

J-11015/232/2007- IA. II(M)  
Government of India  
Ministry of Environment & Forests

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Paryavaran Bhavan, C.G.O. Complex  
Lodi Road, New Delhi-110003  
Dated the July 20, 2007

To

M/s Manganese Ore(India) Limited  
3, Mount Road Extension, Post Box 34,  
Nagpur-440 001

Sub: **Dongri Buzurg Manganese Mine** ( lease area 174.86 ha), expansion in production capacity from 15000 TPM to 35000 TPM of manganese ore and Electrolytic Manganese Di-oxide (EMD) with capacity of 768 TPA to 1500TPA ) of M/s. Manganese Ore India Ltd., at villages Dongri Buzurg, Balapur, Hamesha and Kurmuda, Tehsil Tumsar in Distt. Bhandara, Maharashtra - reg environmental clearance.

Sir,

The undersigned is directed to refer to your letter no. DIR(P&P)/MOEF/06-07/242 dated 12.12.2006 on the above mentioned subject. The Ministry of Environment & Forests has considered the environmental clearance application.

2. It is noted that the proposal is for environmental clearance for renewal and expansion of open cast mechanized mining of manganese ore from current capacity of 15000 TPM to 35000TPM and Electrolytic Manganese Di-oxide (EMD) plant having an area of 2.87 ha is located within the mining lease having capacity of 768 TPA to 1500TPA of Electrolytic Manganese Di-oxide. The mining lease area is spread over 174.86 ha, comprising of 102.55 ha of forest land; 0.86 ha agricultural land and 71.45 ha of govt. land. Forest clearance was obtained in 1999. Out of 174.86 ha of ML area 21.87 ha is for mining activity, 87.66 ha for OB dumps, 36.05 ha for infrastructure, 1.75 ha for roads, 4.13 ha for railways, 2.3 ha for mineral separation plant, 19.85 ha of unused area and 1.25 ha for water pond. The life of the mine at proposed capacity is estimated as 17 years. Topography of the area is hilly. Controlled blasting will be adopted. No National Park /Wildlife sanctuary is located within 10km radius of the mine. The average water demand and peak water demand is 310 m<sup>3</sup>/day and 375m<sup>3</sup>/d respectively which will be met from surface water viz. Bavanthadi River, ground water source and mine pit water. The mining activity has not reached the water table. The ultimate working depth will be 50 m (BGL), whereas the present working table is 30 m (BGL). The ground water table is 8-10 m (BGL). As per the hydro geological study

carried the radius of influence due to mine pit dewatering will be 360 m at mine depth of 105 m. Stage of ground water development is 26.51%. Solid waste generated due to proposed mining and processing operations will be in the form of waste rock from foot wall (mica and schist) and hang wall (quartz - mica schist). The waste will be dumped in the earmarked area on the barren land. Public hearing of the project was held on 25.07.2006. IBM has approved the mining plan on 15.10.2003. Cost of the project is Rs.2866 lakhs.

3. The project has been considered in accordance with the para 2.2 (2.2.1(i) (a)) interim operational guidelines of the Ministry issued on 13<sup>th</sup> October 2006 by the Ministry of Environment and Forests under Para 12 of the EIA Notification 2006.

4. Based on the information submitted by you, the Ministry of Environment and Forests hereby accords environmental clearance to above project under the provisions of EIA Notification dated 14<sup>th</sup> September 2006 subject to the compliance of the following Specific and General conditions:

#### A. Specific Conditions

- i. Topsoil, should be stacked properly with proper slope at ear marked site (s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.
- ii. External OB dumps and other wastes should be stacked at earmarked sites only and should not be kept active for long period till its use for backfilling. Toe walls around the waste dumps shall be made to ensure and to prevent erosion and surface runoff. The total height of the dumps shall not exceed 30 m, each stage should preferably be of 10 m. Overall slope of the dump shall not exceed 28°. The OB dumps should be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment & Forests on six monthly basis.
- iii. Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working. The water so collected should be utilized for watering the mine area, roads, green belt development etc. The drains should be regularly desilted particularly after monsoon and maintained properly.

- iv. Garland drain (size, gradient and length) shall be constructed for both mine pit and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) 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. Sedimentation pits should be constructed at the corners of the garland drains and desilted at regular intervals.
- v. Plantation shall be raised in 47.83 ha of area along the mine lease area including OB dumps which will be reclaimed by green belt / afforestation in consultation with the local DFO / Agriculture Department around mine lease area etc. Selection of the plant species shall be as per the CPCB guidelines. Herbs and Shrubs shall also form a part of afforestation programme besides tree plantation. The density of the trees should be around 2500 plants per ha.
- vi. The project authority should implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- vii. Conservation plan shall be prepared in consultation with CWLW for endangered fauna and submitted to the Ministry. The authenticated list of flora and fauna separately for core and buffer zone shall be indicating schedule of species shall be submitted to the Ministry.
- viii. Drilling and blasting shall be by dust extractors and wet drilling.
- ix. Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new peizometers during the mining operation. The monitoring should be carried out two times in a year - pre- monsoon (April-May), post-monsoon (November) and the data thus collected may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground water Board.
- x. The effluent from the oil separation plant after treatment and conforming to the prescribed standards shall be used for green belt development.
- xi. To control the suspended particulate emissions, water shall be sprinkled on the haul roads and at crushing and screening plant.

- xii. Permission from the competent authority should be obtained for drawl of ground water, if any, required for the project.
- xiii. Suitable rainwater harvesting measures on long-term basis shall be planned and implemented in consultation with Regional Director, CGWB.
- xiv. Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and mineral separation plant wastewater.
- xv. A comprehensive report on the details of land oustees, their socio-economic profile and action plan for their rehabilitation including formation of self help groups who can facilitate promotion of economic opportunity to local indigenous people shall be submitted for record within six months.
- xvi. Details on land use pattern of nearby villages and the agricultural crops in these villages and the mode of compensation for likely damage on agricultural land due to mining activity shall be submitted within three months.
- 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.
- xviii. The company shall implement occupational health and safety measures for the workers and engage a qualified doctor who is trained in occupational health surveillance.

**B. General conditions**

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.
- ii. No change in the calendar plan including excavation, quantum of mineral Manganese ore and waste shall be made.
- iii. Conservation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with the local forest and wildlife department.

- iv. Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO<sub>2</sub>, 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 and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.
- v. Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.
- vi. Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.
- vii. Measures shall be taken for control of noise levels in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.
- viii. 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 19<sup>th</sup> May, 1993 and 31<sup>st</sup> December, 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.
- 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 program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and 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 Organization.

- xii. The project authorities shall inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
  - xiii. The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bhopal.
  - xiv. The project authorities shall inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
  - xv. The Regional Office of this Ministry located at Bhopal 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.
  - xvi. A copy of clearance letter will be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received while processing the proposal.
  - xvii. 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.
  - xviii. The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 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 also at web site of the Ministry of Environment and Forests at <http://envfor.nic.in> and a copy of the same shall be forwarded to the Regional Office of this Ministry located Bhopal.
5. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

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

7. 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.

Yours faithfully,  
*P.L. Ahujara*  
(Dr. P.L. Ahujara)  
Director

Copy to:

1. Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment, Government of Maharashtra, Mumbai.
3. Secretary, Department of Mines and Geology, Government of Maharashtra, Mumbai.
4. Secretary, Department of Forests, Government of Maharashtra, Mumbai.
5. Chief Wildlife Warden, Government of Maharashtra, Mumbai.
7. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office, Link Road No.3, E - 5, Arera Colony, Bhopal - 462 016.
8. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar New Delhi - 110 032.
9. The Chairman Maharashtra Pollution Control Board, Kalpataru Point, 3<sup>rd</sup> & 4<sup>th</sup> Floor, Sion Matunga Scheme, Road No.8, Opp. Cine Planet Cinema, Near Sion Circle, Sion(East), Mumbai- 400 022.
10. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
11. Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines Nagpur-440 001.
12. District Collector, Bhandara district, Maharashtra.
13. EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
14. Monitoring File.
15. Guard File.
16. Record File.

(Dr. P.L. Ahujara)  
Director

