

**Speed Post**

**F. No. J-11015/152/2013-IA.II (M)**  
**Government of India**  
**Ministry of Environment, Forest & Climate Change**  
**Impact Assessment Division**

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**Dated: 21<sup>st</sup> December, 2015**

To,

**M/s Chettinad Cement Corporation Ltd.**  
9th Floor, Rani Seethai Hall Building,  
#603 Anna Salai, Chennai, 600006, Tamilnadu  
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**Sub.: Captive Limestone Mine (5.0 MTPA) of M/s Chettinad Cement Ltd. located at Village-Peddagarlapadu & Kesanupalli, Mandal-Dachepalli, District-Guntur, Andhra Pradesh (377.68 ha;5.0 MTPA)- Environmental Clearance regarding.**

**Reference:** Online Application IA/AP/MIN/18622/2013

Sir,

This has reference to your online application for the above mentioned proposal for opening a New Captive Limestone Mine over an extent of 377.68 ha consisting of 347.983 ha of Patta Land and 29.692 ha of Government Land in Pedagarlapadu & Kesanupalli Villages, Dachepalli Mandal, Guntur District, Andhra Pradesh. The area is falling under Topo-sheet No.56 P/10 & P/14 with Latitudes: N 16°31.22.3" to N 16°33'51.8" and Longitudes: E 79°43'58.2" to E 79°44'52.4". The purpose of proposed Captive Limestone Mine is to meet the Limestone requirement of the Integrated Cement Plant proposed to be established adjacent to this Mine Area.

2. The Ministry had prescribed TOR on 27<sup>th</sup> August 2013. The Proponent after conducting Public Hearing on 05.03.2014 submitted the EIA/EMP report online for seeking environmental clearance. The proposal was appraised before the Expert Appraisal Committee in its Meeting held during 25-26 September 2014 and reconsidered during December 10-11, 2014 and May 27-29, 2015 wherein the Committee recommended the proposal for Environmental Clearance for Mining of Limestone Mine with proposed production capacity of 5.0 MTPA

3. The Opencast mining will be done by Mechanized method by using drilling & blasting and deploying HEMM. The deposit is horizontally bedded and covered by the black cotton soil of thickness varying from 0 m to 3 m (1m average thickness) and is devoid of any complex geological structural disturbances. It forms a simple deposit with almost flat topography. The total estimated geological reserves are 442 million tons and the mineable reserves are 306 million tons. The black cotton soil will be scrapped & collected by hydraulic excavators & bulldozer, loaded by loaders and transported by dumpers to the temporary stacking yard for using the

same concurrently for afforestation works. The Limestone will be mined by drilling 150mm diameter holes and carrying out blasting using slurry and ANFO explosives. Loading of blasted Limestone will be carried out with the help of hydraulic excavator of 4.5 m<sup>3</sup> bucket capacity. The blasted limestone will be transported directly by 35 ton Dumpers, (thus reducing the number of trips and thereby reducing dust & noise generation) to the crusher in Cement Plant, located adjacent to the mine area, through the internal road within mine area. Mining operation will be carried out in two shifts of eight hours each, for 300 days in a year. The proposed maximum depth of the pit is 46m bgl, which will include an average thickness of 1.0 m of black cotton soil. The pit water will be collected in the sump developed below the bottom most bench and pumped out through centrifugal pumps for using the same for various purposes within the premises. No Beneficiation is involved as the entire Limestone produced will go as Plant feed.

4. The total Mine Lease area is 377.68 ha and the land use at conceptual period will be Mined out pits converted into Rainwater Harvesting Ponds : 280.01 ha, Greenbelt: 67.47 ha, Road/Infrastructure/Others:30.2 ha. No wastes will be generated and the entire Limestone produced will be used as the Plant feed. As no wastes are generated, there is no Proposal for back-filling of the pit. At conceptual stage, the leftover black cotton soil, if any, will be spread over the topmost Limestone bench for the development of vegetation. The total expected generation of Black Cotton Soil (BCS) is 7.0 million m<sup>3</sup>.

5. The water requirement for proposed mining activity will be 120 KLD which includes 100 KLD for dust suppression and greenbelt development, 10 KLD for workshop and 10 KLD for domestic purposes. The application submitted for obtaining clearance for ground water drawl from Central Ground Water Authority is under process. The Hydrological study has been carried out. The water table in the core zone is 10.2 m bgl during pre-monsoon and 4.3 m bgl in post monsoon and pit will reach a maximum depth of 46 m bgl (including average BCS thickness of 1m. The ground water will be intersected at 8m depth.

6. It was reported by the PP that there is no wildlife Sanctuary, Bird Sanctuary, Tiger Reserves, National Park, Elephant Corridor, within 10 km of the proposed mine boundary. Madinapadu Reserve Forest is at a distance of 7.4 km from the proposed mine boundary. Baseline studies were carried out for one season (post monsoon) during October 2013 to December 2013. All the parameters for water, air and noise were within the limits. The Public Hearing for the proposed Integrated Cement Plant with Captive Power Plant and Captive Limestone Mine was conducted at Mandal Parishad Primary School, Pedagarlapadu near the Project site on 5<sup>th</sup> March 2014. The PH was presided over by Shri Vivek Yadav, Joint Collector & Additional District Magistrate, Guntur District, Andhra Pradesh. The issues raised by the public include Pollution Control Measures, Impact of pollution, Use of Imported Coal, Utilisation of Fly Ash, Employment, Welfare Measures (Road, School, College, Hospital, Marriage, Hall, Village Office, Check Dam), Compensation for land owners, Land purchase, Adherence to Rules & Regulation, No hindrance due to railway line, Contracts to locals etc., and the response against each issue has been included in the EIA Report. The commitment for CSR for the Integrated Cement Plant with Captive power Plant and Captive Limestone Mine is Rs 2.2 Crores per annum.

7. The total cost of the proposed mining Project will be Rs. 10 Crores and the recurring expenditure for Environmental Protection measures will be Rs. 41 lakhs

per annum. There is no court case and also there is no violation of any statutory rules. The Committee noted that a seasonal nallah is passing through MLA; therefore adequate width of safety zone should be left on both sides of the nallah.

8. 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 of **Captive Limestone Mine for production of 5.0 MTPA of M/s Chettinad Cement Ltd. located at Village-Peddagarlapadu & Kesanupalli, Mandal-Dachepalli, District-Guntur, Andhra Pradesh over the mine lease area of 377.68 ha** subject to compliance of the followings terms and conditions and environmental safeguards mentioned below:-

#### **A. Specific conditions**

- (i) The Environmental Clearance is subject to obtaining the prior permission from CGWA for intersecting the ground water table.
- (ii) The Project will implement and comply with all applicable safeguard measures as provided in OM No. Z-11013/57/2014-IA.II(M) dated 29<sup>th</sup> October, 2014.
- (iii) The project proponent shall obtain Consent to Establish and Consent to Operate from the State Pollution Control Board and effectively implement all the conditions stipulated therein.
- (iv) A buffer zone of 50 m (green belt) on either side of the nalla passing through lease area should be developed for protection of the nalla/stream.
- (v) 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.
- (vi) 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 1<sup>st</sup> and 2<sup>nd</sup> order streams, emanating or passing through the mine lease during the course of mining operation.
- (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) Appropriate safeguard measures shall be taken to ensure stability and drainage of dump so that no solid waste/debris flows into the nallah.
- (ix) 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, Chennai on six monthly basis.
- (x) 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.

- (xi) 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.
- (xii) 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.
- (xiii) 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.
- (xiv) 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, Chennai, Central Groundwater Authority, Regional Director, Central Ground Water Board, State Pollution Control Board and Central Pollution Control Board.
- (xv) Appropriate measures shall be taken for treatment of the upper catchment of the mine lease area.
- (xvi) 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.
- (xvii) 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 Chennai, 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.
- (xviii) The project proponent shall obtain necessary prior permission of the competent authorities for drawl of requisite quantity of water, required for the project.
- (xix) Suitable rainwater harvesting measures on long term basis shall be planned and implemented in consultation with the Regional Director, Central Ground Water Board.
- (xx) Appropriate mitigative measures should be taken to prevent pollution of nearby River in consultation with the State Pollution Control Board.

- (xxi) 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.
- (xxii) Controlled blasting shall be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.
- (xxiii) Drills shall either be operated with dust extractors or equipped with water injection system.
- (xxiv) 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.
- (xxv) Sewage treatment plant shall be installed for the colony. ETP shall also be provided for the workshop and wastewater generated during the mining operation.
- (xxvi) 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.
- (xxvii) 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.
- (xxviii) 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.
- (xxix) 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 Chennai within 3 months.
- (xxx) The critical parameters such as RSPM (Particulate matter with size less than 10 micron i.e., PM<sub>10</sub>) and NO<sub>x</sub> 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](http://www.envfor.nic.in) shall also be referred in this regard for its compliance.

- (xxxi) 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.
- (xxxii) 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<sub>10</sub>) and NOx 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<sub>10</sub>) & NOx should be regularly submitted to the Ministry of Environment, Forest and Climate Change including its Regional office located at Chennai 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 19<sup>th</sup> May, 1993 and 31<sup>st</sup> 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 Chennai.
- (xi) The project authorities should inform the Regional Office located at Chennai 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 Chennai 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 Chennai, 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, Chennai, 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, Chennai 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 Chennai.

9. The Ministry or any other Competent Authority may alter/modify the above conditions or stipulate any further condition in the interest of environment protection.

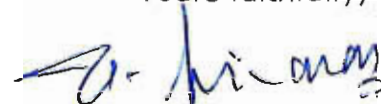
10. Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.

11. 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 Telangana and any other Court of Law relating to the subject matter.

12. 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.

Yours faithfully,



**(Dr. U. Sridharan)**  
**Director (S)**

**Copy to:**

1. The Secretary, Ministry of Mines, Government of India Shastri Bhawan, New Delhi.
2. The Secretary, Department of Environment, Government of Andhra Pradesh, Hyderabad.
3. The Secretary, Department of Forests, Government of Andhra Pradesh, Hyderabad.
4. The Secretary, Department of Mines and Geology, Government of Andhra Pradesh, Hyderabad.
5. The Secretary, Department of Industries and Commerce (M-III), Govt of Andhra Pradesh, Hyderabad.
6. Additional Principal Chief Conservator of Forests (C), Ministry of Environment, Forest and Climate Change, Regional Office (SEZ), I<sup>st</sup> and II<sup>nd</sup> Floor, Handloom Export Promotion Council, 34, Cathedral Garden Road, Nungambakkam, Chennai - 34.
7. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, New Delhi-110 032.
8. The Chairman, Andhra Pradesh State Pollution Control Board, Paryavaran Bhawan, A-3 Industrial Estate, Sanath Nagar, Hyderabad - 500 018
9. The Member Secretary, Central Ground Water Authority, A2, W- 3 Curzon Road Barracks, K.G. Marg, New Delhi-110001.
10. The Controller General, Indian Bureau of Mines, Indira Bhavan, Civil Lines, Nagpur- 440 001.
11. The District Collector, Guntur District, Government of Andhra Pradesh.
12. Guard File.
13. MoEFCC website



**(Dr. U. Sridharan)**  
**Director (S)**