

Chettinad Cement/ Tamilnadu/Karuppur Keelapalur Mines (New)
/EC Compliance/Apr '2020 - Sep'2020/2020 | 198
27th Nov , 2020

The Director
Regional Office [SEZ]
Ministry of Environment, Forest and Climate Change, GoI,
#34, HEPC Campus, Cathedral Garden Road
Nungambakkam, Chennai -600 034

Sir,

Sub: Submission of Environmental Clearance (EC) Compliance Report (Apr '2020 - Sep'2020) Chettinad Cement Corporation Private Limited -Proposed New Captive Karuppur Kilapaluvur Limestone Mine (26.145 ha) with a capacity of 0.76 million tons per annum at Karuppur Senapathy & Kilapaluvur Villages, Ariyalur Taluk & District, Tamilnadu

Ref: Environmental Clearance granted by SEIAA, Tamilnadu vide Letter No: SEIAA-TN/F.No 3000/2013/EC-40/1(a)/ARY/2016/ dated 27th Apr 2016

We enclose herewith the Six Monthly Environmental Clearance Compliance Report pertaining to our Proposed New Captive Karuppur Kilapaluvur Limestone Mine (26.145 ha) with a capacity of 0.76 million ton per annum at Karuppur Senapathy & Kilapaluvur Villages, Ariyalur Taluk & District, Tamilnadu, for the period from Apr '2020 - Sep'2020.

Consent for Operation from Tamilnadu Pollution Control Board obtained on 06.11.2019.

- a. Environmental Clearance Compliance Report Annexure 1
- b. Environmental Monitoring Report comprising of
 - i. Ambient Air Quality Monitoring - Consolidated Report - Annexure 2
 - ii. Noise Level Monitoring - Consolidated Report - Annexure 3
 - iii. Ground Water Quality Monitoring Report- Annexure 4

Yours faithfully
for Chettinad Cement Corporation Private Limited



M. Sundaramoorthy
Joint President (Works)

Copy to :
Zonal Office, CPCB, Bangalore
Member Secretary, TNPCB, Chennai.
JCEE, TNPCB, Trichy
DEE, TNPCB, Ariyalur

Chettinad Cement Corporation Private Limited

Karuppur Kilapaluvur Limestone Mine

Karuppur Senapathy & Kilapaluvur Villages, Ariyalur Taluk & District , Tamilnadu

Environmental Clearance (EC) Compliance Report (April-20 to September-20)

(Environmental Clearance granted by SEIAA, Tamilnadu vide Letter No : SEIAA-TN/F.NO 3000/2013/EC-40/1(a)/ARY/2016/ dated 27.4.2016 for a Mining Capacity of 0.76 million tons per annum & Mining Lease Area of 26.145 ha)

Part A - Conditions for Pre-Construction Phase

S.No	Condition (Pre-Construction Phase)	Compliance Status
i.	NOC from the National Board for Wild Life shall be obtained before commencement of quarry operations ,for the karaivetti Bird Sanctuary located at distance of 8 km from the proposed site for application submitted for the same on 01.07.2014	<p>With reference to the MoEF notification (S. O. 1909(E) dt. New Delhi, the 31st May, 2019, the extent of Karaivetti Eco-sensitive Zone varies from 0.105 kilometers to 0.891 kilometers around the Karaivetti Bird Sanctuary and our Karuppur Keelapalur Limestone mines falls at 7.3 KM i.e. out of Eco sensitive Zone of Karaivetti bird Sanctuary.</p> <p>We received a letter from Principal Chief Conservator of Forests, Chennai for Karaivetti Bird Sanctuary location vide letter Ref. No. WL5[A]/34792/2019 dt: 20.08.2019, directed District Forest Officer to examine the condition.</p> <p>Based on the above PCCF letter, we received a NOC letter from District Forest Officer vide letter No.: C No.1993/2017/P dt: 13.09.2019, stating that, "the project site is located away from the Eco sensitive zone Boundary of Karaivetti bird sanctuary".</p>
ii.	Vision document specifying prospective plant for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	<p>The Environmental Clearance has been obtained for 5.5 million tons of Cement per annum and 45 mw of Captive Power Generation at Kilapaluvur, Ariyalur District, Tamilnadu. This Captive Limestone Mine will be catering to the requirement of the Cement Plant mentioned above.</p> <p>As of now, no further expansion of capacity of integrated Cement Plant has been</p>

S.No	Condition (Pre-Construction Phase)	Compliance Status
		planned. As and when, any plan of further augmentation plan of Cement Plant, mentioned above, is conceived, the details will be submitted to the Regional Office of MoEFCC, Chennai.
iii.	In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAC/SEIAA Shall be obtained. No change in mining technology and scope of working should be made without prior approval of the State Environmental Impact Assessment Authority .No change in the calendar plan including excavation, quantum of mineral limestone and waste should be made.	No change in mining technology and scope of working will be made without prior approval of the State Environmental Impact Assessment Authority (Tamilnadu). No change in the calendar plan including excavation, quantum of mineral limestone and waste will be made without prior approval of concerned authorities.
iv.	A copy of the clearance letter shall be sent by the proponent to the Local Body, Ariyalur Taluk, Ariyalur District, and the local NGO, if any, from whom suggestions/representations, if any, have been received while processing the proposal. The clearance letter shall also be put in the website of the Company by the Proponent.	A copy of the Environmental Clearance letter sent to concerned Keelapaluvur Panchayat on 10.06.2016.The EC letter has been uploaded in the company website.
v.	Consent for Establishment shall be obtained from the Tamil Nadu Pollution Control Board and a copy shall be submitted to the SEIAA, Tamilnadu before taking up any construction activity at the site.	Consent for Establishment (CFE) obtained from TNPCB on 06.09.2019. A copy of CFE submitted to the SEIAA, Tamilnadu before taken up construction activity at the site.
vi.	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire and Rescue Services Department, Civil Aviation Department, Forest Conservation Act,1980 and WildLife (Protection)Act,1972, State/Central Ground Water Authority, Coastal Regularity Zone Authority, other statutory authorities as applicable to the project shall be obtained by project	All applicable statutory clearances for this project has been obtained from the concerned competent authorities.

S.No	Condition (Pre-Construction Phase)	Compliance Status
	proponent from the concerned competent authorities.	
vii.	The construction of the structures should be undertaken as per the plans approved by the concerned local authorities /local administration.	The construction of the structures undertaken as per the plans approved by the concerned local authorities /local administration.
viii.	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.	Noted.
ix.	All required sanitary and hygienic measures should be in place before starting construction activities and they have to be maintained throughout the construction phase.	All required sanitary and hygienic measure in place of construction activities and maintained throughout the construction activities.
x.	The company shall stress up on the preventive aspects of occupational health.	Workers are trained in safety on the need to use Personal Protective Equipment to safeguard against possible occupational health issues and also on the safe procedures to be followed to prevent accidents.
xi.	Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Only the construction of Office Shed, Toilet & Septic Tank was involved in this project. The workers from nearby the villages have engaged for the same. Hence, housing for the construction labourers is not envisaged. However, safe drinking water, medical health care etc., has ensured for the labourers.
xii.	The project authorities shall advertise with basic details at least in two widely circulated newspapers, one of which shall be in the vernacular language of the locality concerned with in 7 days of the issue of clearance and copy of the clearance letter is available with State Pollution Control Board and also at website of SEIAA ,TN and a copy of the same should be forwarded to the Regional office of the Ministry of Environment and Forests located at Chennai.	Advertisement in two local newspapers widely circulated in the region, one in English (The New Indian Express) and the other in Tamil (Dinamani) published on 21.05.2018 informing the public that the project has been accorded environmental clearance and copies of clearance letter are available with the TNPCB and also can be seen at website of SEIAA. The copies of advertisement published is submitted to the Regional office of the Ministry of Environment, Forest & Climate

S.No	Condition (Pre-Construction Phase)	Compliance Status
		Change located at Chennai.
xiii.	A Separate environment and safety management cell with qualified staff shall be set up before commissioning of construction activities and shall be retained throughout the life time of the industry, for implementation of the stipulated environmental safeguards.	<p>No major construction work is envisaged as this is a Mine. Only construction of Office Shed, Toilet and Septic Tank has carried out. An EHS Engineer overseen the above mentioned construction activities to ensure safety, health and environmental aspects.</p> <p>A separate Environmental & Safety Cell has be formed to take care of EHS function and the Head of the Cell will be directly reporting to the Head of the Organization for complying with environmental and safety regulations and implementing pollution control and occupational health and safety measures.</p>
xiv.	The State pollution control board should display a copy of Environmental Clearance issued to the project at the regional office, District Industry Centre and Collector's Office/Tahsildar's Office for 30 days.	Noted.

Part B - Conditions for Construction Phase

S No	Condition (Construction Phase)	Compliance Status
i.	Non conventional open-cast mechanized mining method shall be adopted as reported for the mining of Limestone. No drilling or blasting shall be done during mining operations.	Non- conventional open-cast fully mechanized mining method adopted and no drilling or blasting will be carried out.
ii.	Monitoring of well water levels and water quality of the wells in the locations furnished in the EIA report shall be done during pre-monsoon and post monsoon period and results submitted to the Regional Office of the MoEF, Chennai and SEIAA.	The monitoring of well water levels and water quality of the wells in the locations furnished in the EIA report has been taken up during pre-monsoon and post monsoon period and results submitted to the Regional Office of the MoEFCC , Chennai and SEIAA, Chennai.
iii.	Monitoring of water quality and air quality in and around the project site in the selected monitoring points as mentioned in the EIA report shall be continued regularly involving Academic Institutions.	The monitoring of water quality and air quality in and around the project site in the selected monitoring points as mentioned in the EIA report taken up by recognized laboratory.

S No	Condition (Construction Phase)	Compliance Status
iv.	Regular monitoring of ground water level and quality shall be carried out in and around the mine lease by establishing a network of existing wells and constructing new piezometers during the mining operation. The periodic monitoring (at least four times in a year-pre-monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January); once in each season) shall be carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forest and its Regional Office ,Chennai, the Central Ground Water Authority and the Regional Director, Central Ground Water Board. If at any stage, it is observed that the groundwater table is getting depleted due to the mining activity; necessary corrective measures shall be carried out.	<p>The regular monitoring of ground water level and quality taken up in and around the ML Area by establishing a network of existing wells and installing new piezometers. The periodic monitoring, four times in a year, once in each season, carried out in consultation with the State Ground Water Board/Central Ground Water Authority and the data thus collected will be sent regularly to the SEIAA, TN and the Regional Office of the MoEFCC, Chennai, the Central Ground Water Authority and the Regional Director, Central Ground Water Board.</p> <p>If groundwater table is getting depleted due to the mining activity, necessary corrective measures will be taken.</p>
v.	The proponent shall conduct AAQ Monitoring Survey once in 6 months in the locations furnished in the EIA report and furnish report to the Regional Office of the MoEF, Chennai .It shall be ensured that one AAQ station shall be located in the nearby habitation of Kilapaluvur village	The Ambient Air Quality Monitoring Survey will also be taken up in the locations furnished in the Environmental Impact Assessment Report and the monitored data furnished to the Regional Office of the MoEF & CC, Chennai and SEIAA, Chennai.
vi.	The critical parameters such as RSPM (PM _{2.5} , PM ₁₀) and Nox in the ambient air within the impact zone, peak particle velocity at 300 m distance or within the nearest habitation, whichever is closer shall be monitored periodically. Further, quality of discharged water shall also be monitored (TDS, DO, PH and Total Suspended Solids (TSS). The monitored data shall be uploaded on the website of the company as well as displayed on a display board at the project site at a suitable location near the main gate of the Company in public domain. The Circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment and Forests, Govt. of India, New Delhi which is available on the website of the Ministry www.envfor.nic.in shall also be referred in this regard for its	<p>During mining operations, the periodical monitoring of parameters such as PM_{2.5}, PM₁₀ and NOx in the ambient air within the impact zone and the peak particle velocity at 300 m distance or within the nearest habitation, whichever is closer, taken up. Treatment of domestic effluent in septic tank, followed by dispersion trench also being ensured.</p> <p>As, there will not be any generation of effluent from mining, no discharge of effluent from Mining Lease Area is envisaged. Hence, the need to monitor effluent does not arise.</p> <p>The monitored data uploaded on the website of the company as well as displayed on a display board at the</p>

S No	Condition (Construction Phase)	Compliance Status
	compliance.	project site at a suitable location near the main gate of the company in public domain. The monitoring carried out as per circular No. J-20012/1/2006-IA.II(M) dated 27.05.2009 issued by Ministry of Environment , Forest & Climate Change , Government of India.
vii.	Data on ambient air quality [RSPM and NOx] shall be regularly submitted to the Regional office of the MoEF at Chennai and the SEIAA/ SPCB / CPCB once in six months.	The monitoring of parameters such as PM _{2.5} , PM ₁₀ and NOx in the ambient air also be taken up and the monitored data on ambient air quality regularly submitted to the SEIAA, TN including the Regional Office of the MoEFCC located at Chennai, TNPCB and CPCB once in six months.
viii.	Fugitive dust emissions from all the sources shall be controlled regularly. Water spraying arrangements on haul roads, loading and unloading and at transfer points should be provided and properly maintained.	As no conveyor has been planned either while carrying out above mentioned construction activities or during the mining operation , the transfer points and control measures for same are not envisaged. However, water sprinkling by water tankers will be ensured on the haul roads to control fugitive dust emissions.
ix.	Pre-placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For this purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Pre-placement medical examination and periodical medical examination, for the workers going to be engaged for the mining operations, carried out and records are being maintained. For this purpose, schedule of health examination of the workers are drawn and followed accordingly.
x.	Regular medical check-up for mine workers and nearby residents around the project site involving community medical centre / NIMH shall be conducted.	The regular medical check-up for mine workers and nearby community (under CSR initiative) around the project site are carried out.
xi.	Mineral handling area shall be provided with adequate number of high efficiency dust extraction system. Loading and unloading areas including all transfer points shall also have efficient dust control arrangements. These should be properly maintained and operated.	The activities viz., Mineral Handling, Loading and Unloading are envisaged during the mining operations. While carrying out mining operations, water sprinkling arrangements are provided to suppress the dust at material handling area & loading and unloading areas. As dust suppression

S.No	Condition (Construction Phase)	Compliance Status
		are ensured, no dust extraction system has been planned. As no conveyor has been planned in Mine, the transfer points and control measures for same are not envisaged
xii.	Vehicular emissions shall be kept under control and regularly monitored. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of mineral. The vehicles shall be covered with a tarpaulin and shall not be overloaded.	The vehicles entering the Mine are checked at the entry point for Pollution Under Control Certificate. Use of vehicles for mining operations, transportation of mineral and maintenance of vehicles are envisaged only during mining operations. Regular maintenance of vehicles used in mining operations and in transportation of mineral ensured. The vehicle body covered with tarpaulin, before commencement of transportation. The vehicles will not be overloaded.
xiii.	The effective safeguard measurements shall be provided to control particulate dust level In critical areas, transfer points and haul road with in the mining area.	Water sprinkling will be ensured on the haul roads while transportation of mineral. As no conveyor has been planned either while carrying out above mentioned construction activities or during the mining operation, the transfer points and control measures for same are not envisaged.
xiv.	At least four ambient air quality-monitoring stations should be established in the core zone as well as in the buffer zone for RSPM (PM _{2.5} , PM ₁₀) and NOx monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring should be undertaken in consultation with the Tamilnadu Pollution Control Board.	The Ambient Air Quality Monitoring Stations will be established in the core zone as well as in the buffer zone for PM _{2.5} & PM ₁₀ and NOx monitoring. Location of the stations and the frequency of monitoring were decided in consultation with the Tamilnadu Pollution Control Board and considering applicable factors stipulated herein.
xv.	Mine working shall be restricted up to 15 bgl (average) as per the present mine plan period. NOC from the state GWA for drawing ground water level.	The mine workings are restricted up to 15 m bgl (average) as per IBM Approved Mining Plan. Rain water collected in the sump at the bottom most bench of the Mine Pit will used to meet the water requirement of the Mine. In case, any need arises to use ground water, the required prior permission will be obtained from the

S No	Condition (Construction Phase)	Compliance Status
		Water Resources Department, Tamilnadu, the authority for granting permission to use ground water.
xvi.	Separate drain shall be constructed in between waste dumps (bunds) and river Marudaiyar.	No dumps planned for throughout the life of the mines as the approved mining plan, Waste will be refilled in mined out area as refilling.
xvii.	Garland drains & siltation ponds of appropriate size shall be constructed around the mine working ,soil and mineral dumps to prevent run off water and flow of sediments . 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>Garland drains of appropriate size, around the mine working pit, and siltation ponds were constructed to prevent run off water and flow of sediments . The water diverted and collected in the sump at the bottom most bench of the Mine Pit, utilized for watering the mine area, roads, greenbelt development etc. The drains and siltation ponds will be regularly desilted particularly after monsoon and maintained properly.</p> <p>No mineral dump as the mined Limestone transported to the Cement Plant without storing at Mine.</p>
xviii.	The rain water accumulation in the mine during rainy seasons shall be treated by providing settling tanks in the periphery of the mining lease and over flow clean water from the settling tanks shall be allowed to discharge through the first order streams to join nearby natural drains. The settling tank shall be cleaned periodically for removal of sediments and such records of cleaning shall be maintained properly.	<p>Garland drains/Catch drains of appropriate size around the mine working pit, and siltation ponds were constructed to prevent runoff water and flow of sediments.</p> <p>The sediments in garland drains and siltation ponds were cleared periodically and records of cleaning are being maintained.</p> <p>This rain water collected in the sump at the bottom most bench of the Mine Pit used for dust suppression, greenbelt development and domestic purpose.</p>
xix.	Garland drain proposed on the non moving sides of the dump yards shall be connected to settling tanks to arrest any wash off sediments from the dumps and only overflowing clean water shall be allowed to discharge through the first order streams. The settling tank shall be sufficient dimensions to hold the wash offs in one rainy season and has to be cleaned	<p>There is no waste dump planned throughout the life of the mines and waste generated during the mining activity will be utilized for back filling of mined out pits as per the approved mining plan.</p> <p>No mineral dump as the mined Limestone transported to the Cement</p>

S No	Condition (Construction Phase)	Compliance Status
	before every rainy season.	Plant without storing at Mine.
xx.	Proper scheme to lay the GEO-MAT on the dump yard on non moving sides shall be evolved to develop plantation on the GEO-MAT to have a green coverage.	There is no waste dump planned throughout the life of the mines and waste generated during the mining activity will be utilized for back filling of mined out pits as per the approved mining plan.
xxi.	Conservation Plan furnished to protect the Scheduled flora and fauna in the core and buffer zone of the project shall be implemented. Scheduled species of fauna found in the study area shall be monitored closely.	No Scheduled fauna /flora exist in the core and buffer zone of the project. Hence, no Conservation Plan is envisaged.
xxii.	Annual monitoring on Bio-diversity around the project site shall be conducted and a report shall be furnished.	The annual monitoring on Bio-diversity around the project site are taken up and a reports are furnished.
xxiii.	Green belt shall be raised including a 7.5 m wide statutory barrier all around the mining lease, reclaimed & rehabilitated areas, around water body, roads etc by planting local species in consultation with local DFO/Agriculture department. The ultimate area to be planted/afforested shall not be less than 0.4 ha. The density of trees should be around 2000 plants/Ha. Greenbelt shall be developed all along the mining lease area in a phased manner and shall be completed within first 5 years.	As stipulated, greenbelt raised for a 7.5 m width all around the mining lease, reclaimed & rehabilitated areas, around water body, roads etc by planting local species in consultation with local DFO/Agriculture department. The ultimate area to be planted/afforested is not less than 0.4 ha. The density of trees around 2000 plants/ha. Greenbelt developed all along the mining lease area in a phased manner and will be completed within first 5 years.
xxiv.	The project authority shall implement suitable conservation measures including suitable rain water harvesting measures to augment ground water resources in the area in consultation with Regional Director, State ground water board.	The rain water harvesting measures were taken up during mining operations. The rain water collected in the sump at the bottom most bench of the Mine Pit, after settling, it is used for dust control in haul roads, greenbelt development and domestic purpose within the Mining Lease Area. The unreclaimed portion of the mined out pit will be used as rainwater harvesting pond. The water stored in the sump itself is help to augment ground water recharge.

S No	Condition (Construction Phase)	Compliance Status
xxv.	The company shall submit within 3 months their policy towards Corporate Environment Responsibility which should inter alia address i) Standard operating process /procedure to bring into focus any infringement /deviation/violation of environmental or forest norms/conditions ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance of EC conditions and iii) system of reporting of non compliance/violation of environmental norms to the board of directors of the company and / or stake holder or share holders.	The copies of Corporate Environmental Policy (CEP) and the salient features of the CEP have been submitted to MoEFCC, Delhi and the Regional Office of MoEFCC, Chennai. We have IMS (Integrated Management system), in which, Quality, Environment, Energy, Occupational health & safety were covered.
xxvi.	A final Mine closure plan along with details of corpus fund, shall be submitted to the Ministry of Environment and Forest, Government of India, New Delhi in advance of 5 years prior to final mine closure for approval. Mine closure procedure shall be followed as per the approved mining plan.	As stipulated, a Final Mine Closure Plan along with details of Corpus Fund submitted to the SEIAA, TN , 5 years in advance, prior to the final mine closure for approval. Mine closure procedure will be followed as per the approved Mining Plan.
xxvii.	Depth of water table of the wells located inside the mining area and wells located around the monitoring area shall be monitored regularly.	There is no well inside the ML Area. As the proposed activity is mining, no major construction is involved except the construction of Office Shed, Toilet and Septic Tank. While commencing mining operations, the monitoring of depth of water table of the wells located around the monitoring area is taken up. Piezometer installed to monitor ground water level.
xxviii.	CSR activity shall include providing social & welfare measures for the local residents & nearby villagers around the mine area. It shall focus on providing water supply and sanitation facility to the nearby government schools around the mine area and maintenance of village roads ,ponds, providing solar street lights etc. Funds earmarked for CSR activity shall be used for that purpose only and separate account shall be maintained and report on implementation shall be furnished regularly.	As the proposed activity is mining, no major construction is involved except the construction of Office Shed, Toilet and Septic Tank. The CSR activities also be taken up, which includes providing social & welfare measures for the local residents & nearby villagers around the Mine area. It will focus on providing water supply and sanitation facility to the nearby government schools around the Mine area and maintenance of village roads, ponds, providing solar

S No	Condition (Construction Phase)	Compliance Status
		street lights etc. Funds earmarked for CSR activity will be used for that purpose only and separate account will be maintained and report on implementation furnished regularly.

Part C - Conditions for Post-construction Phase/Operation Phase & Entire Life of the Project

S.No	Condition (Post-construction Phase/Operation Phase & Entire Life)	Compliance Status
i.	It is mandatory for the project proponent to furnish to the SEIAA ,Half yearly compliance report in hard and soft copies on 1 st June and 1 st December of each calendar year in respect of the conditions stipulated in the prior environmental clearance and also before commencement of production.	Half yearly compliance report is being submitted in hard and soft copies by 1 st June and 1 st December of each calendar year in respect of the conditions stipulated in the prior environmental clearance and also before commencement of production.
ii.	No expansion or modernization in the project shall be carried out without prior approval of the SEIAA-TN .In case of any deviations or alterations in the project proposal from those submitted to the authority for clearance ,a fresh reference shall be made to the SEIAA-TN to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	No expansion or modernization in the project will be carried out without prior approval of the SEIAA-TN. In case of any deviations or alterations in the project proposal from those submitted to the authority for clearance, a fresh reference made to the SEIAA-TN to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
iii.	All the environmental protection measures and safeguards as recommended in the EIA report shall be complied with.	All the environmental protection measures and safeguards as recommended in the EIA report are implemented.
iv.	The implementation of the project vis-à-vis environmental action plans shall be monitored by the regional office of MOEF at Chennai /TNPCB/CPCB. A six monthly compliance status Report shall be submitted to monitoring agencies.	Six monthly compliance status Report is being submitted regularly to MOEFCC at Chennai, TNPCB & CPCB.
v.	Data on ambient air, stack and fugitive emissions shall be regularly submitted	The monitoring of ambient air quality and fugitive emissions are taken up and the

S.No	Condition (Post-construction Phase/Operation Phase & Entire Life)	Compliance Status
	online to the regional office of MOEF at Chennai, TNPCB and Central Pollution Control Board as well as hard copy once in six months and display data on RSPM, SO ₂ and NO _x outside the premises at the appropriate place for the general public.	<p>data regularly submitted to the Regional Office of MOEFCC at Chennai, TNPCB and Central Pollution Control Board in both hard copy as well as in soft copy once in six months.</p> <p>The data on PM₁₀, PM_{2.5}, SO₂ and NO_x displayed outside the premises at the appropriate place for the general public.</p>
vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	Occupational health surveillance of the workers carried out on a regular basis and records are maintained.
vii.	Proper housekeeping and cleanliness must be maintained within and outside the plant.	Proper housekeeping and cleanliness maintained within and outside the Mine.
viii.	Occupational health surveillance programme shall be undertaken as regular exercise for all employees especially for those engaged in handling hazardous activities. The first aid facilities in the occupational health centre shall be strengthened and medical records of each employees should be maintained separately.	Occupational health surveillance programme of the workers conducted periodically to observe any abnormality due to exposure to dust and take corrective measures, if needed. No hazardous activities involved in the mines. First Aid facilities are ensured and Surveillance Health records of the workers also being maintained.
ix.	<p>The overall noise level in and around mining area shall be kept within the standards prescribed for by providing noise control measures on all sources of noise generation.</p> <p>The ambient noise levels should conform to the standards prescribed under EPA Rules 1989 viz 55 dBA (day time) and 45 dBA (night time)</p>	Measures like silencers, greenbelt along the boundary of ML area, etc., provided and good maintenance of Mining Machinery and Vehicles ensured for controlling ambient noise level below 55 dBA in day time and 45 in night time. Ear plugs/Muffs are provided to the operators of HEMM.
x.	The project proponent shall regenerate /preserve water body located at about 5 km from the proposed site at its own expenses. The project proponent shall also develop village ponds in addition and ensure that the existing ponds in and around 5.0km radius are well maintained.	Action taken to preserve water body located at about 5 km from the proposed Mine site at its own expenses and also develop village ponds in addition and maintain the existing ponds in and around 5 km radius.
xi.	Hydro geological study of the area shall be reviewed annually and report submitted to the Authority. No water bodies including natural drainage system in the area shall be disturbed due to activities	No water bodies including natural drainage system in the area disturbed due to mining activities by taking necessary safety precautions. No intersection of groundwater is envisaged. Hence, the need

S.No	Condition (Post-construction Phase/Operation Phase & Entire Life)	Compliance Status
	associated with the operation of the Mining Activity.	for Hydro-geological study of the area is not envisaged.
xii.	At least three nearest villages shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school, etc shall be developed in coordination with the district administration.	Under CSR initiative, the basic amenities like development of roads, drinking water supply, primary health-care centre, primary school, etc will be taken up in coordination with the district administration to meet the requirements of nearby villages.
xiii.	CSR activity shall be implemented as committed by drawing a scheme for social up-liftment in the surrounding villages with reference to contribution in road construction, providing sanitation facilities ,drinking water supply in the government schools nearby, community awareness, establishment of health centres, water supply to nearby villages and employment to local people whenever and wherever possible both for technical and non technical jobs and protection of water sources around the project site etc. Funds earmarked for CSR activity shall be used for that purpose only and separate account shall be maintained and report on implementation shall be furnished regularly.	<p>CSR activity implemented as committed by drawing a scheme for social up-liftment in the surrounding villages with reference to the contribution in road construction, providing sanitation facilities, drinking water supply in the government schools nearby, community awareness , establishment of healthcare centres, and employment to local people whenever and wherever possible both for technical and non technical jobs and protection of water sources around the project site.</p> <p>Funds earmarked for CSR activity used for that purpose only and separate account maintained and report on implementation furnished regularly.</p>
xiv.	A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of senior executive	<p>A separate Environmental and Safety Cell ensured to take care of EHS function and the Head of the Cell will be directly reporting to the Head of the Organization for complying with environmental and safety regulations and implementing pollution control and occupational health & safety measures.</p> <p>The laboratory facilities of a recognized laboratory utilized for Environmental monitoring.</p>

S.No	Condition (Post-construction Phase/Operation Phase & Entire Life)	Compliance Status
xv.	The requisite amount earmarked towards capital cost and recurring cost /annum for implementation of pollution control measures shall be used judiciously to implement the Environment Management Plan as furnished in the EIA Report. The funds so provided shall not be diverted for any other purpose.	The funds earmarked for environmental protection measures kept in separate account and used to implement the Environment Management Plan as furnished in the EIA Report. The funds so provided will not be diverted for any other purpose.
xvi.	The proponent shall upload the status of compliance of the environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MOEF, at Chennai, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely RSPM,SO ₂ ,NO _x (Ambient level as well as stack emissions) or critical sector parameters indicated for the projects shall be monitored and displayed at a convenient location near the main gate of the company in the public domain.	<p>The status of compliance of the environmental clearance conditions, is being uploaded in the company website and will be updated periodically.</p> <p>The same is being simultaneously be sent to the Regional Office of the Ministry of Environment and Forest & Climate Change , Chennai, the Zonal Office of Central Pollution Control Board, Bengaluru and the Tamilnadu Pollution Control Board.</p> <p>The pollutant levels namely PM₁₀, PM_{2.5}, SO₂,NO_x (in the ambient air) monitored and the monitored data uploaded in the company website and also updated periodically. The monitored data sent in hard copy to the entire all above mentioned authorities. No stack monitoring is required to be carried out as there will not be any stack within the Mining Lease Area.</p> <p>The environmental monitoring data displayed at a convenient location near the main gate of the company in the public domain.</p>
xvii.	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The regional office of this Ministry at Bangalore/CPCB/SPCB shall monitor the stipulated conditions.	<p>The six monthly report on the status of compliance of the stipulated environmental clearance (both in hard copies as well as by e-mail) is being submitted to the SEIAA, TN, the Regional Office of the MoEF &CC, Chennai, the Zonal Office of Central Pollution Control Board, Bengaluru and the Tamilnadu Pollution Control Board.</p> <p>The monitored data (both in hard copies</p>

S.No	Condition (Post-construction Phase/Operation Phase & Entire Life)	Compliance Status
		as well as by e-mail) will be submitted to all above mentioned authorities on commencing mining operations.
xviii.	The environmental statement for each financial year ending 31st March in Form - V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental conditions and shall also be sent to the respective Regional Offices of the MOEF by e-mail.	<p>The environmental statement for financial year ending 31st March 2020 in Form - V submitted to the Tamilnadu Pollution Control Board and the Regional Office of the Ministry of Environment, Forest & Climate Change, Chennai on 16.09.2020.</p> <p>The same is being displayed on the website of the company and also sent to the respective Regional Office of the Ministry of Environment, Forest & Climate Change, Chennai by e-mail. The status of compliance of Environmental Clearance conditions is being uploaded on the company website.</p>
xix	Environmental clearance is being issued without Prejudice to the action initiated under Environment (Protection) Act ,1986 or any court case pending or any other court order shall prevail.	Noted.
xx	The SEIAA,TN may alter/modify the above conditions or stipulate any further condition in the interest of environmental Protection.	Guidelines noted and additional condition stipulated, if any, will also be implemented.
xxi	The SEIAA /SEAC reserves the right to add any further condition(s)on receiving reports from the project authority. The above conditions shall be monitored by Regional Office of MOEF located at Chennai.	Guidelines Noted and additional condition stipulated, if any, will also be implemented.
xxii	The SEIAA,TN may revoke or suspend the environmental clearance ,if implementation of any of the above conditions is not satisfactory.	Noted.
xxiii	The SEIAA ,TN may cancel the environmental clearance granted to this project under the provisions of EIA Notification ,2006 ,if, at any stage of the validity of this environmental clearance ,if it is found or if it comes to the knowledge of this SEIAA,TN that the project	Noted.

S.No	Condition (Post construction Phase/Operation Phase & Entire Life)	Compliance Status
	proponent has deliberately concealed/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.	
xxiv	Failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of the Environment (Protection) Act, 1986.	Noted.
xxv	The above conditions will be enforced inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act 1974, the Air (Prevention & Control of Pollution) Act 1981, Environment (Protection Act) 1986, the Public Liability Act , 1991 along with their amendments, draft Minor Mineral Conservation & Development rules ,2010 framed under MMDR Act 1957,National commission for protection of Child Right Rules 2006 and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/ Hon'ble high court of Madras and any other Courts of Law relating to the subject matter.	Noted.

for Chettinad Cement Corporation Private Limited



M. Sundaramoorthy
Joint President (Works)

Chettinad Cement Corporation Private Limited -Karuppur Keelapalur Limestone Mine													
Karuppur Keelapalur Village , Ariyalur District, Tamilnadu State													
Ambiant Air Quality Monitoring- Consolidated Report (Apr'2020 - Sep'2020)													
S.No	Location	PM ₁₀ (µg/m ³)			PM _{2.5} (µg/m ³)			SO ₂ (µg/m ³)			NO _x (µg/m ³)		
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
1	KKR Mines Mines Office	68.6	53.8	61.2	27.4	23.7	25.6	8.4	6.5	7.4	21.6	16.9	19.2
2	Thideerkuppam Village	58.3	49.4	53.8	22.4	21.2	21.8	6.8	5.6	6.2	19.0	15.6	17.3
3	Keezhapalur	56.7	43.6	50.2	24.9	17.5	21.2	6.6	5.0	5.8	18.6	14.3	16.5
4	Karuvadaicheri	47.9	44.0	46.0	18.7	18.7	18.7	5.4	5.0	5.2	15.2	14.0	14.6
5	Loading Area	73.5	73.5	73.5	29.9	29.9	29.9	8.6	8.6	8.6	23.9	23.9	23.9
6	Karuppur Village	41.3	41.3	41.3	17.5	17.5	17.5	6.0	6.0	6.0	13.1	13.1	13.1
7	E&F Colony	50.4	50.4	50.4	22.4	22.4	22.4	5.7	5.7	5.7	15.9	15.9	15.9
8	Maravanur Village	46.1	46.1	46.1	20.0	20.0	20.0	5.2	5.2	5.2	14.6	14.6	14.6
Norm		100 µg/m ³			60 µg/m ³			80 µg/m ³			80 µg/m ³		

for Chettinad Cement Corporation Private Limited



M Sundaramoorthy
Joint President (Works)

Chettinad Cement Corporation Private Limited -Karuppur Keelapalur Limestone Mine								
Karuppur Keelapalur Village , Ariyalur District, Tamilnadu State								
Noise Level Monitoring- Consolidated Report (Apr'2020 to Sep'2020)								
S.No	Location	UoM	Day			Night		
			L _{min}	L _{max}	L _{eq}	L _{min}	L _{max}	L _{eq}
Within the Premises								
1	Mines Office	dB(A)	54.7	69.0	61.9	49.3	66.9	58.1
2	Loading Area	dB(A)	63.8	76.4	70.1	64.1	76.3	70.2
Limit (L _{eq})		dB(A)	85			85		
S.No	Location	UoM	Day			Night		
			L _{min}	L _{max}	L _{eq}	L _{min}	L _{max}	L _{eq}
Outside the Premises								
1	Keelapalur Village	dB(A)	49.5	52.3	50.9	37.6	44.0	40.8
2	Karuvadaicherry Village	dB(A)	40.8	51.0	45.9	34.4	43.1	38.8
Limit (L _{eq})		dB(A)	55			45		

for Chettinad Cement Corporation Private Limited



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Joint President (Works)

Annexure 4

Chettinad Cement Corporation Private Limited-Karuppur Keelapalur Limestone Mine						
Karuppur Senapathy & Keelapalur Village, Ariyalur District, Tamilnadu						
Ground Water Quality Monitoring Report (Apr '2020 to Sep '2020)						
S.No	Parameter	UoM	GW 1 Aug-20	GW 2 Aug-20	SW 3 Aug-20	Limit
1	pH	-	7.7	7.8	8.0	5.5 - 9.0
2	Temperature	Deg C	28	29	28	40
3	Particle size for TSS	-	100%	100%	100%	Shall pass 850 micron IS Sieve
4	TSS	mg/l	1	1	5	100
5	TDS	mg/l	400	430	136	2100
6	Chloride as Cl	mg/l	58	28	29	1000
7	Sulphide as S	mg/l	BLQ	BLQ	BLQ	2
8	Sulphate as SO ₄	mg/l	30	68	29	1000
9	Fluride as F	mg/l	0.2	0.2	BLQ	2
10	Sodium	mg/l	18	20	10	-
11	Copper	mg/l	BLQ	BLQ	BLQ	3
12	Zinc as Zn	mg/l	BDL	BDL	BDL	1
13	Phenolic compounds as C ₆ H ₅ OH	mg/l	BLQ	BLQ	BLQ	1
14	Oil & Grease	mg/l	BLQ	BLQ	BLQ	10
15	Boron as B	mg/l	BLQ	BLQ	BLQ	2
16	BOD 3 days 27°C	mg/l	BLQ	BLQ	BLQ	30
17	COD	mg/l	BLQ	BLQ	BLQ	250
18	Total Residual Chlorine	mg/l	BLQ	BLQ	BLQ	1
19	Arsenic as As	mg/l	BLQ	BLQ	BLQ	0.2
20	Cadmium as Cd	mg/l	BLQ	BLQ	BLQ	2
21	Total Chromium as Cr	mg/l	BLQ	BLQ	BLQ	2
22	Hexavalant Chromium	mg/l	BLQ	BLQ	BLQ	0.1
23	Lead as Pb	mg/l	BLQ	BLQ	BLQ	0.1
24	Selenium as se	mg/l	BLQ	BLQ	BLQ	0.05
25	Mercury as Hg	mg/l	BLQ	BLQ	BLQ	0.01
26	Pesticides	mg/l	BLQ	BLQ	BLQ	---
27	Free Ammonia as NH ₃	mg/l	BLQ	BLQ	BLQ	5
28	Dissolved Phosphate as P	mg/l	BLQ	BLQ	BLQ	5
29	Cyanide as CN	mg/l	BLQ	BLQ	BLQ	BDL
30	Nickel as Ni	mg/l	BLQ	BLQ	BLQ	3
GW 1 : Keelapalur Village						
GW 2 : Karuppur Senapathy Village			BLQ: Below Qualification Limit.			
SW 3: Mines Sump Water			BDL : Below Detectable Level			

for Chettinad Cement Corporation Private Limited


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