015/61/2006-IA.II(M)  
Government of India  
Ministry of Environment & Forests

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

Dated: 10<sup>th</sup> June 2006

To  
M/s Usha Martin Ltd.,  
701, Surya Kiran Building,  
19, Kasturba Gandhi Marg,  
New Delhi - 110001.

Sub: Kathautia Opencast Coal Mine Project (0.80 MTPA) of M/s Usha Martin Ltd.,  
located in villages Kathautia, Kajri, Garikhas, Palhekurd, Sika, Sakhui and  
Batsara,, Tehsil Daltonganj, District Palamau, Jharkand - environmental  
clearance - reg.

Sir,

This has reference to your letter dated 14.03.2006 submitting your application and subsequent letters dated 12.04.2006, 12.04.2006, 25.04.2006, 02.05.2006 and 02.05.2006 on the above-mentioned subject. The Ministry of Environment & Forests has considered your application. It has been noted that the project is for opening a new Kathautia Opencast Coal Mine Project for the linked Sponge Iron Plant. The total lease area is 938.27 ha of which 55.98 ha is agricultural land and 882.29 ha is wasteland. Of the total lease area, area for excavation is 687.93 ha, 4 ha is for storage of topsoil dumps, 73.97 ha is for OB dumps, 2ha is for infrastructure, 1 ha is for roads, 40.09 ha is for greenbelt, 3.50 ha is for tailings pond, and 125.51 ha is undisturbed area. There are no National Parks, Wildlife Sanctuary, Biosphere Reserves found in the 10 km buffer zone. The nearest water body (Koel River) flows at a distance of 500m, and River Durgawati adjacent to the northern boundary of the proposed project and Amannat River and Jinjoi Nadi flow at a distance of 4 km and 1 km respectively from the mine site. The project does not involve modification of the natural drainage. An embankment for protection against flood is planned 5m above the HFL of Durgavati Nallah which is controlling the drainage to the core zone. Project involves R&R of 7 villages- Kathautia, Kajri, Garikas, Palhekurd, Sakhui, Sika and Batsara involving 976 land losers and 396 losers of both land and homestead. Mining will be opencast by mechanised method. Surface Miners will be mainly used for both coal and OB extraction and blasting will be done only if hard starta is encountered. The rated capacity of the project is 0.80 million tonnes per annum (MTPA) of coal production. Mineral transportation of 2667 TPD of coal is by road. Ultimate working depth of the mine is 50m below ground level (bgl). Water table is in the range of 3.2 m - 6.98 m bgl in the core zone and 2.9 m - 8.5 m bgl in the buffer zone. Mining will intersect water table. Average water requirement is 345 m<sup>3</sup>/d, which will be met from groundwater (27 m<sup>3</sup>/d) and from mine pit water (318m<sup>3</sup>/d). An estimated 244.46 Mm<sup>3</sup> of OB and 6.879 Mm<sup>3</sup> of topsoil will be generated in life of mine of which about 93% of the OB will be backfilled and the balance will be dumped in four external dumps of 50m max. height. Backfilling will begin from 1<sup>st</sup> year onwards. Public Hearing was held on 18.07.2005. NOC has been obtained on 21.02.2006. Life of the mine at the rated capacity is 33 years. The Mining Plan has been approved by Ministry of Coal on 20.05.2005. Capital cost of the project is Rs. 80 crores.



2. The Ministry of Environment & Forests hereby accords environmental clearance for the above-mentioned Kathautia Opencast Coal Mine Project of M/s Usha Martin Ltd. for production of coal of 0.80 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 State Pollution Control Board shall be effectively implemented.
- (ii) The bund/embankment shall be designed taking into account the highest flood level, based on past data, of the drainage of the water bodies in the buffer zone which impact the mining operations so as to guard against mine inundation.
- (iii) Topsoil should be stacked properly with proper slope at earmarked site(s) and should not be kept active and shall be used for reclamation and development of green belt.
- (iv) OB should be stacked at earmarked external OB dumpsite(s) within ML area and shall be a maximum height of 60m only and consist of benches of 10m each. The ultimate slope of the dump shall not exceed 28°. Backfilling shall begin at the end of 3<sup>rd</sup> year in the decoaled area. Monitoring and management of existing reclaimed dumpsites should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests and its Regional office located at Bhubaneswar on yearly basis.
- (v) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The water so collected should be utilised for watering the mine area, roads, green belt development, etc. The drains should be regularly desilted and maintained properly.  
Garland drains (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above the peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provided adequate retention period to allow proper settling of silt material.
- (vi) Dimension of the retaining wall at the toe of the dumps and OB benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vii) No ancillary operations shall as crushing, screening and washing of coal shall be done within the lease.
- (viii) 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, and transfer points.
- (ix) Drills should be wet operated.
- (x) Surface Miners shall be used for coal and OB extraction. Controlled blasting should be limited to hard strata only and practiced only during daytime with use of delay detonators. The mitigative measures for control of ground vibrations and to arrest the fly rocks and boulders should be implemented.
- (xi) Area brought under afforestation shall cover a total area of 802.03 ha and includes reclaimed external OB dump (73.97 ha), reclaimed topsoil dump (4 ha), backfilled area (683.97 ha), 18.65 ha along excavated area, along ML boundary, along roads



(14.80 ha), 6.64 ha along the river and in undisturbed area (1.14 ha) within the lease 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) A Progressive Closure Plan shall be implemented by reclamation of quarry area of 683.97 ha shall be backfilled and afforested by planting native plant species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha. The balance 3.96 ha of decoladed area shall be converted into a water reservoir, the upper benches of which shall be gently sloped and stabilised and reclaimed with plantation.
- (xiii) Conservation Plan for endangered species found in and around the project area shall be formulated, if required, in consultation with the State Forest and Wildlife Departments.
- (xiv) The company shall obtain prior approval of CGWA/CGWB Regional Office for use of groundwater if any, for mining operations.
- (xv) 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.
- (xvi) 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.
- (xvii) ETP should also be provided for workshop and CHP wastewater.
- (xviii) R&R shall be not less than the norms laid out by the State Government and of the National R&R Policy and shall be completed within a specified time-frame.
- (xix) 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.

✓ (xx) Consent to Operate shall be obtained before starting mining operations. — Mr Patodra has applied

B. 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, SO<sub>2</sub> and NO<sub>x</sub> 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, SO<sub>2</sub> and NO<sub>x</sub>) should 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 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 (E) dated 19<sup>th</sup> May 1993 and 31<sup>st</sup> 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 Bhubaneswar.
- (xiii) The Regional Office of this Ministry located at Bhubaneswar 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 Jharkhand, Secretariat, Ranchi.
3. Chief Conservator of Forests, Regional office (EZ), Ministry of Environment & Forests, A/3 Chandrashekarapur, Bhubaneswar - 751023.
4. Chairman, Jharkhand State Pollution Control Board, TA Building, HEC Complex, PO Dhurwa, Ranchi.
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. District Collector, Palamau, Government of Jharkhand.
8. Monitoring File    9. Guard File    10. Record File