



Chettinad Cement, KW,TN/ Cement Plant & CPP / Six Monthly Report/ Apr'20-Sep'20 / EHS-264
30th November, 2020

Regional Office (SEZ)
MoEF & CC, Government of India,
No.34, HEPC Campus, Cathedral Garden Road,
Nungambakkam, Chennai – 600 034
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Dear Sir,

Subject : Submission of Six Monthly (April'2020 to September'2020) Compliance Report of Environment Clearance for Chettinad Cement Corporation Private Limited, Proposed Expansion of Cement Plant (4.5 to 7.0 million tons per annum) & Captive Power (48 to 78 mw) at Rani Meyyamami Nagar, Karikkali Village, Vendasandur Taulk, Dindigul District, Tamilnadu – Reg

Reference : Environmental Clearance F.No.J-11011/110/2011 -1A II (I) dated 29.11.2012

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We hereby submit the **Six Monthly Compliance report (April'2020 to September'2020)** of above referred Environmental clearance pertaining to our “**Cement Plant** (Expansion from 4.5 to 7.0 million tons per annum), **Captive Power Plant** (Expansion from 48 to 78mw) located at Rani Meyyammai Nagar, Karikkali Village, Guziliamparai Taluk, Dindigul District, Tamil Nadu-624703.

Thanking you

Yours faithfully
for CHETTINAD CEMENT CORPORATION PRIVATE LIMITED

V.KRISHNAN
SENIOR VICE PRESIDENT [WORKS]

Copy to:

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Six Monthly EC Compliance Report
Period: April'2020 to September'2020

CHETTIAND CEMENT CORPORATION PRIVATE LIMITED

Cement Plant & Captive Power Plant
Karikkali Village, Dindigul District, Tamil Nadu

Six Monthly Compliance Report (Apr'20 – Sep'20)
[Expansion of Cement Plant from 4.5 to 7.0 million tons per annum,
Captive Power Plant from 48 to 78 MW]

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Chettinad Cement Corporation Private Limited

Karikkali Village, Dindigul District, Tamil Nadu

Cement Plant, Captive Power Plant & Seethai Nagar Limestone Mine

Status of compliance Stipulated in Environmental Clearance

(For the Period of April 2020 to September 2020)

Reference : EC granted by MoEF vide Letter No **F.No.J-11011/110/2011-1A 11(i)** dated **29.11.2012** for expansion of Cement Plant Capacity from 4.5 to 7.0 million tons per annum and Captive Power Plant Capacity from 48 to 78 mw

Present Status of Project : 1. Cement Plant : Expansion (7.0 mtpa) - Not yet started the project (due to no positive cement requirement in cement Market)
2. Captive Power Plant : Expansion (78mw) Completed & Commissioned on July'2014

A. Specific Conditions

S. No	Specific Condition	Compliance Status
i.	The company shall comply with the condition stipulated in the environmental clearance and NOC granted by SPCB for the existing plant.	<i>Compliance with the conditions stipulated in the Environmental Clearance and NOC granted by SPCB referred is Complied</i>
ii.	Continuous monitoring system to monitor gaseous emissions to the all stacks shall be provided. After expansion, limit of PM shall be controlled within 50mg/Nm ³ by installing adequate air pollution control system, Electrostatic Precipitators to Clinker Cooler, Bag House to Raw Mill/Kiln and Bag Filters to Coal Mill and Cement Mill, Low NO _x burners should be provided to control NO _x emissions.	<p><i>Complied</i></p> <p><i>The continuous stack monitoring system to monitor gaseous emissions (SO₂ and NO_x) and dust (PM) has been provided and the concentrations of pollutants are being controlled by providing the following appropriate control measures to ensure compliance with prescribed norms.</i></p> <p><i>a. Bag House – Raw Mill/kiln-1&2, Coal Mill-1&2, Cement Mill -1,2 &3</i></p> <p><i>b. Low Nox burners – Pyro process</i></p> <p><i>c. Electrostatic Precipitators – Clinker Coolers</i></p> <p><i>d. As sulphur is getting converted into its compounds during the process of formation of clinker in the Kiln, the emission of SO₂ is under control as stated.</i></p> <p><i>e. Bag Filters – Limestone crushers at mines</i></p> <p><i>The stack emission report of ROA of the survey</i></p>

S. No	Specific Condition	Compliance Status
		<p><i>conducted by TNPCB on 27.02.2020 & 28.02.2020 reveals that the emission from the all stacks are PM in the range of 21mg/Nm³ to 27mg/Nm³ which is below the prescribed limit of 30mg/Nm³,</i></p> <p><i>SO₂ in the range of 11mg/Nm³ to 48mg/Nm³ which is below the prescribed limit of 100mg/Nm³ and NO_X in the range of 17mg/Nm³ to 39mg/Nm³ which is below the prescribed limit of 800mg/Nm³</i></p> <p><i>Manual monitoring is also carried out through external agency on monthly basis and ROA of the results reveals that emission values are maintaining below norms prescribed by MoEF /CPCB /TNPCB.</i></p> <p><i>The consolidated stack emission monitoring reports (Apr'20 – Sep'20) are hereby enclosed vide Annexure 2 & 3</i></p>
iii.	<p>The National Ambient Air Quality Emission Standards issued by the Ministry vide G.S.R .No. 826 (E) dated 16th November, 2009 should be followed.</p>	<p><i>Complied</i></p> <p><i>The Ambient Air Quality (AAQ) manual monitoring is conducting at 8 locations through external agency on monthly basis and TNPCB once in six month.</i></p> <p><i>In addition to the manual monitoring, two numbers online CAAQMS (Continuous Ambient Air Quality Monitoring Station) installed to monitor the Ambient emission levels and same is being connected to Air Care Centre, TNPCB and OCEMS, CPCB.</i></p> <p><i>The ROA of the AAQ survey conducted by TNPCB on 27.02.2020 & 28.02.2020 reveals that the PM₁₀ is in the range of 40µg/m³ to 58µg/m³ which is below the prescribed limit of 100µg/m³, PM_{2.5} is in the range of 25µg/m³ to 34µg/m³ which is below the prescribed limit of 60µg/m³ and SO₂ in the range of 14µg/m³ to 21µg/m³ and NO₂ in the range of 21µg/m³ to 27µg/m³ which is below the prescribed limit of 80µg/m³.</i></p> <p><i>The consolidated AAQ monitoring reports (Apr'20-Sep'20) are hereby enclosed vide Annexure 5.</i></p>

S. No	Specific Condition	Compliance Status
iv.	Secondary fugitive emission from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed.	<p><i>Complied</i></p> <p><i>To control Fugitive Emissions, all the raw materials and finished product cement are stored in closed RCC silos and sheds. All materials transfer through closed conveyors. The periodical fugitive emission monitoring at raw material storage areas</i></p> <p><i>The consolidated Fugitive Emission monitoring reports (Apr'20 - Sep'20) are hereby enclosed vide Annexure 4.</i></p>
v.	Efforts should be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land. All the raw materials including fly ash should be transported in the closed containers only and shall not be overloaded. Vehicular emissions shall be regularly monitored.	<p><i>Complied</i></p> <p><i>Raw materials transport is being done through both rail and road mode. Fly ash is being handled through closed bowsters and pneumatic transfers. No overloading of trucks is permitted. Vehicles with Pollution Under Control Certificate only being permitted inside the premises.</i></p>
vi.	Total water requirement for proposed expansion shall <i>not exceed</i> 800m ³ /day. Efforts shall be made to further reduce water consumption by using air cooled condensers. All the treated wastewater shall be recycled and reused in the process and/or for dust suppression and green belt development and other plant related activities etc. No process wastewater shall be discharged outside the factory premises and 'zero' discharge should be adopted.	<p><i>Complied</i></p> <p><i>Total water requirement for proposed expansion will not exceed 800m³/day.</i></p> <p><i>For the existing (30 mw +18 mw) and the additional (30 mw) Captive Power Plants, Air Cooled Condensers have been installed for condensate cooling to ensure water conservation. The industrial effluents generated from the plant , after treatment are being reused within the plant premises for cooling purpose and the plant related other activities. The domestic effluents generated, after treatment are used for greenbelt development and dust suppression. All the treated water is used within the plant premises, ensuring ZERO Discharge System.</i></p> <p><i>The consolidated Ground Water quality reports (Apr'20 - Sep'20) are hereby enclosed vide Annexure 8</i></p>

S. No	Specific Condition	Compliance Status
vii.	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir should be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<p><i>Complied</i></p> <p><i>Rainwater harvesting pond with a capacity of 1200 m³ has been provided in the Plant premises.</i></p> <p><i>100% water requirement for existing plant & domestic purpose are being met from rainwater harvested from the Mine.</i></p> <p><i>No ground water is drawn for any of the requirements of the plant.</i></p>
viii.	Regular monitoring of influent and effluent surface, sub-surface and ground water should be ensured and treated wastewater should meet the norms prescribed by the State Pollution Control Board or described under the E(P)Act whichever are more stringent. Leachate study for the effluent generated and analysis should also be regularly carried out and report submitted to the Ministry's Regional Office at Bangalore, SPCB and CPCB.	<p><i>Complied</i></p> <p><i>The quality of treated industrial & domestic effluents and the ground water quality are monitored regularly. The monitored data are being submitted to Ministry's Regional Office at Chennai, TNPCB & CPCB, once in six months.</i></p> <p><i>The Industrial effluents generated from the plant are being treated to meet the norms prescribed by TNPCB and reused for cooling purpose and the Plant related other activities within the Plant premises. No treated Industrial Effluent is let out on the surface.</i></p> <p><i>The Industrial Effluents generated do not contain any toxic element and there is no discharge of treated Industrial Effluent and the same is reused within the plant premises. So, leachate study is not applicable.</i></p> <p><i>The treated water from the Sewage Effluent Plant is being used for greenbelt development and dust suppression.</i></p> <p><i>The consolidated Treated Effluent (Trade Effluent & Sewage) quality reports (Apr'20 - Sep'20) are hereby enclosed vide Annexure 7</i></p>
ix.	All the bag filter dust, raw meal dust coal dust, clinker dust and cement dust from pollution control devices should be recycled and reused in the process and used for Cement manufacturing. Spent oil and batteries shall be sold be authorized recyclers / reprocesses only.	<p><i>Complied</i></p> <p><i>All the Bag Filter dust, Raw Meal dust Coal Dust, Clinker Dust and Cement Dust from pollution control devices are being recycled and reused in the respective process.</i></p>

S. No	Specific Condition	Compliance Status
x.	All the fly ash shall be utilized as per Fly ash Notification, 1999 subsequently amended in 2003 and 2009. Efforts should be made to use fly ash maximum in making Pozollana Portland Cement (PPC).	<i>Complied</i> <i>Fly Ash generated in our Captive Power Plant is 100% used for manufacturing Portland Pozzolana Cement (PPC).</i> <i>Fly returns submitted to MoEF&CC & TNPCB regularly and Last (Quarterly 2) submission date: 08.10.2020</i>
xi.	Effort shall be made to use low grade lime, more fly ash and solid waste in the Cement manufacturing	<i>Complied</i> <i>Fly Ash generated in our Captive Power Plant is 100% used for manufacturing Portland Pozzolana Cement (PPC).</i> <i>Low Grade Limestone is being blended with available High Grade Limestone to conserve the natural resource. This blend is being used for raw meal preparation to produce clinker.</i> <i>Slag, a waste from Steel Industries is also being used to produce Portland Slag Cement.</i>
xii.	Measure shall be made to use of high calorific hazardous waste in the Cement Kiln and necessary provision shall be made accordingly.	<i>Complied</i> <i>Provisions like high efficiency multi-channel burner, feeding system etc., had been installed to facilitate co-processing of hazardous wastes in the Kiln.</i>
xiii.	As proposed, green belt shall be developed in least 33% area in and around the Cement Plant as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO.	<i>Complied</i> <i>Plant (Cement Plant & Captive Power Plant):</i> <i>Total Plant area : 72.95 ha</i> <i>33 % of Plant area : 24.07 ha</i> <i>Actual Greenbelt developed area : 24.10 ha</i> <i>Number of saplings planted so far : 48792 nos</i> <i>Green Belt Development Photos are hereby enclosed vide Annexure 9.</i>
xiv.	All the recommendation made in the Charter on Corporate Responsibility for Environment Protection (CERP) for the Cement Plants shall be implemented.	<i>Complied</i> <i>The recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement Plants have been complied with except for the generation of power using hot gases from the Kiln. As the exit hot gases from kiln are being utilized for moisture removal in the raw materials and final exist gas in the range of 1800c is insufficient for power generation using Waste Heat Recovery Boiler (WHRB).</i>

S. No	Specific Condition	Compliance Status
xv.	All the commitments made to the public during / public consultation meeting held on 21 th March, 2012 shall be satisfactory implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.	<i>Complied</i> <i>The details of commitments made to the public during public hearing and the action plan to implement the same had been submitted to Ministry's Regional Office at Bangalore on 27.03.2012. The commitments are being met from the budget allocated.</i>
xvi.	At least 5% of the total cost of the project should be earmarked towards the Enterprise Social Commitment based on Public hearing issues and item wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Officer at Bangalore. Implementation of such program should be ensured accordingly in a time bound manner.	<i>As per the Companies act 2013, 2% of last 3 years average profit to be spent for Corporate Social Responsibility (CSR). The EIA Report covering the details of CSR activities, which include Item-wise details and time schedule, had been submitted to the Ministry's Regional Office at Bangalore.</i>
xvii.	The company shall provide housing for construction labour within the site will all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc., The housing may be in the form of temporary structure to be removed after the completion of project.	<i>Complied</i> <i>All necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc., are provided for the construction labour within the site. The temporary structures (houses) will be removed after the completion of the project.</i>
xviii.	The company shall submit within three 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 environment or forest norms /conditions, (ii) Hierarchical system or Administrative order of the company to deal with environmental issues and ensuring compliance to the environmental clearance conditions and (iii) system of reporting of non compliance / violation environmental norms to the Board of Directors of the company and / or stakeholders or Shareholders.	<i>Complied</i> <i>The Corporate Environment Policy has been formulated for adherence by all the Cement units of the Group. A copy of the same has already been submitted on 02.04.2013 to MoEF Regional Office, Bangalore.</i>

B. General Conditions

S. No	General Condition	Compliance Status
i.	The Project authorities must strictly adhere to the stipulations made by the Tamilnadu State Pollution Control Board and State Government.	<i>Complied</i> <i>All the stipulations made by the Tamil Nadu Pollution Control Board / State Government are being adhered.</i>
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment and Forests.	<i>Complied</i> <i>No further expansion or modernization of the plant was carried out without prior approval of the MoEF & CC, New Delhi.</i> <i>We are going for additional product namely Granulated Ground Blast Slug (GGBS) and obtained EC amendment vide MoEF letter F.No.J-11011/518/2009-IA.II(I) dated 22.02.19</i>
iii.	The gaseous emissions from various process units shall conform to the load/mass based standards notified by this Ministry on 19th May, 1993 and standards prescribed from time to time. The State Pollution Control Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry and its size and location.	<i>Complied</i> <i>The Installation of RABH/ESP/Pulse Jet Bag Filters for the point sources of emission, Use of low Ash and low Sulphur fuels and Use of low NO_x Burners ensure that the Particulate Matter and gaseous emissions like SO₂ and NO_x from various units are within the standards prescribed.</i> <i>Interlocking facility had been provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit gets shut down automatically.</i>
iv.	At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM ₁₀ , SO ₂ and NO _x are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore and the SPCB/CPCB once in six months.	<i>Complied</i> <i>8 numbers of air quality monitoring stations & Two numbers Continuous Ambient Air Quality Monitoring Station (CAAQMS) have been installed in consultation with TNPCB.</i> <i>Data on Ambient Air Quality and stack emissions are regularly submitted to MoEF & CC, Delhi, MoEF & CC Regional Office, Chennai, TNPCB and CPCB.</i> <i>The consolidated AAQ monitoring reports (Apr'20-Sep'20) are hereby enclosed vide Annexure 5.</i>

S. No	General Condition	Compliance Status
v.	Industrial Waste Water shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	<p><i>Complied</i></p> <p><i>The Industrial Waste Water viz., Cooling Tower Blow Down, DM/RO Plant Rejects etc., are being collected and treated in ETP to meet the standards prescribed. Treated water being used for cooling purpose and the plant related other activities. The domestic waste water from the plant and the colony are treated in STP and reused for greenbelt and dust suppression. The treated water meets the standards prescribed. Zero Discharge System is being followed in the existing Plant.</i></p> <p><i>The consolidated Treated Effluent (Trade Effluent & Sewage) quality reports (Apr'20 - Sep'20) are hereby enclosed vide Annexure 7.</i></p>
vi.	The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	<p><i>Complied</i></p> <p><i>Noise control measures like silencers, acoustic enclosures etc, are provided for all the sources of noise generation and good maintenance of Equipment & Machinery are also carried out.</i></p> <p><i>The Noise levels are monitored at eight locations on monthly basis through external agency and levels are within the limits.</i></p> <p><i>The consolidated Noise Level monitoring reports (Apr'20 - Sep'20) are hereby enclosed vide Annexure 6.</i></p>
vii.	Occupational health surveillance of the workers should be done on a regular basis and records maintained as per the Factories Act.	<p><i>Complied</i></p> <p><i>Occupational health surveillance of the workers is carried out on a regular basis and records are maintained as per the Factories Act.</i></p>
viii.	The company shall develop surface water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	<p><i>Complied</i></p> <p><i>The rainwater harvesting structures have been provided in the existing plant. The capacity of rainwater harvesting pond is 1200 m³, which also helps to recharge the ground water.</i></p> <p><i>100% water requirements for the plant & domestic purpose are being met from rainwater harvested from the Mine. No ground water is drawn for any of the requirements of the plant.</i></p>

S. No	General Condition	Compliance Status
ix.	The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	<p><i>Complied</i></p> <p><i>The environmental protection measures and safeguards recommended in EIA/EMP as indicated below will be ensured for the expansion programme.</i></p> <ul style="list-style-type: none"> <i>a. ESP, Bag House / Bag Filters to control air emission</i> <i>b. Water Sprinkling to suppress dust</i> <i>c. Treatment and use of industrial and domestic effluents within the premises ensuring zero discharge from the plant</i> <i>d. Fly Ash used - Cement manufacturing</i> <i>e. Disposal of used oil to authorised recyclers</i> <i>f. Noise Control Measures like enclosures, silencers</i> <i>g. Greenbelt in the plant and colony</i> <p><i>Socio-economic development programme covering Health, Education and Infrastructure are being implemented.</i></p>
x.	The requisite amount shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bangalore. The funds so provided shall not be diverted for any other purpose.	<p><i>Complied with</i></p> <p><i>The required capital cost and the annual recurring expenditure earmarked for implementing the environment pollution control measures and the conditions stipulated by the MoEF & CC as well as the State Government, are not being diverted any other purpose. The status of implementation of the conditions is being submitted to the MoEF & CC Regional Office, Chennai, once in six months.</i></p>
xi.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parishad/Municipal Corporation, Urban Local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent.	<p><i>Complied</i></p> <p><i>Environmental Clearance copy sent on 15.12.2012 to Gujiliyampari Panchayat, Kaikkali Village Vedesandur Taluk, Dindigul District. Also, a copy of EC granted, has also been uploaded in our company website.</i></p>

S. No	General Condition	Compliance Status
xii.	The project proponent shall upload the status of compliance of the stipulated environment 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 Bangalore. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM ₁₀ , SO ₂ , NO _x (ambient levels as well as stack emissions) or critical sectoral 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><i>Complied</i></p> <p><i>The status of compliance of the stipulated environment clearance conditions, including results of monitoring data are uploaded in our website and updated periodically.</i></p> <p><i>Also, the same was submitted to Regional Office of the MoEF&CC, Chennai, Zonal Office of CPCB, Bangalore and TNPCB. Last Submission date : 28.05.2020 (Oct'19-Mar'20)</i></p> <p><i>The monitoring data are displayed on main gate of the company of public domain.</i></p>
xiii.	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 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><i>Complied</i></p> <p><i>Six monthly EC compliance reports and the monitoring data are submitted to the Regional Office of MoEF & CC, Chennai, CPCB & TNPCB regularly.</i></p> <p><i>Last Submission date : 28.05.2020 (Oct'19-Mar'20)</i></p>
xiv.	The environmental statement for each financial year ending 31 st 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 Office of the MoEF at Bangalore by e-mail.	<p><i>Complied</i></p> <p><i>Environmental Statement of Form V submitted to TNPCB and the Regional Office of MOEF & CC, Chennai at Bangalore in hard copy as well as by e-mail regularly.</i></p> <p><i>The status of compliance of EC conditions and the Environmental Statement are uploaded in our company website.</i></p> <p><i>Last Submission date :30.06.2020 (2019-2020)</i></p>

S. No	General Condition	Compliance Status
xv.	The project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to Regional Office at Bangalore.	<p><i>Complied</i></p> <p><i>Advertisements in two local newspapers (Indian Express & Dinaboomai Daily, both dated 7th Dec, 2012) have been published informing the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in.</i></p> <p><i>The copies of the same have also been submitted on 15.12.2012 to MoEF Regional Office at Bangalore.</i></p>
xvi.	Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.	<p><i>Complied</i></p> <p><i>As the internally accrued funds will be invested for the proposed expansion, this condition is not applicable.</i></p> <p><i>The date of commencement of land development work for Captive Power Plant communicated to MoEF, Regional Office of MoEF, Bangalore on 02.04.2013.</i></p> <p><i>The date of commencing land development work for the Cement Plant will be informed to the Ministry as and when the same is commenced.</i></p>

Other Conditions

S No	Other Condition	Compliance Status
12	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions, is not satisfactory.	<i>Guidelines noted.</i>
13	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.	<i>Guidelines noted and the additional conditions stipulated will also be implemented.</i>

S No	Other Condition	Compliance Status
14	The above conditions shall 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, Hazardous Waste (Management Handling, Transboundary Movement) Rules, 2008 and the Public Liability Insurance Act, 1991 along with their amendments and rules.	<i>Guidelines noted.</i>

for CHETTINAD CEMENT CORPORATION PRIVATE LIMITED

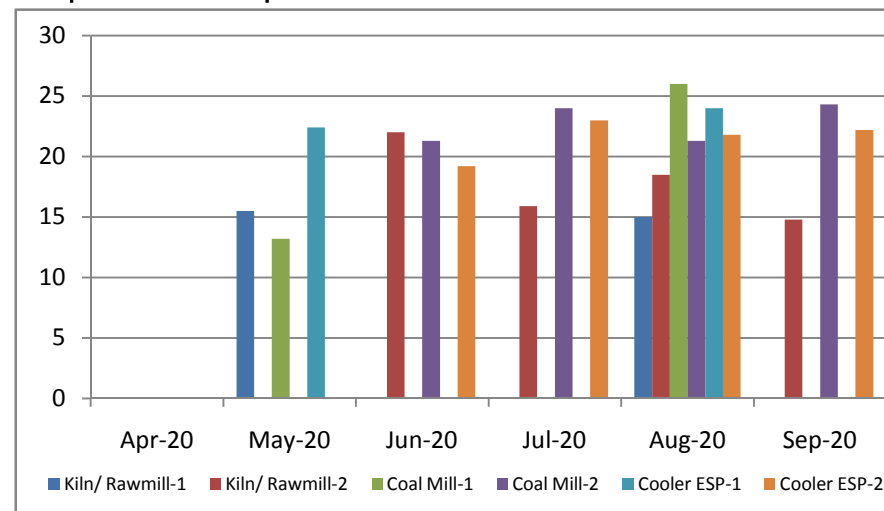


V.KRISHNAN

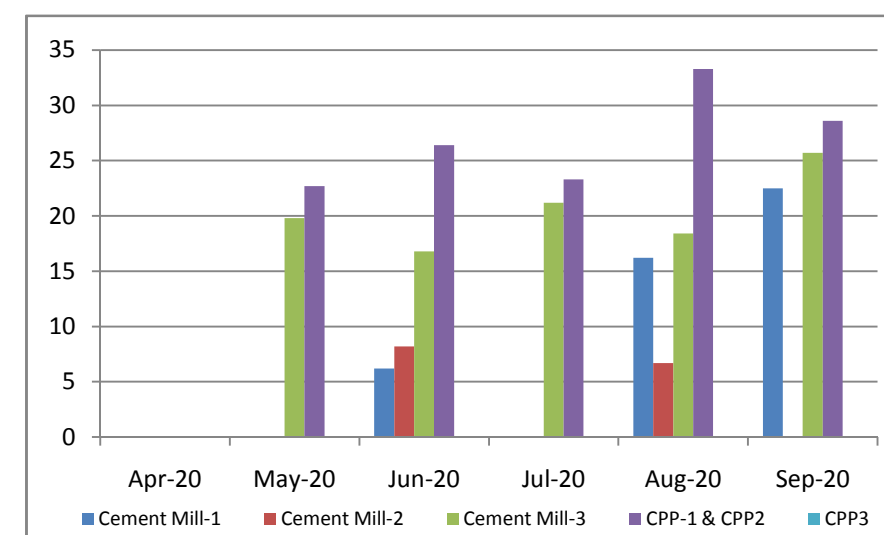
SENIOR VICE PRESIDENT [WORKS]

Stack Emission Data (PM - mg/Nm³) from Apr'2020 to Sep'2020

Month	Kiln/ Rawmill-1	Kiln/ Rawmill-2	Coal Mill-1	Coal Mill-2	Cooler ESP-1	Cooler ESP-2	Permissible Limit
Apr-20	Shut down						Cement Plant : 30mg/Nm ³ Power Plant : 50mg/Nm ³
May-20	15.5	Shut down	13.2	Shut down	22.4	Shut down	
Jun-20	Shut down	22	Shut down	21.3	Shut down	19.2	
Jul-20	Shut down	15.9	Shut down	24.0	Shut down	23.0	
Aug-20	15	18.5	26	21.3	24	21.8	
Sep-20	Shut down	14.8	Shut down	24.3	Shut down	22.2	
Max	15.5	22	26	24.3	24	23	
Min	15	14.8	13.2	21.3	22.4	19.2	
Avg	15.3	17.8	19.6	22.7	23.2	21.6	



Month	Cement Mill-1	Cement Mill-2	Cement Mill-3	CPP-1 & CPP2	CPP3	Permissible Limit
Apr-20	Shut down				Shut down	Cement Plant : 30mg/Nm ³ Power Plant : 50mg/Nm ³
May-20	Shut down	Shut down	19.8	22.7		
Jun-20	6.2	8.2	16.8	26.4		
Jul-20	Shut down	Shut down	21.2	23.3		
Aug-20	16.2	6.7	18.4	33.3		
Sep-20	22.5	Shut down	25.7	28.6		
Max	6.2	6.7	16.8	22.7		
Min	22.5	8.2	25.7	33.3		
Avg	15.0	7.5	20.4	26.9		



for Chettinad Cement Corporation Private Limited

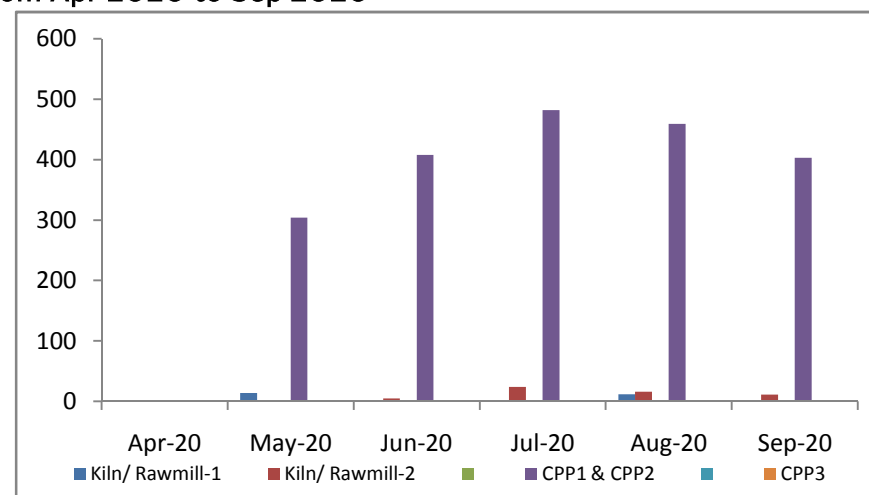
V. Krishnan

V.Krishnan

Joint President[works]

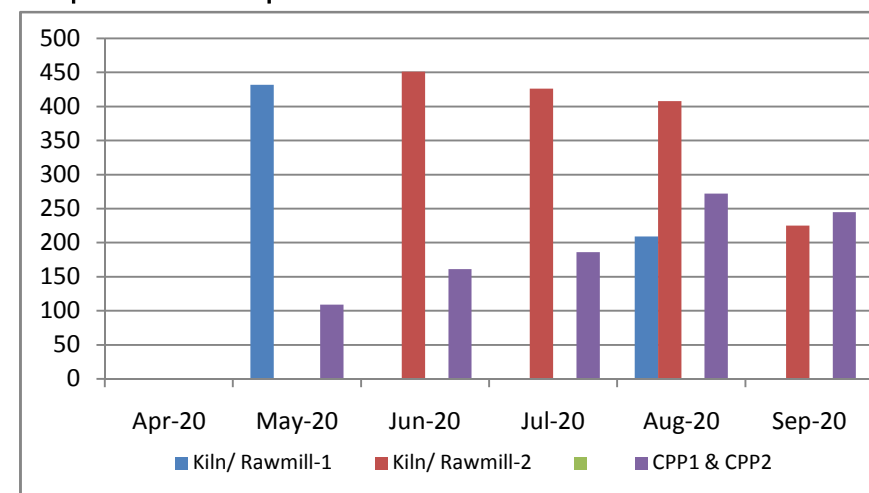
Stack Emission Data (SO₂ - mg/Nm³) from Apr'2020 to Sep'2020

Month	Kiln/ Rawmill-1	Kiln/ Rawmill-2	CPP1 & CPP2	CPP3	Permissible Limit
Apr-20	Shut down	Shut down	Shut down	Shut Down	Cement Plant : 100mg/Nm ³ Power Plant : 600mg/Nm ³
May-20	13.6	Shut down	304		
Jun-20	Shut down	4.8	408		
Jul-20	Shut down	24	482		
Aug-20	11.8	16	459		
Sep-20	Shut down	11	403		
Max	13.6	24	482		
Min	11.8	4.8	304		
Avg	12.7	14.0	411		



Stack Emission Data (NO_x - mg/Nm³) from Apr'2020 to Sep'2020

Month	Kiln/ Rawmill-1	Kiln/ Rawmill-2	CPP1 & CPP2	CPP3	Permissible Limit
Apr-20	Shut down	Shut down	Shut down	Shut Down	Cement Plant : 800mg/Nm ³ Power Plant : 450mg/Nm ³
May-20	432	Shut down	109		
Jun-20	Shut down	451	161		
Jul-20	Shut down	426	186		
Aug-20	209	408	272		
Sep-20	Shut down	225	245		
Max	432	451	272		
Min	209	225	109		
Avg	321	378	195		



for Chettinad Cement Corporation Private Limited

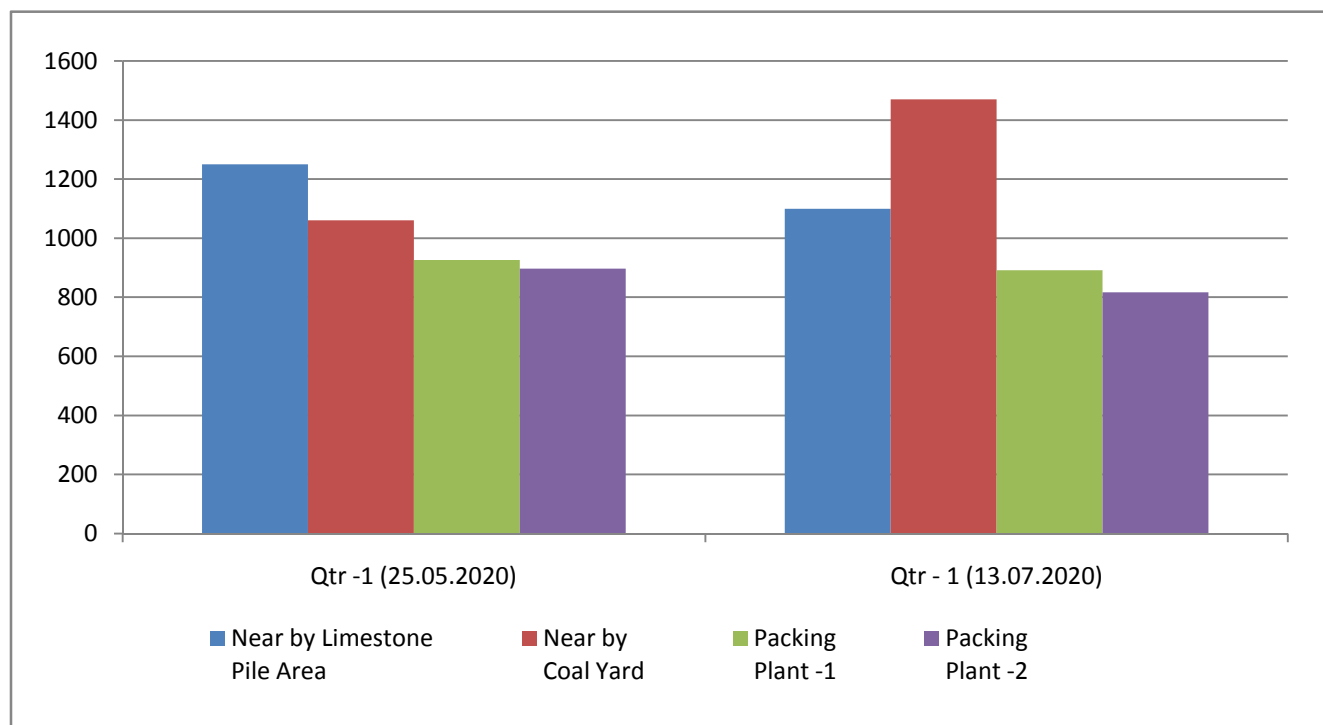
V. Krishnan

V.Krishnan
Joint President[works]

Chettinad Cement Corporation Private Limited, Karikkali Works
(Cement Plant)

Fugitive Emission Data (SPM - $\mu\text{g}/\text{m}^3$) from Apr'2020 to Sep'2020

Date	Near by Limestone Pile Area	Near by Coal Yard	Packing Plant -1	Packing Plant -2	Permissible Limit
Qtr -1 (25.05.2020)	1250	1060	926	897	2000
Qtr - 1 (13.07.2020)	1100	1470	892	817	
Max	1250	1470	926	897	
Min	1100	1060	892	817	
Avg	1175	1265	909	857	



for Chettinad Cement Corporation Private Limited



V.Krishnan
Joint President[works]

Ambient Air Quality Data (PM₁₀, PM_{2.5}, SO₂ & NO_x - µg/Nm³) from Apr'2020 to Sep'2020

Month	Sukkanatham Village (North)				kanagupillaiyar Village (North East)				Near East Security Gate (East)				On top of B2 Quarters (South East)				Permissible Limit			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-20	Shut down																100	60	80	80
May-20	50.6	20.8	11.1	19.5	51.9	21.2	9.1	20.5	54.2	24.1	13.0	22.3	51.2	20.6	9.6	20.7				
Jun-20	51.5	21.8	10.3	22.3	51.4	21.0	9.3	21.0	53.0	23.2	12.3	22.1	50.9	20.5	9.3	20.8				
Jul-20	52.1	19.2	12.4	20.4	57.3	23.0	12.8	22.1	56.0	24.9	12.4	21.9	51.6	21.2	10.4	20.8				
Aug-20	52.3	21.7	8.3	18.9	53.1	22.0	8.1	18.6	55.7	23.4	8.4	19.5	56.1	25.0	8.6	20.1				
Sep-20	49.7	17.6	8.4	18.2	52.8	20.3	8.9	19.0	54.6	22.5	9.4	20.4	55.2	21.4	9.5	22.4				
Max	52.3	21.8	12.4	22.3	57.3	23.0	12.8	22.1	56.0	24.9	13.0	22.3	56.1	25.0	10.4	22.4				
Min	49.7	17.6	8.3	18.2	51.4	20.3	8.1	18.6	53.0	22.5	8.4	19.5	50.9	20.5	8.6	20.1				
Avg	51.2	20.2	10.1	19.9	53.3	21.5	9.6	20.2	54.7	23.6	11.1	21.2	53.0	21.7	9.5	21.0				

Month	On top of C5 Quarters (South)				Near Workers Quarters (South West)				Near Karikkali Village (West)				Near Vasavanaikanpatti Village (North West)				Permissible Limit			
	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	NO ₂
Apr-20	Shut down																100	60	80	80
May-20	53.0	21.7	11.1	21.5	55.6	22.0	11.5	21.3	51.5	19.2	10.1	18.4	49.8	20.5	8.7	19.3				
Jun-20	52.6	21.0	10.8	21.6	54.6	22.5	11.8	21.2	50.2	19.4	10.3	18.9	48.6	19.9	8.9	19.5				
Jul-20	52.1	22.0	10.9	22.9	50.0	19.2	11.4	23.3	52.3	21.0	10.9	21.3	52.8	20.1	11.9	22.1				
Aug-20	57.5	24.2	8.7	20.5	55.0	21.6	8.8	20.9	49.5	20.7	7.8	19.9	50.2	19.4	7.9	20.3				
Sep-20	56.5	22.2	9.6	22.8	57.4	22.7	9.5	22.4	51.3	21.2	8.9	20.4	50.6	19.9	9.0	20.8				
Max	57.5	24.2	11.1	22.9	57.4	22.7	11.8	23.3	52.3	21.2	10.9	21.3	52.8	20.5	11.9	22.1				
Min	52.1	21.0	8.7	20.5	50.0	19.2	8.8	20.9	49.5	19.2	7.8	18.4	48.6	19.4	7.9	19.3				
Avg	54.3	22.2	10.2	21.9	54.5	21.6	10.6	21.8	51.0	20.3	9.6	19.8	50.4	20.0	9.3	20.4				

for Chettinad Cement Corporation Private Limited



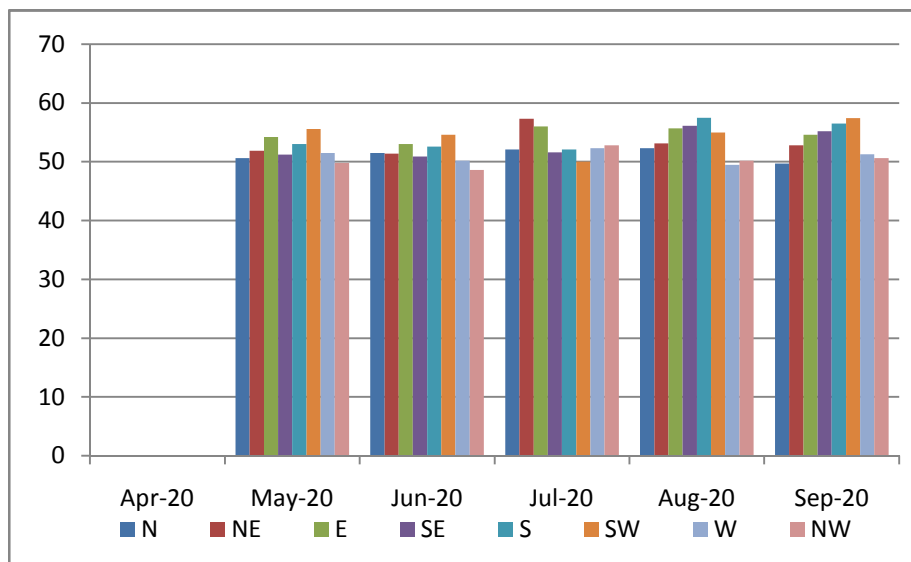
V. Krishnan

Joint President[works]

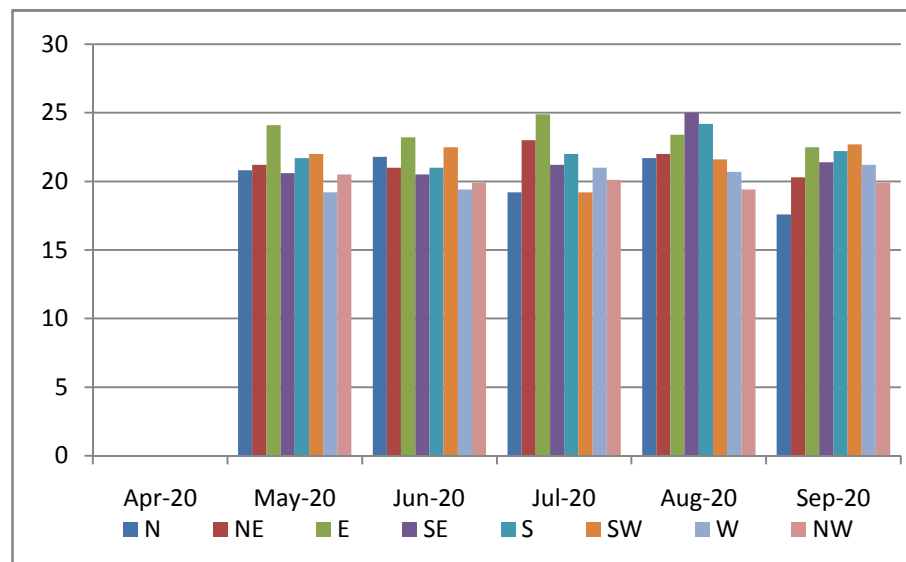
Chettinad Cement Corporation Private Limited, Karikkali Works

(Cement Plant & Captive Power Plant)

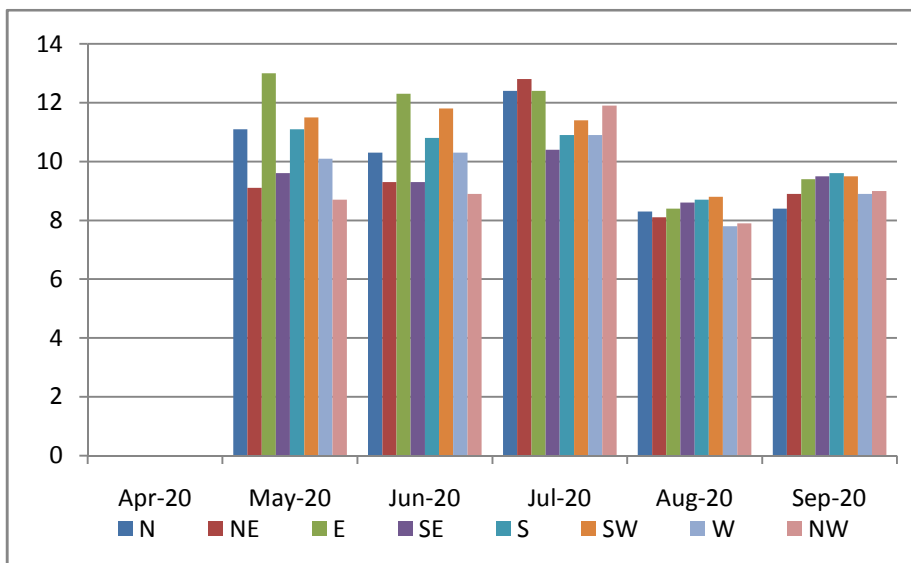
Trend Graph - Ambient Air Quality Data from Apr'2020 to Sep'2020



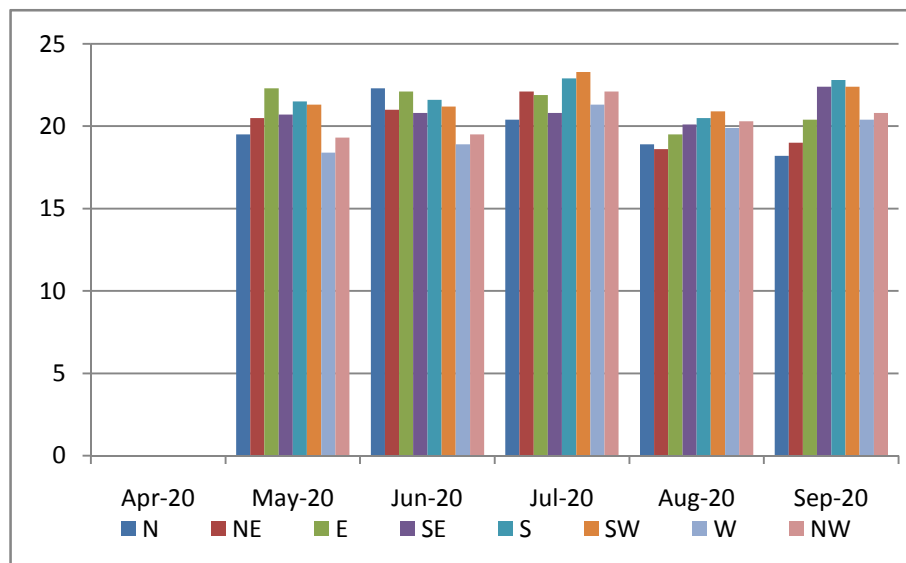
PM 10



PM2.5



SO2



NO2

Chettinad Cement Corporation Private Limited, Karikkali Works

(Cement Plant & Captive Power Plant)

Ambient Noise Level Data [dB(A)] from Apr'2020 to Sep'2020

Month	Sukkanatham Village (North)		kanagupillaiyar Village (North East)		Near East Security Gate (East)		On top of B2 Quarters (South East)		On top of C5 Quarters (South)		Near Workers Quarters (South West)		Near Karikkali Village (West)		Vasavanaikanpatti Village (North West)		Permissible Limit	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Apr-20	Plant Shut down																55	45
May-20	52.2	42.6	52.1	42.2	51.9	42.4	52.6	42.7	52.7	42.5	52.4	42.3	52.1	42.3	52.5	42.3		
Jun-20	52.1	42.3	52.2	42.2	52.2	42.1	52.5	42.8	52.5	42.4	52.4	42.3	52.5	42.4	52.2	42.5		
Jul-20	52.4	40.6	52.3	40.6	52.5	42.1	52.6	42.1	52.4	42.1	52.2	42.4	52.3	42.6	52.1	42.7		
Aug-20	53.8	42.3	54.0	42.5	52.3	42.4	52.5	42.5	52.7	42.4	52.5	42.5	52.4	42.3	52.3	42.3		
Sep-20	52.2	42.0	51.2	42.6	51.7	42.8	51.8	42.3	52.5	42.3	52.7	41.9	52.4	42.2	52.0	42.5		
Max	53.8	42.6	54.0	42.6	52.5	42.8	52.6	42.8	52.7	42.5	52.7	42.5	52.5	42.6	52.5	42.7		
Min	52.1	40.6	51.2	40.6	51.7	42.1	51.8	42.1	52.4	42.1	52.2	41.9	52.1	42.2	52.0	42.3		
Avg	52.5	42.0	52.4	42.0	52.1	42.4	52.4	42.5	52.6	42.3	52.4	42.3	52.3	42.4	52.2	42.5		

Source Noise Level Data [dB(A)] from Apr'2019 to Sep'2020

Month	Kiln-1 Area		Kiln-2 Area		CPP1 & CPP2 Area		CPP3 Boiler Area		Permissible Limit	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Apr-20	Plant Shut down								75	70
May-20	70.5	68.1	69.8	67.2	68.2	66.3	54.3	54.8		
Jun-20	64.7	59.4	65.6	58.8	64.3	58.0	62.6	56.6		
Jul-20	66.5	49.8	66.1	58.4	66.5	57.2	63.6	50.3		
Aug-20	68.5	58.6	69.9	47.8	68.9	56.0	65.7	56.0		
Sep-20	69.4	59.7	68.5	59.8	66.4	59.6	64.0	58.1		
Max	70.5	68.1	69.9	67.2	68.9	66.3	65.7	58.1		
Min	64.7	49.8	65.6	47.8	64.3	56.0	54.3	50.3		
Avg	67.9	59.1	68.0	58.4	66.9	59.4	62.0	55.2		

for Chettinad Cement Corporation Private Limited



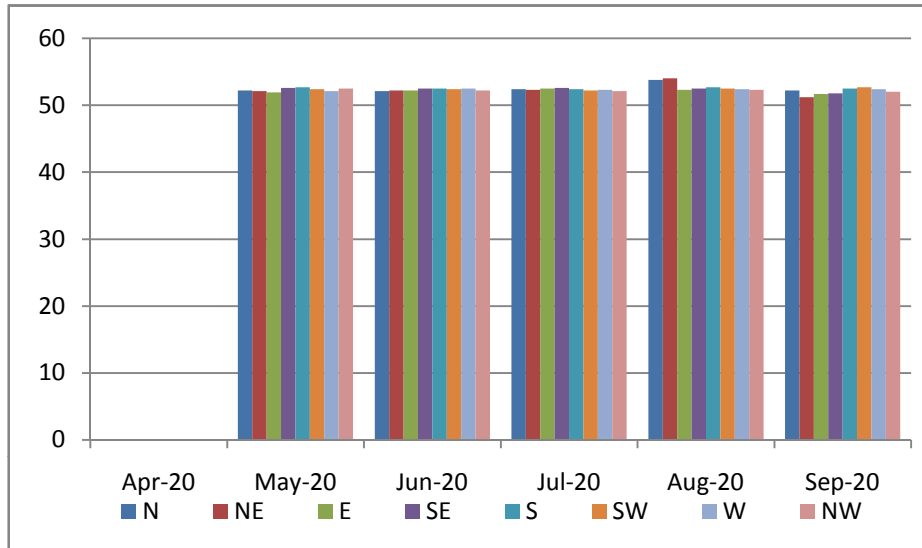
V. Krishnan

Joint President[works]

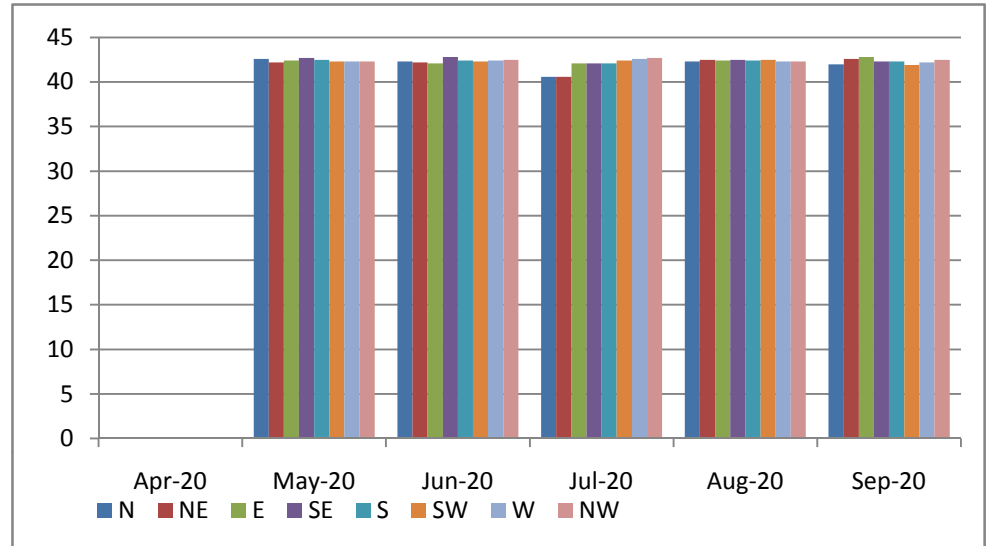
Chettinad Cement Corporation Private Limited, Karikkali Works

(Cement Plant & Captive Power Plant)

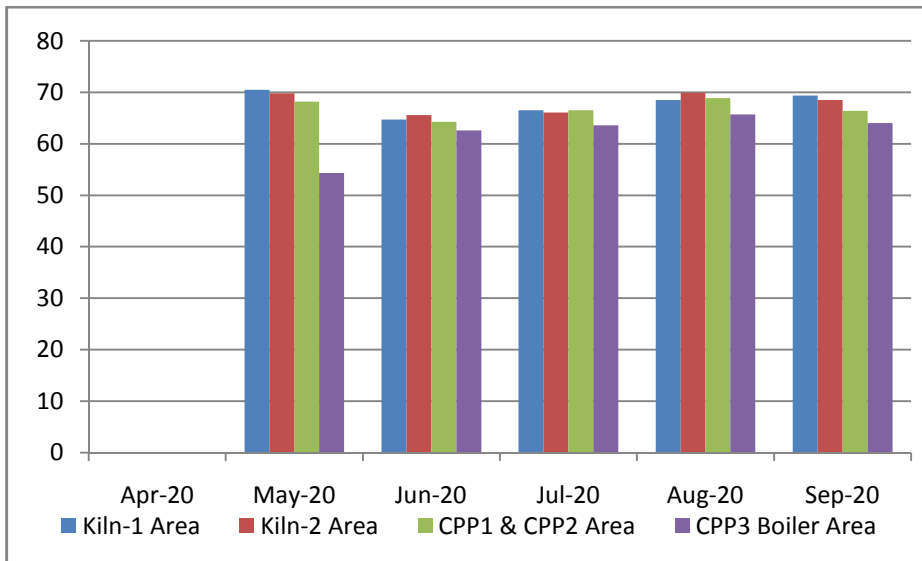
Trend Graph - Noise Level Data from Oct'2019 to Mar'2020



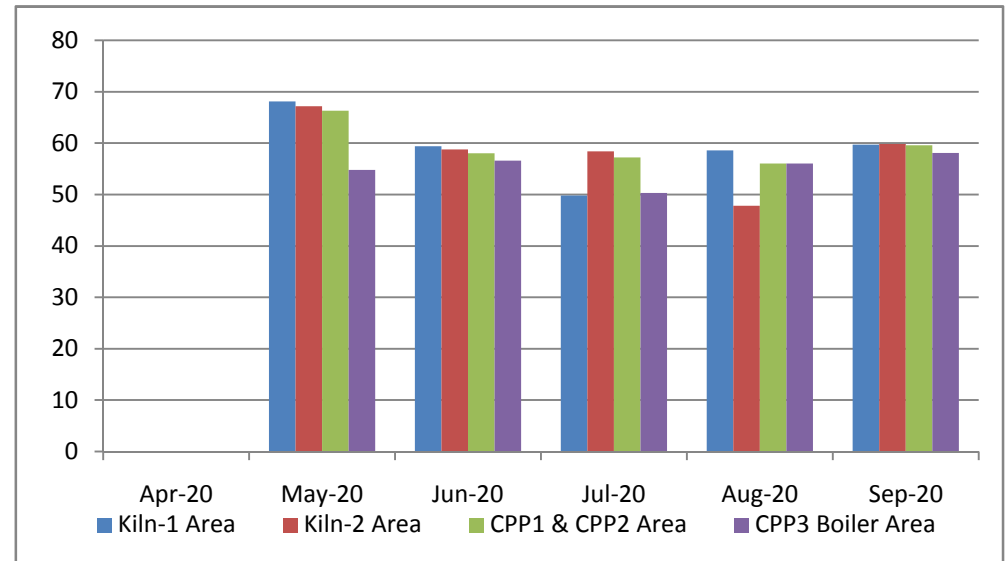
Ambinet Noise - Day Time (6 AM - 10PM)



Ambient Noise - Night Time (10PM - 6AM)



Source Noise - Day Time (6 AM - 10PM)



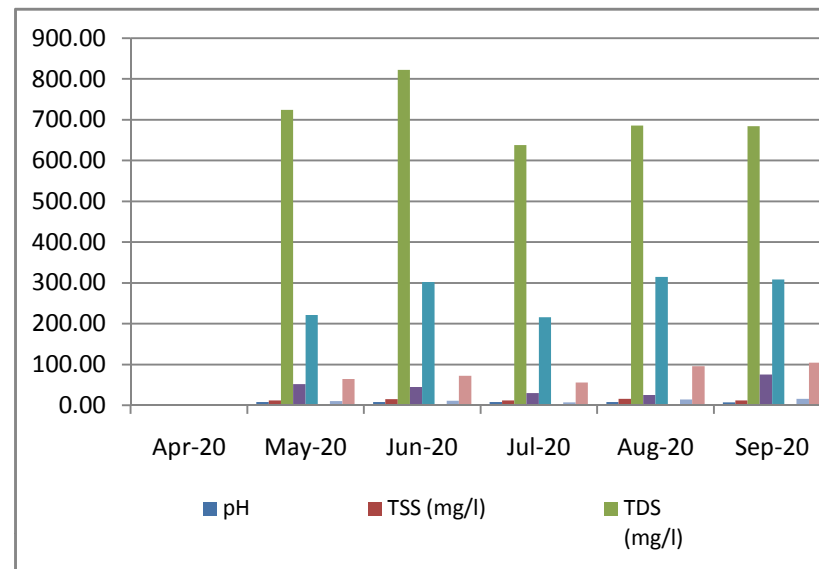
Source Noise - Night Time (10PM - 6AM)

Chettinad Cement Corporation Private Limited, Karikkali Works

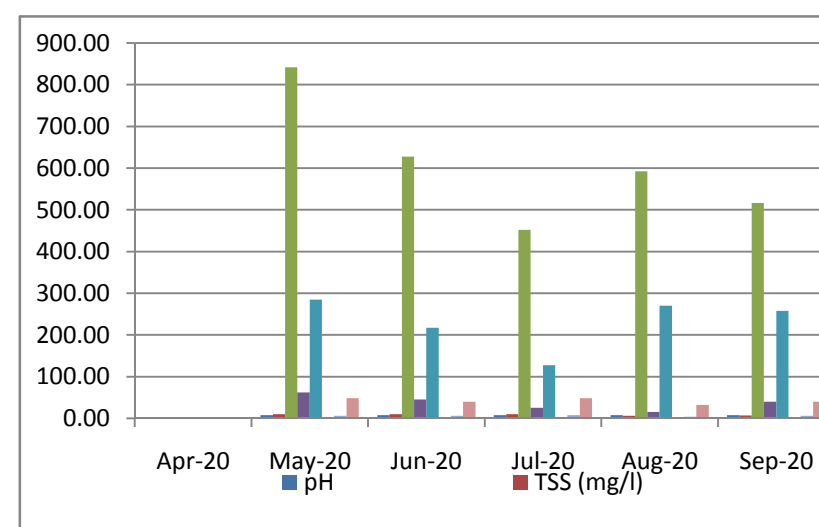
(Cement Plant & Captive Power Plant)

Treated Effluent Water Quality Data from Apr'2020 to Sep'2020

Month	Treated Trade Effluent (CPP)							
	pH	TSS (mg/l)	TDS (mg/l)	Chloride (mg/l)	Sulphate (mg/l)	Oil & grease	BOD (mg/l)	COD (mg/l)
Apr-20								
May-20	7.95	12.0	724	52	221	1.2	10.0	64.0
Jun-20	7.74	15.0	822	45	302	1.2	11.0	72.0
Jul-20	7.80	12.0	638	30	216	1.0	7.0	56.0
Aug-20	7.95	16.0	686	25	315	1.0	14.0	96.0
Sep-20	7.31	12.0	684	75	308	1.2	16.0	104.0
Max	7.95	16.0	822	75	315	1.2	16.0	104.0
Min	7.31	12.0	638	25	216	1.0	7.0	56.0
Avg	0.00	0.0	0	0	0	0.0	0.0	0.0
Permissible Limit	5.5-9.0	2100	100	1000	1000	10	30	250



Month	Treated Sewage (Cement Plant & Power Plant)							
	pH	TSS	TDS	Chloride	Sulphate	Oil &	BOD	COD
Apr-20								
May-20	7.89	10.0	842	62	285	1.0	6.0	48.0
Jun-20	7.70	10.0	628	45	217	1.0	6.0	40.0
Jul-20	7.84	10.0	452	25	127	1.0	8.0	48.0
Aug-20	7.89	6.0	592	15	270	1.0	4.0	32.0
Sep-20	7.37	7.0	516	40	258	1.0	6.0	40.0
Max	7.89	10.0	842	62	285	1.0	8.0	48.0
Min	7.37	6.0	452	15	127	1.0	4.0	32.0
Avg	0.00	0.0	0	0	0	0.0	0.0	0.0
Permissible Limit	5.5-9.0	2100	100	1000	1000	10	30	250



for Chettinad Cement Corporation Private Limited

V. Krishnan

V. Krishnan

Joint President[works]

Chettinad Cement Corporation Private Limited, Karikkali Works

(Cement Plant & Captive Power Plant)

Ground Water Quality Data from Apr'2020 to Sep'2020

Sr. No	Parameter	UoM	Karikkali Village		Dholipatti Village		Kottanatham Village		Palayam Village		Acceptable Limit
			May-20	Sep-20	May-20	Sep-20	May-20	Sep-20	May-20	Sep-20	
I. Physical Examination											
1	Appearance	-	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
2	Colour, Hazen Units	-	2	2	2	2	2	2	2	2	15
3	Odour	-	Agreeable								Agreeable
4	pH value	-	7.76	7.64	7.91	7.82	7.40	7.36	7.21	7.29	6.5-8.5
5	Turbidity	NTU	0.10	0.10	0.40	0.30	0.10	0.10	0.10	0.10	5
6	Total dissolved Solids	mg/l	642	666	672	692	722	715	762	725	2000
7	Total suspended Solids	mg/l	BDL (DL : 2.0)								-
II. Chemical Examination											
8	ph.Alkanity as CaCO ₃	mg/l	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	-
9	Total Alkanity as CaCO ₃	mg/l	91	96	89	93	106	105	124	131	600
10	Total Hardness as CaCO ₃	mg/l	340	351	392	406	405	401	430	416	600
11	Calcium Hardness as CaCO3	mg/l	220	228	256	262	275	272	280	267	-
12	Magnesium Hardess as CaCO3	mg/l	120	123	136	144	130	129	150	149	-
13	Calcium as Ca	mg/l	88	91	102	105	110	109	112	107	200
14	Magnesium as Mg	mg/l	29	30	33	35	31	31	36	36	100
15	Sodium as Na	mg/l	110	114	92	95	84	83	106	98	-
16	Iron as Fe	mg/l	0.08	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.3
17	Silica as SiO2	mg/l	20	23	27	28	24	24	24	21	-
18	Manganese as Mn	mg/l	BLQ(LOQ:0.001)								0.3
19	Free Ammonia as NH ₃	mg/l	BDL(DL:0.03)								0.5
20	Nitrite as NO2	mg/l	BDL(DL:0.01)								-
21	Nitrate as NO3	mg/l	18	21	29	30	27	27	28	26	45
22	Chloride as Cl	mg/l	139	145	157	162	171	170	176	170	1000
23	Fluride as F	mg/l	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.5
24	Boron as B	mg/l	BLQ(LOQ:0.001)								1
25	Copper as Cu	mg/l	BLQ(LOQ:0.001)								1.5
26	Free residual chlorine	mg/l	BDL(DL:0.1)								1
27	Mineral Oil	mg/l	BLQ(LOQ:0.5)								0.5
28	Sulphate as SO4	mg/l	126	134	152	157	160	158	168	159	400
29	Selenium as Se	mg/l	BLQ(LOQ:0.001)								0.05
30	Anionic detergents as MBAS	mg/l	BDL(DL:0.05)								-
31	Phenolic Compound as C ₆ H ₅ OH	mg/l	BDL(DL:0.001)								0.001
32	Cadmium as Cd	mg/l	BLQ(LOQ:0.001)								0.003
33	Cyanide as CN	mg/l	BDL(DL:0.01)								0.05
34	Lead as Pb	mg/l	BLQ(LOQ:0.001)								0.01
35	Mercury as Hg	mg/l	BLQ(LOQ:0.0005)								0.001
36	Total Arsenic as As	mg/l	BLQ(LOQ:0.001)								0.05
37	Total Chromium as Cr	mg/l	BLQ(LOQ:0.001)								0.05
III. Bacteriological Examination											
38	Total Coliform	-	Absent / 100ml								Absent /100ml
BDL : Below Detectable Level, LOQ : Limit of Quantification, BLQ :Below Quanitication Limit											

BDL : Below Detectable Level, LOQ : Limit of Quantification, BLQ :Below Quantification Limit

for Chettinad Cement Corporation Private Limited



 V.Krishnan
Joint President[works]

CHETTINAD CEMENT CORPORATION PRIVATE LTD, KARIKKALI WORKS
(Cement Plant & Captive Power Plant)

GREEN BELT DEVELOPMENT PHOTOS

Green Belt Development area : 24.10 ha
So far, total no. of trees planted : 48792 nos. (as on 30.09.2020)

1. Plant Premises:

Latitude : 10°71'27.47" N
Longitude : 78°09'61.31" E



GREEN BELT DEVELOPMENT PHOTOS (Cont..)



2 PLANT COLONY AREAS:

Latitude : 10°70'85.04" N
Longitude : 78°09'44.45" E



GREEN BELT DEVELOPMENT PHOTOS (Cont..)



3. PLANT – OUT SIDE PREMISES

Latitude : 10°70'78.92" N

Longitude : 78°11'40.81" E



GREEN BELT DEVELOPMENT PHOTOS (Cont..)



for Chettinad Cement Corporation Private Limited



V. Krishnan
Senior Vice President [works]



THANK YOU!