

THE RAMCO CEMENTS LIMITED
(Formerly known as Madras Cements Ltd.,)
COMPLIANCE REPORT FOR ENVIRONMENTAL CLEARANCE –
RAVIRALA MINING LEASE – 0.5 MILLION TPA CAPACITY

EC Lr. No. : J-11015/18/2000-IA.II (M) dated 16.10.2002
Period : October 2018 to March 2019

A. SPECIFIC CONDITIONS:

i) *APPCB's fresh consent should be obtained for producing 30.25 lakh tonnes / annum of limestone for the first five years prior to increase in already consented annual production capacity of 0.50 million tonnes.*

In the financial year 2010-11; EC, CFE & CFO are obtained for production capacity of 1.20 million TPA from 0.50 million TPA. During the financial year 2018-19, the limestone production was 1.199 million tonnes. The latest CFO is accorded vide letter No. APPCB/HO/UH-IV/CFO:VJA/Auto Renewal-8/2016 dated 08.12.2016.

ii) *Top soil will be properly stacked at earmarked dump site(s) with adequate measures and should be used for reclamation and rehabilitation of mined out area.*

There is no top soil available in the mining lease area.

iii) *Check dams and siltation ponds of appropriate size should be constructed to arrest silt and sediment flows from soil and mineral dumps. The water so collected should be utilized for watering the mine area, roads, greenbelt development etc., and the drains should be regularly de-silted and maintained. Garland drain (size, gradient and length) and sump capacity should be designed keeping 50% safety margin over and above peak sudden rainfall and maximum discharge in the area adjoining the mine site. Sump capacity should also provide adequate retention period to allow proper settling of silt material.*

Various measures taken are:

- Garland drain of a cumulative length of 1415 m with a size of 2.0m*1.0m has been made towards the Southern lease boundary as well as all along the bottom of the waste dump.
 - The drains follow the natural slope with a gradient about 1 in 100 ultimately leading to the desilting sump.
 - A mine sump with dimensions of 65m*60m*5m is made to settle the suspended solids in the water.
 - The water collected is being utilized for watering the mine area, haul roads, greenbelt development, etc. within lease area.
 - The drains are being regularly de-silted and maintained.
 - Latest de-silting operation carried out in 18.05.2018 and the de-silted quantity is about 54 tonne.
- iv) *A 30 m wide green belt all around the ML area should be developed by planting the native plant species in consultation with local DFO / Agricultural department. At least 1600 plant species/ha should be planted. Plantation should also be raised along the roads, OB dump sites etc.*

Greenbelt of 30 m wide will be developed along the ML boundary in phase wise manner. Total greenbelt area is 7.51 Ha within ML by the end of this half year period.

- v) *Blasting operations should be carried out only during the day time. Controlled blasting should be practiced. The mitigative measures for control of ground vibrations and to arrest fly rocks and boulders should be implemented.*

Blasting operations are being carried out in day-time only. Controlled blasting is being practiced by using advanced technology viz., Shock tube bottom initiation detonators to reduce ground vibrations.

- vi) *Backfilling of excavated area should concurrently start from 7th year of operations.*

Backfilling is initiated, as per approved mining plan. IBM further advised during 2016, to stop back filling and exploit the bottom mineral also. Accordingly back filling material rehandled and opened the benches for exploitation of mineral. Hence the back filling will be initiated after exhaustion of mineral.

- vii) *A detailed decommissioning plan should be submitted to the MOEF 5 years in advance for approval.*

This will be submitted accordingly. The life of the mine as per latest approved modified mining plan by IBM is up to year 2030-2031.

- viii) *The drills should be attached with dust extraction system.*

All drills are provided with wet drilling system.

- ix) *Regular monitoring of ground water level and quality should be carried out by establishing a network of existing well and constructing new piezometers. Monitoring should be done four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January). Data thus collected should be sent at regular intervals to MoEF and The Central Ground Water Authority.*

4 Nos. of piezometers (1 are manual and 3 is automatic) are used to monitor ground water levels. Ground Water level data is being submitted to the CGWA. Copy of the letter addressed to CGWB regarding the water level data through piezometers for the period October 2018 to March 2019 is enclosed as Annexure – I. Compiled data on ground water quality analysis carried out by MoEF&CC approved external environmental monitoring agency (M/s B.S. Envitech Hyderabad) for the period October 2018 to March 2019 is enclosed as Annexure – II. Monitoring is being carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January).

NOC obtained to work below ground water table through Panchayat Raj & Rural Development, Government of Andhra Pradesh (agency authorized to issue NOC on behalf of CGWA, Delhi for Andhra Pradesh projects) vide their letter No. PRR05-11028/15/2018-SLNA-GIS-CORD dated 06.07.2018. Copy of the same is enclosed as Annexure – III. The conditions stipulated in this NOC are being followed and yearly compliance reports will be submitted to the concerned.

B. GENERAL CONDITIONS:-

i) *No change in mining technology and scope of working should be made without prior approval of the MoEF*

There is no change in the mining technology and scope of working.

ii) *No change in the calendar plan including excavation, quantum of limestone, waste / OB dump should be made.*

- During 2010-11; EC, CFE & CFO are obtained for production capacity of 1.20 million TPA from 0.50 million TPA.
- The limestone production was 1.199 million tonnes and 107077.83 cu.m. of development done during the financial year 2018-19.

iii) *Three ambient air quality monitoring stations should be established in the core zone as well as buffer zone for SPM, RPM, SO₂, NO_x and CO monitoring. Location of the ambient air quality stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB.*

4 and 9 Nos. of ambient air quality monitoring stations are established in core and buffer zones respectively based on the meteorological data, topographical features and environmentally and ecologically sensitive targets in consultation with the SPCB and regular (fortnightly) manual monitoring by MoEF&CC approved external environmental monitoring agency (M/s B.S. Envi-tech, Hyderabad) for SPM, RPM, SO₂, NO_x and CO monitoring.

iv) *Data on ambient air quality should be regularly submitted to the Ministry including its RO at Bangalore and the SPCB / CPCB once in six months.*

Data of the Ambient Air Quality is being submitted to the Regional Office, MoEF&CC located at Chennai and the SPCB regularly once in six months. Compiled data for the period October 2018 to March 2019 is enclosed vide Annexure – IV.

v) *Adequate measures for control of fugitive emissions should be taken during drilling and blasting operations, loading and transportation of minerals etc.*

- Wet drilling is being practiced.
- Water is being sprayed by mobile water tanker on haul road and permanent water sprinkling system is being operated on part of main haul road leading to the limestone crusher.
- Water is being sprayed on internal ramp roads, muck piles and unloading points (on dumps) by mobile water tankers.
- Water fogging system is being operated at limestone crusher dump hopper (limestone unloading point) to suppress the fugitive emissions.
- To avoid spillage of material while transporting, the following measures are being in practice:
 - Moderate loading of tippers.
 - The body height of the vehicle is raised by 1 foot.

- vi) *Adequate measures should be taken for control of noise levels below 85 dB(A) in the work environment.*

Vehicles are being maintained properly for control of noise level and the noise levels are well within the limit. Ear plugs / muffs are provided to respective HEMM operators. Compiled data on noise levels measured for the period from April 2018 to March 2019 is enclosed as Annexure – V.

- vii) *Vehicular emissions should be kept under control and regularly monitored.*

Vehicles are being maintained properly. Emission levels (pollution under control check) are being monitored regularly and kept under control.

- 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 programme of the workers should be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.*

Protective respiratory devices are provided to the personnel working in dusty areas (near drilling and loading areas) and adequate training and information on safety and health aspects are being provided as part of Mines Vocational Training.

Occupational health surveillance programme is taken up periodically and records are being maintained. Corrective measures will be taken to the contractions due to exposures of dust, if needed. A full-fledged Occupational Health Centre with a qualified Occupational Health Specialist with supporting staff is established with the following facilities:

- i. X-ray
 - ii. ECG
 - iii. Spirometry (lung function test)
 - iv. Audiometry
 - v. Semi-auto analyser to carryout bio-chemical tests
 - vi. Clinical lab for micro-biological tests (including sputum test)
 - vii. Checking colour blindness
 - viii. Dental chair
 - ix. Ambulance
- ix) *The funds earmarked for environmental protection measures should be kept in separate account and should not be diverted for other purposes. Year-wise expenditure will be reported to MoEF.*

The funds earmarked for environment protection are not diverted for other purposes. The details of environmental protection expenditure for the financial year 2018-19 and funds allotted for the financial year 2019-20 are enclosed as Annexure -VI.

- x) *The RO of this Ministry located at Bangalore will monitor compliance of the stipulated environmental safeguards. The project authorities should send one set of EIA / EMP report and mining plan to them and extend full co-operation to the officer(s) of the RO by furnishing the requisite data / information / monitoring reports.*

Necessary co-operation along with relevant data is being provided.

xi) The project authorities should inform to the RO located at Bangalore as well as to the MoEF regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.

Date of financial closure for this project is not required as total funding for this project is from own funds.

xii) SPCB should display a copy of the clearance letter at RO, District Industries Centre and Collector's Office / Tahsildar's office for 30 days.

Noted.

xiii) The project authorities should advertise at least in two local newspapers widely circulated, one of which will be in 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 SPCB and also be seen at website of the MoEF at <http://envor.nic.in> and a copy of the same will be forwarded to the RO of this Ministry located Bangalore.

Advertised in Eenadu Telugu daily and The Hindu English daily on 16.11.2002 and a copy of the same is forwarded to RO, Bangalore vide Lr. No. MCL/MINES/RF dt. 31.12.2002.