

F.No.J-11015/439/2007-IA.II(M)

Government of India
Ministry of Environment & Forests

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

Dated the 28th May, 2008

To

M/s Orissa Mining Corporation Limited
OMC House, Bhubanswar-751 001
Orissa
E-mail: info@orissamining.com

Subject: Kodingamali Bauxite Mining Project of M/s Orissa Mining Corporation Limited located in Kodingamali, Tehsil Koraput, District Koraput, Orissa- Environmental Clearance regarding.

Sir,

This has reference to your letter No.10636/OMC/2007 dated 15.05.2007 and subsequent letters dated 26.12.2007 and 21.02.2008 on the subject mentioned above. The proposal is for opening of a new mine for production of 3million tonnes per annum (million TPA) of bauxite, which will be supplied to the alumina refinery of M/s Hindalco Industries Limited located at Kansari- gurha, District Raygada at a distance of about 3km from the mine lease. The total mine lease area of the project is 447.25ha, which is a forestland falling under Kodingamali Reserve Forest of Koraput Forest Division. The Kodingamali plateau is a part of Eastern Ghat Hill Range in Orissa. Area proposed for mining is 222.21ha, an area of 18.94ha is kept for green belt development and 206.1ha is others (future prospecting). The Patagarha River is located at a distance of 3.5km in the north direction from the mine lease boundary. No national park/wildlife sanctuary/biosphere reserve/elephant 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. There are 12 protected forests and 6 reserve forests in the buffer zone of the mine. The mine working will be opencast by mechanized method involving blasting. The targetted production capacity of the mine will be 3million TPA of bauxite and the life of mine will be 20years. The transportation of mineral will be through pipe conveyor. There is no population in the core zone on plateau top, therefore, no displacement of population and R&R is envisaged. The topography of the area is a plateau top at an elevation of 1276m AMSL. The general ground level is at 900m AMSL. The ultimate working depth of mine will be 40m from the hill top i.e., upto 1236AMSL. The mine working will be much above the groundwater table and it will not intersect the ground water table. The peak water requirement of the project is estimated as 200m³ per day, which will be met from the treated waste water.

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from alumina refinery during the initial years and later on from the rainwater harvested in the mine pits. No groundwater or surface water will be sourced for the mining operation. There will be zero discharge from the mine. Approximately 23240m³ per month of solid waste comprising 240m³ per month of topsoil (soil/clay/murram), 8600m³ per month of over burden and 14400m³ per month of subgrade ore will be generated, which will be temporarily stacked at the earmarked site(s). It is estimated that 2.06million m³ of over burden will be generated during the mine life, which will be stored in the earmarked areas for the first five years and thereafter concurrently backfilled. Backfilled will start from the 6th year onwards. There will no external dump at the end of the mine life. Plantation will be raised in an area of 243.65ha at the end of the mine life and there will be no water body left during the post mining stage. The State Pollution Control Board, Orissa had issued Consent to Establish to the project on 12.01.2007 for production of 3million TPA of bauxite involving lease area of 447.25ha. The Public hearing of the project was held on 27.09.2006 for production of 3million TPA of bauxite over an area of 447.25ha. The Indian Bureau of Mines had approved mining plan along with the progressive mine closure plan of the project on 15.09.2006 for lease area of 447.25ha. The forestry clearance for the project has not been obtained as yet. The capital cost of the project is Rs.28,290Lakhs.

2. The Ministry of Environment and Forests has examined the application in accordance with Section 12 of the EIA Notification 2006 read with para 2.2.1(i)(a) of 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 Kodingamali Bauxite Mining Project of M/s Orissa Mining Corporation Limited for an annual production capacity of 3000,000tonnes (3 millions tonnes) of bauxite by opencast mechanized method involving lease area of 447.25ha, subject to implementation of the following conditions and environmental safeguards.

A. Specific conditions

- (i) All the conditions stipulated by the State Pollution Control Board in the Consent to Establish shall be effectively implemented.
- (ii) Necessary forestry clearance under the Forest (Conservation) Act, 1980 for an area of 447.25ha forestland shall be obtained before starting mining operation in that area. Environmental clearance is subject to grant of forestry clearance.
- (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 & Forests and Central Ground Water Authority shall be obtained for which a detailed hydro-geological study shall be carried out.

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- (iv) The project proponent shall ensure that no natural watercourse/or water resources shall be obstructed due to any mining operations.
- (v) The top soil should temporarily be stored at earmarked site(s) only and it should not be kept unutilized for a period more than 3 years. The topsoil should be used for land reclamation and plantation.
- (vi) The solid waste generated during the initial five years due to mining operation shall temporarily be stacked at earmarked dump site(s) only and thereafter concurrently backfilled. Backfilling shall start from the 6th year onwards. There shall be no external over burden dump at the end of the mine life. The backfilled area shall be reclaimed and rehabilitated by plantation. 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 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 working pit, soil, mineral and temporary OB dumps to prevent run off of water and flow of sediments directly into the river and water bodies. 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 drains, settling tanks and check dams of appropriate size, gradient and length shall be constructed both around the mine pit and temporary over burden dumps to prevent run off of water and flow of sediments directly into the river and 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 should 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 dumps and OB benches within the mine to check run-off and siltation should be based on the rain fall data.
- (ix) Plantation shall be raised in an area of 243.65ha including a 7.5m wide green belt in the safety zone around the mining lease, backfilled area, 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.

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- (x) 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 RPM such as haul road, loading and unloading point and transfer points. 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) 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.
- (xii) Regular monitoring of ground water level and quality should 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 may 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.
- (xiii) Appropriate mitigative measures should be taken to prevent pollution of Patagarha River in consultation with the State Pollution Control Board.
- (xiv) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of ground water and/or surface 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, Central Ground Water Board.
- (xvi) 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 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 shall either be operated with dust extractors or equipped with water injection system.
- (xix) Consent to operate shall be obtained from State Pollution Control Board prior to start of production from the mine.

- (xx) Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generated during mining operation.
- (xxi) Digital processing of the entire lease area using remote sensing technique should be done regularly once in three years for monitoring land use pattern and report submitted to the Ministry of Environment and Forests and its Regional Office, Bhubneswar.
- (xxii) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered fauna such as tiger, four horned antelope, leopard cat, leopard, wolf, python etc. spotted in the study area. Action plan for conservation of flora and fauna prepared shall be 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. A copy of action plan if so revised by the State Government, if any, shall be submitted to the Ministry and its Regional Office, Bhubneswar within 3 months.
- (xxiii) 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 bauxite 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 & 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 & NO_x) should be regularly submitted to the Ministry including its Regional office located at Bhubneshwar 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.

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- (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) 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 project authorities should inform to the Regional Office located at Bhubneshwar 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 Bhubneshwar.
- (xii) The Regional Office of this Ministry located at Bhubneshwar 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, Bhubneshwar, 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 and suggestion / representation has been received while processing the proposal.

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(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.

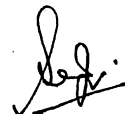
(xvi) The project authorities should advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned, within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a 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 at Bhubneshwar.

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 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 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.

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- (iii) The Secretary, Department of Mines and Geology, Government of Orissa, Secretariat, Bhubaneswar.
- (iv) The Secretary, Department of Forests, Government of Orissa, Secretariat, Bhubaneswar.
- (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 Nilkantha 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, Koraput District, Orissa.
- (xi) EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
- (xii) Monitoring File.
- (xiii) Guard File.
- (xiv) Record File.

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