

**No. J-11015/184/2011-IA.II (M)**  
Government of India  
Ministry of Environment & Forests

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

Dated the 17<sup>th</sup> June, 2013

To,

M/s Hindalco Industries Ltd.,  
Mines Division Logardaga,  
PO & District Lohardaga-835 302  
Jharkhand

**Subject: Bhusar Bauxite Mining Lease with production capacity of 2.80 LTPA of M/s Hindalco Industries Ltd. Located at Village Bhusar, Distt-Lohardaga, Jharkhand. (65.31 ha) - environmental clearance regarding.**

Sir,

This has reference to your No. HIL/LHD/GM(M)/MoEF/238 dated 22.06.2011 and subsequent letters dated 17.02.2012 and 27.11.2012 on the subject mentioned above. The Proposal is for renewal of mine lease, which fell due in 1996 for production of 0.28 million TPA of bauxite (ROM). Mine lease area is 65.31 ha. The land use is 62.31 ha of waste land (barren land) and 3.00 ha is unused land, no forest land is involved.

2. The co-ordinates of the lease area are 23°29'00"N to 23° 30'00"N and 84° 36'00"E to 84°37'00"E. The Sukri Nadi flows at a distance of 0.5 km in N direction from the mine lease. No national park/wildlife sanctuary/biosphere reserve/ Elephant reserve etc. is reported to be located in the core and buffer zone of the mine.

3. The mine working will be opencast by mechanized method involving drilling and blasting. The targeted production capacity of the mine is 0.28 million TPA (ROM) and the life of mine is 4 years. Transportation of the materials will be done by rope way from the site. There will not be any vehicles involved for the material transportation. The area is flat topped, elevated plateau hydro-geologically, the area is underlain by consolidated formations characterized by presence of secondary porosity viz. fissures, fractures, joints and zone of weathering. The Bhusar leasehold, occur on the Bagru Hill plateau, with NW-SE elongation, has a length of about 2,900 m and a width of 1,200 m and an elevation of 1,025 m to 1,055 m above Mean Sea Level. Ultimate working depth will be 18 m bgl. The mine working will not intersect ground water table. Water requirement is estimated as 24 kld which will be met by mine sump. There is no population reported in the core zone, therefore, displacement of population and R&R is not involved. The total over burden generation will be 716647 m<sup>3</sup> during the entire life of the

mine which will be used for backfilling. It is proposed to plant 6800 plant species.

4. The public hearing of the project was held on 20.09.2012. The Indian Bureau of Mines had approved mining scheme along with progressive mine closure plan of the project vide no. 314(3)/2011-MCCM(CZ)/MS-21 dated 22.12.2011 for lease area of 65.31 ha. The capital cost of the project is Rs. 258.78 lakhs and the recurring capital cost for environmental protection measures is proposed as Rs. 17.5 Lakhs with existing recurring cost of 23.19 lakhs. The cost of Environmental protection measures encompasses the combined expenditure of all the leases i.e. Bagru, Bhusar, Hisri Old and Hisri New.

5. It has been observed that the mine continued production of bauxite after it fell due for renewal in 1996 without obtaining requisite prior environmental clearance. The prosecution report has been filed in the Court of Chief Judicial Magistrate, Lohardaga against the company on 18.10.2012 vide Case No. C.III 06/2012 to take cognizance of offence by the said court under section 15 of Environment (Protection) Act, which has been committed by the offending project and the board resolution stating that such violations of Environment (protection) Act, 1986 will not be repeated in the future has been passed by the Board of Director's dated 8.12.2011, the same have been taken on record.

6. The Ministry of Environment and Forests has examined the application in accordance with Section 12 of EIA Notification 2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned Bhusar Bauxite Mining project of M/s Hindalco Industries Ltd. for an annual production capacity of 0.28 million tonnes of bauxite by opencast mechanised method involving total lease area of 65.31 ha, 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 their NOC shall be effectively implemented.
- (ii) Environmental clearance is subject to obtaining clearance under the Wildlife (Protection) Act, 1972 from the competent authority, as may be applicable to this project.
- (iii) The mining operations shall be restricted to above ground water table and it should not intersect groundwater table. Prior approval of the Ministry of Environment & Forests and Central Ground Water Authority shall be obtained for mining below water table.
- (iv) The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.

- (v) Top soil should be stacked with proper slope at earmarked site(s) only with adequate measures and should be used for reclamation and rehabilitation of mined out areas.
- (vi) The entire waste generated shall be backfilled and there shall be no external over burden dump left at the end of the mine life. The entire backfilled area shall be reclaimed by plantation. The back filling should be carried out in such a manner that it is restored to the normal ground level. 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, Bhubaneswar on six monthly basis.
- (vii) Catch drains and siltation ponds of appropriate size should be constructed for the working pit, temporary OB dumps, if any and mineral dumps to arrest flow of silt and sediment. 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 of appropriate size, gradient and length shall be constructed for both mine pit and temporary 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.

- (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 52.50 ha including a 7.5m wide green belt in the safety zone around the mining lease by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO/Agriculture Department at the end of life of mine. The density of the trees should be around 2500 plants per ha.
- (x) Regular water sprinkling should 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 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 should 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 i.e. January, April-May, August, November and the data thus collected may be sent regularly to Ministry of Environment and Forests, its Regional Office, Bhubaneswar; Central Ground Water Authority and Central Ground Water Board.
- (xiii) The project authorities should obtain prior approval of the competent authority for drawal of groundwater if any, required for the project.
- (xiv) 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.
- (xv) 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.
- (xvi) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xvii) Consent to operate should be obtained from SPCB before starting enhanced production from the mine.
- (xviii) 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 and 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 PM<sub>10</sub>, 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) 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.
- (v) 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.
- (vi) Industrial wastewater (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 effluents from workshop.
- (vii) 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.
- (viii) Occupational health surveillance programme 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 purposes. Year-wise expenditure should be reported to the Ministry and its Regional Office located at Bhubaneswar.
- (xi) 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 requisite data/information/monitoring reports.
- (xii) 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.

- (xiii) A copy of the clearance letter will be marked to the concerned Panchayat /local NGO, if any, from whom suggestions/representation has been received while processing the proposal.
- (xiv) 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.
- (xv) State Pollution Control Board should display a copy of the clearance letter at the Regional Office, District Industry Centre and Collector's/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.

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

8. 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.

9. 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 there under 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.

10. Any appeal against this environmental clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

**(Dr. Saroj)**  
**Director**

**Copy to:**

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
- (ii) The Secretary, Department of Environment and Forests, Government of Jharkhand, Secretariat, Ranchi
- (iii) The Secretary, Department of Mines, Government of Jharkhand, Secretariat, Ranchi
- (iv) The Principal Chief Conservator of Forests, Biodiversity Conservation cum Chief Wildlife Warden, Government of Jharkhand, Secretariat, Ranchi.
- (v) The Chief Conservator of Forests, Ministry of Environment & Forests, Regional Office (EZ), A/3, Chandra Shekar, Bhubaneswar – 751023
- (vi) The Chairman, Central Pollution Control Board, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi – 110032
- (vii) The Chairman, Jharkhand State Pollution Control Board, T.A. Division Building (Ground Floor), HEC Campus, P.O. Dhurwa, Ranchi – 834004, Jharkhand
- (viii) The Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi – 110 001
- (ix) The Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur – 440001
- (x) The District Collector, Lohardaga District, Jharkhand.
- (xi) Guard File

**(Dr. Saroj)  
Director**