Chettinad Cement/ Tamilnadu/Periyathirukonam Mines/
/EC Compliance/ Oct'2021 - Mar'2022/2021-22/ 83

26th May, 2022

The Joint Director
Ministry of Environment, Forest & Climate Change
Government Of India,
IRO, 1st Floor, Additional Office Block for GPOA,
Shastri Bhawan,
Haddows Road, Nungambakkam
Chennai - 600 006.

Sir,

Sub: Submission of Six Monthly Environmental Clearance Compliance & Environmental Monitoring Reports (Oct'2021 - Mar'2022) Chettinad Cement Corporation Private Limited – Periyathirukonam Limestone Mine (32.295 ha) with a capacity of 0.5004 million tons of Limestone & Marl/ annum at Periyathirukonam Villages, Ariyalur Taluk & District, Tamilnadu

Ref: Environmental Clearance granted by SEIAA-TN/F No.-6283/ALR/1(a)/EC – 4020/2019 dt. 19.08.2019

We enclose herewith the Six Monthly Environmental Clearance Compliance & Environmental Monitoring Reports pertaining to Periyathirukonam Limestone Mine (32.295 ha) with a capacity of 0.5004 million ton per annum at Periyathirukonam Villages, Ariyalur Taluk & District, Tamilnadu, for the period from Oct'2021 - Mar'2022.

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**

A. Amalraj
Joint President (Works)

Copy to :
Regional Directorate, CPCB, Chennai
Member Secretary, TNPCB, Chennai.
JCEE, TNPCB, Trichy
DEE, TNPCB, Ariyalur

Chettinad Cement Corporation Private Limited
Ariyalur Trichy Road, Keelapalur Post,
Ariyalur Dist - 621707, Tamilnadu, India.
T + 91 4329 250009
F + 91 4329 250011, 250013

CIN : U93090TN1962PTC004947
Regd.Office : Chettinad Towers,
603, Anna Salai, Chennai - 600 006.
T + 91 44 2829 2727, 42951800 (100 lines)
F + 91 44 2829 1558

E : ariyalur@chettinadcement.com
www.chettinad.com

Annexure 1

Chettinad Cement Corporation Private Limited

Ariyalur - Trichy Road

Keelapalur -621707. Ariyalur Dist.

Periyathirukonam Limestone Mines

(Area: 32.295 hectares)

Environmental Clearance (EC) Compliance Report (October-21 to March-22)

Environmental Clearance: Lr.No. SEIAA-TN/F No.-6283/ALR/1(a)/EC – 4020/2019 dt. 19.08.2019

Conditions for Pre-Construction phase:

S.No.	Pre-Construction phase	Compliance status
1	Any appeal against this environmental clearance shall lie with the Hon'ble National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16of the National Green Tribunal Act, 2010.	No Appeal is against this environmental Clearance.
2	Consent for Establishment" shall be obtained from the Tamil Nadu Pollution Control Board and a copy shall be submitted to the SEIAA, Tamil Nadu before taking up any construction activity at the site.	We have obtained CTE from TNPCB vide Ref. No: AIR - 1901228088887 dt: 18.10.19 WATER – 1901128088887 DT: 18.10.19, it was submitted to SEIAA.
3	"Consent to Operate" should be obtained from the Tamil Nadu pollution Control Board before the start of the operation of the project and copy shall be submitted to the SEIAATN.	We have obtained CTO from TNPCB vide ref. No: AIR: 2004229421491 DT: 28.01.2020. WATER: 2004129421491 DT: 28.01.2020, it was submitted to SEIAA.
4	Safety distance of 50m shall be provided from the vari course to the mining lease boundary and this should be monitored continuously by the District Level Task Force.	The necessary safety distance of 50 Meter provided.
5	The proponent shall carry out mining activities for the 5 years only for 1874401 Tonnes of Limestone & 325371 Tonnes of Marl as per the mining plan furnished by the proponent. The EC is valid only if the mining plan (including Progressive Mine Closure plan) is approved by the Indian Bureau of Mines or any officers nominated on his behalf.	Mining activities will be carried out for 5 years only for 1874401 tonnes of Limestone & 325371 Tonnes of Marl. As per the Mining plan, Mining operations are carried out.
6	For the extension of the Environmental Clearance the proponent shall apply for extension of EC within the valid period for the next scheme of mining.	Extension of EC will be applied in next Scheme of Mining period.

7	In the case of any change(s) in the scope of the project, a fresh appraisal by the SEAL/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 & Marl and waste should be made.	No changes are carried out in extraction of limestone mining technology.
8	The Environmental clearance is subject to obtaining prior clearance from Forestry and wildlife angle including clearance from the standing committee of the National Board for Wildlife as applicable before issue of permit/Consent to establish by the Competent Authority"/before starting any activity at site.	Not Applicable.
9	Project proponent shall comply with all the guidelines and notifications issued by MoEF&CC, New Delhi regarding Mining of Minerals and comply with orders of Hon'ble NGT from time to time regarding mining of minerals under 1(a).	We comply with the conditions as per guidelines and notifications issued by MoEF&CC, New Delhi from time to time.
10	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 on the website of the Proponent. letter shall also be put on the website of the Proponent.	A copy of the Environmental clearance letter sent to Local Body, Ariyalur Taluk, Ariyalur District on 24.08.2019 and also displayed in the company website.
11	All other statutory clearances such as the approvals for storage of diesel from Chief Controller of Explosives, Fire and Rescue, Services. Department, Hill Area Conservation Authority (HACA), Civil Aviation Department, 'Forest Conservation Act, 1980 and Wild Life (Protection) Act, 1972, State / Central Ground Water Authority, Coastal Regulatory Zone Authority, other statutory and other authorities as applicable to the project shall be obtained by project proponent from the concerned competent authorities.	All statutory clearances as applicable are obtained.
12	All required sanitary and hygienic measures should be in place before	All required sanitary and hygienic measures are in place.

	startingconstruction activities and they have to be, maintained throughout the construction phase.	
13	The company shall stress upon the preventive aspects of occupational health.	We have provided the necessary personal protective equipment [PPE] viz. safety helmet, goggles, nose mask, hand gloves & safety shoe for the workmen involved.
14	Provision shall be made for the housing of construction labour within the site with allnecessary 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.
15	The project authorities should advertise with basic details at least in two widely circulated local newspapers, one of which shall be in the vernacular language of the-: locality concerned, within 7 days of the issue of clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at website of SEIAA, SEIAA-TNTN and a copy of the same should be forwarded to the Regional Office of the Ministry of Environment and Forests located at Chennai.	We advertised in Dinamani,(Tamil News paper), in Indian Express,(English News paper) on 29.08.2019 as mentioned in the conditions. The advertisement copy in both Tamil & English uploaded online.
16	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 lifetime of the industry, for implementation of the stipulated environmental safeguards.	Environment and Safety Management cell with qualified staff are formed.
17	The State Pollution Control Board should display a copy of the Environmental Clearance issued to the project at the Regional office, District Industry Centre and the Collector's office/Tahsildar's office for 30 days. The Project Proponent has to conduct Ambient Air Quality survey twice in. a week (104 times) in a year and monitor the PM 10& PM 2.5.	Copy of the Environmental Clearance issued to the project may be displayed through TNPCB. We have conducted AAQ monitoring survey as per the conditions stipulated for PM 10& PM 2.5.
18	A scientific site/ ecological rehabilitation and restoration plan on long term basis should be drawn to carryout restoration With native species and Bio diversity.	As per the approval of PMCP by IBM, ecological rehabilitation and restoration plan were carried out.

19	The Green/Blue plan should guide the restoration of the site. The rehabilitation restoration plan should be submitted to SEIAA-TN within one month. If applicable.	Not Applicable.
20	The existing water bodies should not be disturbed to ensure sustainable environment for aquatic life forms.	Water bodies are not disturbed to ensure the sustainable environment.
21	The proponent should completely implement all environmental pollution control measures as detailed in the EIA report and in the additional report.	We have implemented all environmental pollution control measures as detailed in the EIA report
22	Additional sprinklers to be effectively added along the route for transporting limestone from the mines to the plant	Sprinklers are installed at suitable places for dust suppression for transporting limestone from the mines to the plant.
23	Avenue plantation wherever needed has to be carried out along the route for dust suppression.	It is being planted as to avoid dust suppression.
24	The green belt developed for the prevention of dust pollution should not form a part of the larger green belt development envisaged in the EIA report.	Conditions noted.
25	Regular monitoring and check up for pulmonary and carcinogenic diseases to be carried out regularly, not only for the workers involved in the mines but also to the people in the villages adjoining the mines. Interaction with the Primary Health Centre & district medical officer should be on regular basis to monitor the incidence of the diseases if any, and to provide suitable medical facility for the patients.	Initial and Periodical Medical examination carried out for all the mine employees and periodically as per the consultation with Primary Health Centre & district medical officer, medical camps conducted for the villagers.
26	As mining operations are Conducted by deploying rock breakers which is bound to produce noise as well as vibration, a survey has to be undertaken for studying the vibrations and remedial action need to be taken to circumvent the noise pollution and dissemination from the source. Vibration studies need to be conducted by a reputed organization like Annamalai University, Anna University, NIT, Trichy. Green barrier needs to be provided between the mine boundary and the nearby habitation to minimize the noise pollution.	Till date, we have carried out Vibration study through Monthly/ Quarterly Monitoring NABL Accredited Agencies only. Green barrier in the form of Afforestation provided between the mine boundary and the nearby habitation to minimize the noise pollution.

Conditions for Construction /Mining phase :

No.	Conditions (Construction Phase)	Compliance Status
1)	The proponent shall plant the green belt area with more indigenous species for Biodiversity enhancement.	Green belt area developed by planting the more indigenous species like Pungan, Vembu, Malai Vembu, Mailkondrai for Biodiversity enhancement.
2)	A Report on quality and quantity of ground water to be generated during mining operations should be furnished to the TNPCB for every one year for effective monitoring.	A Report of quality and quantity of ground water furnished to the TNPCB during mining operations for every one year for effective monitoring.
3)	The Comparative statement on normal ground water and mined out water with respect to Qualities & Suitability for agriculture etc should be furnished to the TNPCB for every one year for effective monitoring.	A Comparative statement of ground water and mined water furnished with respect to qualities & suitability for agriculture furnished to TNPCB.
4)	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 period and results submitted to the regional office MoEF, Chennai and SEIAA	Water levels and water quality of the wells are furnished during pre-monsoon and post monsoon period and reports submitted to the Regional Office of MoEF, Chennai and SEIAA.
5)	Monitoring of water quality and air quality and around the project site in the selected monitoring points as mentioned in the EIA report shall be continued regularly involving Academic Institutions.	Monitoring of Water quality and air quality carried out at regular intervals through NABL accredited consultants/Academic institution.
6)	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	Regular monitoring of ground water level and quality carried out in and around the mine lease area by Constructing the Piezometers during the mining operation. The periodic monitoring carried out for four times in a year- pre monsoon (April-May), monsoon (August), post-monsoon (November) and winter (January) as per the MOEF & CGWB Norms. Necessary corrective measures will be carried out, if the groundwater table is getting depleted due to the mining activity.

	Authority and the data thus collected may be sent regularly to the Ministry of Environment and Forests 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.	
7)	Hydro geological study including infiltration test shall be conducted by any reputed agency to estimate leachate quantity.	Hydro geological study including infiltration test conducted by Anna University, Chennai.
8)	The excess over burden shall not be disposed for any commercial purposes and shall be disposed within the mine lease area only.	At any case, No overburden disposed for any commercial purpose and disposed only within the mine lease area.
9)	The critical parameters such as RSPM (PM2.5, PM10) 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 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.	All critical parameters given in the conditions monitored through NABL accredited Laboratory. Monitored data uploaded on the company website and displayed at the project site in display board near the main gate of the project area.
10)	Data on ambient air quality [RSPM and NO_x] shall be regularly submitted to the regional Office of MoEF at Chennai and the SEIAA / SPCB / CPCB once in six months.	Ambient air quality [RSPM and NOX] data submitted to the MoEF Chennai, SEIAA/SPCB/CPCB once in six months.
11)	Fugitive dust emissions from all the sources should be controlled regularly. Water spraying arrangement on haul roads, loading and at transfer points should be provided and properly maintained.	Fugitive dust emission sources controlled regularly by Water spraying arrangement on haul roads, loading and unloading points and all transfer points.

12)	Pre – Placement medical examination and periodical medical examination of the workers engaged in the project shall be carried out and records maintained. For the purpose, schedule of health examination of the workers should be drawn and followed accordingly.	Medical examination for all workers carried out and records are maintained.
13)	Regular medical checkup for mine workers and nearby residents around the project site involving community medical centre / NIMH shall be conducted.	Regular medical check-up for mine workers and nearby residents around the mining site involving community medical Centre/NIMH conducted.
14)	As per norms, the health study should be conducted through competent / approved health organization and report submitted for one year.	As per norms, the health study conducted through competent / approved health organization by CCCPL and report submitted for one year.
15)	Corpus fund created should be prioritized and utilized for health issues.	Conditions noted.
16)	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 arrangement. These should be properly maintained and operated.	Mineral handling done only through the tippers/trucks with covered tarpaulin. So, high dust extraction system not required in the mining area as there is not transfer point in the lease area.
17)	Vehicular emissions shall be kept under control and regularly monitored. Measured shall be taken for maintenance of vehicle used in mining operations and in transportation within the mine lease shall be carried out through the covered trucks only and the vehicles carrying the mineral shall not be overloaded.	Vehicles with emission under control certificate only engaged for operation and transportation. Tippers are covered with tarpaulin while limestone transportation to avoid fugitive emission.
18)	The effective safe guard measures shall be provided to control particulate dust level in Critical areas, transfer points and haul road in the mine area.	No transfer points as mined out material are transported though Tipper/Trucks. Water sprinkling arrangement carried out on Haul Roads regularly.
19)	At least four ambient air quality – monitoring stations should be established in the core zone as well as in	Ambient Air quality monitoring carried out periodically at a regular interval for the location in consultation with the

	the buffer zone for monitoring of RSPM ($PM_{2.5}$, PM_{10}) and NO_X. Location of the stations should be decided in consultation with Tamil Nadu pollution Control Board Based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and frequency of monitoring etc.	Tamil Nadu Pollution control Board guidance.
20)	NOC from the state GWA for drawing ground water shall be obtained, if ground water table is intersected.	We have applied NOC for Dewatering from Water resource department, PWD. Govt. of Tamilnadu. Authority has replied that they would reply after getting the guidelines from Government of Tamilnadu which is under process. We are waiting for the same.
21)	Separate drain shall be constructed in between waste dump (bund) and nearby river course, if any to avoid silting in the water body.	A separate drain constructed to avoid silting in the water body.
22)	Garland drains and siltation ponds of appropriate Size shall be constructed around the mine working, soil and mineral dumps to prevent run off of 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 desilted, particularly after the monsoon, and maintained properly.	Garland drainages are provided all along the periphery of the Dump area. The drains are regularly desilted, after the monsoon.
23)	The rain water accumulation in the mine during rainy seasons shall be treated by Providing settling tanks in the periphery of the mining lease area and the overflow clean water from the settling tanks shall be allowed to discharge through the first order streams to join nearby natural drains. The settling tanks shall be cleaned periodically for removal of sediments and such records of cleaning shall be maintained properly.	Settling tanks were provided wherever necessary and clean water overflow allowed discharging to nearby natural drains. The settling tanks are regularly desilted, after the monsoon.
24)	Garland drains proposed on the non moving sides of the Dump yards shall be connected to settling tanks to arrest any wash off sediments from	Garland drains are provided wherever necessary connected to settling tanks and clean water overflow only allowed to discharge to nearby natural drains.

	the dumps and only overflowing clean water shall be allowed to discharge through the first order streams. The settling tanks shall be of sufficient dimensions to hold the wash offs in one rainy season and has to be cleaned before every rainy season.	The settling tanks are regularly desilted, after the monsoon.
25)	Conservation plan furnished to protect the scheduled flora and fauna in the core and buffer zone of the project site 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.
26)	Annual monitoring on Bio-diversity around the project site shall be conducted and a report shall be furnished.	One portion of natural green cover kept undisturbed during the mining phase. Green belt with Native species developed to retain the Biodiversity of the area. Apart from this Annual monitoring on Bio-diversity around the project site is conducted and reports furnished.
27)	Greenbelt shall be raised including a 7.5 m wide statutory barrier all around the mining lease, reclaimed and rehabilitated areas around water body, roads etc. by planting the Native species in consultation with the local DFO / Agriculture Department. The ultimate area to be planted afforested shall not be less than 15.993 ha. Greenbelt shall be developed all along the mine lease area in a phased manner as per the approved mining plan.	Greenbelt raised all along the mine lease area with native species in consultation with the local DFO/Agriculture Department. Greenbelt being developed all along the mine lease area in a phased manner as per the approved mining plan.
28)	Green belt shall be provided as per norms of MoEF & CC, GOI in consultation with local DFO.	Green belt developed as per norms of MoEF & CC, GOI in consultation with local DFO.
29)	The project authority shall implement suitable water conservation measures including rain water harvesting system to augment ground water resources in the area in consultation with the Regional Director, State Ground Water Board.	We have implemented water harvesting measures to store the water to augment the ground water resources in consultation with State Ground water Board.

30)	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 stakeholders or shareholders.	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.
31)	A Final Mine Closure Plan along with details of Corpus Fund shall be submitted to the Ministry of Environment & Forests, Government of India, New Delhi in advance of 5 years prior to the 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.
32)	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. Piezometer installed to monitor ground water level.
33)	Mining should be carried out taking into consideration all aspects of mineral conservation.	All the aspects of mineral conservation have been considered while carrying out the mining operation.
34)	The suitable measures to allow the existing drainage to flow to the nearby area or lake if any stream is found in the near vicinity of the mining area.	Conditions noted and necessary arrangements were made.
35)	Effective water quality management	Effective water quality management of the surface and ground water quality

	of the surface and ground water quality studies shall be carried out systematically in a sustainable manner to ensure that the ground water quality is neither depleted nor deteriorated.	studies were carried out systematically in a sustainable manner to ensure that the ground water quality.
36)	The mining activity involves intersection ground water and it was reported that 173 cu.m/day mine seepage water will be Collected in the sump adequate capacity and allowed to settle in the pond. Clear water after meeting the permissible limit of Bureau of Indian standards for drinking and irrigation purpose, bailed out water will be discharged into nearby water bodies for irrigation. For bailing out 173 cu. m/day of mine seepage water, project proponent has to get necessary permission from central ground water authority. If applicable.	Mine seepage water collected in a collection and settling tank. After meeting the permissible limits of BIS, the clear water is being allowed to discharge into the nearby water bodies. We have applied NOC for dewatering from Water resource organization, PWD, Govt of Tamilnadu. Authority has replied that they would reply after getting the guidelines from Government of Tamilnadu which is under process. We are awaiting for the same.
37)	Necessary permission should be obtained from the competent authority for discharge of bailed out water into nearby water bodies for irrigation. After achieving permissible limits of Bureau of Indian standards for drinking and irrigation.	We have applied NOC for dewatering from Water resource organization, PWD, Govt. of Tamilnadu. Authority has replied that they would reply after getting the guidelines from Government of Tamilnadu which is under process. We are waiting for the same.
38)	All the condition imposed in the proceedings of the commissioner of geology and mining vide R.cNo.7135/MM1/2010 dated 09.01.2017 should be strictly followed.	All the condition imposed in the proceedings of the commissioner of geology and mining vide R.cNo.7135/MM1/2010 dated 09.01.2017 were followed.
39)	The limestone & marl produced from the mining lease area will be for captive purpose only.	We are using the limestone & marl produced from the mining lease area for captive purpose only.

40)	Scientific studies related to noise and ground vibration shall be carried out involving reputed government institutions like IIT, NIT, Anna University, Chennai for the usage of rock breakers and to carry out controlled blasting activities in the mine even if sporadically.	Carrying out noise & ground vibration study through monthly/ quarterly monitoring NABL accredited agencies only.
41)	The executive engineer, PWD/WRD, Marudaiyar Basin Ariyalur vide letter number 37m/DB/F.14(A)/2018 dated 13.02.2018 states that the mining lease area and recommended with a condition of providing 50m for Uppu odai right bank boundary limit, 50m for Marudaiyar river left bank boundary limit, 50m for Periyapadayatcheri boundary limit, 50m for poonkudikuttai boundary limit However the SEAC felt that the 50m, safety distance is not sufficient for Marudaiyar River. Hence, the project proponent has to provide a total of 100m safety distance from boundary of the Marudaiyar River Course this should be ensured by the District level task force.	Conditions noted. We provided a safety distance as per the direction.
42)	The study recommended for hydrological modeling and water quality analysis through the centre for water resources (CWR) Anna University, Chennai should be strictly followed. The recommendation are detailed below: a. The mine seepage water will be collected in the sump located in the bottom of the mine pit. This sump will act as the settling pond also. Supernatant clear water confirming to the limit will be pumped out to the nearby tanks. b. Carrying out regular monitoring of mine discharge water quality before discharging into nearby tanks.	Hydrological modeling and water quality analysis study conducted through CWR, Anna University, Chennai recommendations. a. The mine seepage water collected in the sump located in the bottom of the mine pit & settling pond also. Supernatant clear water confirming to the limit will be pumped out to the nearby tanks. b. Regular monitoring of water quality being done. c. Water chemistry of mine discharge being carefully monitored. d. Piezometers installed in two directions for regular monitoring of

	c. Water chemistry of mine discharge must be carefully considered and suitable in situ water treatment methods should be adopted for the controlling the turbidity, pH and total hardness if needed. d. Piezometer of two numbers (at least) shall be installed by CCCPL in different directions for regular monitoring of the ground water level and its quality during the actual course of mining operations.	ground water level.
43)	Ground water quality monitoring should be conducted every month and the report should be submitted to TNPCB.	Ground water quality monitoring conducted every month by NABL accredited Laboratory and the same submitted to TNPCB.
44)	The operation of the quarry should no way impact the water bodies, agricultural activity, and habitation surrounding the project site.	No impact on the water bodies, agricultural activity, and habitation due to Mining caused by Mining.
45)	Transportation of the quarried materials shall not cause any hindrance to the Village people/Existing Village road.	No hindrance caused by Transportation of the quarried materials to the Village people/Existing Village road.
46)	All the commitment made in the proposal with respect to bailing out of water, rain water harvesting, installation of Piezo meter monitoring of ground water quality, green belt development, etc should be strictly followed	Piezometers installed in two directions for regular monitoring of ground water level. Green belt development being done regularly and ground water quality being monitored regularly.
47)	The Project Proponent shall comply with the mining& other rules and regulations where ever applicable.	Mining and other rules and regulations were complied with.
48)	The quarrying activity shall be stopped if the entire quantity indicated in the mining plan is quarried even before the expiry of the quarry lease period and the same shall be monitored by the District Authorities.	Noted and conditions will be complied with.
49)	To Ensure safety measures along the boundary of the quarry site, security guards are to be engaged during the entire period of mining operation.	Security guards being engaged during the entire period of mining operation.

50)	The mining Closure plan submitted by the project proponent shall be strictly followed after the mine activity is lapsed as reported.	Mining closure plan will be submitted and strictly followed as per the guidance.

Conditions for Post-Construction / Operation phase & Entire life of the project:

No.	nditions (Post Construction Phase)	Compliance Status
1)	The pits left unfilled in an area shall be converted into water body. The higher benched of excavated void/ mining shall be terraced and plantation shall be done to stabilize the slopes.	As per the approved mining plan, Mined out area left as water reservoir, at the end of the life of mine. The Plantations are carried out in benches and properly fenced to avoid un-authorized entry into the pit.
2)	There should not be any impact to the nearby water bodies due to seepage from the proposed mine.	The water bodies are not disturbed due to seepage from the proposed mine.
3)	There should not be any disturbance to the plantation in and around the mining area due to the proposed activity.	No disturbance to the plantation in and around the mining area due to the mining activity.
4)	The proponent shall plant the green belt area with more indigenous species for bio diversity enhancement in consultation with local DFO. a. The mutual agreement signed between M/s. Chettinad Cement Corporation Private limited & M/s. Dalmia cement Bharat Limited shall be registered before commencement of the mining operation. This should be ensured by the District Collector.	Green belt area being developed by planting the more indigenous species like Pungan, Vembu, Malai Vembu, and Mailkondrai for Biodiversity enhancement in consultation with Local DFO. ML area : 32.295 ha Saplings planted so far : 11252 Extent of existing greenbelt area : 5.50 ha Area covered with greenbelt : Dumps, bunds along the ML boundary Tree Density : 2000 /ha a. Mutual consent has been already signed between M/s Chettinad Cement Corporation Private limited & M/s. Dalmia cement Bharat Limited. The registration is under progress.
5)	As far as possible, the mining should be on sustainable basis, ensuring the reserves are not unduly over harvested and mining should spread over the years, ensuring sustainable mining.	Mining carried out by systematic and scientific manner with sustainability for the proposed rate of average production of 0.5 Million MT per annum. (As per the approved mining Plan)
6)	The Mining site shall be monitored during entire mining period by establishing at least two stations and the Air quality shall be monitored twice in a week.	Monthly Monitoring of air quality done through NABL accredited Laboratory.
7)	Pumping of water if available in the common storm water area should not impact the neighboring agricultural activities nor affect the ground water availability and alter the	Conditions noted.

	ground after flow by any means.	
8)	Any storm water leaving the site shall be settled within the mining area by providing adequate settling tank so that there shall not be any carryover of residue to the surrounding land or water bodies.	The rain water accumulated during monsoon period in the mine pit during plan period pumped out into the settling pond on the south eastern side and ultimately after settling the water utilized for green belt development and dust suppression activities.
9)	There has to be a thorough risk assessment and disaster assessment plan in place.	We have prepared thorough risk assessment and disaster assessment plan for all mining operations.
10)	Preventive measures and problems due to occupational mine diseases should be displayed in vernacular language for understanding to the workers.	We are following the guidelines as per the statute.
11)	Workers shall be examined every month by practiced physician, results shall be documented and required medical facilities shall be extended to labour force at the cost of the proponent.	We have provided the required medical facilities to all workers every month by practiced physician, results being documented.
12)	Anti vibration devices shall be provided to the vibrating tools and equipments to be used by workers during mining and its usage shall be ensured by maintaining safe limit of vibration impact.	HEMM are equipped with ergonomically designed to maintain safe limit of vibration impact.
13)	All the precautions are to be followed for safety and security. Face masks, helmets, safety shoes, etc., shall be provided to all the workers working in the mining area.	All the safety precautions are being followed and all the personal protective equipments are provided to all the persons employed in mines.
14)	Appropriate fencing and manning of lease area and mine out area shall be done.	We have provided appropriate fencing and security for lease area and mined out area.
15)	All the recommendations made in the EIA report of the project shall be effectively implemented.	Conditions noted.
16)	A booklet containing the Dos and Don'ts shall be prepared in vernacular languages for the use of the mine engineers/ managers and the workers to ensure that all necessary environmental, safety and health measures are undertaken.	A booklet containing the Do's and Don'ts in the form of Safe operating Procedure is prepared in Tamil language and same issued to all the employee of the mine.

17)	CER funds of Rs. 6.60 lakhs shall be spent for Karaivetti Bird Sanctuary, Ariyalur District for maintenance and beatification purpose. The aforesaid amount shall be paid in the form of Demand Draft to District forest officer, Ariyalur. The above said amount shall be spent before applying Consent from TNPCB.	Completed. CER funds of Rs.6.60 Lakhs already been paid in the form of Demand draft vide no. 077494, dt: 28.08.2019 to DFO, Ariyalur for maintenance and beautification of Karaivetti Bird sanctuary.
18)	The proponent should strictly comply with, Tamil Nadu Government Order (Ms) No.84 Environment and Forests (EC.2) Department dated 25.06.2018 regarding ban on one time use and throwaway plastics irrespective of thickness with effect from 01.01.2019 under Environment (Protection) Act, 1986.	Complied. Use of one time throwaway plastics is completely banned in our Mines boundary.
19)	It is mandatory for the project proponent to furnish to the SEIAA, Half yearly compliance report in hard and soft copies on 1st June and 1st 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 1st June and 1st December of each calendar year in respect of the conditions stipulated in the prior environmental clearance and also before commencement of production.
20)	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 this 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 is proposed. No deviations or alterations in the proposed mining lease are considered.
21)	All the environmental protection measure and safeguards as recommended in the EIA report shall be complied with.	All the environmental protection measure and safeguards as recommended in the EIA report were implemented.
22)	The implementation of the project vis-a-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 regularly.	Six monthly compliance status report is being submitted regularly to MOEF &CC at Chennai, TNPCB & CPCB.
23)	Data on ambient air, stack and fugitive emissions shall be regularly submitted 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, SO2 and NOx outside the premises at the appropriate place for the general public.	The monitoring of quality of ambient air and fugitive emissions taken up and the data on ambient air and fugitive emissions regularly submitted to the Regional office of MOEF &CC at Chennai, TNPCB and CPCB in both hard copies as well as in soft copy once in six months.

		The Monitoring data displayed outside the premises at the appropriate place for the general public
24)	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Mines Act.	Occupational health surveillance of the workers done on a regular basis and records also is maintained as per Mines Act.
25)	The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employee should be maintained separately.	First aid room and facilities provided in Mine entrance and medical records also be maintained separately for each person.
26)	The overall noise levels in and around the mining area shall be kept well within the standards prescribed for by providing noise control measures on all sources of noise generation. The ambient noise level should conform to the standards prescribed under EPA Rules, 1989 viz. 55 dBA (day time) and 45 dBA (night time).	Measures like silencers, green belt along the boundary of ML area, etc are provided and good maintenance of Mining Machinery is being ensured for controlling ambient noise level below 55 dBA in a day time and 45 dBA in night time at nearby residential area. Ear plugs/muffs are provided to the operators of HEMM
27)	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 associated with the operation of the Mining activity.	Hydro geological study of the area is reviewed annually and report submitted to the Authority No water bodies including natural drainage system in the area disturbed due to mining activities.
28)	CSR activity shall be implemented as committed by drawing a scheme for social up liftmen 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 centers, 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.	We are carrying out CSR activities (road construction, providing sanitation facilities, drinking water supply in the government schools nearby, community awareness, establishment of health centers, water supply to nearby villages) in coordination with District administration. The funds so provided will not be diverted for any other purpose.
29)	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 a Senior Executive.	A Separate environmental and safety cell ensured to take care of EHS function and head of the cell directly reporting to head of the organization for complying the environmental and safety regulation and implementing pollution control and occupational health & Safety measures.

30)	The requisite amount earmarked forwards capital cost and recurring cost/annum for implementing 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 purposes.	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 not diverted for any other purpose.
31)	The project proponent shall upload the status of compliance of the stipulated 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, SO2, NOx 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.	The status of compliance of the environment clearance conditions is being uploaded in the company website and will be updated periodically. 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. The pollutant levels namely RSPM, SO_2, NO_X (in the ambient air) being monitored and uploaded in the company website periodically. The environmental monitoring data displayed at a convenient location near the main gate of the company in the public domain.
32)	The project proponent shall also submit six monthly reports on the status of the 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 Chennai/CPCB/SPCB shall monitor the stipulated conditions.	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.
33)	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 & CC by e-mail.	The environmental statement for financial year ending 31stMarch 2021 in Form – V submitted to the Regional office of MOEF, forest & Climate change, Chennai on 24.09.2021. The same displayed on the website of the company and sent to the respective regional office of the Ministry of Environment, Forest & Climate change, Chennai by e-mail. The Status of compliance of Environment clearance conditions sent to the respective Regional Offices of the MoEF & CC by e-mail.

34)	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.	Condition noted.
35)	The SEIAA, TN may alter/modify the above conditions or stipulate any further conditions in the interest of environment protection.	Condition noted.
36)	The SEIAA/SEAC reserves the right to add any further condition(s) on receiving reports from the project authority. The above condition shall be monitored by the Regional Office of MoEF & CC located at Chennai.	Condition noted.
37)	The SEIAA, TN may revoke or suspend the Environmental clearance, if implementation of any of the above conditions is not satisfactory.	Condition noted.
38)	The SEIAA, TN may cancel the environmental clearance granted to this project under the provisions of EIA Notifications, 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 proponent has deliberately concealed and/or submitted false or misleading information or inadequate data for obtaining the environmental clearance.	Condition noted.
39)	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.	Condition noted.
40)	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, the Environment (Protection) Act,1986, the Public Liability Insurance 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 Hon'ble Supreme Court of India /Hon'ble High Court of Madras and any other Courts of Law relating to the subject matter.	Condition noted.

41)	This clearance is issued with respect to only environmental considerations and it does not imply that SEIAA approved the way which lease is granted to the project. While granting lease , the concerned authority shall ensure compliance of relevant rules, Regulations, Notification, Government resolutions, circulars, Judgment/orders of Hon'ble Court and NGT,etc.,	Condition noted.

for **Chettinad Cement Corporation Private Limited**

A. Amalraj
Joint President (Works)

ANNEXURE 2

Chettinad Cement Corporation Private Limited -Periyathirukonam Limestone Mine													
Periyathirukonam Village , Ariyalur District, Tamilnadu State													
Ambiant Air Quality Monitoring- Consolidated Report (October 2021 -March 2022)													
S.No	Location	PM_{10} (µg/m^3)			$PM_{2.5}$ (µg/m^3)			SO_2 (µg/m^3)			NOx (µg/m^3)		
		Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
1	Near PTK Mines Office	54.9	47.6	51.5	24.1	17.8	20.5	16.1	9.8	12.6	23.4	13.6	18.7
2	Haul Road - PTK Mines	56.8	45.8	52.5	24.0	15.7	19.3	18.0	9.1	11.8	27.8	13.0	18.2
3	Chettithirukonam Village	59.2	44.7	54.1	22.1	14.3	19.0	12.7	9.9	11.4	28.7	15.4	19.3
4	Periyathirukonam Village	57.5	48.6	53.6	24.3	15.6	21.1	16.6	9.1	12.1	25.0	11.4	17.0
5	Ambalavar Village	52.4	45.1	48.8	20.7	18.3	19.5	11.2	8.9	10.1	19.3	17.6	18.5
6	Idaiyathankudi Village	51.5	50.3	50.9	24.0	22.2	23.1	12.3	11.0	11.7	18.4	18.2	18.3
7	Valaikkuzhi Village	56.6	46.2	51.4	22.8	17.5	20.2	17.5	14.7	16.1	18.8	18.2	18.5
8	Muniyankurichi Village	46.9	45.5	46.2	15.5	15.4	15.5	13.4	10.2	11.8	22.1	15.4	18.8
Norm		100 µg/m^3			60 µg/m^3			80 µg/m^3			80 µg/m^3		

for **Chettinad Cement Corporation Private Limited**

A Amalraj
Joint President (Works)

ANNEXURE 3

Chettinad Cement Corporation Private Limited -Periyathirukonam Limestone Mine								
Periyathirukonam Village , Ariyalur District, Tamilnadu State								
Noise Level Monitoring- Consolidated Report (October 2021 -March 2022)								
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)	57.2	65.1	60.6	53.6	58.8	56.0
2	Loading Area	dB(A)	58.9	66.8	63.2	53.9	59.2	56.7
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	Periyathirukonam Village	dB(A)	48.9	52.6	51.9	41.3	42.4	42.3
2	Chettithirukonam Village	dB(A)	51.7	53.4	53.4	42.1	43.5	42.7
Limit (L_{eq})		dB(A)	55			45		

for Chettinad Cement Corporation Private Limited

A Amalraj
Joint President (Works)

ANNEXURE 4

Chettinad Cement Corporation Private Limited -Periyathirukonam Limestone Mine						
Periyathirukonam Village , Ariyalur District, Tamilnadu State						
Ground Water Quality Monitoring Report(October 2021 -March 2022)						
S.No	Parameter	UoM	GW1	GW2	SW3	Limit
			Dec-21	Dec-21	Dec-21	
1	pH	-	6.72	7.11	7.74	5.5 - 9.0
2	Temperature	Deg C	31.5	30.7	32.5	40
3	Particle size for TSS	-	100%	100%	100%	Shall pass 850 micron IS Sieve
4	TSS	mg/l	BDL(DL:1.0)	BDL(DL:1.0)	BDL(DL:1.0)	100
5	TDS	mg/l	948	1126	1153	2100
6	Chloride as Cl	mg/l	336	373	388	1000
7	Sulphide as S	mg/l	BLQ	BLQ	BLQ	2
8	Sulphate as SO4	mg/l	126	181	190	1000
9	Fluride as F	mg/l	0.13	0.14	0.16	2
10	Sodium	mg/l	41.2	94.3	94.2	-
11	Copper	mg/l	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	3
12	Zinc as Zn	mg/l	BLQ	BLQ	BLQ	1
13	Phenolic compounds as C_6H_5OH	mg/l	BDL(DL:0.001)	BDL(DL:0.001)	BDL(DL:0.001)	1
14	Oil & Grease	mg/l	BLQ	BLQ	BLQ	10
15	Boron as B	mg/l	0.218	0.095	0.024	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(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	0.2
20	Cadmium as Cd	mg/l	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	2
21	Total Chrominum as Cr	mg/l	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	2
22	Hexavalant Chrominum	mg/l	BLQ	BLQ	BLQ	0.1
23	Lead as Pb	mg/l	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	0.1
24	Selenium as se	mg/l	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	BLQ(LOQ:0.002)	0.05
25	Mercury as Hg	mg/l	BLQ(LOQ:0.0005)	BLQ(LOQ:0.0005)	BLQ(LOQ:0.0005)	0.01
26	Pesticides	mg/l	BLQ	BLQ	BLQ	---
27	Free Ammonia as NH_3	mg/l	BDL(DL:0.5)	BDL(DL:0.5)	BDL(DL:0.5)	5
28	Dissolved Phosphate as P	mg/l	BLQ	BLQ	BLQ	5
29	Total Kieldahl Nitrogen as N	mg/l	BLQ	BLQ	BLQ	100
30	Cyanide as CN	mg/l	BDL(DL:0.01)	BDL(DL:0.01)	BDL(DL:0.01)	BDL
31	Nickel as Ni	mg/l	BLQ	BLQ	BLQ	3
GW 1 Periyathirukonam Village & GW 2 Chettithirukonam Village,						
SW 3.Mines Sump Water						

for Chettinad Cement Corporation Private Limited

A Amalraj
Joint President (Works)