CHETTINAD CEMENT CORPN. LTD.
Chennai-600 006.
11 JUL 2011
No. KCL

BY SPEED POST

No. J-11015/206/2009-IA.II (M)
Government of India
Ministry of Environment & Forests

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

Dated the 6th July, 2011

To

M/s Chettinad Cement Corporation Limited
4th Floor, Rani Seethai Hall Building
603, Anna Salai, Chennai - 600 006

Subject: Arungal Limestone Mine of M/s Chettinad Cement Corporation Ltd., Village Arungal, Taluk and District Ariyalur, Tamil Nadu -Environmental clearance regarding.

Sir,

This has reference to your letter No. Chettinad Cement/Arungal Mines/EC/1243 dt. 1.9.2010 on the subject mentioned above. Subsequent letters Chettinad Cement/Arungal Mines/EC/2383 dt.15.2.2011 and 30.3.2011 were also considered.

2. The proposal is for opening of a new mine for production of 0.8 million TPA of limestone and marl put together (0.56 MTPA limestone + 0.24 MTPA marl) for their captive use. The mine lease area is 67.73 ha. No forestland is involved. Latitude- 11^0 00' 48.2" to 11^0 01' 25.7" and longitude - 79^0 05' 07.6" to 79^0 05' 11.3". Mine working will be opencast mechanized involving drilling and blasting. Life of the mine is 13 years. Ultimate working depth will be 18 m bgl. Mine working will not intersect groundwater table. It is estimated that 2.759 million m^3 of waste material will be generated during the mine life. The OB would be dumped in non mineralized area adjoining to the mine lease which is in the possession of the proponent. Backfilling will start from 2nd year and the temporary dump will be liquidated. The water requirement for the mine is estimated as 40 kld, which will be met from bore well and mine pit seepage water. There is no settlement within the core zone. No national park/wildlife sanctuary/biosphere reserve/tiger reserve/elephant reserve etc are reported within 10 km of the project, however, the Karaivetti Bird Sanctuary is at a distance of 7 km. Public hearing has been held on 27.8.2010. Cost of EMP will be Rs. 0.0725 crore (Capital) and Rs. 0. 0475 crore per annum. CSR budget will be Rs. 0.0525 crore. Cost of the project will be Rs. 12.00 Crores.

3. The terms of reference for the project were issued on 26.10.2009 for preparation of EIA and EMP. The Public hearing was held on 27.8.2010 in Village Arungal, Taluk and District Ariyalur, Tamil Nadu by Tamil Nadu Pollution Control Board. The Mining Plan was approved by IBM on 18.8.2009. Letter of intent for grant of mine lease was issued on Lr No. 10047/MMI/2008 dt. 1.6.2009 by Deptt. of Geology and Mines, Govt. of Tamil Nadu.

4. The proposal has been considered by the Expert Appraisal Committee for Mining based on the project documents and has recommended for the grant of environmental clearance for the said new Limestone mining project. Accordingly, the Ministry of Environment and Forests hereby accords environmental clearance to the said project under the provisions of Environment Impact Assessment Notification, 2006 subject to strict compliance of the terms and conditions as follows:-

A. SPECIFIC CONDITIONS:

(i) The project proponent shall obtain Consent to Establish and Consent to Operate from the Tamil Nadu State Pollution Control Board and effectively implement all the conditions stipulated therein.

(ii) Environmental clearance is subject to final order of the Hon'ble Supreme Court of India in the matter of Goa Foundation Vs. Union of India in Writ Petition (Civil) No. 460 of 2004, as may be applicable to this project.

(iii) Requisite prior clearance from the Standing Committee of the National Board for Wildlife shall be obtained, due to location of the mine lease within 10 Km of the Karaivetti Bird Sanctuary , before starting any activity relating to the project at site. All the conditions stipulated by the Standing Committee shall be effectively implemented in the project. It shall be noted that this clearance does not necessarily implies that wildlife clearance shall be granted to the project and that your proposal for wildlife clearance shall be considered by the competent authorities on its merit and decision taken. The investment made in the project, if any based on environmental clearance granted to the project, in anticipation of the clearance from wildlife clearance shall be entirely at the cost and risk of the project proponent and Ministry of Environment and Forests shall not be responsible in this regard in any manner.

(iv) Environmental clearance is subject to obtaining prior clearance under the Wildlife (Protection) Act, 1972 from the Chief Wildlife Warden, Tamil

Nadu for operating the mine at a distance of 7.00 Km from the sanctuary, as may be applicable to this project.

(v) The environmental clearance is subject to approval of the State Land use Department or Concerned Authority in the State, Government of Tamil Nadu for diversion of agricultural land for non-agricultural use.

(vi) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water (surface water and/or ground water) required for the project.

(vii) The top soil, if any shall temporarily be stored at earmarked site(s) only and it should not be kept unutilized for long. The topsoil shall be used for land reclamation and plantation.

(viii) The mining operations shall be restricted to above ground water table and it should not intersect the groundwater table. In case of working below the ground water table, prior approval of the Ministry of Environment and Forests and the Central Ground Water Authority shall be obtained, for which a detailed hydro-geological study shall be carried out.

(ix) No transportation of ore outside the mine lease area shall be carried out after the sunset.

(x) A safety distance of 10 mts. shall be provided for the nallah passing on the northern boundary of ML area. 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 (if any) flowing through the ML area and silts arrested. De- silting at regular intervals shall be carried out.

(xi) The optimum charge for blasting shall be determined based on peak particle velocity. Blasting operation shall be carried out only during the daytime. Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.

(xii) Drills shall either be operated with dust extractors or equipped with water injection system.

(xiii) Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all the transfer points should also have efficient dust control arrangements. These should be properly maintained and operated.

(xiv) ETP shall also be provided for the workshop and wastewater generated during the mining operation.

(xv) Effective safeguard measures, such as regular water sprinkling shall be carried out in critical areas prone to air pollution and having high levels of particulate matter such as around loading and unloading point and all transfer points. Extensive water sprinkling shall be carried out on haul roads. It should be ensured that the Ambient Air Quality parameters conform to the norms prescribed by the Central Pollution Control Board in this regard.

(xvi) Fugitive dust generation shall be controlled. Fugitive dust emission shall be regularly monitored at locations of nearest human habitation (including schools, temples and other public amenities located nearest to sources of dust generation as applicable) and records submitted to the Ministry.

(xvii) The project authority shall implement suitable conservation measures including suitable rain water harvesting measures to augment ground water resources in the area in consultation with the Regional Director, Central Ground Water Board.

(xviii) Regular monitoring of ground water level and quality including Arsenic shall 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 periodic monitoring [(at least four times in a year- pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season)] shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests and its Regional Office, Bangalore, the Central Ground Water Authority and the Regional Director, Central

Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity, necessary corrective measures shall be carried out.

(xix) Mineralogical composition of the dust to assess the silica content in the dust particle and particle size analysis shall be carried out periodically and records maintained. Personnel exposure monitoring for dust shall also be carried out for the workers.

(xx) 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 Ministry within six months.

(xxi) Need based assessment for the nearby villages shall be conducted to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides 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.

(xxii) Occupational Health Cell shall be created at the company under the charge of an officer of adequate seniority who is a qualified person in occupational health. 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 of less) shall be conducted followed by follow up action wherever required.

(xxiii) The company shall stress upon the preventive aspects of occupational health. Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.

(xxiv) The greenbelt plantation all around the mine lease should be completed within 5 years of grant of environmental clearance. Green belt development and selection of plant species shall be of native species. The density of the trees should be around 2000 plants per ha. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Ministry within six months.

(xxv) 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 within the lease up to the stockyard. The mineral transportation within the mine lease shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded. The mineral transportation outside the mine lease shall be carried out through the tarpaulin covered trucks only and the vehicles carrying the mineral shall not be overloaded. There shall be no spillage of mineral enroute up to the delivery point.

(xxvi) Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

(xxvii) The critical parameters such as RSPM (Particulate matter with size less than 10micron i.e., PM_{10}) and NO_X in the ambient air within the impact zone, peak particle velocity at 300m distance or within the nearest habitation, whichever is closer shall be monitored periodically . Further, quality of discharged water shall also be monitored [(TDS, DO, PH and Total Suspended Solids (TSS)]. The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company

in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.

(xxviii) The Company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter-alia address (i) Standard operating process/ procedure to bring into focus any infringement/deviation/violation of environmental or forest norms/ conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance of EC conditions and (iii) System of reporting of non compliance/violation of environmental norms to the Board of Directors of the company and/or stakeholders or shareholders.

(xxix) 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 should be made without prior approval of the Ministry of Environment & Forests.

(ii) No change in the calendar plan including excavation, quantum of mineral limestone and Marl and waste should be made.

(iii) At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM(Particulate matter with size less than 10micron i.e., PM_{10}) and NO_X monitoring. Location of the monitoring stations and frequency of monitoring should be undertaken in consultation with the State Pollution Control Board and should be based on the meteorological data, topographical features and environmentally and ecologically sensitive targets.

(iv) Data on ambient air quality [(RSPM(Particulate matter with size less than 10micron i.e., PM_{10}) and 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.

(v) 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.

(vi) 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.

(vii) 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 should be installed before discharge of workshop effluents.

(viii) 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. Occupational health surveillance program 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 purpose. Year wise expenditure should be reported to the Ministry and its Regional Office located at Bangalore.

(xi) The project authorities should 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 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.

(xiii) The project proponent shall submit six monthly reports on the status of compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the Ministry of Environment and Forests, its Regional Office Bangalore, the respective Zonal Office of Central Pollution Control Board and the State Pollution Control Board. The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office

of the Ministry of Environment and Forests, Bangalore, the respective Zonal Officer of Central Pollution Control Board and the State Pollution Control Board.

(xiv) A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad/ Municipal Corporation, Urban Local Body and the Local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.

(xv) The State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ 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 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 the 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 made there under and also any other orders passed by the Hon'ble Supreme Court of India/ High Court of Tamil Nadu and any other Court of Law relating to the subject matter.

8. The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the

company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Office of the Ministry of Environment and Forests, Bangalore by e-mail.

9. 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.

6/7/2011

(OM PRAKASH)
DEPUTY 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 Tamilnadu, Chennai
5. The Secretary (Environment), Govt. of Tamil Nadu, Fort. St. George, Chennai-600009.
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, 76, Mount Road, Guindy, Chennai - 600032.
8. The Chief Conservator of Forests (Central), Regional Office (SZ), Kendriya Sadan, IVth Floor, F&F Wings, 7th Main Road, IInd Block, Koramangala, Bangalore-560034.
9. Member Secretary, Central Ground Water Authority, A 2, 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 Ariyalur , Tamil Nadu.
12. Monitoring File/Guard File/Record File.

(OM PRAKASH)
DEPUTY DIRECTOR