

Approved
March 2014
K/S

**KATTUPIRINGIUM LIMESTONE MINE OF THE RAMCO CEMENTS LIMITED ,
GOVINDAPURAM WORKS, ARIYALUR.**

1. Name and address of the project Authority
With phone and fax number : Kattupiringium Limestone Mine
M/s The Ramco Cements Limited,
Auras Corporate Centre,
Vth Floor, No.98-A , Dr.Radhakrishnan Road
Mylapore, Chennai – 600 004.
kq@ramcocements.co.in
Phone- 044-28478666 / 28478656
Fax 044 -28478676.

2. Latitude / Longitude
Latitude : N 11^o 06' 20" to 11^o 06' 40"
Longitude : E 79^o 08' 13" to 79^o 08' 25"

3. Total project cost and expenditure as on date : Rs: 857.00 Lakhs

4. Allocation and expenditure for
Environment Management : Details given in Annexure – 1

5. Total area of the Project (mines + Dump area) : (44.58.0 Ha)

6. Number of trees planted, species name
and area of plantation : Details given in Annexure -2
No of trees planted : 16500
Area : 8.45Ha

7. Number of bore / tube wells in the project site : 1 Nos

8. Copy of the monitoring reports (Ambient air,
noise, Ground Water, soil etc...) : Annexure – 3

9. Date of commencement and Commissioning
of the project work.
Date of commencement : 10.10.2007
Date of commissioning : 06.05.2008.

10. Year wise production for the last three years.
: :
2011-12 : 396731 Tonnes (0.40 MTPA)
2012-13 : 433573 Tonnes (0.43 MTPA)
2013-14 (Till February 2014) : 335171 Tonnes (0.33 MTPA)

11. Point wise compliance on the various conditions
with all supporting documents stipulated in
MOEF clearance. (Hard and soft copy) : Annexure – 4

12. Point wise compliance on the various conditions
(With all supporting documents) stipulated by
Tamil Nadu State Pollution Control Board : Annexure – 5

13. Copy of the consent, authorization and
Environment statement : Annexure – 6

23/02/14
1/4/14

- ❖ Mining lease -G.O.MS NO.605 over an extent of 44.58.0 Ha in Valajanagaram and Periyagalur villages for a period of 30 years w.e.f 13.07.2000.
- ❖ Environmental Clearance from MOEF for producing 0.90 MTPA of limestone vide letter J - 11015/557/2007-IA. II (M) dated 10.10.07.
- ❖ Consent for Establishment (CFE) for Air from State Pollution control board for 0.90 MTPA vide Proceedings. No T6/TNPCB/F1245/ A/ 2008 dated 25.01.08.
- ❖ Consent for Establishment (CFE) for Water from State Pollution control board for 0.90 MTPA vide Proceedings. No T6/TNPCB/F1245/ W/ 2008 dated 25.01.08.
- ❖ Consent for Operation (CFO) from State Pollution control board for 0.90 MTPA vide Letter No (A) 17522 dated 06.05.08.
- ❖ Consent for Operation (CFO) from State Pollution control board for 0.90 MTPA vide Letter No (W) 21485 dated 06.05.08.
- ❖ Consent for Operation (CFO) from State Pollution control board for 0.90 MTPA vide Letter No (A) 17522 dated 03.07.2013.
- ❖ Consent for Operation (CFO) from State Pollution control board for 0.90 MTPA vide Letter No (W) 21485 dated 03.07.2013.

List of Annexures:-

S.No	Description	Annexure details
1	Expenditure for Environmental Management.	Annexure-1
2	Green Belt Development	Annexure-2
3	Copy of Monitoring Report	Annexure-3
4	MOEF-Compliance conditions & Status.	Annexure-4
5	TNPCB Compliance Conditions & Status.	Annexure-5
6	Environment Statement	Annexure-6

KATTUPIRINGIUM LIMESTONE MINE
MOEF CLEARANCE NO-J-11015/557/2007-IA. II(M) DT. 10.10.2007.

SPECIFIC CONDITIONS:

Sl. No	Conditions	Compliance status
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.	From the inception of mining, top soil generated was temporarily dumped in the earmarked place. The major part of the quantity of top soil accumulated got utilized for development of green belt, avenue plantation, all along the M.L.B. (Refer Annexure-2) The top soil likely to be generated in future will be stored in earmarked dumps and will be utilized for afforestation. Refer Photo No:1 to 9
ii.	<p>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 green belt development etc. The drains shall be regularly de-silted particularly after monsoon and maintained properly.</p> <p>Garland drain with appropriate (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 rain fall (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 setting of site material. Sedimentation pits shall be constructed at the corner of the garland drains and desilted at regular intervals.</p>	<p>a) Garland drain for Dump : Garland drains around the periphery of dumps has been formed to arrest the silt and sediments from the OB dumps. Garland drains around the dumps Size of 700 X 2 X 2 meters respectively. De-silting of drains are being carried out regularly. Refer Photo No: 10</p> <p>b) Garland drain for Mines : Garland drains have been formed in the Working mines of size 600 X 2 X 2 meter to take care of rainfall and discharge of surrounding area. Refer Photo No: 11. The mine floor has been maintained at the gradient of 1:20 to collect the water in the sump. The sump is properly designed keeping 50% safety margin over and above peak sudden rain fall so as to allow adequate retention period for proper settling of silt material. Free from silt water is being utilized for watering the mine area roads green belt development etc. Besides de silting of drains are being carried out regularly. Sedimentation pits with a dimension of 3 X 3 X 2 metre has been constructed at the corners of the garland drains & arrangement has been made for de silting at regular intervals.</p>
iii.	Conceptual mining plan for every 5 years for the mine shall be submitted to ministry.	Conceptual Mining plan will arise only at the end of the life of the Mine period and we will submit to Ministry at that stage.
iv.	The company shall monitor cumulative impacts of the near by mines and cement plants located in the area with regard to ambient air quality and maintain proper authentic record.	Arrangement has been made for monitoring and these data's were compared with the base line data (Studied during initial stage). It was found that there is no any cumulative impact with regards to Ambient Air quality.

v.	Drilling and blasting shall be by using dust extractors / wet drilling.	Drilling operation is not carried out regularly as the Mining operation is done with Ripper which eliminates drilling. However drilling & blasting is carried out only for making sumps. During drilling we have covered the drilling point with wet gunny bags so that it controls the dust emission.
vi.	Plantation shall be raised in an area of 19.78 ha including a green belt of adequate width by planting the native species around the ML area ,OB dump sites etc., in construction with the local DFO/Agriculture Department. The density of the trees shall be around 2500 plants per ha. Selection of plant species shall be as per CPCB guidelines. Herbs & shrubs shall also form a part of afforestation programme besides tree plantation.	Green Belt development is being done as per norms in the MOEF Clearance, Consultation with local DFO, all along the roads, waste dump. We are following the CPCB guidelines for selection of species. Refer Photo No:1 to 9
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 Conservation measures by way of rain water harvesting structures like recharge pond on the southeastern side of the mine are made to augment ground water resources. Consultation with Central Ground Water Board will also be done for implementing the conservation measures.
viii.	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells 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), winter (January) and the data thus collected may be sent, regularly to MOEF central Ground water Authority and Regional Director Central Ground Water Board.	We have engaged a consultant for regular monitoring of ground water level, quality and monitoring report has been obtained for four seasons in a year and it has been sent regularly to Central Ground Water Board, Regional Director and MOEF.
ix.	Prior permission from the competent authority shall be obtained for drawl of ground water, if any	We have obtained permission from competent authority for drawl of ground water.
x	The existing water bodies and that to be created during the course of mining may utilized to develop pisciculture by organizing Fishermen co operative society with the land losers if any and special the poorer section of the people as member of such society with initial financial assistance in the form of share money and managerial assistance so that the member themselves can run the affairs of the society in due course .The project proponent shall arrange marketing tie up so that the society gets fair price of their product and the profits are equitably shared by member of the society as regular source of income.	This condition will arise during the conceptual sfage of Mining operations. Hence this will be taken care at that period.

xi.	Land use pattern of the nearby villages shall be studied and action plan for abatement and compensation for damage to agriculture land or common property land (if any) due to mining activity shall be submitted to ministry within six months.	Study has been taken for the present land use pattern of the nearby villages and there was no impact for the agricultural land or common property land due to Mining activities.
xii	Soil samples for contamination of mercury chromium and other traces metals shall be studied when mine is in operation and records maintained.	Soil sampling has been carried out periodically and No such trace elements like mercury, chromium are found.
xiii.	Erosion and silt control measures shall be prepared and ground vibration study shall be conducted.	Formation of sedimentation pit and Garland drainage system acts as control measures for erosion and silt. Ground vibration study is being carried out.
xiv	Vehicular emissions shall be kept under control and regular monitored Measures shall be taken for maintenance of vehicle used in mining operations and in transported of mineral .The vehicles shall be covered with a tarpaulin and shall not be overloaded.	Measures have been taken for maintenance of Vehicles using in mining operation and transportation of mineral. Emission Test has been carried out periodically for all Vehicles in the Mines. Closed transportation with optimum quantity has been arranged (Emission Test Report Enclosed)
xv	A final Mine Closure Plan, along with details of Corpus Fund, shall be submitted to the Ministry of Environment & Forests 5 years in advance of final mine closure for approval.	Final closure plan will be prepared one year prior to the final closure with suitable financial provisions for mine closure. The same will be informed to the Ministry of Environment & Forests.
xvi	Company shall periodically (every 6 month) monitor river water quality and also shall undertake mitigation measures in case contamination due to mining activity is observed .Periodic test result of the river water quality shall be submitted to the state government and the ministry for record every 6 months.	We have taken water samples on Halfyearly basis in Marudaiyar and Kallaru and in quality part there is no contamination due to Mining activity and report has been submitted to the state government and the ministry for record every 6 months.
xvii	Transportation of ore shall be done by covering the trucks with tarpaulin or other suitable mechanism so that no spillage of ore /dust take place .transportation shall be done only during day time.	Closed transportation has been arranged in order to avoid spillage .Only day time transportation is in practice.
xviii	Occupational health surveillance program of the workers shall be undertaken periodically to observe any contractions due to exposure to dust and take corrective measures ,if needed .occupational health and safety measures for the workers including training on malaria eradication ,HIV ,and health effects on exposure to mineral dust etc.shall be carried out .The company shall engage a full time qualified doctor who is trained in occupational Health surveillance health record of workers shall be maintained.	A Full time dedicated dispensary with qualified Doctor, nurse and pharmacy is provided for occupational health surveillance and monitoring of all employees. Refer Photo No: 27 to 30. (Copy of the Medical Examination reports is enclosed)

GENERAL CONDITIONS:

Sl. No	Conditions	Compliance status
i.	No change in mining technology and scope of working shall be made without prior approval of the Ministry of Environment & Forest.	No change in mining technology. Opencast Mechanised non conventional Mining is in practice.
ii.	No change in the calendar plan including excavation, quantum of limestone and waste should be made.	We are not exceeding the stipulated Quantity of limestone and waste as per the approved Mine plan/Scheme.
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.	We have obtained NOC from District Forest Officer, Tamil Nadu Forest Department. Attur. As per their report there is no sanctuary of any kind, National Park, Biosphere is located around the Mining area.
iv.	Four ambient air quality – monitoring stations should be established in the core zone as well as the buffer zone for RPM,SPM,SO ₂ ,NOX and CO monitoring. Location of the stations should be decided based on the meteorological data topographical features and environmentally and ecologically sensitive targets in consultation with the State Pollution Control Board	Ten Ambient Air Quality monitoring stations are located in core and buffer zone for monitoring . PM _{2.5} ,PM ₁₀ ,RPM,SPM,SO ₂ ,NOX and CO. The location of the above stations is based on meteorological data topographical features and environmentally and ecologically sensitive considerations.
v.	Data on ambient quality should be controlled regularly submitted to the Ministry including its Regional office at Bangalore and the State Pollution Control Board/ Central Pollution Control Board once in six months.	Ambient Air Quality data is being submitted regularly to the Regional Office, Bangalore in every six months. AAQ study report is being submitted to State Pollution Control Boards once in six month. (copy of monitoring report enclosed).
vi.	Fugitive dust emissions from all the sources should be controlled regularly monitored and data recorded properly. Water spraying arrangement on haul roads, wagon loading, dump, trucks (loading & unloading) should be provided and properly maintained.	Fugitive dust emission from all the sources is being controlled and regularly monitored. Haul roads are adequately water sprayed through water spraying utilizing 10KLD water tanker arrangement. Both sides of haul road plantation is being maintained. Refer Photo No: 13 of Water spraying and green belt along haul roads.
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 plug / muffs.	Noise generation near mining operations areas are being measured periodically which is enclosed in the Environmental Monitoring report. Refer Photo No: 31 HEMM noise is reduced by means of effective periodical and Preventive maintenance system. Acoustic enclosures are provided for the operators in all the equipment. Refer Photo No:32
viii.	Industrial waste water (workshop and waste from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December,1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	Centralized effluent treatment facilities is provided for all the mines at Periyanaalur Village .Oil, and grease traps allow to pass through settling tank to remove oil and grease from the waste water
ix.	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.	Personal Protective Equipment is provided for employees working in the mines. Adequate training on safety and health aspect has been provided in the vocational training centre. (VTC Certificate enclosed)

x	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.	Organizational set up of Environmental cell is functioning under the unit head. One competent Environmental Engineer is posted at Corporate office to monitor and coordinate the Environmental activity. The organizational chart is enclosed
xi.	The project authorities shall inform to the Regional Office 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.	<i>The project finance is met with from the internal accruals and reserves.</i>
xii	The funds earmarked for environmental protection measures shall be kept in separate account and should not be diverted for other purpose. Year wise expenditure should be reported to the Ministry and its Regional office located at Bangalore.	As per the EMP plan fund provision for capital and recurring expenditure towards environmental measures are implemented. Separate account is being maintained for implementation of Environmental Management Plan measures is enclosed.
xiii	The Regional Office of this Ministry located at Bangalore shall monitor compliance of the stipulated conditions. The project authorities extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data /information/monitoring reports.	A set of filled in questionnaire is filled and sent to the MOEF Regional office, Bangalore.
xiv.	A copy of clearance letter will be earmarked to concern Panchayat / local NGO, if any from whom suggestion / representation has been received while processing the proposal.	The proposal has been informed to Local Panchayat/ NGO.
xv	State Pollution Control Board should display a copy of the clearance letter at the Regional office, District Industry center and Collectors office/ Tahsildars Office for 30 days.	The copy of clearance letter has been sent to District Authorities through State Pollution Control Board with in the stipulated period.
xvi	The project authorities should advertise at least in two local newspapers widely circulated around the project, 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 according environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and may also be seen at web site of the Ministry of Environment & Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional Office of the Ministry located at Bangalore.	Advertised the Environmental clearance obtained from MOEF for Expansion of the Mining Project in the Dinamani News paper Tamil Edition on 15.10.2007 and Indian Express English News paper dated 15.10.2007 and the copy has been sent to Regional Office of the Ministry located at Bangalore. (Advt. copy enclosed)