

No. J-11015/377/2007-IA.II(M)

Government of India  
Ministry of Environment & Forests

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

Dated the 16<sup>th</sup> January, 2009

To

M/s Devkabai Velji  
P.O. Barajamda,  
District West Singhbhum  
Pin - 833 221  
Jharkhand

**Subject: Expansion of Ajitaburu Iron and Manganese Ore Mining Project of M/s Devkabai Velji, located in Village Bokna, Tehsil Noamundi, District West Singhbhum, Jharkhand - environmental clearance regarding.**

Sir,

This has reference to your letter No MoEF/0/ dated 09.03.2007 and subsequent letters dated 14.09.2007, 11.10.2007, 10.05.2008, 14.07.2008, 04.09.2008 and 25.09.2008 on the subject mentioned above. The proposal is for enhancement of production of iron ore upto 6,00,000 tonnes per annum (0.6 million TPA) and manganese ore upto 4275 TPA. The total mine lease area of the project is 46.62ha, which is a forestland falling within the Ghatkuri Reserve Forest. Area proposed for mining is 26.242ha, an area of 2.85ha is kept for over burden dumps, 0.4ha for mineral storage, 0.102ha for construction of magazine, 2.822ha for roads, 2.454ha for safety zone and 11.95ha is for green belt. The Karo River is flowing in the buffer zone of the mine at a distance of 4.5km towards east from the mine lease boundary. Two dry nullahs exist in the lease and flows from West to East and later joins the Karo River outside the mine lease. No national park/wildlife sanctuary/biosphere reserve/tiger reserve etc. is reported to be located in the core and buffer zone of the mine and that the area does not report to form corridor for Schedule-I fauna. The Principal Chief Conservator of Forests, Biodiversity Conservation cum Chief Wildlife Warden, Jharkhand vide their letter dated 17.01.2008 stated that the proposed mine lease area falls within the core area of the Singhbhum Elephant Reserve and that no national park/wildlife sanctuary/ biosphere reserve or wildlife corridor are located within 10 km. of the mine lease. The Karo Karampada Elephant Corridor is also reported to be located beyond 10 km of the mine lease. In support of this, a map duly authenticated by the Principal Chief Conservator of Forests, Biodiversity Conservation cum Chief Wildlife Warden, Jharkhand has

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also been submitted. The Uluburu reserve forest and the two protected forests namely Gua PF and Tatiba PF are located in the buffer zone of the mine. The mine working will be opencast by semi-mechanized method involving drilling and blasting. The targetted production capacity of the mine is 6,00,000TPA of iron ore and 4,275TPA of manganese ore and the life of mine is 8years for iron ore and 61years for the manganese ore. The mineral will be transported through the road. The topography of the area is undulated and hilly at an elevation ranging from 440m RL to 630m RL. The ultimate working depth during conceptual period will vary between 555m AMSL-535m AMSL. The groundwater table is reported at 405m AMSL. The mine working will not intersect the groundwater table. The water requirement of the project is estimated as 12m<sup>3</sup> per day, which will be obtained from the ground water. There is no population in the core zone, therefore, no displacement of population and R&R is involved. It is estimated that a total of 16,44,000 m<sup>3</sup> of waste from the iron section and 7,35,000 m<sup>3</sup> of waste in the manganese section will be generated during the mine life. The waste during the plan period will be dumped over dump no. 4 and 5 and will cover an area of 2.85 ha. The dumps will be suitably terraced. The exhausted pits are proposed to be backfilled from the 7<sup>th</sup> year onwards. An area of 41.442 ha will be covered by plantation post mine. NOC from the Jharkhand State Pollution Control Board obtained on 28.12.2007 for production of 3000TPD of iron ore and 115TPD of manganese ore. The public hearing of the project was held on 25.11.2006 for production of 6LTPA of iron ore and 4,274TPA of manganese ore involving lease area of 46.82ha. The Indian Bureau of Mines had approved mining plan of the project on 06.04.2005 for lease area of 46.62ha. The forestry clearance for renewal of mining lease over broken up area of 15.57ha within a lease of 46.62ha was granted by the Regional Office, Bhubneswar on 10.04.2007. In principle forestry clearance for diversion of additional 16.846ha forestland was accorded by the Regional Office, Bhubneswar on 22.07.2008. The annual recurring cost towards environmental protection measures is proposed as Rs.4,50,000/-.

2. The Ministry of Environment and Forests has examined the application in accordance with Section 12 of the EIA Notification, 2006 read with para 1.2 of the Circular No. J-11013/41/2006-IA.II(I) dated 13.10.2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned Ajitaburu Iron and Manganese Ore Mining Project of M/s Devkabal Velji, for an annual production capacity of 6,00,000tonnes (0.6million tonnes) of iron ore and 4,275tonnes of manganese ore by opencast semi-mechanized method involving total mine lease area of 46.62ha, subject to implementation of the following conditions and environmental safeguards.

#### A. Specific Conditions

- (i) All the conditions stipulated by the Jharkhand State Pollution Control Board in their NOC shall be effectively implemented.

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- (ii) Necessary forestry clearance under the Forest (Conservation) Act, 1980 for the entire forestland involved in the project shall be obtained before starting mining operation in that area. Environmental clearance is subject to grant of forestry clearance.
- (iii) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004, as may be applicable to this project.
- (iv) Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.
- (v) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.
- (vi) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. The first order streams and the seasonal nullahs originating from the mining lease area shall be protected.
- (vii) The top soil, if any, shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.
- (viii) The over burden (OB) generated during the mining operations shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. There shall be two external dumps in an area of 2.85 ha. Proper terracing of OB dumps should be carried out so that the overall slope shall not exceed 28 degree. Backfilling shall start from the 7<sup>th</sup> year onwards. 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 shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests and its Regional Office located at Bhubaneswar on six monthly basis.
- (ix) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and OB dump(s) to prevent run off of water and flow of sediments directly into the Karo River, seasonal nullahs and other water bodies. The water so collected should be utilized

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for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after the monsoon and maintained properly.

Garland drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and over burden dump to prevent run off of water and flow of sediments directly into the Karo River, seasonal nallahs and other water bodies 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 shall be constructed at the corners of the garland drains and desilted at regular intervals.

- (x) Dimension of the retaining wall at the toe of the over burden dumps and the OB benches within the mine to check run-off and siltation shall be based on the rainfall data.
- (xi) Plantation shall be raised in an area of 41.442ha including a 7.5m wide green belt in the safety zone around the mining lease, over burden dumps, backfilled and reclaimed area, mine benches, roads etc. by planting the native species in consultation with the local DFO/Agriculture Department. The density of the trees should be around 2500 plants per ha.
- (xii) Effective safeguard measures such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as haul road, loading and unloading point and transfer points. It shall be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xiii) Regular monitoring of the flow rate of the springs and perennial nallahs flowing in and around the mine lease shall be carried out and records maintained.
- (xiv) 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.
- (xv) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease 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-  
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May), monsoon (August), post-monsoon (November) and winter (January) and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar, the Central Ground Water Authority, and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.

- (xvi) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and ground water) for the project.
- (xvii) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xviii) Appropriate mitigative measures shall be taken to prevent pollution of the Karo River in consultation with the State Pollution Control Board.
- (xix) Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral from mine face to the beneficiation plant. The vehicles shall be covered with a tarpaulin and shall not be overloaded.
- (xx) No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during the day time. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxi) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxii) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.
- (xxiii) Consent to operate shall be obtained from the State Pollution Control Board prior to start of enhanced production from the mine.
- (xxiv) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and the wastewater generated during the mining operation.

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(xxv) Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.

(xxvi) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant, sloth bear, python etc. spotted in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented 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. All the safeguard measures brought out in the Wildlife Conservation Plan so prepared specific to the project site shall be effectively implemented. A copy of action plan shall be submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.

(xxvii) The project proponent shall effectively implement all the safeguard measures as may be stipulated by the Principal Chief Conservator of Forests, Biodiversity Conservation cum Chief Wildlife Warden, Jharkhand. The cost of implementing such safeguard measures shall be borne by the project proponent, out of the project cost.

(xxviii) The entire mining lease area shall be fenced by erecting solar powered electric fencing all around it. The fencing so erected shall be maintained properly and the cost towards erection and maintenance of the solar powered electric fencing shall be borne by the project proponent out of the project cost.

(xxix) No transportation of ore outside the mine lease area shall be carried out after the sunset.

(xxx) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(xxxi) 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 should be made without prior approval of the Ministry of Environment & Forests.

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- (ii) No change in the calendar plan including excavation, quantum of mineral iron ore and manganese 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 RSPM, 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.
- (iv) Data on ambient air quality (RSPM, SPM, SO<sub>2</sub> & NO<sub>x</sub>) should be regularly submitted to the Ministry including its Regional office located at Bhubaneswar 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 19<sup>th</sup> May, 1993 and 31<sup>st</sup> 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) 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.
- (x) 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.

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- (xi) The project authorities should inform to the Regional Office located at Bhubaneswar regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (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) The project proponent shall submit six monthly report on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Bhubaneswar, Central Pollution Control Board and State Pollution Control Board.
- (xiv) 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.
- (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, 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 Bhubaneswar.

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.

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 made thereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Jharkhand and any other Court of Law relating to the subject matter.

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6. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred within a period of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.

  
(SATISH C. GARKOTI)  
Additional Director (S)

**Copy to:**

- (i) The Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- (ii) The Secretary, Department of Environment, Government of Jharkhand, Secretariat, Ranchi.
- (iii) The Secretary, Department of Mines, Government of Jharkhand, Secretariat, Ranchi.
- (iv) The Secretary, Department of Forests, Government of Jharkhand, Secretariat, Ranchi.
- (v) The Principal Chief Conservator of Forests, Biodiversity Conservation cum Chief Wildlife Warden, Government of Jharkhand, Secretariat, Ranchi.
- (vi) The Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (EZ), A/3, Chandra Shekar, Bhubneshwar-751 023.
- (vii) The Chairman, Central Pollution Control Board, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
- (viii) The Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, Ranchi - 834004, Jharkhand.
- (ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (x) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- (xi) The District Collector, West Singhbhum District, Jharkhand.
- (xii) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (xiii) Monitoring File.
- (xiv) Guard File.
- (xv) Record File.