

**THE RAMCO CEMENTS LIMITED**  
(Formerly Madras Cements Ltd.,)  
**COMPLIANCE REPORT FOR ENVIRONMENTAL CLEARANCE –**  
**JAYANTHIPURAM SOUTH BAND MINING LEASE – 0.5 MILLION TPA CAPACITY**

EC Lr. No. : J-11015/378/2007-IA.II (M) dated 08.06.2007  
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.*

No topsoil generated during period from October-2018 to March-2019. Reclamation and rehabilitation are not initiated as ultimate pit level is not reached. Backfilling is not yet started.

- ii) *Overburden shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30 m, each stage shall preferably be of 10 m and overall slope of the dump shall not exceed 28°. The mine pit area shall be reclaimed by back filling the OB in a phased manner. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface run off. Monitoring and management of rehabilitated areas shall continue until the vegetation becomes self-sustaining. Compliance status shall be submitted to the MOEF once in six months.*

Out of 2 Nos. of overburden dumps, one is active dump and another is in-active dump. Overburden is being dumped on the earmarked dump sites only. The height of the active dump is 19.5 m (in 2 terraces) and the slope of the dump is maintained as specified. As the dump is still in active stage, plantation on parts of the dump is started. Reclamation and rehabilitation are not initiated as the mineral is not exhausted. This report is being submitted as half yearly compliance report (October-2018 to March-2019).

- iii) *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 are made along the bottom of waste dumps and around the mine workings.
- These drains are made for a total length of 2420 m along the ML boundary and 600 & 680 m around the two waste dumps.

- Settling tanks (4 Nos.) with total area of 0.37 ha is connected to the garland drains for settling the suspended solids.
- These tanks are being de-silted and maintained regularly.
- The sump capacity is made to take care of maximum rainfall.
- A sump is made with a dimension 33m\*17m\*4.0m size for proper settling of silt material.
- The water collected is being utilized for watering the mine area, haul roads, greenbelt development, etc.
- Latest desilting operation carried out on 21.05.2018 and the de-silted quantity is about 100 tonne.

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

Wet drilling and controlled blasting are being practiced.

v) *Plantation shall be raised in an area of 20.17 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 involve local people with the help of local NGOs for afforestation programme.*

- An area of 18.00 ha within ML has been covered under plantation as on March-2019 with native plant species.
- Saplings have been planted along OB dump, roads.
- Greenbelt development will be further extended in a phased manner.
- All saplings including fruit bearing species are planted and regular maintenance is being done by involving local people.
- The total area of 20.17 ha will be covered by greenbelt at conceptual stage.

vi) *The company shall prepare Wild Life Conservation plan in consultation with CWLW / State Forest Department for implementation.*

Wild life conservation plan is not prepared as no wild life and schedule -1 species are present in the area and no wild life is observed, after opening the subject mine. This mining lease area does not fall under forest area. The nearest reserve forest is a distance of 3 km. There are some agriculture lands and public roads in between the nearest reserve forest and the subject mining lease area.

vii) *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 conservation measures are being taken up such as garland drains, check dams, siltation pond and rainwater harvesting 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.
- As part of the CSR activities, mine seepage water is also being supplied to Jayanthipuram village in Jaggayyapet Mandal after treatment, to conserve the water resources in the vicinity.
- 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. PRR05-11028/13/2018-SLNA-GIS-CORD dated 08.08.2018. Copy of the same is enclosed as Annexure – I. The conditions stipulated in this NOC are being followed and yearly compliance reports will be submitted to the concerned.

- viii) *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.*

Ground water levels are being monitored regularly by 2 Nos. of piezometers. The data submitted to the CGWB for the period October-2018 to March-2019 is enclosed as Annexure – II. Compiled data of Ground water quality analysis is carried out by MoEF&CC approved external environmental monitoring agency (M/s B.S. Envitech, Hyderabad) for the same period is enclosed as Annexure – III. The monitoring is being carried out four times in a year – Pre-monsoon (April-May), Monsoon (August), Post-Monsoon (November) and Winter (January).

- ix) *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 m<sup>3</sup>/day water from the available quantity of water from the mine de-watering only (enclosed as Annexure - IV). This clearance is common for our cement plant, thermal power plant, township and for four captive Mining Lease areas.

- x) *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.
- While transporting the mineral, the following measures are being taken:
  - 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.

- xi) *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 final mine closure plan will be submitted accordingly with details to MoEF&CC as suggested. The life of the mine is estimated up to the year 2050-51.

- xii) *Spent oil generated from maintenance of HEMM shall be sold to the registered recyclers.*

Being used for firing in kilns and for lubrication of reclaimer equipment / or sold to APPCB authorized recyclers (with proper storage).

**B. GENERAL CONDITIONS:-**

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

There is no change in the mining technology and scope of working. In case of any change, prior approval will be obtained from the MoEF&CC.

- 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, limestone production was 0.499 million tonne against EC quantity of 0.5 million TPA. The waste generated in the same period is 15827.82 cu. m against the proposed quantity of 82970.1 cu. m per annum in approved Modified Mining Plan by IBM.

- 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.*

The subject area does not fall under forest area. The nearest reserve forest is at a distance of about 3 km. There are some agriculture lands and public roads in between the nearest reserve forest and the subject mining lease area. There is no endangered species observed after opening of the mine. Submitted a letter to Chief Wild Life Warden requesting 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, SO<sub>2</sub>, NO<sub>x</sub> 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, SO<sub>2</sub>, NO<sub>x</sub> monitoring.

- v) *Data on ambient air quality (RPM, SPM, SO<sub>2</sub>, NO<sub>x</sub>) should be regularly submitted to the Ministry including its RO located at Bangalore and the SPCB / CPCB once in six months.*

Compiled data of ambient air quality monitoring collected during half-year period October-2018 to March-2019 by MoEF&CC approved external environmental monitoring agency (M/s B.S. Envitech, Hyderabad) is enclosed as Annexure – V.

- 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.
- Wet drilling is being practiced.
- 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.

- 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 levels and the noise levels are well below the limit. Ear plugs / muffs are provided to respective HEMM operators. Compiled data on noise levels for the period from April-2018 to March-2019 is enclosed as Annexure – VI.

- viii) *Industrial wastewater (workshop and wastewater 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 shall be installed before discharge of workshop effluents.*

Oil and Grease trap is installed at Workshop to treat the wastewater before let out. Outlet water quality analysis carried out by MoEF&CC approved external environmental agency. Compiled data for the period October-2018 to March-2019 is enclosed as Annexure – VII. There is no wastewater generation 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 - VIII.

*xii) & xiv) 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 our own funds. The same is informed to the RO 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 - IX.

*xv) 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.

*xvi) 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.

xvii) *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.

xviii) *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 on 15.06.2007 & "The Hindu" English daily on 14.06.2007 and a copy of the same is forwarded to RO, Bangalore vide Lr. No. MCL/Mines/South Band/501 dt 19.06.2007.