

F.NO.J-11015/239/2006-IA-II (M)
Government of India
Ministry of Environment & Forests
IA Division

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Paryavaran Bhavan, CGO Complex,
Lodi Road, New Delhi-110003.

Dated February 5, 2007

To

M/S Hindalco Industries Ltd
P.O Radhanagari
Kolhapur, Maharashtra-416212.

Subject: Durgmanwadi Bauxite Mines Project by M/s Hindalco Industries Limited at villages Durgmanwadi & Padsili, Taluka Radhanagari in Kolhapur District in Maharashtra - environmental clearance reg.

Sir,

This has reference to your application-dated 06.07.2005 and subsequent letters received on 17.02.2006, 03.05.2006 and 11.05.2006 on the above mentioned subject. It has been noted that the proposal is for enhancement of the production capacity to 8,64,000 TPA of Bauxite for captive use in the alumina refinery located at Belgaum in Karnataka.

2. The total mining lease area of the project is 204.56 ha. out of which 63.46 ha is a forestland and 141.14 ha is a private land. It is noted that Radhanagri Wildlife Sanctuary is located in proximity of the mine lease area. The targeted production capacity of the mine is 864,000 TPA of Bauxite. Mining is open cast by mechanized method. Ripping and Dozing will be involved. The present working depth reported 10m (bgl) and the ultimate mining depth would be 15m (bgl). Water table is in the range of 80-100m (bgl) core zone and in 15m (bgl) buffer zone (Pre-monsoon) and 80-100m (bgl) core zone and in 12-15m (bgl) buffer zone (Post- monsoon). Working will not intersect the ground water table. Water requirement is 55 m³/day will be met by harvesting rainwater. There is no population in the core zone therefore displacement of population and R/R is not involved. No power requirement is envisaged. About 0.008 million m³/year overburden will be generated. 0.65m³ of OB waste has already accumulated and 0.10 million m³ will be generating in mine life. 100% of waste will be backfilled concurrently. Life of the mine is 12 years. Mining lease is valid upto 2018. Public hearing was held on 31.01.2006. IBM has approved the mining plan and progressive mine closure plan on 17.01.2003. Cost of the project is Rs.3903.00 lakhs.

3. Proposal was received prior to EIA Notification of 14th September, 2006 and was processed for consideration for grant of environmental clearance as per procedure in EIA Notification, 1994 as per provisions of Para 12 of EIA Notification, 2006 dated 14.9.2006. The proposal has been appraised in accordance with Para 1.0 (1.1) of the Circular dated 13.10.06 regarding Interim Operational Guidelines.

4. The Ministry of Environment and Forests hereby accords environmental clearance for the above project under the provisions of EIA Notification dated 14th September, 2006 subject to implementation of the following conditions/ safeguards:

A. Specific conditions

- i. As per the communication no. FLD-2398/C.R.465/Part-II/F-10 dated 11.5.2006 from the Revenue and Forest Department, Govt of Maharashtra, the company shall restrict the mining activity to private land only for which the conservation plan has been accepted by the State Government. Further the company shall not undertake mining operations in the forest land till the necessary permission for diversion of forest land for non-forestry purpose is obtained and State Government accepts the conservation plan for forest and non-forest land.
- ii. The project proponent shall prepare a conservation plan for protection of endangered fauna reported in the study area in consultation with State Forest and Wildlife Department and allocate funds for this purpose. After the State Government has approved conservation plan for the forest land and forestry clearance has been granted under the Forest (Cons.) Act, then only the project authorities may be permitted to start the mining operation.
- iii. Top soil shall be stacked properly with proper slope with adequate safeguards and shall be backfilled for reclamation and rehabilitation of mined out area.
- iv. Over burden shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 20 m, each stage shall preferably be of 10 m and over all slope of the dump shall not exceed 28°. The mine pit area shall be reclaimed by back filling the OB in a phased manner. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the Ministry of Environment & Forests on six monthly basis.

- v. External OB dumps and other wastes should be stacked at earmarked sites only and should not be kept active for long period till its use for backfilling. Toe walls around the waste dumps shall be made to ensure and to prevent erosion and surface runoff.
- vi. Catch drains and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from mine working, soil, OB and mineral dumps.

Garland drain (size, gradient and length) shall be constructed for both mine pit and for waste dump 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.

- vii. Drilling and blasting should not be involved.
- viii. Plantation shall be raised in an area of 121.50 ha including a green belt of adequate width by planting the native species around the ML area, roads, OB dump sites etc. in consultation with the local DFO / Agriculture Department. The density of the trees shall be around 2000 plants per ha.
- ix. 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.
- x. Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall 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 MOEF, Central Ground Water Authority and Regional Director Central Ground Water Board.
- xi. Suitable rainwater harvesting measures on long-term basis shall be planned and implemented in consultation with Regional Director, CGWB.
- xii. 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. Regular water sprinkling arrangements are also shall be made to control the fugitive dust generation from the haul roads.

- xiii. Sewage treatment plant should be installed for the colony. ETP should also be provided for workshop and wastewater generation from mining operation, if required.
- xiv. 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.

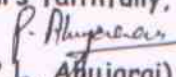
B. General conditions

- i. No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forests.
- ii. No change in the calendar plan including excavation, quantum of mineral bauxite ore and waste shall be made.
- iii. Conservation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with the local forest and wildlife department.
- iv. Four ambient air quality-monitoring stations shall 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.
- v. Data on ambient air quality (RPM, SPM, SO₂, NO_x) should be regularly submitted to the Ministry including its Regional office located at Bhopal and the State Pollution Control Board / Central Pollution Control Board once in six months.
- vi. Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.
- vii. Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM, etc. shall be provided with ear plugs / muffs.

- viii. 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 shall be installed before discharge of workshop effluents.
- ix. Personnel working in dusty areas shall wear protective respiratory devices and they shall also be provided with adequate training and information on safety and health aspects.
- x. Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.
- xi. A separate environmental management cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.
- xii. The project authorities shall 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.
- xiii. The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bhopal.
- xiv. The project authorities shall 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.
- xv. 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 the requisite data / information / monitoring reports.
- xvi. 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.

- xvii. 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.
 - xviii. 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 shall be forwarded to the Regional Office of this Ministry located Bhopal.
5. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.
 6. 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.
 7. 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.

Yours faithfully,


(Dr. P.L. Ahujarai)
Director

Copy to:

1. Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment, Government of Maharashtra, Mumbai.
3. Secretary, Department of Mines and Geology, Government of Maharashtra, Mumbai.
4. Secretary, Department of Forests, Government of Maharashtra, Mumbai.
5. Chief Wildlife Warden, Government of Maharashtra, Mumbai.
6. The Chief Conservator of Forests (Central), Ministry of Environment & Forests, Regional Office, Link Road No.3, E - 5 , Arera Colony, Bhopal - 462 016.
7. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar New Delhi - 110 032.
8. The Chairman Maharashtra Pollution Control Board, Kalpataru Point, 3rd & 4th Floor, Sion Matunga Scheme, Road No.8, Opp. Cine Planet Cinema, Near Sion Circle, Sion(East), Mumbai- 400 022.
9. Member Secretary, Central Ground Water Authority, A2, W3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
10. Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur-440 001.
11. District Collector, Kolhapur district, Maharashtra.
12. EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
13. Monitoring File.
14. Guard File.
15. Record File.

(Dr. P.L. Ahujarai)
Director