

J-11015/414/2006- IA. II(M)
Government of India
Ministry of Environment & Forests

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Paryavaran Bhavan, C.G.O. Complex,
Lodi Road, New Delhi-110003.

Dated the 12th September, 2007

To

M/s Chettinad Cements Corporation Limited
Kumararajah Muthiah Nagar
Puliyar Cement Factory Post 639 114
District Karur, Tamilnadu

Sub: Devarmalai Limestone Mine (ML area 166.535 ha and production of 8.0 LTPA) of M/s Chettinad Cement Corporation Ltd. in villages Devarmalai and Melapagudi, Kulilthalai Taluk, Karur Distt., Tamil Nadu - reg. Environmental Clearance.

Sir,

This has reference to letter no. nil dated 6.8.2007 on the above mentioned subject.

2. The Ministry of Environment and Forests has examined the application. It has been noted that proposal is for environmental clearance of Devarmalai limestone mine with production capacity of 8 lakh TPA to meet the expansion requirement of Puliyur and Karikkali cement plants. Total lease area of the mine is 166.535 ha of which 154.875 ha is agriculture land and 11.600 ha is waste land. Out of 166.535 ha of ML area, 77.500 ha is for mining activity, 0.450 ha is for storage of topsoil, 4.220 ha for OB dumps, 0.160 ha for roads, 0.50 ha for infrastructure, 3.80 ha for green belt and 79.905 ha of undisturbed area. No forest land is involved. No ecologically sensitive area such as national park/ wildlife sanctuary/biosphere reserve/Tiger reserve etc is located within 10km distance of the core zone and buffer zone. No population is located within the ML area. Topography of the area is flat. Life of the mine is 16 years and lease period is for 20 years. Method of mining is opencast and mechanized involving drilling and blasting. Water requirement of 57m³/d will be met from the mine pit water. Present working depth of the mine is 195m msl and the ultimate working depth will be 160 m MSL. Ground water table depth is at 185 m msl. Mine working is 10m above the water table at present and ultimately mine workings will be 25 m below the ground water table. As per the hydrogeological study carried at Devarmalai limestone mine area, the ground water potential for future development is 0.0227m³ and the stage of ground water development is 89%. The aquifer characteristics of the area indicates that transmitting capacity of the aquifer is poor to moderate and there may not be any adverse effect on the ground water regime during dewatering when the mine is in operation. It is noted that 46,666 m³/m and 6.7 million tonnes of solid waste will be

generated during the entire life of the mine which will be externally dumped and stabilized with vegetation. Public hearing of the project was held on 25.5.2007. IBM has approved the scheme of mining including post mine closure plan on 3.8.2006. Capital cost of the project is Rs.190.0 lakhs.

3. The Ministry of Environment and Forests hereby accords environmental clearance under the provisions of Environmental Impact Assessment Notification, 2006 to the Devarmalai Limestone mine of M/s Chettinad Cement for annual production capacity of 8 lakh TPA involving total lease area of 166.535 ha subject to implementation of following conditions and safeguards:

A. Specific conditions

- i. Top soil shall be stacked properly with proper slope with adequate safeguards and shall be backfilled for reclamation and rehabilitation of mined out area.
- ii. 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 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.
- iii. Garland drains of appropriate size shall be constructed to arrest silt and sediment flows from soil, and mineral dumps. The water so collected shall be utilized for watering the mine area, roads, green belt development etc. The drains shall be regularly desilted particularly after monsoon and maintained properly.

Garland drain (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 desilted at regular intervals.

- iv. Drilling and blasting shall be by using dust extractors/wet drilling.
- v. Conceptual Mining Plan for every 5 years for the life of the mine shall be prepared and submitted to the Ministry within six months.

- vi. Plantation shall be raised in an area of 79.905 ha including 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 2500 plants per ha. Selection of plant species shall be as per CPCB guidelines. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation.
- vii. 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.
- viii. 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.
- ix. Prior permission from the competent authority shall be obtained for drawl of ground water ,if any.
- x. Mitigation measures when mining intersect ground water shall be prepared and submitted to the Ministry as well as the concerned dept. of the State Government.
- xi. Water quality shall be periodically tested (every six months) for contamination when mining intersect ground water table and data shall be submitted to the Ministry as well as the concerned Dept. of the State Government.
- xii. Water bodies shall be developed and utilized to develop pisciculture by organizing fishermen cooperative society with the land losers and specially the poorer section of the people as members of such society with initial financial assistance in the form of share money and managerial assistance so that the members themselves can run the affairs of the society in due course. The project proponent shall arrange marketing tie up so that the society gets fair price of their product and the profits are equitably shared by the members of the society as regular source of income.

- xiii. Occupational health and safety measures for the workers including 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 surveillance and health records of the workers shall be maintained.
- xiv. Drinking water shall be supplied to the villagers after proper treatment.
- xv. 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 shall be covered with a tarpaulin and shall not be overloaded.
- xvi. A Final Mine Closure Plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.

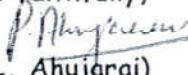
B. General conditions

- 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, limestone 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 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 wear protective respiratory devices and they shall also be provided with 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 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 should 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 to the Regional Office 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 this Ministry located at Bangalore 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.
- 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 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.
- 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 shall be forwarded to the Regional Office of this 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. 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 Tamilnadu, Chennai.
3. Secretary, Department of Mines and Geology, Government of Tamilnadu, Chennai.
4. Secretary, Department of Forests, Government of Tamilnadu, Chennai
5. The Secretary (Environment), Govt. of Tamil Nadu, Fort. St. George, Chennai-560560.
6. The Chairman, Central Pollution Control Board, Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, Delhi-110032.
7. The Chairman, Tamil Nadu Pollution Control Board, 100, Anna Salai, Guindy, Chennai - 600032.
8. The Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IVth Floor, E&F Wings, 7th Main Road, IInd Block, Koramangala, Bangalore-560034.
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, District Karur, Tamilnadu.
12. EI Division, Ministry of Environment & Forests, EI Division, New Delhi.
13. Monitoring File.
14. Guard File.
15. Record File.

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(Dr. P.L. Ahujarai)
Director