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No J-11015/416/2005-TA. II (M)
Government of India
Ministry of Environment & Forests

Paryavaran Bhawan,
C.G.O. Complex, Lodi Road,
New Delhi - 110 003

Dated the 11th September 2006

To,
M/s National Minerals Development Corporation Limited,
'Khanij', 10-3-311/A,
Castle Hills,
Masab Tank,
Hyderabad-500 028

Subject: Bailadilla Iron Ore (Deposit 11-B) Mining Project of M/s National Minerals Development Corporation Limited located in Village Kirandul, Tehsil Kirandul, District South Bastar Dantewala, Chhattisgarh -environmental clearance req.

Sir,

This has reference to the Ministry of Steel, Government of India letter No. 4(3)2005-RMI dated 01.12.2005 and your letter No. Env/DMP/PANNA/1.17/2005 dated 19.12.2005 and subsequent letters dated 23.01.2006, 08.05.2006, 22.05.2006 and 04.07.2006 on the subject mentioned above. The Ministry of Environment and Forests has considered the application. It has been noted that the project was earlier accorded environmental clearance by the Ministry on 25.10.1993 as an integrated proposal for iron ore deposit no. 10, 11-A and 11-B. Since the work on the project did not start within 5 years of grant of environmental clearance, the validity of environmental clearance lapsed. The total mine lease area of the project is 874.924 ha, out of which 535.005 ha belongs to deposit 11-B which is a forestland falling in Bailadilla Reserve Forest. Area proposed for mining is 36.33 ha, an area of 20.33 ha is kept for OB dumps, 29.96 ha for roads, 30.57 ha for statutory buildings and 417.83 ha is unbroken area. No ecologically sensitive area such as national park/sanctuary/biosphere reserve etc. is located in the core and buffer zone. There is no population in the core zone, therefore, displacement of population and R&R is not involved. Working will be opencast by mechanized method involving blasting. Targeted production capacity of mine is 70 lakh tonnes per annum (7.0 million tonnes per annum) of iron ore. Life of mine is 17 years. Approximately 26119 TPD of mineral will be transported through covered conveyor from crusher to the screening plant located at a distance of 3.5 km. Ultimate working depth of mine will be 1020 m AMSL. Water table is at 740 m AMSL. Mining will not intersect ground water table. Peak water requirement of the project is 1150m³/day, which will be met from Malinger Nadi. Approximately 3.17 million m³ of solid waste generated during the entire life of the mine, out of which 1.79 million m³ will be stored in waste dump no 1 and 0.54 million m³ is waste dump no. 2, remaining 0.84 million m³ of solid waste will be backfilled from the 11th year onwards. There will be two OB dumps with a maximum height of 64 m. The entire area of 535.003 ha will be covered under plantation at the end of the mine life. NOC issued by the Chhattisgarh Environment Conservation Board on 18.11.2005 for production of 7.0 million TPA of iron ore (ROM) for deposit 11-B. Public hearing of the project held on 12.04.2005. The Indian Bureau of Mines has approved mining plan for deposit no. 11 on 23.07.1997 for lease area of 1809.23 ha and subsequently approved modified mining plan for an area of 874.924 ha on

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Manoj
12.09.06

DET

copy: (L&RP) : For n.s.b

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for kind information of *CEO*

for further n.a.pl.
MTC/ANI

Manoj

[Signature]

15.10.2005. Forestry clearance for renewal of mining lease granted by the Ministry of Environment and Forest on 22.12.1999 for lease area of 874.924 ha forestland. Capital cost of the project is Rs.466.14 crores.

2. The Ministry of Environment & Forests hereby accords environmental clearance to the above mentioned Balladilla Iron Ore (Deposit 11-B) Mining Project of M/S National Mineral Development Corporation Limited for annual production capacity of 70.0 lakh tonnes (7.0 million tonnes per annum) of iron ore by opencast mechanized method involving total area of 535.003 ha under the provisions of the EIA Notification 1994 and its subsequent amendments issued under Environment (Protection) Act, 1986 subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) The environmental clearance is granted to 11-B deposit only having lease area of 535.003 ha.
- (ii) All the conditions stipulated by the State Pollution Control Board in their consent to establish should be effectively implemented.
- (iii) The mining operations shall not intersect groundwater table. The mine working will be restricted to above water table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.
- (iv) Topsoil, if any shall be stacked properly with proper slope with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
- (v) Over Burden should be stacked at earmarked dump site(s) only and should not be kept active for long period. The total height of the dumps shall not exceed 64 m, having four benches. 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. In critical areas use of geo textiles shall be undertaken for stabilization of the dumps. 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.
- (vi) Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working, soil, OB and mineral dumps. 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.

Garland drain (size, gradient and length) shall be constructed for each mine pit and for waste dumps 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.

- (vii) Dimension of the retaining wall at the toe of dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data.
- (viii) Plantation shall be raised in entire area of 535.003 ha including a green belt of adequate width by planting the native species around ML area, OB dump sites, roads etc. in consultation with the local DFO / Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (ix) The slime dumped already on land should be cleared within 5 years and thereafter there shall be no external dump of slime.
- (x) Diversion of Madadi Nallah will be carried out within 5 years.
- (xi) Regular monitoring of water quality downstream of check dam after the tailing pond should be carried out particularly in locations close to habitation along the nallah. The record of monitoring data should be maintained and submitted to MoEF, its Regional Office, SPCB and CPCB. The monitoring of water quality downstream may start immediately.
- (xii) 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.
- (xiii) Regular monitoring of ground water level and quality should be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring should 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 may be sent regularly to MOEF, Central Ground Water Authority and Regional Director Central Ground water Board.
- (xiv) Permission from the competent authority should be obtained for drawal of surface water and ground water if any, required for the project.
- (xv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with Regional Director, CGWB.
- (xvi) Vehicular emissions should be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles should be covered with a tarpaulin and shall not be overloaded.
- (xvii) Blasting operation should be carried out only during the daytime. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xviii) Drills should be wet operated or operated with dust extractors.
- (xix) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as leopard,

peacock etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and its implementation shall start by 2007 in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office within 3 months.

- (xx) Consent to operate should be obtained from SPCB before starting production from the mine.
- (xxi) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and mineral separation plant wastewater.
- (xxii) 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 mineral 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 and NO_x 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.
- (iv) Data on ambient air quality (RPM, SPM, SO₂ and NO_x) 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.
- (v) Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points should be provided and properly maintained.
- (vi) Measures should be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in 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) 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.


- (ix) 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.
- (x) The project authorities should 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.
- (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 Bhopal.
- (xii) 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.
- (xiii) 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.
- (xiv) 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, 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 should be forwarded to the Regional Office of this Ministry located Bhopal.

3. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

4. 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.

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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.


(SATISH C. GARKOTI)
Additional Director (S)

Copy to:

1. Secretary, Ministry of Steel, Government of India, Udyog Bhawan, New Delhi.
2. Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
3. Secretary, Department of Environment, Government of Chhattisgarh, Secretariat Raipur.
4. Secretary, Industries and Mines Department, Government of Chhattisgarh, Secretariat Raipur.
5. Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (WZ), E-5, Arera Colony, Link Road-3, Bhopal -462 016.
6. Chairman, Central Pollution Control Board, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
7. Chairman, Chattisgarh State Environment Conservation Board, 14/3, Park Street, Chaubay Colony, Raipur, Chattisgarh - 492001.
8. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
9. Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
10. District Collector, South Bastar Dantewada District, Chhattisgarh.
11. EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
12. Monitoring File.
13. Guard File.
14. Record File.