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J-11015/912/2007-1 A. II (M)
Government of India
Ministry of Environment & Forests

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Dated: May, 27th 2008

To
M/s Dalmia Cement (Bharat) Ltd.
Regd Office: Dalmiapuram
Tiruchirapalli
Tamil Nadu-621 651

Sub: Expansion of Kallakudi & Kovandakurichi Limestone Mine (ML area 166.005 ha and enhancement of limestone production from 1.0 to 2.0 MTPA at villages Kallakudi, Kovandakurichi and Venkatachalapuram in Lalgudi Taluk, in Tiruchirapalli Distt., in Tamil Nadu - reg. environmental clearance.

Sir,

The undersigned is directed to refer to your letter dated 25.04.2008, on the above mentioned subject. The Ministry of Environment and Forests has considered the application.

2. It has been noted that the proposal is for expansion of limestone production from 1.0 MTPA to 2.0 MTPA. The lease is located at villages Kallakudi, Kovandakurichi and Venkatachalapuram, in Lalgudi Taluk, in Tiruchirapalli Distt., in Tamil Nadu. The lease area is 166.005 ha, out of which 93.955 ha is patta land owned by the company and 72.05 ha is govt. revenue land. The mine is for captive consumption for its Cement plant located at Dalmiapuram in Tamil Nadu. The reserves of Iron Ore is 21.88 MT. Life of the mine at proposed rate of production will be 11 years. Method of mining will be mechanized open cast mining involving drilling and blasting. Out of total lease area of 166.005 ha, area for mining will be 75.058 ha; an area of 3.72 ha is kept for waste dump and is presently being used. For mineral storage 3.01 ha is earmarked; 3.58 ha for roads; 0.04 ha for green belt and 80.617 ha will be unutilised. There are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Heritage sites etc. within 10 km from the lease area. There are also no reserve forest within 10 km of lease. Water requirement at the mine will be 987 KLD, which will be met from mine pit water and ground water. Nandiyar Uppar nallah (non perennial) flows at a distance of about 2-4 km from the lease area. This river confluence with river Coleroon flowing at a distance of 8.5 -10 km from the lease. Ultimate depth of mining will be at 50 m (bgl). Ground water table is at 45 m (bgl). Mining will intersect ground water table. Hydro geological study conducted indicates that the stage of ground water development is 67 % which is well within the permissible limits as per CGWB norms. The net annual ground water availability is estimated at 7.2184 million m³/year. The underlying layer of soil in the lease area has poor transmissibility and permeability. The radius of influence will be within the mine pit and does not spread appreciably. Water requirement will be 987 KLD, which will be met from mine pit water and ground water source. Sewage generation of 4.0 KLD is being treated in a soak pit followed by dispersion trench. Workshop effluent is treated in an upflow filter for oil and grease removal and treated water is sent to a septic tank. No solid waste is generated in this mine. Mining plan has been approved by Indian Bureau of Mines on 30.05.2007. Public hearing was held on 07.03.2008. Cost of the project will be Rs 5.0 Crores.

3. The project has been considered in accordance with the provisions of the EIA notification issued by the Ministry of Environment & Forests vide S.O. 1533 (E), dated September 14, 2006.

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4. Based on the information submitted by you, as at para 2 above and others, the Ministry of Environment and Forests hereby accords environmental clearance to the above project under the provisions of EIA Notification dated September 14, 2006, subject to the compliance of the following Specific and General conditions:

A. Specific conditions

- i) Reclamation of mined pit shall be done and demonstrated on the ground before the next pit is worked. No two pits shall be simultaneously worked i.e before the first is exhausted and reclamation work completed, no more mineral bearing area shall be worked.
- ii) Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.
- iii) Hydro-geological study of the area shall be reviewed annually. In case adverse effect on ground water quality and quantity is observed mining shall be stopped and resumed only after mitigating steps to contain any adverse impact on ground water is implemented.
- iv) The company shall adopt non-conventional mining without involving drilling and blasting near the temple.
- v) Zero waste mining concept shall be implemented either by putting up pelletisation plant or dispose of 100% of low grade ores/fines to prospective buyers.
- vi) Maintenance of village roads through which transportation of ores are undertaken shall be carried out by the company regularly at its own expenses. The roads shall be black topped.
- vii) Land-use pattern of the nearby villages shall be studied, including common property resources available for conversion into productive land. Action plan for abatement and compensation for damage to agricultural land/ common property land (if any) in the nearby villages, due to mining activity shall be submitted to the Regional office of the Ministry within six months. Annual status of implementation of the plan and expenditure thereon shall be reported to the Regional Office of the Ministry.
- viii) Need based assessment of the near by villages shall be conducted to study economic measures which can help in upliftment of poor section of society. Income generating projects/tools such as development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.
- ix) Water to be supplied for drinking purposes shall be treated to meet the prescribed standards. Monitoring of water quality for drinking shall be undertaken on daily basis especially for fluoride & arsenic and records maintained.
- x) Rain water harvesting scheme shall be undertaken in consultation with the Regional Director, Central Ground Water Board and action plan for implementation of the scheme shall be submitted to the Regional Office of the Ministry, the Central Ground Water Board and the concerned state Govt. Dept. within six months.

- xi) Water quality both for surface as well as ground water in the core zone shall be regularly monitored and records maintained. Water supplied for drinking shall be monitored on daily basis and records maintained. In case contamination is observed, measures for control and action taken shall be reported to the state government as well as the Regional Office of the Ministry.
- xii) Adequate measures for prevention and control of soil erosion and management of silt shall be undertaken. Dumps shall be protected by geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump site. Dumps shall be protected by retaining walls. Total silt load of the mines (including that of adjacent mine) shall be assessed and measures for prevention and control of silt shall be submitted to the Regional Office of the Ministry within six months.
- xiii) Trenches / garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of Check Dams and Gully Plugs shall be constructed across seasonal/perennial nallahs flowing through the ML area and silts arrested. De-silting at regular intervals shall be carried out.
- Garland drain of appropriate size, gradient and length shall be constructed for both mine pit and for waste dump 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 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 de-silted at regular intervals.
- xiv) Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV, and health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action wherever required.
- xv) Action plan for implementation with respect to suggestions/improvements and recommendations made during public consultation/hearing shall be submitted to the Ministry and the State Govt within six months.
- xvi) Dust fall measurement shall be periodically carried out including particle size analysis in work zone area. Results shall be submitted to the Regional Office of the Ministry and the State Govt.
- xvii) Top soil/ solid waste shall be stacked properly with proper slope and with adequate safeguards for prevention of erosion and shall be used for backfilling for reclamation and rehabilitation of mined out area.
- xviii) The waste water from the mine shall be treated to conform to the prescribe standards before discharging in to the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and report submitted to the Ministry of

Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.

- xix) 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 30 m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed 28°. 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.
- xx) Slope of the mining bench and ultimate pit limit shall be as per the mining scheme as approved by the Indian Bureau of Mines.
- xxi) Drilling and blasting (if any) shall not be conducted.
- xxii) Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO / Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Plantation shall be raised in 84.377 ha around the ML area, haul roads, OB dump sites etc. The density of the trees shall be not less than 2500 plants per ha. The company shall involve local people with the help of self help group for plantation programme. Further the company shall practice poly culture plantation instead of monoculture of plant species. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Ministry within six months.
- xxiii) Prior permission from the competent authority shall be obtained for extraction of ground water, if any.
- xxiv) 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 shall be regularly sent to the RO of the Ministry, Central Ground Water Authority and RO of Central Ground Water Board.
- xxv) Vehicles used for transportation of ores and other mining operations shall have valid permissions as prescribed under Central Motor Vehicle Rules, 1989 and its amendments. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of ores. Transporting of ores shall be done covered with a tarpaulin or other suitable enclosures so that no dust particles / fine matters escape during the course of transportation. No overloading of ores for transportation shall be undertaken.
- xxvi) A final mine closure plan, along with details of Corpus Fund, shall be submitted to the Regional Office of the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.

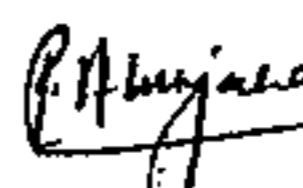
B. General conditions

- (i) No change in mining technology and scope of working shall be made without prior approval of the Regional Office of the Ministry of Environment & Forests.
- (ii) No change in the calendar plan including excavation, quantum of mineral 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 (RSPM, SPM, SO₂, NO_x) should be regularly submitted to the Ministry including its Regional office located at Bangalore 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 be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.
- (x) 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.
- (xi) The project authorities shall inform to the Regional Office of the Ministry located at Bangalore 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 funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the Ministry and its Regional Office located at Bangalore.
- (xiii) The project authorities shall inform the Regional Office of the Ministry located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.
- (xiv) The Regional Office of the Ministry, Bangalore shall monitor compliance of the stipulated conditions. The project authorities shall extend full cooperation to the officer(s) of the Regional Office by furnishing the requisite data / information / monitoring reports.
- (xv) 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.

- (xvi) State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District Industry Centre and Collector's office / Tehsildar's Office for 30 days.
- (xvii) The project authorities shall 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 the Ministry located Bangalore.
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. 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.
7. Any appeal against this environmental clearance shall lie with the National Environment Appellate Authority, if preferred, within a period 35 of 30 days as prescribed under Section 11 of the National Environment Appellate Authority Act, 1997.
8. 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. Ahujara)
Director

Copy to:

1. Secretary, Ministry of Mines, Government of India, Shastri Bhawan, New Delhi.
2. Secretary, Department of Environment, Government of Tamil Nadu, Chennai.
3. Secretary, Department of Mines and Geology, Government of Tamil Nadu, Chennai.
4. Secretary, Department of Forests, Government of Tamil Nadu, Chennai.
5. Chief Wildlife Warden, Government of Tamil Nadu, Chennai.
6. Chief Conservator of Forests, Regional Office (SZ), Kendriya Sadan, 4th Floor E&F, Wings 17th Main Road, 1 Block, Koranmangala, Bangalore-560 034.
7. Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
8. Chairman, Tamil Nadu State Pollution Control Board, No. 76, Mount Salai, Guindy, Chennai-600 032.
9. Member Secretary, Central Ground Water Authority, A2, W-3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
10. Controller General, Indian Bureau of Mines, Indira Bhawan, Civil Lines, Nagpur-440 001.
11. District Collector, Tiruchirapalli, Government of Tamil Nadu.

12. EI Division, Ministry of Environment & Forests, Paryavaran Bhawan, New Delhi.
13. Monitoring File.
14. Guard File.
15. Record File.

Dr. P L Ahujara)
Director