



ANNEXURE - XXXII

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

Dated the 2nd September, 2008

To

M/s The Orissa Mining Corporation Ltd. -
OMC House, P.O. Box -34,
Bhubaneswar - 751 001,
Orissa
Email: info@orissamining.com

Subject: Expansion of Kurmitar Iron Ore Mining Project of M/s The Orissa Mining Corporation Ltd. located in Village (s) Tilkura, Usukuda and Sareikala, Tehsil Bonai, District Sundargarh, Orissa - Environmental Clearance regarding.

Sir,

This has reference to your letter No. 160605/OMC/F&E/07 dated 15.05.2007 and subsequent letters dated 04.10.2007 and 03.04.2008 on the subject mentioned above. The proposal is for renewal of mining lease and enhancement of production of iron ore from 0.5million tonnes per annum (million TPA) to 2.4million TPA. The total mine lease area of the project is 1212.47ha, out of which 5.5143ha is an agricultural land, 1205.94ha is forestland and 1.0157ha is others (settlements). The lease hold includes a part of Khandadhar Reserve Forest and Khandadhar Protected Reserve Forest. Area proposed for mining is 114.281ha, an area of 15.652ha is kept for over burden dumps, 0.121ha for mineral storage, 3.058ha for roads, 2.604ha for green belt and 1076.754ha is others (untouched area). Three nallahs namely Paichkundi Nallah, Marda Nallah and Burhghur Nallah are located in the buffer zone of the mine at a distance of 0.3km, 0.5km and 1.8km respectively from the mine lease. In addition, two rivers namely Korapnai Nadi and Totunda Nadi are flowing in the buffer zone of the mine at a distance of 3km and 4km respectively from the mine lease. 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. The area also does not report to form corridor for Schedule-I fauna. In support of this, a map duly authenticated by the Divisional Forest Officer and Wildlife Warden, Bonai Division has been provided. Two reserve forests namely Torha RF and Khajurdiha RF are in the buffer zone of the mine at a distance of 8km each from the mine lease boundary. The mine working will be opencast by semi-mechanized method involving drilling and blasting. The targetted production capacity of the mine is 24,00,000TPA and the life of mine is 24

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15 years. Mineral will be transported through road. A portable crushing and screening plant with a capacity of 225TPH will be installed. The topography of the area is hilly at an elevation ranging from 620m to 1065m AMSL. The ultimate working depth of mine will be 940m RL. The groundwater table is reported to be below 904m RL. Mine working will not intersect groundwater table. The water requirement of the project is estimated as 83m³ per day, which will be sourced from the Paikuncha Nallah. Twenty eight households from two villages namely Sareikala and Tilkuda comprising a population of 136 tribals (47 from Sareikala and 89 from Tilkuda) are in the core zone, however, displacement of population and R&R has not been envisaged. It is estimated that 4.407million m³ of waste will be generated during the life of mine, which will be backfilled. Backfilling will start from the year 2011. There will be no external OB dump at the end of the mine life. Out of 114.281ha of excavated area, an area of 91.425ha will be backfilled. Plantation will be raised in an area of 132.658ha at the end of the mine life. The public hearing of the project was held on 13.03.2007, as per EIA Notification, 2006 for production of 2.4millionTPA of iron ore involving lease area of 1212.47ha. The Indian Bureau of Mines had approved mining plan including progressive mine closure plan of the project on 10.03.2006 for lease area of 1212.47ha. The Ministry of Environment and Forests had accorded in-principle forestry clearance for diversion of 133.112ha forestland in Bonai Forest Division for iron ore mining on 14.09.2006. The capital cost of the project is Rs.964Lakhs.

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 Kurmitar Iron Ore Mining Project of M/s The Orissa Mining Corporation Ltd. for an annual production capacity of 24,00,000 tonnes (2.4 million tonnes) by opencast semi-mechanized method involving total lease area of 1212.47ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) The project proponent shall obtain Consent to Establish from the State Pollution Control Board, Orissa and effectively implement all the conditions stipulated therein.
- (ii) Environmental clearance is subject to grant of forestry clearance. Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 1205.94ha forestland involved in the project shall be obtained before starting mining operation in that area. No mining will be undertaken in the forest area without obtaining requisite prior forestry clearance.

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- (iii) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. In case of working below ground water table, prior approval of the Ministry of Environment and Forests and Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.
- (iv) 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 200m length 4th order seasonal channel during the course of mining operation.
- (v) 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.
- (vi) The existing over burden (OB) lying in an area of 15.625ha shall be re-handled and backfilled. Backfilling shall start from the year 2011 and the existing dumps shall be liquidated. There shall be no external over burden dumps. Out of the total excavated area of 114.281ha, an area of 91.425ha shall be backfilled and 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.
- (vii) Catch drains and siltation ponds of appropriate size shall be constructed around the mine working, soil, mineral and temporary OB dumps to prevent run off of water and flow of sediments directly into the Paichkundi Nallah, Marda Nallah, Burhghur Nallah, Korapnai Nadi, Totunda Nadi 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 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 Paichkundi Nallah, Marda Nallah, Burhghur Nallah, Korapnai Nadi, Totunda Nadi 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

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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.

- (viii) Dimension of the retaining wall at the toe of temporary OB dumps and over burden benches within the mine to check run-off and siltation shall be based on the rain fall data.
- (ix) Plantation shall be raised in an area of 132.658ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled and reclaimed area, quarry benches, area earmarked for ore stacking, 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.
- (x) 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 transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.
- (xi) Regular monitoring of the flow rate of the springs and perennial nallahs shall be carried out and records maintained.
- (xii) Regular monitoring of water quality upstream and downstream of Karo nallah, Paichkundi Nallah, Marda Nallah, Burhghur Nallah shall be carried out and record of monitored data should be maintained and submitted to Ministry of Environment and Forests, its Regional Office, Bhubneswar, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (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 Ministry of Environment and Forests and its Regional Office, Bhubaneswar, Central Ground Water Authority and Regional Director, Central Ground Water Board.

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- (xv) Appropriate mitigative measures shall be taken to prevent pollution of Korapnai Nadi and Totunda Nadi 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) for the project.
- (xvii) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with 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 covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- (xix) 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 plant 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 enhanced production from the mine.
- (xxiii) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for workshop and wastewater generated during mining operation.
- (xxiv) Digital processing of the entire lease area using remote sensing technique shall be carried out regularly once in three years for monitoring land use pattern and report submitted to the Ministry of Environment and Forests and its Regional Office, Bhubaneswar.
- (xxv) 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.

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(xxvi) 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.

(xxvii) 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 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 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 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.

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(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 any 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 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 Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.

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- (v) The Chief Wildlife Warden, Government of Orissa, Bhubaneswar.
- (vi) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
- (vii) The Chief Conservator of Forests, Regional Office (EZ), Ministry of Environment and Forests, A-3 Chandrashekharapur, Bhubaneswar-751023.
- (viii) The Chairman, Orissa State Pollution Control Board, Parivesh Bhawan, A/118 Nilakantha Nagar, Unit-VIII, Bhubaneswar-751012.
- (ix) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (x) The District Collector, Sundergarh District, Government of Orissa.
- (xi) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (xii) Monitoring File.
- (xiii) Guard File.
- (xiv) Record File.

