

Speed Post

**F. No. J-11015/29/2011-IA-II(M)
Government of India
Ministry of Environment, Forest & Climate Change
Impact Assessment Division**

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Dated: 08th March, 2016

To,

M/s Chettinad Cement Corporation Ltd.

Kallur Project, Sangem.K,
Bhaktampalli Post, Chandapur (SO),
Chincholi (TK), Gulbarga (DT)
Karnataka-585305
E-mail: kallur@chettinadcement.com
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Subject: Proposed expansion of Captive Limestone mines captive from 4.0 to 10.0 million tons per annum by M/s Chettinad Cement Corporation Limited at kallur Village, Chincholi Taluka, Gulbarga District in Karnataka-Environmental Clearance regarding.

Reference: Online Application IA/KA/MIN/29198/2011

Sir,

This has reference to your online application for the above the proposed mining lease for Limestone mining is over an extent of 422.94 ha located in Kallur Village, Chincholi Taluk, Gulbarga District in Karnataka State. The area is falling on Topo-sheet No.56 G/7 & G/11 with Latitude: N 17°22'22.22" to N 17°23'52.73" and Longitude: E 77°26'38.38" to E 77°28'05.04". The mining lease area of the Captive Limestone Mining over an Extent of 422.94 ha consists of 414.72 ha of Patta Land owned by the company and 8.22 ha of Government Land. It is now proposed to enhance the capacity of Cement Plant, located adjacent to the mine in Sangem & Kallur villages of same Taluk, from 2.5 to 8.25 million tonnes per annum. In order to meet this increased production of cement, it is proposed to expand the capacity of the Captive Limestone Mine from existing 4.0 to 10.0 MTPA.

2. The proposal for the expansion was considered by the Expert Appraisal Committee in its meeting held during 25th to 27th May 2011 to determine the Terms of Reference (ToR) for undertaking detailed EIA study. The ToR was issued by MoEF Vide Letter No J-11015/29/2011-IA.II(M) dated 27th June 2011. Further, with reference to the application made by the proponent vide letter Chettinad Cement/Kallur Mine Expansion/ToR Extn/2013 dated 28th Jan 2013 for extension for validity of TOR, the proposal was considered by the EAC in its meeting held during 16th to 18th April 2013 and the Committee recommended extension of validity period for TOR by one year from 27th June 2013 to 26th June 2014 vide letter No J-11015/29/2011-IA.II(M) dated 22nd May 2013. The proposal was

considered in the EAC meeting held during May 28-30, 2014, and December 22-23, 2014 wherein the Committee sought additional information. Further, the proposal of EC was appraised in the EAC meeting held during July 29-30, 2015 wherein the Committee recommended the Proposal for environmental clearance with additional conditions for Mining of Limestone with proposed production capacity of 4.0 to 10.0 million tons per annum in the 422.94 ha.

3. Prior EC was obtained for the production of 4.0 million tons of Limestone per annum from MoEF, New Delhi vide Letter No J-11011/399/2008-IA.II (I) dated 18th June 2000 for the Integrated Cement Plant with Captive Power Plant and Captive Limestone Mine at Sangem & Kallur, with specific and general conditions on Pollution Control, Environmental Management and Method of Working etc., which are duly complied with and the Certified Copy of the Compliance Report duly signed and issued by the Director (S), Regional Office MoEF, Southern Zone, Bangalore vide letter No EP/12.1/19 of 10-11/KAR/ 4585 dated 27th December 2013 was included in the EIA & EMP Report.

4. The Mining Lease has been granted by the Government of Karnataka vide Letter No DMG/MLS:1921/AML07/2009-10 /SL 11 dated 9th October 2009 for an extent of 422.94 ha in Kallur Village, Chincholi Taluk, Gulbarga District in Karnataka State for a period of 30 years. The Modified Mining Plan was approved by Indian Bureau of Mines vide Letter No MP/GLB/Lst-243-SZ/411 dated 23rd July 2012.

5. The Opencast mining will be done by mechanized method using drilling & blasting and deploying HEMM. The deposit is horizontally bedded and covered by the black cotton soil of thickness varying from 0.5 to 4.5 m (average 1.7 m) and is devoid of any complex geological/structural disturbances. It forms a simple deposit with almost flat topography. The black cotton soil is scrapped and collected by hydraulic excavators & bulldozer, loaded by loaders and transported by dumpers to the temporary stacking yard for using the same concurrently for erection of bunds in the safety barriers, along the mine boundary and for afforestation works. The Limestone is mined by adopting deep hole drilling with 150mm diameter holes and blasted with slurry and ANFO explosives.

6. The black cotton soil benches will be of average height about 1.7m and width of about 10m and the bottom Limestone benches will be of 9m height and width will be about 12 m with a working pit slope angle around 360. The proposed maximum depth of the pit is 37.7 m bgl, 1.7 m in topsoil and 36 m in bottom limestone. The pit water is collected in the sump developed below the bottom most bench and pumped out through centrifugal pumps. No Beneficiation is involved as the entire Limestone produced can go as plant feed.

7. No wastes are generated and the entire Limestone produced is used as the plant feed. As no wastes are generated, there is no proposal for backfilling of the pit. At conceptual stage the leftover black cotton soil will be spread over the excavated Limestone bench for the development of vegetation.

8. The water requirement for expansion proposals is 130 KLD out of which 125 KLD will be met from pit water and 5 KLD for drinking is met from the bore well. CGWA approval is available for 900 KLD. For expansion purpose, the permission for additional water drawl will be taken from CGWA. The Hydrological study report was submitted. The water table in the core zone is 19 m bgl during pre-monsoon

and 10 m bgl in post monsoon and pit will reach maximum depth of 37.7 m bgl during the 3rd year of operation, thus there will be ground-water intersection. The permission for ground water intersection shall be taken from CGWA.

9. The Chincholi Reserved Forests is located at a distance of 3.2 km in northeast of ML boundary. It was informed by PP that the Chincholi WLS was declared as WLS in 2011 after the establishment of the Mines at Kallur & ICP at Sangem (K) and Kallur. Schedule I Fauna found in this area are: Leopard, Indian Wolf, Black Buck, Python, Indian Mud Turtle, Common Indian Lizard, Indian Peafowl, Common Kite, Kite, Pariah Kite, Spotted Owlet, Grey hornbill, Dragan Fly and Plain Tiger. The Wildlife Conservation Plan for an outlay of Rs. 1000 lakhs approved by the Chief Conservator of Forests, Gulbarga was submitted. PP informed that application for getting the clearance from NBWL with respect to the Chincholi Wildlife Sanctuary located within 10 km radius from the Mine (3.2 km) in connection with the proposed expansion activities in the specified format has been submitted to the Chief Conservator of Forests, Gulbarga District, Karnataka on 16th Jan 2014 and application is under process.

10. Baseline studies were carried out for one season (post monsoon) during September 2012 to November 2012 which is not as per IMD guidelines. Therefore, the PP submitted the baseline data collected during October 2014. All the parameters for water, air and noise were within the limits. The Public Hearing/Consultation for the enhancement of production of Integrated cement plant with Captive Power Plant and Captive Limestone Mine was conducted at the Project site in Kallur Village on 09.10.2013. The PH was chaired by Dr. N.V. Prasad, Deputy Commissioner, Gulbarga District, Karnataka. The issues raised by the public include air, water and noise pollution control measures, quality of air, water and noise, land acquisition cost, local employment, various CSR related demands by local villagers, solid wastes, traffic & impact on roads, environmental monitoring, tree plantation, forest protection & development, following Rules & Regulations, payments for land givers, health care, proposed Railway Line etc. Action plan along with budgetary provision was submitted by PP and it was informed to the Committee that currently Rs 1.5 crores per annum has been allocated for CSR. The estimated cost for the proposed expansion of the mining Project will be Rs. 560 lakhs. It was reported by the PP that there are no court cases and also there are no violations of any statutory rules.

11. The Ministry of Environment, Forests & Climate Change has examined the proposal in accordance with the Environmental Impact Assessment Notification, 2006 and further amendments thereto and hereby accords the environmental clearance under the provisions thereof to the above mentioned proposal **for expansion of Captive Limestone mines from 4.0 to 10.0 million tons per annum by M/s Chettinad Cement Corporation Limited at kallur Village, Chincholi Taluka, Gulbarga District in Karnataka** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:-

A. Specific conditions

- (i) The water table is dropping in the area as indicated by the data from November, 2014-March, 2015. Therefore the additional conservation measures shall be taken to protect/conservate the ground water table.

- (ii) The bund constructed for protection of nallah shall not interfere with the natural drainage of the area.
- (iii) In order to protect the water stream a 50 m non-mining safety barriers on both side of nallah to protect from any siltation is proposed, protective measures like gully plugs shall be erected across the water course to enable settling of any silt. Grass species and leguminous plants shall be cultivated for binding the loose soil and improve the soil fertility.
- (iv) Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court of Karnataka and any other Court of Law, if any, as may be applicable to this project.
- (v) Environmental clearance is subject to obtaining NBWL clearance from Standing Committee of NBWL.
- (vi) No mining activities will be allowed in forest area, if any, for which the Forest Clearance is not available.
- (vii) Proponent shall appoint an Occupational Health Specialist for Regular and Periodical medical examination of the workers engaged in the Project and records maintained; also, Occupational health check-ups for workers having some ailments like BP, diabetes, habitual smokers, etc. shall be undertaken once in six months and necessary remedial/preventive measures taken accordingly. Recommendations of National Institute for Labour for ensuring good occupational environment for mine workers would also be adopted; All the old age people of the surrounding villages may be provided medical facilities.
- (viii) The project proponent shall obtain Consent to Establish and Consent to Operate from the Karnataka State Pollution Control Board and effectively implement all the conditions stipulated therein.
- (ix) The prior permission from CGWA shall be obtained before intersecting the groundwater table.
- (x) To avoid adverse impact of mining operations on habitations/villages, the Project shall comply with conditions provided in OM no. Z-11013/57/2014-IA.II(M) dated 29.10.2014 on Impact of mining activities on Habitations-Issues related to the mining Projects wherein Habitations and villages are the part of mine lease areas or Habitations and villages are surrounded by the mine lease area.
- (xi) The loose solids should be kept separately from flowing water and flow of effluents to nearby areas outside the leasehold shall be prevented. The paved drains along with arrangements for Over Burden Dumps and their drainage may be clearly depicted on a contoured map of the mining area.
- (xii) The project proponent shall ensure that no natural watercourse and/or water resources shall be obstructed due to any mining operations. Adequate measures shall be taken for conservation and protection of the 1st and 2nd order streams, emanating or passing through the mine lease during the course of mining operation.
- (xiii) 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.
- (xiv) Appropriate safeguard measures shall be taken to ensure stability and drainage of dump so that no solid waste/debris flows into the nallah.
- (xv) The over burden (OB) generated during the mining operation shall be stacked at earmarked dump site(s) only and it should not be kept active for a long period of time and their phase-wise stabilization shall be carried out. Proper terracing of OB dump(s) shall be carried out. The over burden dump(s) shall be scientifically vegetated with suitable native species to

prevent erosion and surface run off. In critical areas, use of geo textiles shall be undertaken for stabilization of the dumps. Monitoring and management of rehabilitated areas should continue until the vegetation becomes self-sustaining. Compliance status should be submitted to the Ministry of Environment, Forest and Climate Change and its Regional Office, Bangalore on six monthly basis.

- (xvi) Catch drains and siltation ponds of appropriate size shall be constructed for the working pit, temporary OB and mineral dumps to arrest flow of silt and sediment directly into the adjoining River and other water bodies. 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 the monsoon and maintained properly.
- (xvii) Dimension of the retaining wall at the toe of the OB dump(s) and the OB benches within the mine to check run-off and siltation should be based on the rain fall data.
- (xviii) Plantation shall be raised in an specified area including a 7.5 m wide green belt in the safety zone around the mining lease, OB dump(s), along the roads, etc. by planting the native species in consultation with the local DFO/Agriculture Department. In addition, plantation shall also be raised in the backfilled and reclaimed area and around water body. The density of the trees should be around 1500 plants per ha.
- (xix) 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 crushing and screening plant, 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.
- (xx) Regular monitoring of water quality upstream and downstream of perennial nallahs falling in the impact zone shall be carried out and record of monitoring data should be maintained and submitted to Ministry of Environment, Forest and Climate Change, its Regional Office, Bangalore, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xxi) Appropriate measures shall be taken for treatment of the upper catchment of the mine lease area.
- (xxii) 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.
- (xxiii) Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and installing 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, Forest and Climate Change 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.

- (xxiv) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water, required for the project.
- (xxv) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xxvi) Appropriate mitigative measures should be taken to prevent pollution of nearby River in consultation with the State Pollution Control Board.
- (xxvii) 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 mineral transportation shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.
- (xxviii) Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxix) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxx) Mineral handling area shall be provided with the 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.
- (xxxi) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxxii) 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.
- (xxxiii) Regular monitoring of free silica in the dust will be carried out and records maintained. It shall be ensured that the levels of silica do not exceed the prescribed limit. The workers will be provided with personal protective measures to guard against inhaling silica dust.
- (xxxiv) 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, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- (xxxv) The project proponent should take all precautionary measures during mining operation for conservation and protection of endangered flora as well as endangered fauna in the study area. Action plan for conservation of flora and fauna shall be prepared and implemented in consultation with the State Forest and Wildlife Department. Necessary allocation of funds for implementation of the conservation plan shall be made and the funds so allocated shall be included in the project cost. Copy of action plan may be submitted to the Ministry and its Regional Office at Bangalore within 3 months.
- (xxxvi) The critical parameters such as RSPM (Particulate matter with size less than 10 micron 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, Forest and Climate Change, which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its compliance.

- (xxxvii) A Final Mine Closure Plan along with details of Corpus Fund should be submitted to the Ministry of Environment, Forest and Climate Change 5 years in advance of final mine closure for approval.
- (xxxviii) The project proponent shall undertake all the commitments made during the public hearing and effectively address the concerns raised by the locals in the public hearing as well as during consideration of the project, while implementing the project.

B. General conditions

- (i) No change in mining technology and scope of working should be made without prior approval of the Ministry of Environment, Forest and Climate Change.
- (ii) No change in the calendar plan including excavation, quantum of mineral limestone 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 RSPM (Particulate matter with size less than 10micron i.e., PM_{10}) and 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.
- (iv) Data on ambient air quality RSPM (Particulate matter with size less than 10micron i.e., PM_{10}) & NO_x should be regularly submitted to the Ministry of Environment, Forest and Climate Change 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.

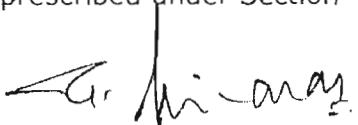
- (x) The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry of Environment, Forest and Climate Change and its Regional Office located at Bangalore.
- (xi) The project authorities should inform 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, Forest and Climate Change, its Regional Office Bangalore, the respective Zonal Office of Central Pollution Control Board 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, Forest and Climate Change, Bangalore, the respective Zonal Office 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 environmental statement for each financial year ending 31st March in Form-Vas 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 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 Regional Office of the Ministry of Environment, Forest and Climate Change, Bangalore by e-mail.
- (xvii) The project authorities should advertise at least in two local newspapers of the District or State widely circulated in which the project is located and 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, Forest and Climate Change at <http://envfor.nic.in> and a copy of the same should be forwarded to the Regional Office of this Ministry located at Bangalore.

12. The Ministry or any other competent authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

13. 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.

14. 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 thereunder and also any other orders passed by the Hon'ble Supreme Court of India/High Court of Karnataka and any other Court of Law relating to the subject matter.

15. 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. U. Sridharan)
Scientist 'F'

Copy to:

- (i) The Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
- (ii) The Secretary (Environment), Government of Karnataka, Multi Storeyed Building, Bangalore-560 001.
- (iii) The Secretary, Department of Forests, Government of Karnataka, Bangalore-560003
- (iv) The Secretary, Department of Mines and Geology, Government of Karnataka, Bangalore.
- (v) The Secretary, Department of Industries and Commerce (M-III), Govt Karnataka, Bangalore.
- (vi) The Chairman, Karnataka State Pollution Control Board, No. 25, 6th - 9th Floor, Public Utility Building, M.G. Road, Bangalore - 560 001.
- (vii) The Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SZ), Kendriya Sadan, 4th Floor, E&F Wings, 17th Main Road, Koramangala II Block, Bangalore - 560034.
- (viii) The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
- (ix) The Member Secretary, Karnataka State Pollution Control Board "Parisara Bhavan", #49,4th & 5th Floor, Church Street, Bangalore-560001
- (x) The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur- 440 001
- (xi) The District Collector, Gulbarga District, Government of Karnataka.
- (xii) Guard File.


(Dr. U. Sridharan)
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