

No.J-11015/120/2003-IA.II(M)
Government of India
Ministry of Environment & Forests

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

Dated: 6th May 2005

To
Shri Chanakya Choudhary,
Chief Resident Executive,
M/s The Tata Iron & Steel Company Limited,
(Tata Steel),
Jeevan Bharati Building Tower 1, 10th Floor,
124, Connaught Circus,
New Delhi -110001.

→ GIM (Comd)

Chanakya Choudhary

Sub: Expansion of Katamati Iron Ore Mines (2477 TPA to 2.0 MTPA) of M/s The Tata Iron & Steel Company Limited in village Deojhar, Tehsil Barbil, District, Keonjhar, Orissa – Environmental clearance -reg.

Sir,

This has reference your application dated 29.04.2003, 14.07.2003, 22.09.2003, 19.01.2004, 01.12.2004, 07.02.2005, and 21.03.2005 on the subject mentioned above. The Ministry of Environment and Forests has examined the application. It has been noted that the proposal is for expansion in production of iron ore in Katamati Iron Ore Mine. The total lease area of the mine is 403.3238 ha of which 199.172 ha is forestland and 204.1518 ha is non-forestland. There are no ecologically sensitive areas such as National Parks, Tiger Reserves, Biosphere Reserves within 10 km of mine site. Of the total lease area of 403.3238 ha, area to be mined is 92.3418 ha, an area of 58.6567 ha is for OB dumps, 1.10 ha is for mineral storage, 1.70 ha is for infrastructure, 14.1036 ha is for roads, and 235.4209 ha is undisturbed area. The targeted expansion in annual production capacity of the mine is from 2477 tonnes per annum (TPA) to 2.0 million TPA (MTPA). The project does not involve displacement of people. Baitarni river flows at a distance of 7 km and Kundra Nala at 8 km from ML boundary. Mining is opencast by mechanised method and involves drilling and blasting. Approx. 1.81 mill. m3 of OB will be generated in addition to about 0.002 mill. m3 already accumulated. Backfilling is not proposed during the next 20 years. Peak water requirement of 260 m3/d will be met from River Baitarani through existing facilities. Water table is in the range of 10-20m below ground level (bgl). Life of the mine at the rated capacity is 47 years. Consent to Establish from the Orissa Pollution Control Board has been obtained on 30.05.2003. Approval of IBM obtained on 06.07.2001. Public hearing was held on 22.02.2003. The capital cost of the project is Rs. 2100 lakhs.

2. The Ministry of Environment and Forests hereby accords environmental clearance to the above Katamati Iron Ore Mine of M/s The Tata Iron and Steel Co. Ltd.. to enhance production of iron ore from 2477 TPA to 2.0 MTPA involving a lease area of 403.3238 ha under the provisions of the Environmental Impact Assessment Notification, 1994 and amendments thereto subject to strict compliance of the terms and conditions mentioned below:

A. Specific conditions

- (i) Mining shall not be undertaken in forestland without the necessary approvals/ forestry clearance.
- (ii) OB should be stacked at the two earmarked dump site(s) only, stabilised and reclaimed. The maximum overall slope of dump even if single stage shall not exceed 28° .
- (iii) Mineral rejects shall be stacked separately at earmarked site/dump only.
- (iv) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil, OB and mineral dumps. The drains should be regularly desilted and maintained properly.
 Garland drains (size, gradient & 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 provide adequate retention period to allow proper settling of silt material.
 Storm water return system should be provided. Storm water should not be allowed to go to the effluent treatment plant during high rainfall/super cyclone period. A separate storm water sump for this purpose should be created.
- (v) Dimension of retaining wall at the toe of OB dumps and benches within the mine to check run-off and siltation should be based on the rainfall data.
- (vi) Trace Metals such as Ni, Co, As, and Hg should be analysed in dust fall and soil samples for at least one year during summer, monsoon and winter seasons. If concentrations of these metals are found below the standards then with prior approval of MOEF this specific monitoring could be discontinued.
- (vii) Road network shall be developed within the lease area before expansion for transport of the mineral from the quarry area.
- (viii) Mineral and OB transportation shall be in trucks/dumpers covered with tarpaulins. Vehicular emissions should be kept under control and regularly monitored. Suitable measures should be taken to check fugitive emissions from haulage roads, transfer points, etc.
- (ix) A green belt of adequate width should be raised by planting the native species around ML area. Plantation should also be carried out along roads, OB dump sites etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (x) Groundwater shall not be used for mine operations. Prior approval of CGWA shall be obtained for using groundwater.
- (xi) Mining will not intersect groundwater. Prior permission of the MOEF and CGWA shall be taken to mine below water table.
- (xii) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers. The monitoring should be done for quantity four times a year in pre-monsoon (April /

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 the Central Ground Water Authority quarterly.

- (xiii) Trace metals such as Fe, Cr +6, Cu, Se, As, Cd, Hg, Pb, Zn and Mn shall be periodically monitored at specific locations in both surface water downstream and in ground water at lower elevations from mine area, in consultation with the OSPCB and State Ground Water Board. Suitable treatment measures shall be undertaken in case levels are found to be higher than permissible limits
- (xv) "Consent to Operate" should be obtained from SPCB before expanding mining activities.
- (xvi) Specific conservation measures shall be taken up for conservation of endangered fauna, if found within the lease area, in consultation with the State Government.
- (xvii) 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.

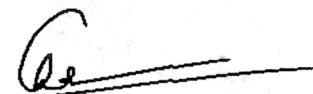
B. General Conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of iron ore 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 RPM, SPM, SO₂, NO_x & 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.
Data on ambient air quality (RPM, SPM, SO₂, NO_x & CO) should be regularly submitted to the Ministry including its Regional office at Bhubaneswar and the State Pollution Control Board / Central Pollution Control Board once in six months.
- (iv) Drills should be wet operated or with dust extractors and controlled blasting should be practiced.
- (v) Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangements on haul roads, wagon loading, dumpers/ trucks, loading & 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, operations of HEMM, etc should be provided with ear plugs / muffs.
- (vii) Industrial waste water (workshop and waste water from the mine) should 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. Oil and grease trap should be installed before discharge of workshop effluents.

- (viii) Environmental laboratory should be established with adequate number and type of pollution monitoring and analysis equipment in consultation with the State Pollution Control Board.
 - (ix) 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 program of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
 - (x) 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 Organization.
 - (xi) 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 the Ministry and its Regional Office located at Bhubaneswar.
 - (xii) The Regional Office of this Ministry located at Bhubaneswar shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
 - (xiii) A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom and suggestion / representation has been received while processing the proposal.
 - (xiv) The 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.
 - (xv) 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 issue 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 Web Site of the Ministry of Environment & Forests at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bhubaneswar.
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.
 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 Steel, Shastri Bhawan, New Delhi
2. Secretary, Department of Steel and Mines, Government of Orissa, Secretariat, Bhubaneswar.
3. Secretary, Department of Environment & Forests, Government of Orissa, Secretariat, Bhubaneswar.
4. Principal CCF and Chief Wildlife Warden, Government of Orissa, Prakruti Bhawan, Nilakantha Nagar, Bhubaneswar - 751012.
5. Chairman, Orissa Pollution Control Board, Parivesh Bhawan, A/118, Nilkanthanagar, Unit VIII, Bhubaneswar-751012.
6. Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-32
7. Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-31, Chandrasekharpur, Bhubaneswar - 751 023
8. Member-Secretary, Central Ground Water Authority, Ministry of Water Resources, A-3 W-3, Curzon Road Barracks, Kasturba Gandhi Marg, New Delhi.
9. Collector, Keonjhar District, Government of Orissa, Keonjhar.
10. EI Division, Ministry of Environment and Forests, New Delhi.
11. Monitoring File 12. Guard file. 13. Record file.