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THE RAMCO CEMENTS LIMITED
(Formerly known as Madras Cements Ltd.)

RCL/MoEF-239/ 97 /2017-18

29th May 2017

The Additional Principal Chief Conservator of Forests,
The Ministry of Environment and Forests,
Regional Office (Southern Zone),
No. 34, Cathedral Garden Road,
Nungambakkam,
CHENNAI – 600 034.

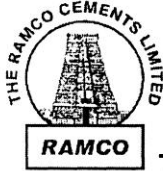
Dear Sir,

- Sub: Submission of Half-Yearly Compliance Report for Environmental Clearances for Jayanthipuram North Band Limestone Mine, Jayanthipuram South Band Limestone Mine, Ravirala Limestone Mine & Budawada Limestone Mine for the period from October 2016 to March 2017 – Reg.
- Ref: 1. Jayanthipuram North Band Limestone Mine - Environmental Clearance Lr.No.J-11015/377/2006-IA.II(M) dated 18.05.2007.
2. Jayanthipuram South Band Limestone Mine - Environmental Clearance Lr. No.J-11015/378/2006-IA.II (M) dated 08.06.2007.
3. Ravirala Limestone Mine (0.5 million TPA) - Environmental Clearance Lr. No.J-11015/18 /2000-IA.II(M) dated 16.10.2002.
4. Ravirala Limestone Mine Expansion (from 0.5 million TPA to 1.2 million TPA) - Environmental Clearance Lr. No. J-11015/149/2008-IA(M) dated 26.08.2009.
5. Budawada Limestone Mine - Environmental Clearance J-11015/150/2008-IA.II(M) dated 10.12.2009.

We are herewith submitting the Half-Yearly Compliance for Environmental Clearances for the period from October 2016 to March 2017 along with relevant enclosures for Jayanthipuram North Band Limestone Mine, Jayanthipuram South Band Limestone Mine, Ravirala Limestone Mine & Budawada Limestone Mine.

Name, designation and contact details of person in-charge of environmental division are:

T. Sridhar Reddy
Asst. Vice President (Works)
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THE RAMCO CEMENTS LIMITED
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This is for your kind information and perusal please.

Thanking you,

Yours faithfully,
For The Ramco Cements Limited,
(Formerly known as Madras Cements Ltd.)

BSP RAJU
Asst. Vice President - Mines

Encl: a.a

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 2016 to March 2017

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 2016-17, the limestone production was 0.397 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.*

Garland drain of a cumulative length of 1089m 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 62m*18m*3m 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. Check bund is constructed in SE direction of the mining lease.

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. 750 saplings are planted near North side of the mining lease boundary and on dump yard in the year 2016-17. Total greenbelt area is 5.91 Ha within ML by the

end of this half year period. Plantation has been developed along the bunds on the Western flanks of the waste dump.

- 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, where the mineral is exhausted. Total backfilled area as on March 2017 is 1.21 ha.

- 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 mining scheme approved by IBM is up to year 2024-25.

- 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.*

Ground water level is being monitored regularly at established piezometer with automatic water level monitor. One more Automatic Water Level Recorder procured and is to be installed. Ground water level is also being manually monitored by 3 Nos. of piezometers and the Ground Water level data is being submitted to the CGWA. Copy of the letter addressed to CGWA regarding the water level data through piezometers for the period October 2016 to March 2017 is enclosed as Annexure – II. Consolidated reports for ground water quality analysis carried out by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates, Hyderabad) for the period October 2016 to March 2017 is enclosed as Annexure – III.

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 0.397 million tonnes and 108631 Cu.m. of development done during the financial year of 2016-17.

- 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. Ambient air quality is being monitored regularly by MoEF&CC approved external environmental monitoring agency (M/s Universal Enviro Associates, Hyderabad).

- 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 2016 to March 2017 is enclosed vide Annexure – VI.

- 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. Non-el delay detonators are being done to reduce fugitive emissions during blasting. 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.

To avoid spillage of material while transporting, the following measures are being in practice:

- Moderately 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 October 2016 to March 2017 is enclosed as Annexure – VII.

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

Vehicles are being maintained properly. Emission levels 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.

Periodical medical tests for all the workers are carried out as per statute and the records are being maintained. The same is reviewed periodically. Occupational Health Centre (with qualified Occupational Health Specialist) 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 provided for environmental protection measures are not being diverted for any other purposes. The details of environmental protection measures are being submitted to the Regional Office, Ministry regularly. Details of expenditure for the financial year 2016-17 are enclosed as Annexure - X.

- 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.