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J-11015/483/2007- IA. II (M)  
Government of India  
Ministry of Environment & Forests

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Lodi Road, New Delhi-110003.  
Dated: the 11<sup>th</sup> September, 2007

To

M/s. National Mineral Development Corporation Ltd.  
Khanij Bhavan 10-3-311/A,  
Castle Hills, Masab Tank,  
Hyderabad – 500 028

**Sub: Expansion project of Bailadila Iron Ore mine (ML area 935.522 ha)  
Deposit No. 14/11C at Bailadila Range Hills at village Kirandul, South  
Bastar, Dantewada Distt., Chhattisgarh – reg. environmental clearance.**

Sir,

The undersigned is directed to refer to the office memorandum received from the Ministry of Steel vide letter no. F.No.6 (5)2007-RMi, dated 29.05.2007, on the above mentioned subject. The Ministry of Environment and Forests has examined the application.

2. It is noted that the proposal is for expansion of open cast mechanized iron ore mining at Deposit-14 from 3.2 MTPA to 5.0 MTPA and Deposit-11C from 5.0 MTPA to 7.0 MTPA. The following has been noted from the information provided by you. The mines are located at Bailadila range hills at village Kirandul, South Bastar, Dantewada District, in Chhattisgarh. The mineral reserve of Deposit-14 is 150.94 MT and life of the Deposit 14 will be 30 years at the proposed rate of production. The mineral reserve of Deposit-11C is 72.56 MT and the life of this deposit at proposed production will be 15 years. Mining is proposed to be carried out from hill top in both the deposits. There will be no ground water intersection due to mining activity. Water requirement for the expansion will be about 8540 Kld which will be met from existing Nallahs in Mallinger, Bachel and Kirandul. The mines spread over an area of 935.522 ha which falls in Bailadila reserved forests. Forestry clearance has been obtained on 18.06.1999 and 22.12.1999 respectively. No displacement of household is involved due to proposed expansion. No national park/wildlife sanctuary/biosphere reserve etc. is located within 10 km radius of the ML area. No ground water extraction is involved. The total quantity of solid waste to be generated is 54334m<sup>3</sup>/m. Green belt development is being undertaken through Chhattisgarh Raj Van Vikas Nigam Ltd. since 2003. It is proposed to plant 50,000 trees every year out side the ML area also. It is also noted that Public hearing of the project was held on 13.06.2006. IBM has approved Mining scheme and progressive mine closure plan on 01.04.2006 & 12.03 2007 respectively. Cost of the project is Rs.350.0 crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006 and its interim operational guidelines issued on October 13, 2006.

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

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A. Specific conditions

- (i) Appropriate management of slime shall be undertaken to prevent pollution of surface water bodies. As per action plan submitted to the Ministry of Environment & Forests for utilisation of slime including additional slime to be generated due to proposed expansion, the slime shall be utilised for pellets manufacturing after beneficiation.
  - (ii) Detailed report on de-silting of tailing dams and management of silt shall be submitted to the Ministry of Environment & Forests at regular interval.
  - (iii) Assessment of erosion potential and sedimentation control plan shall be carried out and submitted to the Ministry.
  - (iv) Conceptual mining plan for every five year for the life of the mine shall be submitted to the Ministry for record. Water bodies shall be developed and utilized to develop pisci-culture by organizing fishermen cooperative society with the land losers and the poorer section (specially tribals) of area opted as members of such society. Financial assistance in the form of share money and managerial assistance shall be made available so that the members themselves can run the affairs of the society in due course. The project proponent shall arrange marketing tie up so that the society gets fair price of their produce and the profits are equitably shared by the members of the society as regular source of income.
  - (v) Top soil/ solid waste shall be stacked properly with proper slope with adequate safeguards and shall be backfilled (wherever applicable) for reclamation and rehabilitation of mined out area.
  - (iv) Over burden (OB) shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30 m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed 28°. The OB dump shall be backfilled. In critical areas, use of geo textiles shall be undertaken for stabilization of the dump. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.
  - (v) Garland drains shall be constructed to arrest silt and sediment flows from soil, and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly de-silted particularly after monsoon and maintained properly.
- Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and for waste dump and sump capacity shall 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 shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.
- (vi) Slope of the mining bench and ultimate pit limit shall be as per the mining scheme approved by Indian Bureau of Mines.
  - (vii) Drilling and blasting (if any) shall be conducted by using dust extractors/wet drilling.

- (viii) Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Plantation shall be raised in 308.73 ha in the ML area, haul roads, OB dump sites etc. The density of the trees shall be around 2500 plants per ha. The company shall involve local people with the help of self help group for plantation programme.
- (ix) The project authority shall implement suitable conservation measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.
- (x) Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected shall be regularly sent to MoEF, Central Ground Water Authority and Regional Director, Central Ground Water Board.
- (xi) The waste water from the mine shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water from the tailing dam shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the Andhra Pradesh Pollution Control Board.
- (xii) Prior permission from the competent authority shall be obtained for extraction of ground water, if any.
- (xiii) Vehicular emissions shall be kept under control and regularly monitored. Vehicles used for transportation of ores and others shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles transporting ores shall be covered with a tarpaulin or other suitable enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be committed.
- (xiv) 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.

**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 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, SO2, NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features

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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>, Nox) should be regularly submitted to the Ministry including its Regional office located at Bangalore 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 below 85 dBA 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) shall be properly collected and 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.
- (ix) Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted 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. Records of health of the workers shall be maintained.
- (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 of the Ministry 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 shall 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 the Ministry located at Bhopal shall monitor compliance of the stipulated conditions. The project authorities shall 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.

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(xviii) The project authorities shall 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 the Ministry located Bangalore.

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. Concealing factual data or submission of false/fabricated data and 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,

  
(W. Bharat Singh)  
Deputy Director

Copy to:

1. Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment, Government of Chhattisgarh, Raipur.
3. Secretary, Department of Mines and Geology, Government of Chhattisgarh, Raipur.
4. Secretary, Department of Forests, Government of Chhattisgarh, Raipur.
5. Chief Wildlife Warden, Government of Chhattisgarh, Raipur.
6. Chief Conservator of Forests, Regional Office, Ministry of Environment & Forests, Arera Colony, Bhopal - 462016.
7. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
8. Chairman, Chhattisgarh Environment Conservation Board, Nanak Niwas, Civil Lines, Raipur - 421 001, Chhattisgarh.
9. Member Secretary, Central Ground Water Authority, A2, W-3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
10. Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur- 440 001.
11. District Collector, Dantewada, Govt. Chhattisgarh.
12. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
13. Monitoring File.
14. Guard File.
15. Record File.

  
(W. Bharat Singh)  
Deputy Director