

**BY SPEED POST**

**No. J-11015/23/2011-IA.II (M)  
Government of India  
Ministry of Environment & Forests**

**Paryavaran Bhavan,  
C.G.O. Complex, Lodi Road,  
New Delhi-11 0 003.**

Dated: the 06<sup>th</sup> January, 2014

To,

**M/s Hindalco Industries Ltd.,  
Jadhav Sarnaik Building No.-4,  
Vasant Nagar, Near Circuit House,  
Tarabai Park Kolhapur-416003  
Maharashtra**

Subject: **Mogalgad Bauxite Mining Project of M/s Hindalco Industries Ltd., Village Mogalgad, Chandgad Taluka, District Kolhapur, Maharashtra, 9.05ha, 0.1 MTPA (Mine lease area: 7.5 Ha, Approach Road: 1.55 Ha) - Environmental clearance regarding.**

Sir,

This has reference to your letter No. nil dated 27.04.2011 and subsequent letter dated 11.06.2013 on the subject mentioned above. The terms of reference to the proposal for undertaking detailed EIA study were prescribed on 20.05.2011. The proponent submitted the EIA/EMP and public hearing documents which was considered by Expert Appraisal Committee in its meeting held during August 21-23, 2013 wherein Committee recommended the proposal for grant of environmental clearance.

2. Mogalgad Bauxite Mine of M/s Hindalco Industries Ltd. is a new mine with production capacity of 0.1 million tonnes per annum of Bauxite Ore from the MLA 9.05 Ha. The mine is located at Kitwade and Hajgoli villages, Chandgad Taluka, District Kolhapur, Maharashtra. The Mogalgad Bauxite Mine falls between Latitudes 15°49'17" N to 15°50'05" N and Longitude 74°17'14." E to 74°17'56" E. This is category 'A' project as it is located near interstate boundary of Maharashtra and Karnataka.

3. Mining will be done by opencast semi-mechanized method using deep hole drilling and blasting. The bauxite produced from this mine will be for captive use in the Alumina Refinery of the company located at Belgaum, Karnataka. The mine lease area is 7.5 ha along with 1.55 Ha for approach road (Total: 9.05 Ha). The mine lease area and approach road falls in Reserve Forest land. The Mining plan is approved by IBM vide Letter No. MP/KLP/GOA(MAH)/BX-239-SZ/745 dated 16.11.2011. Stage I Forest Clearance from MoEF is granted vide Letter No. 8C/39/2003-FCW/2478

dated 06/10/2009. NOC from four Village Panchayats i.e. Kaliwade, Hajgoli, Jangamhatti and Madivale is obtained.

4. The total bauxite reserves are about 471,751 Tonnes and aluminous laterite/sub-grade bauxite reserves are estimated as 112,520 tonnes. The bauxite will be loosened by deep hole drilling and blasting. Breaking and Sizing of blasted bauxite will be by manual means before loading into the trucks for dispatch to Belgaum Plant. Maximum depth of the workings would be 8 m bgl. The ground water table in the area is estimated at more than 100 m below the ground level in the mine lease area. Hence, the mining activities will remain above the ground water table. An ultimate pit slope angle of 45° on the inner sidewalls of the pits will be maintained. A safety barrier of 7.5 m will be maintained around the periphery of the Mine lease area. Production of mineral will be carried out every year from October to May i.e. for a period of about 200 days. During rainy season, it will be suspended because of higher moisture content. The anticipated life of mine is about 10 years. A total of 6.03 Ha area will be excavated for mining during the life of the mine. 4.91 ha of the mined out area will be reclaimed with plantation and in the remaining 1.12 Ha mined out area, two surface water reservoirs will be developed by accumulating rainwater into it. Also green belt will be developed in the 1.47 Ha un-mined area within the mine lease.

5. The water requirement is estimated as 15 KLD, which will be obtained by tanker from nearby villages in the initial period of mining. Later, the rainwater accumulated in mine pits will be used for dust suppression and plantation to the extent possible. It was reported by the PP, that Aluminous laterite, sub-grade bauxite will be generated to the tune of 112,520 tonnes during the mine life. This will be blended with the bauxite ROM and will be dispatched to the Aluminium Refinery of the company.

6. It was reported by the PP that the ML area falls in reserve forest land and there are a number of reserve forests in the 10 km radius study area of the project. No National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Tiger / Elephant Reserves are located within 10 km radius of the mine lease. Radhanagri wild life sanctuary (46 km NW) and Chandoli Wildlife Sanctuary (150 km) are located far away from the mine lease. The Schedule I speices species observed in the 10 km radius study area includes Mouse Deer, Bison, Leopard, Elephant, Indian Pangolin and Sloth Bear. A detailed conservation plan has been prepared for the Schedule I species and is approved by Dy. Conservator of Forests, Kolhapur.

7. The Public Hearing for the Proposed Project was conducted on 30<sup>th</sup> April 2013 at Madwale Vidyamandir School Ground. The PH was chaired by Shri Appasaheb Dhulaj, Additional District Collector, Kolhapur. The proponent informed that the chairman of the public hearing is of the level of ADM as per EIA Notification, 2006. The issues raised during public hearing were also discussed and considered during the meeting, which inter-alia, included that there should not be any discharge of effluent from the mine lease area, road safety and dust pollution, cashew crop destruction by

mining, preventing the silt from ML area flowing into the agricultural lands, air pollution control measures to be adopted, sprinkling of water, repairs to the roads, conservation of flora & fauna of the area etc. As per the villager's requirements, it was informed by the PP that they would take care of local employment; health issues, providing education, and assistance in vocational training etc.

8. The cost of the project is Rs. 3.278 Crores. Proposed Capital cost for implementation of Environmental Management Plan is Rs. 59 Lakhs and the recurring expenses per annum are Rs. 38.8 Lakhs. It was reported by the PP that there is no court case/litigation pending against the project and no violation.

9. The Ministry of Environment and Forests has examined the application in accordance with the EIA Notification, 2006 and hereby accords environmental clearance under the provisions thereof to the above mentioned proposal of M/s Hindalco Industries Ltd. for production capacity of 0.1 MTPA (ROM) of Mogalgad Bauxite Mining Project in the Mine lease area of 9.05 ha. This environmental clearance is 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) 10-15% of plantation/green belt should be of endemic/endangered species, for which a nursery shall be set up.
- (iv) 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.
- (v) The project proponent shall ensure that no natural watercourse shall be obstructed due to any mining operations.
- (vi) 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.
- (vii) 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 of 7.67 ha 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, Bhopal on six monthly basis.

- (viii) 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.

- (ix) 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.
- (x) Plantation shall be raised in an area of 4.91 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. The density of the trees should be around 2500 plants per ha.
- (xi) 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.
- (xii) 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.
- (xiii) 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, Bhopal; Central Ground Water Authority and Central Ground Water Board.

- (xiv) The project authorities should obtain prior approval of the competent authority for drawl of groundwater if any, required for the project.
- (xv) 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.
- (xvi) 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.
- (xvii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xviii) Consent to operate should be obtained from SPCB before starting production from the mine.
- (xix) 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 Bhopal.
- (xi) The Regional Office of this Ministry located at Bhopal 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, Bhopal, 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) Action plan submitted with budgetary provisions on issues raised during Public Hearing should be implemented.
- (xv) The project authorities should inform to the Regional Office located at Bhopal regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

- (xvi) 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.
- (xvii) 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 Bhopal.
10. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
11. Concealing factual data or submission of false/fabricated data and 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.
12. 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 Maharashtra and any other Court of Law relating to the subject matter.
13. 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. V.P. Upadhyay)**  
**Director**

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi-110 001.
- (ii) The Secretary, Department of Mines & Geology, Govt. of Maharashtra, Mantralaya, Mumbai.
- (iii) The Secretary, Department of Environment, Govt. of Maharashtra, Mantralaya, Mumbai.

- (iv) The Secretary, Department of Forests, Govt. of Maharashtra, Mantralaya, Mumbai
- (v) The Chief Conservator of Forests, Regional Office (WZ), E-3/240, Arera Colony, Bhopal-462 016.
- (vi) The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office complex, East Arjun Nagar, New Delhi-1100032.
- (vii) The Member Secretary, Central Ground Water Authority, A-2, W3, Curzon Road Barracks, K.G. Marg, New Delhi-110001.
- (viii) The Chairman, Maharashtra Pollution Control Board, Kalpatru Point, Sion Circle, Sion (East), Mumbai-400 022, Maharashtra.
- (ix) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
- (x) The District Collector, Kolhapur District, Government of Maharashtra.
- (xi) Guard File.
- (xii) Record File.

**(Dr. V.P. Upadhyay)**  
**Director**