

THE RAMCO CEMENTS LIMITED
(Formerly Madras Cements Ltd.,)
COMPLIANCE REPORT FOR ENVIRONMENTAL CLEARANCE –
JAYANTHIPURAM NORTH BAND MINING LEASE –
1.8 MILLION TPA CAPACITY OF LIMESTONE

EC Lr. No. : J-11015/377/2006-IA.II (M) dated 18.05.2007
Period : October 2018 to March 2019

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.*

At present, no topsoil is available in this mining lease. Topsoil extracted from this mining lease was used for greenbelt development as well as for top layer on reclamation area in the mining lease.

ii) *Garland drains 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, greenbelt development etc. The drains shall be regularly de-silted 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 de-silted at regular intervals.*

Various measures taken are:

- Garland drains (3838m*2.0m*1.5m) with a gradient of about 1 in 100 are made all along the waste dump - North Eastern side of the Lease area, Eastern side & Southern side of the ML area.
- Water collected through this garland drain is connected to the settling tank & water recharge pit over an area of 0.50 ha (South Eastern side of ML area).
- Drains and settling tank are de-silted regularly.
- Latest desilting operation was carried out in 15.05.2018 and the de-silted quantity is about 60 tonne.
- Two sumps are made with sizes of 76m*33m*5.0m and 52m*14m*4.0m in pit 1 and one sump with 265m*127m*2.9m in pit 2.

iii) *Drilling and blasting shall be by using dust extractors / wet drilling.*

Wet drilling is being practiced. Controlled blasting is being done.

iv) *Plantation shall be raised in an area of 195.54 Ha including a greenbelt 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. The company shall avoid plantation of mono culture species. Further greenbelt shall be developed in the North to NE direction of mine to protect the temple from dust emission. Fruit bearing species shall be planted by involving local people especially women with the help of self help groups.*

- An area of 63.32 ha within ML has been covered under plantation with native plant species by March 2019.
- Saplings have been planted along OB dump slopes and Northern side of lease boundary within the Mining Lease. Greenbelt is also developed in the North direction of mine.
- Greenbelt development will be further extended in a phased manner.
- All saplings including fruit bearing species are planted by involving local people and regular maintenance is being done by involving local people.
- The plantation will be continued in phased manner upto conceptual stage.

An EC amendment request is submitted to the Ministry on 07.01.2015 for this condition because at the time of obtaining EC, the existing greenbelt area is 24.00 ha. As per approved Mining Plan and the proposed greenbelt area at the conceptual stage is 62.39 Ha. The same is mentioned in page Nos. 69 & 86 of Rapid EIA report.

In page 1 of EC letter, it is mentioned that 62.39 Ha of greenbelt area is to be developed and in the above condition, it is mentioned that 195.54 Ha of greenbelt is to be developed. The proposed land use pattern at Conceptual stage specified that 62.39 Ha of greenbelt will be developed.

It is feasible to develop greenbelt over an area of 62.39 Ha only. Hence an EC amendment request is submitted to the Ministry on 07.01.2015 for amendment for this condition.

EAC committee recommended to amend this condition in the meeting held on 28.10.2015 and the EC amendment order is awaited. We are requested to the MoEF&CC regarding the same vide letter No. RCL/MoEF&CC/237, dt. 02.02.2018. The extract of the EAC minutes and letter dated 02.02.2018 are enclosed as Annexure - I.

v) *The company shall develop 50 m wide greenbelt barrier along the mine lease since distance between the last point of the mine and river is 1.0 km.*

The greenbelt developed with a width of 50 m. along the mining lease boundary towards the Paleru River.

vi) *The company shall prepare Wild life conservation in consultation with CWLW / State Forest Department for implementation.*

Wild life conservation plan is not prepared as there is no wild life and Schedule-1 species are present in the area and no wild life is observed after opening the mine in the subject area. This mining lease area does not fall under forest area. The nearest reserve forest is at a distance of 4 km. There are some agriculture lands and public roads in between the nearest reserve forest and the subject mining lease area.

vii) *There shall be no advancement of mine benches laterally. Orientation of mine benches shall be across the strike to minimize the decline in the ground water level.*

There is no advancement of mine benches laterally and The movement of benches is across the strike only.

viii) *Risk assessment study shall be undertaken for entire north band and report submitted to the Ministry.*

Risk assessment study is carried out and the report is incorporated in EIA / EMP report and submitted to the Ministry vide Lr. No. MCL/MoEF/4009/2007 dated 05.10.2007.

ix) *The company shall develop pisciculture in the water body(s) after mining activity is over. A fisherman co-operative society shall be formed with the affected people as members and initial financial support by the company. The company shall involve local people in the afforestation programme.*

Pisciculture will be taken up at final stage of mining activities. Local people are engaged in greenbelt development activity.

x) *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.*

Suitable ground water conservative measures are being taken up such as garland drains, check dams, siltation pond and rainwater harvesting pits etc.

- The rain water collected in mine pit is being used for dust suppression, greenbelt development and domestic purposes after settling of silt in mine sump and through settling tank.
- As part of the CSR activities, mine seepage water is also being supplied to Jaggayyapet town and nearby villages in Jaggayyapet Mandal after treatment, to conserve the water resources in the vicinity.
- A pond of 160m * 30 m size (nearly 0.5 ha area) is made at SE corner of lease area which is helping ground water recharge in the nearby area and excess mine seepage water is being pumped into this pond.

- Excess mine water is also being supplied for agricultural purposes for about 85 acres on need basis so as to conserve the ground water resources in the vicinity.
- Check dam is constructed on Vagu in the NW part of the mining lease to recharge groundwater in the surrounding area.
- NOC obtained vide their letter No. PRR05-11028/14/2018-SLNA-GIS-CORD dated 06.07.2018 to work below ground water table from Dept. of Panchayat Raj & Rural Development, Government of Andhra Pradesh (Nodal agency authorized to issue NOC on behalf of CGWA, Delhi for Andhra Pradesh projects). Copy of the same is enclosed as Annexure – II. The conditions stipulated in this NOC are being followed and yearly compliance reports will be submitted to the concerned.

xi) Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing well 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.

Groundwater level is being monitored regularly (at 4 locations) and readings are being recorded. The ground water data for the period October-2018 to March-2019 is being submitted to the CGWB, copy is enclosed as Annexure – III. Compiled data on Ground water quality carried out by MoEF&CC approved external environmental agency (M/s BS Envitech Hyderabad) for the same period is enclosed as Annexure – IV. The monitoring is being carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January).

xii) The company shall obtain forestry clearance under the Forest (Conservation) Act, 1980.

Total mining lease area is non-forest area, hence not applicable.

xiii) Prior permission from the competent authority shall be obtained for drawl of ground water, if any.

Permission obtained from the Ground Water Department for extraction of water vide their Lr. No. 13830/Hg.II(2)/06 dt. 09.03.2007 for 7000 m³/day water from the available quantity of water from the mine de-watering only (enclosed as Annexure - V). This clearance is common for our cement plant, thermal power plant, township and for four captive Mining Lease areas.

xiv) *Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operation & in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.*

- Vehicles are being maintained properly at our workshop located at cement plant.
- Vehicle emission levels are being monitored regularly and kept under control.
- With proper supervision regularly, it is ensuring that the vehicles are not overloaded.
- To avoid fine particles escape while transporting, the following measures is being in practice:
 - Transportation of mineral is being done by moderately loading the vehicles to avoid the spillage.
 - The body height of the vehicle is raised by 1 foot to avoid the spillage of material.

xv) *A final mine closure plan along with details of Corpus Fund shall be submitted to the MOEF 5 years in advance of final mine closure for approval.*

The life of the mine is estimated up to the year of 2031-32. The final mine closure plan along with other details will be submitted accordingly to MoEF&CC as suggested.

B. GENERAL CONDITIONS:

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

No change in mining technology and the scope of working.

ii) *No change in the calendar plan including excavation, quantum of mineral and waste shall be made.*

No change in the calendar plan. In the financial year 2018-19, the limestone production was 1.799 million tonne against production capacity of 1.80 million TPA. Waste of 3,75,970.87 cu.m generated during the financial year 2018-19 against IBM approved quantity of 4,91,103.20 cu.m for the same.

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.*

There is no forest area in the mining lease. The nearest reserve forest is at a distance of about 4 KM. There are no endangered species in the mining lease area. Further submitted letter to Chief Wild Life Warden requesting their suggestions for conservative measures and reply is awaited.

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 in consultation with State Pollution Control Board.*

9 Nos. of ambient air quality monitoring stations are established in buffer zone and 4 Nos. of air quality monitoring stations are established in core zone based on the meteorological data, topographical features and environmentally and ecologically sensitive in consultation with State Pollution Control Board and regular (fortnightly) manual monitoring is being done through MoEF&CC approved external environmental monitoring agency for RPM, SPM, SO₂, NO_x monitoring.

v) *Data on Ambient Air Quality (RPM, SPM, SO₂, NO_x) should be regularly submitted to the Ministry including its RO located 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 / CPCB regularly once in six months. Compiled data for the period October-2018 to March-2019 is enclosed as Annexure – VI.

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.*

Fugitive dust emission is being controlled at the source.

- Permanent water sprinkling system is being operated on main haul road leading to the limestone crusher.
- Mobile water spraying tanker is being used to control dust emission on other 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.
- Wet drilling is being practiced.
- 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.

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.*

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

viii) *Industrial waste water (workshop and wastewater 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.*

Oil and Grease trap is installed at Workshop to separate oil & grease before letting wastewater out. Samples of Oil and Grease trap outlet are being regularly analysed by MoEF&CC approved external environmental agency. The data for the period October-2018 to March-2019 is enclosed as Annexure – VIII. There is no generation of waste water from the mine.

ix) *Personal 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.*

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

x) *Occupational health surveillance programme of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures, if needed.*

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:

- X-ray
- ECG
- Spirometry (lung function test)
- Audiometry
- Semi-auto analyser to carryout bio-chemical tests
- Clinical lab for micro-biological tests (including sputum test)
- Checking colour blindness
- Dental chair
- Ambulance

xi) 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.

Environment management cell is established with qualified personnel to look after the environment management related activities and is reporting to senior executive of the company. The organization chart is enclosed as Annexure - IX.

xii) The project authorities shall inform to the RO 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.

Date of financial closure for this project is not required as the total funding for this project is from own funds. The same is informed to the Regional Office on 02.06.2007.

xiii) The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purposes. Year-wise expenditure shall be reported to the Ministry and its RO located at Bangalore.

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 - X.

xiv) The RO of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities should 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.

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.

Noted.

xvi) SPCB should display a copy of the clearance letter at RO, district industries centre and Collector's Officer / Tahsildar's office for 30 days

Noted.

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

Advertised in "Eenadu" Telugu daily and "The Hindu" English daily on 27.05.2007 and copy of the same is submitted to RO, Bangalore vide Lr. No. MCL/Mines/North Band/165 dated 02.06.2007.