

03 FEB 2009

No.J-11015/779/2007-IA.II (M)

Government of India
Ministry of Environment and Forests

Paryavaran Bhawan
CGO Complex, Lodi Road,
New Delhi-110 003

Dated the 16th January, 2009

To

M/s Orissa Mining Corporation Limited
OMC House, P.O. Box-34,
Bhubaneswar,
Orissa-751 001
E-mail: dkpattanaik60@gmail.com

Subject: Mahaparat Iron Ore Mining Project of M/s The Orissa Mining Corporation Limited, located in Village Unchabali, Tehsil Barbil, District Keonjhar, Orissa- environmental clearance regarding

Sir,

This has reference to your letter No. 12680/OMC/F&E/07 dated 13.06.2007 and subsequent letters dated 15.04.2008, 26.05.2008 and 08.08.2008 on the subject mentioned above. The proposal is for opening of a new mine for production of 70,000 tonnes per annum (0.07 million TPA) of iron ore. The total mine lease area of the project is 68ha, out of which 0.1ha is an agricultural land, 67.43ha is wasteland and 0.47ha is surface water bodies. No forestland is involved. Area proposed for mining is 50.894ha, an area of 12.681ha is kept for green belt and 4.425ha is others (untouched area). The Baitarani River is flowing in the buffer zone of the mine at distance of 3km from the mine lease boundary. Modification/diversion of the existing natural drainage pattern has not been proposed. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant 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. In support of this, a map duly authenticated by the DFO cum Wildlife Warden, Keonjhar Division has been provided showing that no National Park/Sanctuary and no Wildlife Corridor exist within 10 km of the mine lease. Four Reserve Forests namely Naibuga RF, Pidhapokhari RF, Baitarni RF and Chamakpur RF are located in the buffer zone of the mine at a distance of 5.5km, 7km, 7km and 7.5km respectively from the mine lease boundary. In addition, Balda Forest, Dandahui Forest and unclassified Forest are also 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 70,000 TPA of iron ore and the life of mine is 30 years. Approximately 250 TPD of mineral will be transported through the road. The topography of the area is hilly at an elevation above mean sea level ranging from 525m to 605m. There will be four quarries namely; (i) the Western Quarry, (ii) the Eastern Quarry (iii) the Southern Quarry and (iv) the Ichinda Quarry (for float ore). The existing ground

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level for level for the Western Quarry is 571m AMSL, for the Eastern Quarry, the ground level varies from 539m-605m AMSL, for the Southern Quarry, the ground level varies from 700m-800m AMSL and for the Ichinda Quarry, the ground level varies from 540m-558m AMSL. The ultimate working depth will be 550m AMSL for the Western Quarry, 533m AMSL for the Eastern Quarry, 682m AMSL for the Southern quarry and 540m AMSL for the Ichinda Quarry. The ground water table in the core zone is reported to vary between 487m-500m AMSL. The mine working will not intersect the ground water table. The peak water requirement of the project is estimated as 66m³ per day, which will be sourced from the surface water and the ground water. There is no population in the core zone, therefore, displacement of population and R&R is not involved. It is estimated that 0.287million m³ of waste will be generated during the life of the mine, which will be temporarily disposed off in a small external dump occupying an area of 0.536ha and backfilling in the initial 5 years will be carried out in the Western Quarry. Later on it will be carried out in all the quarries and there will be no external dump at the end of the mine life. Out of the total 50.894ha excavated area, an area of 27.77ha will be backfilled, an area of 6.224ha will be afforested and an area of 16.693ha will be developed as water body during the post mining stage. Plantation will be raised in an area of 46.675ha at the end of the mine life. The Consent to Establish from the State Pollution Control Board, Orissa was obtained on 29.12.2007 for production of 53,550TPA of iron ore involving lease area of 68ha. The public hearing of the project was held on 14.03.2008, as per the EIA Notification, 2006 for production up to 0.07million TPA of iron ore over an area of 68ha. The Indian Bureau of Mines had approved modified mining plan alongwith progressive mine closure plan of the project on 31.01.2008 for lease area of 68ha. The capital cost of the project is Rs.70Lakhs and the capital cost for the environmental protection measures is proposed as Rs.45Lakhs. The annual recurring cost towards environmental protection measures is proposed as Rs.20Lakhs.

2. The Ministry of Environment and Forests has examined the application in accordance with the Section 12 of the EIA Notification, 2006 read with para 2.2.1(i) 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 Mahaprabat Iron Ore Mining Project of M/s The Orissa Mining Corporation Limited for an annual production capacity of 70,000tonnes (0.07million tonnes) of iron ore by opencast semi-mechanized method involving total mining lease area of 68ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) The project proponent shall obtain fresh Consent to Establish from the State Pollution Control Board, Orissa for production capacity of 70,000TPA and effectively implement all the conditions stipulated therein.

- (ii) The environmental clearance is subject to approval of the State Landuse Department, Government of Orissa for diversion of agricultural land for non-agricultural use.
- (iii) The project proponent shall effectively address the concerns raised by the locals in the public hearing as well as during consideration of this project, while implementing this project
- (iv) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the 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.
- (v) The project proponent shall ensure that no natural watercourse and/or water resources are obstructed due to any mining operations. Adequate measures shall be taken while diverting seasonal streams, if any, during the course of mining operation. An area of 0.47ha shown as water body within the mine lease shall be left undisturbed.
- (vi) The top soil 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.
- (vii) The over burden (OB) generated during the mining operation shall be temporarily stacked at earmarked sites for backfilling. Backfilling shall commence from the 5th year of mining operation and there shall be no external over burden dump. Out of the total 50.894ha excavated area, an area of 27.77ha shall be backfilled. The backfilled area shall be afforested. Monitoring and management of rehabilitated areas should 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.
- (viii) The voids left unfilled in an area of 16.693ha shall be converted into the water body. The higher benches of the excavated void/mine pit shall be terraced and plantation done to stabilise the slopes. The slopes of higher benches shall be made gentler for easy accessibility by the local people to use the water body. Peripheral fencing shall be carried out all along the excavated area.
- (ix) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, mineral and temporary OB dumps to prevent run off of water and flow of sediments directly into the Baitarni River and other water bodies. The water so collected shall be utilized 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 around the mine pit, topsoil dump and temporary over burden dumps to prevent run off of water and flow of sediments directly into the Baitarni River and other water bodies 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 desilted at regular intervals.

- (x) Dimension of the retaining wall at the toe of the temporary OB dumps and the over burden benches within the mine to check run-off and siltation shall be based on the rain fall data.
- (xi) Plantation shall be raised in an area of 46.675ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, quarry benches, around water body, 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) Regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of SPM and RSPM such as around crushing and screening plant, loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. 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) 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.
- (xiv) 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 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 shall 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.
- (xv) Appropriate mitigative measures shall be taken to prevent pollution of the Baitarni River in consultation with the State Pollution Control Board.

- (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, if any) required 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) 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. The mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded. No transportation of ore outside the mine lease area shall be carried out after the sunset.
- (xix) No blasting shall be carried out after the sunset. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xx) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxi) 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.
- (xxii) Consent to operate shall be obtained from the State Pollution Control Board prior to start of production from the mine.
- (xxiii) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxiv) Land oustees and land losers/affected people, if any, shall be compensated and rehabilitated as per the National Policy on Resettlement and Rehabilitation of Project Affected Families.
- (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 authorities should undertake sample survey to generate data on pre-project community health status within a radius of 1 km from proposed mine.

(xxvii) 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.

(xxviii) The project proponent shall take all precautionary measures during mining operation for conservation and protection of endangered fauna namely elephant 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.

(xxix) 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.
- (ii) No change in the calendar plan including excavation, quantum of mineral iron ore and waste should be made.
- (iii) Atleast four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM, SPM, SO₂ & 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 (RSPM, SPM, SO₂ & NO_x) should be regularly submitted to the Ministry of Environment and Forests 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.

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- (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) 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 of Environment and Forests and its Regional Office located at Bhubaneswar.
- (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 shall be marked to concerned Panchayat / local NGO, if any, from whom suggestion / representation has been received, while processing the proposal.
- (xv) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the 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 at 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 the 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 Orissa and any other Court of Law relating to the subject matter.

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 Orissa, Secretariat, Bhubaneswar.
- (iii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
- (iv) The Chief Wildlife Warden, Government of Orissa, Bhubaneswar.
- (v) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- (vi) The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharpur, Bhubaneswar-751023.

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- (vii) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (viii) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (ix) The District Collector, Keonjhar District, Government of Orissa.
- (x) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (xi) Monitoring File.
- (xii) Guard File.
- (xiii) Record File.

