

Chettinad Cement/ Tamilnadu/ Ariyalur/
Cement Plant & CPP/EC Compliance/Oct '22 – Mar '23/ 2022-23- 73

26th May, 2023

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 '22 – Mar '23) – Expansion of Cement Plant Capacity (5.0 to 5.5 million tons per annum) and Captive Power Plant (30 to 45 mw) - Chettinad Cement Corporation Private Limited, Ariyalur Works at Kilapaluvur Village, Ariyalur Taluk & District , Tamilnadu

Ref : Environmental Clearance issued by Ministry of Environment and Forests vide Letter No. F.No. J-11011/506/2006 -IA.II (I) dated 17th Jul 2009

We submit herewith the following reports pertaining to our Integrated Cement Plant with Captive Power Plant located at Kilapaluvur Village, Ariyalur Taluk & District, Tamil Nadu for the period from Oct '22 – Mar '23. The Environmental Clearance granted by MoEF is for the expansion of Cement Plant Capacity from 5.0 to 5.5 million tons per annum and Captive Power Plant Capacity from 30 to 45 MW.

1. Environmental Clearance Compliance Report (Oct '22 – Mar '23)-Annexure 1
2. Environmental Monitoring Report comprising of
 - a. Ambient Air Quality Monitoring - Consolidated Report - Annexure 2

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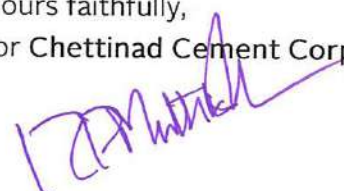
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- b. Noise Level Monitoring - Consolidated Report - Annexure 3
 - c. Ground Water Quality Monitoring Report- Annexure 4
 - d. Stack Emission Monitoring - Consolidated Report - Annexure 5
 - e. Fugitive Emission Monitoring Report- Annexure 6
 - f. Treated Effluent Quality Monitoring - Consolidated Report - Annexure 7
- 3. Waste Oil Manifest – Annexure-8
 - 4. AFR Feeding system - Annexure-9
 - 5. Green Belt Development – Annexure-10
 - 6. CREP for Cement – Annexure-11
 - 7. AAQ & Stack TNPCB report – Annexure-12
 - 8. Environment Management Cell – Annexure-13
 - 9. Environmental Expenses statement – Annexure-14
 - 10. Digital Display Board – Annexure-15
 - 11. Ban Plastic Awareness– Annexure-16

Yours faithfully,
for Chettinad Cement Corporation Private Limited



R. P. Muthiah
Vice President (Works)

Copy to:

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

Chettinad Cement Corporation Private Limited (Ariyalur Works)
Keelapaluvur Village, Ariyalur Taluk & District, Tamilnadu

Environmental Clearance (EC) Compliance Report Oct '22 – Mar '23

[(Environmental Clearance (EC) issued by MoEFCC vide letter No. J-11011 /506/2006-IAI (I)
dated 17th Jul 2009 for the expansion of Cement Plant Capacity
(5.0 to 5.5 million tons per annum) and Captive Power Plant (30 to 45 mw)]

A. Specific Conditions

S No	Specific Condition	Compliance Status				
i.	Online continuous stack monitoring facilities for all the stacks and adequate air pollution control systems shall be provided to keep emission levels below 50 mg/Nm³. Electrostatic Precipitator (ESP) to Cooler and Captive Power Plant, Bag House /Bag Filters already provided to existing Raw Mill/Kiln, Coal Mill, VRM & Cement Mill shall be properly maintained to control air emissions <50mg/Nm³ and data on ambient air quality , stack emissions and fugitive emissions shall be regularly submitted to the Ministry's Regional Office at Bangalore, Tamilnadu Pollution Control Board and Central Pollution Control Boards (CPCB) once in six months	<p>Complied.</p> <p>Online continuous stack monitoring system is available for Raw Mill/Kiln Stack, Cooler ESP Stack, Coal Mill Stack, Cement Mill Stack & Captive Power Plant (CPP) Boiler. The air pollution control devices viz., ESP, Bag House, and Water Sprinkling are in place to control the dust emission within the norms prescribed.</p> <p>Air Pollution Control Measures provided include ESP to Cooler & CPP Boiler, Bag House for Raw Mill/Kiln, Coal Mill & Cement Mill and Bag Filters to Ash Silo, Clinker Silo & all transfer and all APC Measures are being be properly maintained to ensure that the emission levels are below the prescribed norms</p> <p>Monitored data on Ambient Air Quality, Stack Emissions and Fugitive Emissions are being submitted to the MoEFCC Regional Office at Chennai, Central Pollution Control Board (CPCB) & Tamilnadu Pollution Control Board, once in six months. Last report submitted on 26th Nov 2022.</p>				
ii.	The company shall install adequate dust collection and extraction system to control fugitive emission system at various transfer points, raw mill handling (unloading, conveying, transporting, stacking), vehicular movement, bagging and packing areas etc. Dust Extraction and Dust Suppression system	<p>Complied.</p> <p>Dust collection/extraction systems available to control fugitive emission are detailed below.</p> <table><tr><th>Activity</th><th>Control Measures Provided</th></tr><tr><td>Unloading of Raw Materials</td><td>Water Sprinkling</td></tr></table>	Activity	Control Measures Provided	Unloading of Raw Materials	Water Sprinkling
Activity	Control Measures Provided					
Unloading of Raw Materials	Water Sprinkling					



S No	Specific Condition	Compliance Status	
	like Bag Filters and Water Spray System shall be installed in the coal handling system, transfer points etc. Asphalting /concreting of roads and water spray all around the stock yard and loading/unloading areas shall be carried out to Control fugitive emissions. Covered sheds for storage of raw materials and fully covered conveyers for transportation of materials shall be provided. Raw Meal, Clinker and Fly Ash shall be stored in silos.	Stacking	Closed Storage with water Sprinkling System for Coal, Gypsum
		Storing	Silos with Bag Filters for Raw Meal, Clinker & Fly Ash, Cement
		Conveying Fly Ash from ESP Hopper to Fly Ash Silo	Pneumatic conveying through closed pipeline
		Conveying of Materials (Raw Meal, Clinker, Coal, etc.,)	Closed Conveyors and transfer points with Bag Filters
		Conveying of Fly Ash from Silo to Cement Mill & Cement to Silo	Using Air Slide and Bucket Elevator
		Transporting, Vehicular Movement	<ul style="list-style-type: none"> • Paved Roads • Allowing only vehicles with Pollution Under Control Certificate inside the premises • Tarpaulin Cover for the materials • No Overloading • Speed Control
		Activity	Control Measures Provided
		Bagging and Packing	Electronic Packers with Bag Filters
iii.	Secondary fugitive emissions should be controlled and regularly monitored as per Guidelines issued by the CPCB. Secondary fugitive emissions from all the sources shall	Complied. Secondary fugitive Emissions are being controlled by providing following appropriate control measures and are also regularly monitored as per	



S No	Specific Condition	Compliance Status
	be controlled within latest permissible limits issued by Ministry and regularly monitored. Guidelines /Code of practice issued by the CPCB shall be followed.	<p>CPCB Guidelines for controlling the same, within stipulated norms.</p> <ul style="list-style-type: none"> • Paved/concrete roads for truck movement • Use of closed trucks/bulkers/covering materials with tarpaulin before commencing transport • Speed control • Avoiding overloading • Providing closed storage for Gypsum, Coal etc., • Closed Silos for Raw Meal Clinker, Fly Ash & Cement • Water Sprinkling arrangement • Bag Filters at Transfer Points • Maintaining the equipment in good condition. • Progressive Greenbelt development in the Plant premises <p>Fugitive emissions are being monitored at four locations every quarter.</p>
iv.	Efforts shall be made to reduce impact of transport of the raw materials and end products on the surrounding environment including agriculture land. All the raw materials including Fly Ash shall be transported in the closed containers only and should not be overloaded. Vehicular emissions shall be regularly monitored.	<p>Complied.</p> <p>The roads inside the plant have been concreted/paved with tar to reduce the fugitive dust emission due to transport of raw materials.</p> <p>By preventing over loading and ensuring speed control, the spillage of materials is avoided.</p> <p>Transportation of raw materials in closed trucks, covering the materials with tarpaulin before commencing transportation and using bulkers for transportation of Fly Ash are ensured to prevent fugitive emission.</p>
v.	Total ground water requirement shall not exceed 1990 m ³ /day. All the treated waste water treated in a neutralization plant and recycled and reused in the Cement Plant for cooling purpose /or for dust suppression greenbelt development and plant related activities etc. No process waste water shall be discharged outside the factory premises and zero effluent discharge shall be adopted.	<p>Complied.</p> <p>Total ground water requirement will not exceed 1225.6 m³/day.</p> <p>The industrial waste water treated in a neutralization plant is being recycled and reused in the Plant for mill spray cooling purpose.</p> <p>Domestic waste water treated in Sewage Treatment Plant (STP) is being used for dust</p>



S No	Specific Condition	Compliance Status
	Domestic effluent treated in Sewage Treatment Plant (STP) shall be used for greenbelt development within the Plant and Colony area.	suppression and greenbelt development within the premises. No process waste water is being discharged outside the factory premises as "Zero Liquid effluent Discharge" is being followed.
vi.	Prior permission for the excess water required for the expansion project i.e., 90 KLD shall be obtained from the State Ground Water Board and all the recommendations of the state government water board shall be followed. A copy shall be submitted to the Regional Office of this Ministry at Bangalore within 3 months of the issue of this letter. Rejects from the Reverse Osmosis Plant shall be properly utilized. Waste oils shall be sold to authorized recyclers/re processors only.	Complied. The clearance for additional ground water drawl of 90 KLD has been obtained from Chief Engineer, State Ground water and Surface Water Resources Data Centre, Chennai and the conditions stipulated in the above said clearance are being complied with. The copy of the above mentioned clearance had already been submitted to the MoEFCC Regional Office, Bangalore. The Renewal of "No Objection Certificate" has also been obtained for the drawl of ground water from the Chief Engineer, State Groundwater and Surface Water Resources Data Centre, Chennai for a total ground water drawl of 1225.6 KLD. The rejects from the Reverse Osmosis Plant after treatment is being used for mill spray cooling purpose. Waste oil generated being sold to authorized recyclers/re-processors only and enclosed as Annexure-8
vii.	All the Cement dust collected from pollution control devices like ESPs, Bag House, Bag Filters etc. shall be recycled and reused in the process and used for Cement manufacturing. Slag shall be used for manufacture of Portland Slag Cement (PSC). Organic wastes shall be used to vermi composting. Inorganic waste shall be disposed off in environment-friendly manner. Sludge from Sewage Treatment Plant (STP) shall be used as manure for greenbelt development.	Complied. Dust collected in all bag filters is being reused in the respective process. The waste materials like Fly Ash and Slag are being used in the Cement manufacturing process to produce Portland Pozzolana Cement (PPC) and Portland Slag Cement (PSC) respectively. Organic wastes are being composted & STP Sludge is being used as manure for greenbelt Development.
viii.	All the Fly Ash shall be utilized as per fly ash notification 1999 subsequently amended in	Complied.



S No	Specific Condition	Compliance Status
	2003 .Efforts shall be made to use fly ash maximum in making Portland Pozzolana Cement (PPC). Fly ash shall be stored in silos and other materials in closed sheds.	<p>Fly Ash generated in our Captive Power Plant is fully used for manufacturing Portland Pozzolana Cement (PPC). Efforts are being made to use maximum percentage of Fly Ash in Cement manufacturing conforming to BIS standard specification.</p> <p>The Fly Ash is stored in Silos and other materials like gypsum, coal etc., and are stored in closed sheds.</p> <p>Fly Ash annual returns are being submitted to MOEFCC as per Ministry Notification No. 2084 (E), dated 03.11.2009. The latest Annual Implementation report for the year 01.04.2022 to 31.03.2023 is submitted on 28.04.2023.</p>
ix.	An effort shall be made to use of high calorific hazardous waste in the Cement Kiln and necessary provision shall be made accordingly.	<p>Complied.</p> <p>Necessary provisions like high efficiency multi-channel burner, feeding system etc., have been installed to facilitate co-processing of hazardous wastes in the Kiln.</p> <p>Hazardous Waste Authorisation has been obtained from TNPCB [Authorisation No.: 18HFC9598326 and dated: 28/11/2018] for Co-processing & Co-Incineration of hazardous waste. AFR feeding system was commissioned during 25.11.2022 and enclosed as Annexure-9</p>
x.	As proposed greenbelt shall be developed in 29.07 ha (33%) out of total 87.21 ha as per the CPCB guidelines to mitigate the effects of air emissions in consultation with local DFO. As proposed Rs 10 Lakh shall be earmarked towards greenbelt development and maintenance.	<p>Complied.</p> <p>Details of Greenbelt Development</p> <p>During Oct-Mar 23 period 1000 nos. sapling planted & Totally, 61696 have been completed so far.</p> <p>Details of Greenbelt Development</p> <p>Total Plant & Colony Area : 87.21 ha</p> <p>Proposed Greenbelt Area : 29.07 ha</p> <p>Actual Greenbelt Area : 29.38 ha</p> <p>Saplings planted during 2022-23: 1415 nos.</p> <p>Balance area to be developed with Greenbelt: Covered additionally 0.31 Ha</p> <p>Plan for plantation of saplings : 200 nos.</p> <p>Completion of plantation : Mar- 2024</p> <p>Greenbelt development is being carried out progressively. Details are enclosed in Annexure-10</p>



S No	Specific Condition	Compliance Status
xi.	The project authority shall adhere to the provisions stipulated in the Fly Ash notification of September,1999 and as amended in August 2003 in regard to Fly Ash Utilization.	Complied. Fly Ash generated from the Captive Power Plant is being fully used for manufacturing Portland Pozzolana Cement (PPC). Fly Ash annual returns are being submitted to MOEFCC as per Ministry Notification No. 2084[E], dated 03.11.2009. The latest Annual Implementation report for the years 01.04.2022 to 31.03.2023 was submitted on 28.04.2023.
xii.	All recommendations made in the corporate responsibility for environment protection (CREP) for Cement Plant shall be implemented	Complied. CREP guidelines pertaining to Cement Sector are being followed and the details are enclosed as Annexure-11.

B. General Conditions

S No	General Condition	Compliance Status
i.	The project authority shall adhere to the stipulations made by Tamilnadu Pollution Control Board (TNPCB) and State Government.	Complied. Stipulations of Tamilnadu Pollution Control Board / State Government are being complied with.
ii.	No further expansion or modification of the plant shall be carried out without prior approval of this Ministry.	Condition Noted.
iii.	The gaseous and particulate matter emissions from various units shall conform to the standards prescribed by the T.N. Pollution Control Board. At no time, the particulate emissions from the Cement Plant shall exceed TNPCB limit. Interlocking facility shall be provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective unit(s) is shut down automatically.	Complied. The air pollution control devices like ESP, Bag House/ Water Sprinkling and Low NOx Burner etc., are in place to control the gaseous and particulate matter emissions within norms. Monitoring of gaseous and particulate emissions from various units is being carried out through NABL recognized third party laboratory viz. M/s. SMS labs every month. The values as per the reports are within the limits. Interlocking facility has been provided in the pollution control equipment so that in the event of the pollution control equipment not working, the respective production unit gets shut down automatically. TNPCB report of Analysis report no. 102/AAQS/2022-2023 DATED.17.10.2022 IS



S No	General Condition	Compliance Status
		enclosed as Annexure-12 for Ambient air quality, stack emission in the vicinity of the cement plant and CPP. As per the report all the values are within limit.
iv.	One ambient air quality monitoring station shall be installed in downwind direction. Ambient Air Quality including Ambient Noise Levels shall not exceed the standards stipulated under EPA or by the State authorities. Monitoring of Ambient Air Quality and Stack Emissions shall be carried out regularly in consultation with TNPCB and report submitted to the TNPCB quarterly and to the Ministry's Regional Office at Bangalore half-yearly.	<p>Complied.</p> <p>Continuous Online air quality monitoring system has been installed at Two locations and it linked to TNPCB servers and authorized CPCB servers on real time basis.</p> <p>Monitoring of ambient air quality is also carried out through NABL recognized third party laboratory viz. M/s. SMS labs every month. The values as per the reports are within the limits.</p> <p>TNPCB report of Analysis report no. 102/AAQS/2022-2023 DATED.17.10.2022 IS enclosed as Annexure-12 for Ambient air quality, stack emission in the vicinity of the cement plant and CPP. As per the report all the values are within limit.</p> <p>Monitoring of Ambient Air Quality and Stack Emissions are being carried out regularly and the monitored data is being submitted to the TNPCB monthly and to the MoEFCC Regional Office at Chennai half-yearly & last report submitted on 26.11.2022.</p>
v.	The company must harvest the rainwater from the rooftops and storm water drains to recharge the ground water and use the same water for the various activities of the project to conserve fresh water.	<p>Complied.</p> <p>The rainwater from the rooftops and run off are directed through storm water drains to rain harvesting pond to recharge the ground water and ensure availability of water for the various activities of the Plant to conserve fresh water.</p>
vi.	The company shall undertake eco-development measures including community welfare measures in the project area.	<p>Complied.</p> <p>The eco-development activities like rain water harvesting, planting of saplings have been carried out. The various community welfare measures which include Health, Education and Infrastructure initiatives are being carried out.</p>



S No	General Condition	Compliance Status
vii.	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 environmental (Protection) Act, 1986 rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)	Complied. For all sources of noise generation, the required control measures viz., acoustic hoods, silencers, enclosures have been provided. The Equipment and Machinery are being maintained well to keep within 85 dBA. Ambient Noise Level is being monitored by a recognized laboratory viz. M/s SMS Labs, at 8 locations on monthly basis. These Ambient Noise Levels conform to the standards prescribed 75 dBA (day time) and 70 dBA (night time).
viii.	Proper housekeeping and adequate occupational health programmes shall be taken up.	Complied. Regular housekeeping is being carried out in the entire plant area and occupational health programme like pre-employment and periodical health check up for the employees, health awareness programme, ensuring use of personal protective equipment by the employees, maintaining clean and safe work environment etc., are being carried out for employees.
ix.	A separate environmental management cell to carry out various management and monitoring functions shall be set up under the control of Senior Executive.	Complied. A separate environmental management cell to carry out various activities related to Environment has been set up under the control of Senior Executive, who reports to the Unit Head. The regular environmental monitoring is being carried by External Agency having MOEFCC Approval & NABL Accreditations. Details enclosed As Annexure-13
x.	As proposed, Rs. 2.00 Crore and 0.50 Crore shall be earmarked towards capital cost and recurring cost/annum for environmental pollution control measures and judiciously used to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. The funds so provided shall not be diverted for any other purpose.	Complied. Fund allocated for capital cost and recurring cost of environmental pollution control measures has been used to implement the conditions stipulated by the Ministry of Environment, Forest & Climate Change as well as the State Government only and has not been diverted for any other purpose. Details of previous year expenses are enclosed as Annexure-14



S No	General Condition	Compliance Status
xi.	The regional office of this ministry at Bangalore/CPCB/TNPCB shall monitor the stipulated conditions. A six monthly compliance report and the monitored data along with statistical interpretation shall be submitted to them regularly.	Complied. Six monthly EC compliance report and the monitored data are being submitted to Regional Office of MoEFCC at Chennai, CPCB & TNPCB regularly. Last submitted date was 26 th Nov 2022.
xii.	The 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.	Complied. As the internally accrued fund has been invested for the proposed expansion, this condition is not applicable. The date of commencement of land development work communicated to MoEFCC, Regional Office of MoEFCC, Bangaluru.
xiii.	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 T.N. Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in . This should 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 shall be forwarded to the Regional office at Bangalore.	Complied. Advertisements in two local newspapers Indian Express (in English) & Dinamani (in Tamil) published on 22.07.2009 informing the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the TNPCB and may also be seen at website of Ministry of Environment & Forests at http://envfor.nic.in . The copies of the same have also been submitted on 24.07.2009 to MoEFCC Regional Office at Bangalore.
xiv.	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.	Complied. Environmental Clearance copy sent to Keelapaluvur Panchayat, Keelapaluvur village Ariyalur Talk & District on 27.07.2009. Also, a copy of EC granted has also been uploaded in our website. https://www.chettinad.com/cements_plants.php?site=Ariyalur



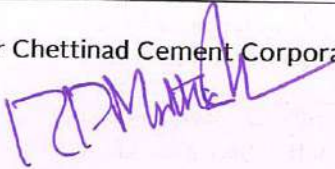
S No	General Condition	Compliance Status
xv.	The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of the MoEFCC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM, 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>Complied.</p> <p>The status of compliance of the stipulated environment clearance conditions, including results of monitored data are being uploaded in our website. https://www.chettinad.com/cements_plants.php?site=Ariyalur</p> <p>The same is also being sent to Ministry's Regional Office Chennai.</p> <p>The pollutant levels are being monitored and displayed at main gate of the company in the public domain. Photos are enclosed as Annexure-15</p>
xvi.	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 MoEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore / CPCB / TNPCB shall monitor the stipulated conditions.	<p>Complied.</p> <p>The six monthly EC compliance report and the monitored data are being submitted regularly to the Regional Office of MoEFCC, Chennai and the copies of the same have been sent by email to the Regional Office of MoEFCC, Chennai, the Zonal Office of CPCB, Bengaluru and TNPCB. Last submitted report was on 26th Nov 2022.</p>
xvii.	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 MoEFCC by e-mail.	<p>Complied.</p> <p>Environment statement for the year 2021-2022 in Form V submitted on 26.09.2022 to TNPCB and the Regional Office of the MoEFCC, Chennai and also uploaded in the company's website https://www.chettinad.com/cements_plants.php?site=Ariyalur</p> <p>The soft copy has also been sent to the Regional Office of the MoEFCC, Chennai by email.</p>



Other Conditions

S No	Other Condition	Compliance Status
8.0	The ministry or any other competent authority may stipulate any further condition(s) on receiving reports from the project authorities. The above conditions shall be monitored by the Regional Office of this Ministry located at Bangalore.	Guidelines noted. If additional conditions are stipulated, the same will also be implemented.
9.0	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions, is not satisfactory.	Guidelines noted.
10.0	Any other conditions or alteration in the above said conditions shall have to be implemented by the project authorities in a time bound manner.	Guidelines noted. If additional conditions or alterations in the above said conditions are stipulated, the same will be implemented.
11.0	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, and the Public Liability Insurance Act, 1991 along with their amendments and rules.	Guidelines noted.

for Chettinad Cement Corporation Private Limited


R.P. Muthiah
Vice President (Works)



Chettinad Cement Corporation Private Limited (Ariyalur Works)													
Kilapaluvur Village , Ariyalur District, Tamilnadu													
Ambiant Air Quality Monitoring- Consolidated Report													
Period: OCT-2022 - MAR-2023													
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 Auto Garage	59.4	56.7	58.4	28.9	26.9	27.7	10.9	9.0	10.1	24.6	18.9	21.3
2	Near Main Gate SO Building	63.2	60.1	61.3	28.6	25.7	27.0	10.5	9.1	10.0	22.2	19.6	21.0
3	Near Coal Yard Area	68.9	63.0	65.5	33.2	27.8	30.8	11.9	9.6	11.0	24.2	21.8	22.8
4	Near Packing House	66.0	57.8	63.6	30.3	24.9	28.2	11.8	8.3	10.5	26.2	18.3	21.3
5	Keelapalur Village South	58.7	53.3	55.4	27.4	25.5	26.4	9.6	8.0	8.9	26.2	18.3	21.3
6	Maravanur Village West	56.6	53.6	55.1	28.3	23.8	26.3	10.3	7.9	9.1	22.3	18.1	20.7
7	Keelapalur Village East	59.2	54.7	57.6	28.2	24.9	26.3	10.3	8.0	9.5	23.9	20.4	21.9
8	Thideerkuppam Village North	59.9	54.1	57.3	28.5	24.3	27.0	10.8	7.6	9.3	21.7	18.0	19.7
Norm		100 µg/m ³			60 µg/m ³			80 µg/m ³			80 µg/m ³		

for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)



Annexure 3

Chettinad Cement Corporation Private Limited (Ariyalur Works)								
Kilapaluvur Village , Ariyalur District, Tamilnadu								
Noise Level Monitoring- Consolidated Report								
Period: OCT-2022 - MAR-2023								
S.No	Location	UoM	Day			Night		
			L _{min}	L _{eq}	L _{max}	L _{min}	L _{eq}	L _{max}
Within the Premises								
1	CPP Boundry	dB(A)	63.80	65.37	67.80	60.70	62.57	64.50
2	Packing Plant Area	dB(A)	62.90	64.25	65.20	59.80	61.53	63.20
3	Coal Storage Shed	dB(A)	68.90	70.22	71.50	60.70	63.48	65.80
4	Limestone Circular Pile	dB(A)	65.40	67.00	68.70	57.60	59.73	61.80
Limit (L _{eq})		dB(A)	75			70		
Outside the Premises								
S.No	Location	UoM	Day			Night		
			L _{min}	L _{max}	L _{eq}	L _{min}	L _{max}	L _{eq}
1	Keelapalur Village - South	dB(A)	51.5	53.2	52.4	41.3	43.2	42.3
2	Maravanur Village - West	dB(A)	51.0	52.5	51.8	41.5	43.5	42.5
3	Keelapalur Village - East	dB(A)	51.8	53.5	52.6	41.8	43.5	42.5
4	Thideerkuppam Village - North	dB(A)	51.7	53.4	52.5	41.5	43.8	42.6
Limit (L _{eq})		dB(A)	55			45		

for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)



Chettinad Cement Corporation Private Limited (Ariyalur Works)								
Kilapaluvur Village, Ariyalur District, Tamilnadu								
Ground Water Quality Monitoring Report								
Period: OCT-2022 - MAR-2023								
S. No	Parameter	UoM	GW1 Nov-22	GW2 Nov-22	GW3 Nov-22	GW4 Nov-22	GW5 Nov-22	Limit
1	Colour	Hazen	2	2	2	2	2	
2	Odour		Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	
3	pH	-	8.1	7.5	8.49	8.09	7.15	5.5 - 9.0
4	Total Dissolved Solids	mg/l	602	1054	534	453	440	2100
5	Turbidity	NTU	0.5	0.7	0.6	0.5	0.5	-
6	Chloride as Cl	mg/l	197	276	183	150	149	1000
7	Fluride as F	mg/l	0.3	0.4	0.4	0.2	0.2	2
8	Free Residual Chlorine	mg/l	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	
9	Iron as Fe	mg/l	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	
10	Sulphate as SO ₄	mg/l	64	102	61	57	55	1000
11	Total Alkalinity as CaCO ₃	mg/l	228	310	204	182	160	
12	Total Hardness as CaCO ₃	mg/l	209	267	188	159	147	
13	Cyanide as CN	mg/l	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	0.2
14	Phenolphthalein Alkalinity as CaCO ₃	mg/l	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	
15	Appearance		Clear	Clear	Clear	Clear	Clear	
16	Conductivity @ 25 Deg C	ms/cm	1056	1849	921	795	772	
17	Sodium as Na	mg/l	82	90	64	49	52	-
18	Total Suspended Solids @ 105 deg C	mg/l	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	100
19	Free Ammonia as NH ₃	mg/l	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	
20	Calcium Hardness as CaCO ₃	mg/l	127	153	109	87	84	
21	Magnesium Hardness as CaCO ₃	mg/l	82	114	79	72	63	
22	Nitrite as NO ₂	mg/l	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	
23	Phenols	mg/l	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	0
24	Silica as SiO ₂	mg/l	26	31	19	16	19	
25	Anionic Detergents as MBAS	mg/l	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	
26	Copper as Cu	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	
27	Total Chromium as Cr	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	2
28	Boron as B	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0
29	Mangnese as Mn	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.1
30	Lead as Pb	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.01
31	Mercury as Hg	mg/l	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	0.2
32	Total Arsenic as As	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.05
33	Selenium as Se	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	2
34	Cadmium as Cd	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0
GW 1: Varanavasi Village		GW 4: Plant Westside						
GW 2: Samathuvapuram Village		GW 5: Plant Northside						
GW 3: East Main Gate								
BDL: Below Detectable Level		BLQ: Below Limit of Quantification						

for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)

Chettinad Cement Corporation Private Limited (Ariyalur Works)								
Kilapaluvur Village, Ariyalur District, Tamilnadu								
Ground Water Quality Monitoring Report								
Period: OCT-2022 - MAR-2023								
S. No	Parameter	UoM	GW1 Feb-23	GW2 Feb-23	GW3 Feb-23	GW4 Feb-23	GW5 Feb-23	Limit
1	Colour	Hazen	2	2	2	2	2	
2	Odour		Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	
3	pH	-	8.03	7.65	8.18	8.06	7.3	5.5 - 9.0
4	Total Dissolved Solids	mg/l	636	948	570	473	478	2100
5	Turbidity	NTU	0.4	0.6	0.4	0.5	0.6	-
6	Chloride as Cl	mg/l	180	250	143	140	153	1000
7	Fluride as F	mg/l	0.2	0.3	0.2	0.2	0.2	2
8	Free Residual Chlorine	mg/l	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	BLQ[LOQ:0.1]	
9	Iron as Fe	mg/l	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	
10	Sulphate as SO ₄	mg/l	67	95	59	58	61	1000
11	Total Alkalinity as CaCO ₃	mg/l	240	324	195	186	174	
12	Total Hardness as CaCO ₃	mg/l	218	248	180	166	164	
13	Cyanide as CN	mg/l	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	BLQ[LOQ:0.01]	0.2
14	Phenolphthalein Alkalinity as CaCO ₃	mg/l	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	
15	Appearance		Clear	Clear	Clear	Clear	Clear	
16	Conductivity @ 25 Deg C	ms/cm	1096	1634	983	815	824	
17	Sodium as Na	mg/l	62	78	56	53	56	-
18	Total Suspended Solids @ 105 deg C	mg/l	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	BLQ[LOQ:2.0]	100
19	Free Ammonia as NH ₃	mg/l	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	BLQ[LOQ:0.03]	
20	Calcium Hardness as CaCO ₃	mg/l	143	163	112	108	105	
21	Magnesium Hardness as CaCO ₃	mg/l	75	85	68	58	59	
22	Nitrite as NO ₂	mg/l	12	18	10	9.2	10	
23	Phenols	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0
24	Silica as SiO ₂	mg/l	28	34	23	19	56	
25	Anionic Detergents as MBAS	mg/l	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	BLQ[LOQ:0.05]	
26	Copper as Cu	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	
27	Total Chromium as Cr	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	2
28	Boron as B	mg/l	BLQ[LOQ:0.025]	BLQ[LOQ:0.025]	BLQ[LOQ:0.025]	BLQ[LOQ:0.025]	BLQ[LOQ:0.025]	0
29	Manganese as Mn	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.1
30	Lead as Pb	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.01
31	Mercury as Hg	mg/l	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	BLQ[LOQ:0.0005]	0.2
32	Total Arsenic as As	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0.05
33	Selenium as Se	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	2
34	Cadmium as Cd	mg/l	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	BLQ[LOQ:0.001]	0
GW 1: Varanavasi Village			GW 4: Plant Westside					
GW 2: Samathuvapuram Village			GW 5: Plant Northside					
GW 3: East Main Gate								
BDL: Below Detectable Level			BLQ: Below Limit of Quantification					

for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)

Chettinad Cement Corporation Private Limited (Ariyalur Works)							
Kilapaluvur Village , Ariyalur District, Tamilnadu							
Stack Emission Monotoring- Consolidated Report							
Period: OCT-2022 - MAR-2023							
S.No	Stack Connected to	Parameter	UoM	Norm	Max	Min	Avg
1	Line-1 RABH Kiln Stack	Particulate Matter	mg/Nm ³	30	0.0	0.0	0.0
2	Line - 1 Cooler ESP				0.0	0.0	0.0
3	Line-1 Coal Mill				0.0	0.0	0.0
4	Line - 1 Cement Mill				24.1	23.6	23.9
5	CPP 1 &2 Common Stack			50	24.6	16.4	21.2
6	CPP 3 Stack				34.8	20.4	25.1

S.No	Stack Connected to	Parameter	UoM	Norm	Max	Min	Avg
1	Line-1 RABH Kiln Stack	SO ₂	mg/Nm ³	100	0.0	0.0	0.0
2	CPP 1 &2 Common Stack			600	241.0	162.0	195.2
3	CPP 3 Stack				196.0	164.0	180.8

S.No	Stack Connected to	Parameter	UoM	Norm	Max	Min	Avg
1	Line-1 RABH Kiln Stack	NOx	mg/Nm ³	800	0.0	0.0	0.0
2	CPP 1 &2 Common Stack			450	111.0	90.0	94.7
3	CPP 3 Stack				152.0	70.0	103.8

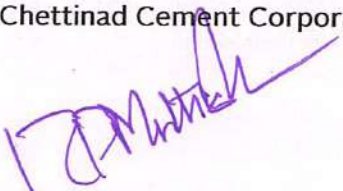
for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)



Chettinad Cement Corporation Private Limited (Ariyalur Works)							
Kilapaluvur Village , Ariyalur District, Tamilnadu							
Fugitive Emission Monotoring- Consolidated Report							
Period: OCT-2022 - MAR-2023							
S.No	Location	Parameter	UoM	Norms	Max	Min	Avg
1	Lime Stone Stacker Area	PM	$\mu\text{g}/\text{m}^3$	2000	1.29	1.2	1.245
2	ESP Cooler Area				1.2	1.13	1.165
3	Coal Unloading Area				1.31	1.16	1.235
4	Packing Area				1.25	1.13	1.19

for Chettinad Cement Corporation Private Limited


R. P. Muthiah
Vice President (Works)



Chettinad Cement Corporation Private Limited (Ariyalur Works)						
Kilapaluvur Village , Ariyalur District , Tamilnadu						
Treated Industrial & Sewage Effluent Quality Monitoring Consolidated Report						
Period: OCT-2022 - MAR-2023						
A. Treated Industrial Effluent (Captive Power Plant)						
S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.96	7.8	7.9
2	Suspended Solids	mg/litre	100	7.5	6.0	6.4
3	Total Dissolved Solids	mg/litre	2100	1089	922	1001
4	Chlorides	mg/litre	1000	267	240	251
5	Sulphates	mg/litre	1000	147	119	130
6	BOD	mg/litre	30	8.0	6.0	7.0
7	COD	mg/litre	250	43.0	32.0	38.0
B. Treated Sewage Effluent - Factory						
S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.8	7.3	7.5
2	Total Suspended Solids	mg/litre	30	10.0	7.5	8.7
3	BOD	mg/litre	20	10.0	7.0	8.2
4	COD	mg/litre	250	52.0	36.0	43.0
C. Treated Sewage Effluent - Colony						
S No	Paramenter	UoM	Norm	Max	Min	Avg
1	PH	-	5.5 to 9.0	7.5	7.3	7.4
2	Total Suspended Solids	mg/litre	30	9.0	5.0	6.8
3	BOD	mg/litre	20	7.0	2.0	4.8
4	COD	mg/litre	250	35.0	12.0	23.2

for Chettinad Cement Corporation Private Limited

R. P. Muthiah
Vice President (Works)



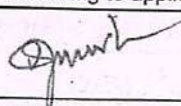
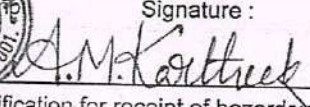


ANNEXURE - 8

FORM - 10

[See Rule 19 (1)]

MANIFEST FOR HAZARDOUS AND OTHER WASTE

1	Sender's name and mailing address (Including Phone No. And e-mail):	Chettinad Cement Corporation Pvt Ltd, Ariyalur Works, Trichy Road, Keelapaludi (PO)-621707 Ariyalur (CDT)
2	Sender's authorisation No.:	18HPC9598326 dated 28/11/2018
3	Manifest Document No.:	CCCPL-01
4	Transporter's name and address : (Including Phone No. and e-mail):	Atlas Corporation 2 MGR Nagar, Chinnaandan Kovil Road, Karur - 639 001.
5	Type of Vehicle:	(Truck / Tanker / Special Vehicle)
6	Transporter's registration No.:	
7	Vehicle registration No.:	TN60X 6192
8	Receiver's name and mailing address (Including Phone No. and e-mail):	Facility Address : ATLAS CORPORATION Plot No. 27-29, 41-43 TANSIDCO Rasathalvasu, Vellakovil - 638111. Cell :99942 00001, 81482 00001 E-mail : atlascorpkarur@gmail.com
9	Receiver's authorisation No.:	18HAC11574707 Dated : 24.03.2018
10	Waste description :	5.1 - waste oil mixed Grease
11	Total Quantity : No. Of Containers :	5.840 MT MS or MT Nos.
12	Physical form :	(Solid/Semi-Solid/Sludge/Oily/Tarry/Slurry/Liquid)
13	Special handling instructions and additional information :	HANDLE WITH CARE
14	Sender's Certificate	I here declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked, and labelled, and are in all respects in proper conditions for transport by road according to applicable national government regulations.
	Name and Stamp:	Signature :  Month Day Year 1 2 2 2 2 0 2 2
15	Transporter's Acknowledgement of receipt of wastes :	
	Name and Stamp:	Signature :  Month Day Year 1 2 2 2 2 0 2 2
16	Receiver's Certification for receipt of hazardous and other waste :	
	Name and Stamp:	For Atlas Corporation  Month Day Year 1 2 2 2 2 0 2 2

Copy 1 (WHITE) : To be retained by the sender to the state Pollution control board after signing all the seven copies.
Copy 2 (YELLOW) : To be retained by the sender after taking signature on it from the transporter and the rest of the five signed copies to be carried by the transporter.
Copy 3 (PINK) : To be retained by the receiver (actual user or treatment storage and disposal facility operator) after receiving the waste and the remaining four copies are to be signed by the receiver.
Copy 4 (ORANGE) : To be handed over to the transporter by the receiver after accepting waste.
Copy 5 (GREEN) : To be sent by the receiver to the state pollution control board.
Copy 6 (BLUE) : To be sent by the receiver to the sender.
Copy 7 (GREY) : To be sent by the receiver to the state pollution control board of the sender in case the sender is in another state.



AFR Feeding system

Commissioned on 25.11.2022.



Annexure-10

International day of Clean Air for Blue Skies – 07.09.2022
Sapling Plantations



Asst. Environmental Engineer & Asst. Engineer from TNPCH, Ariyalur Arrival



Sapling plantation by AEE, TNPCH, Ariyalur



Sapling plantation by AE, TNPCH, Perambalur

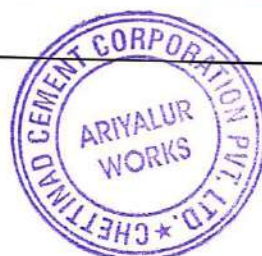


Sapling plantation by Unit Head

World Ozone Day – 16.09.2022
Sapling Plantations



CHETTINAD CEMENT – ARIYALUR WORKS





Progressive Green Belt Development report

World Environment Day Celebration – 05.06.2022

Sapling Plantation by Unit Head



Awareness Speech: "Only One Earth"

Environment Day Pledge



Tree Plantation by Company employees



CHETTINAD CEMENT – ARIYALUR WORKS

Annexure-10

Kurunkadugal Development - Plant 1000 nos. of Sapling Plantations Completed



Project : தமிழ்நாடு மாசு கட்டுப்பாடு வாரியம்
[குறுங்காடுகள் திட்டம்]

Green Tamilnadu Mission - Kurunkadugal Scheme

Plant: Chettinad Cement Corporation Private Limited
Ariyalur Works

Location: Keelapalur Village

Area in sq.m	Name of species planted [in Nos.]	No. of Saplings Planted	GPS location (Lat and Long Details)	Height of saplings	Where from the saplings were purchased
28100	Naval - 250 Pungan - 150 Illuppal - 250 Neem - 250 & Eettimaram - 100	1000	Latitude 11° 03' 30.40"N to 11° 03' 35.90"N Longitude 79° 04' 25.00"E to 79° 04' 31.80"E	5 to 7 feet	District Forest Office, Ariyalur-Central Nursery Garden, Melakaruppur.



Details of Greenbelt Development:

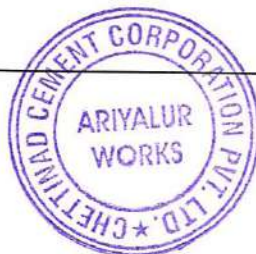
Total Plant & Colony Area : 87.21 ha

Proposed Greenbelt Area : 29.07 ha

Actual Greenbelt Area : 29.38 ha

Saplings planted during 2022-23: 1415 nos.

CHETTINAD CEMENT – ARIYALUR WORKS



**Chettinad Cement Corporation Private Limited, Ariyalur Works,
Keelapalur – 621707**

**CHARTER ON CORPORATE RESPONSIBILITY FOR ENVIRONMENTAL PROTECTION
(CREP)
CEMENT PLANT- COMPLIANCE STATUS**

S.No	ACTION POINTS	COMPLIANCE STATUS
1.	Cement plant which are not complying with Notified standards shall do the following to meet the standards. Augmentation of existing air pollution Control devices by July 2003. Replacement of existing air pollution control devices by July 2004.	We are already complying with latest Notified standards.
2.	Cement plant located in critically polluted areas or urban areas (including 5km distance outside urban boundary) will meet 100 mg/NM ₃ limit of particulate matter by December 2004 and continue working to reduce the Emission of particulate matter to 50mg/NM ₃	We are meeting the emission norm of 30mg/NM ₃ as per the MoEFCC notification Dt 9 & 10 th May 2016.
3.	The new cement kilns to be accorded NOC / environmental clearance w.e.f.1.4.2003 will meet the limit of 50mg/NM ₃ for particular matter emission.	We are meeting the emission norm of 30mg/NM ₃ as per the MoEFCC notification Dt 9 & 10 th May 2016.
4.	CPCB will evolve load based standards by December 2003.	Complying with existing load based standard
5.	CPCB and NCBM will evolve SO ₂ and NOX emission standards by June 2004.	Complying with existing standard given in the MoEFCC notification Dt 9 & 10 th May 2016.
6.	The Cement industries will control fugitive emissions from all the raw materials, products storage and transfer points by December 2003. However the feasibility for the control of fugitive emissions from Limestone and coal storage areas will be decided by National Task Force (NTF). The NTF shall submit its recommendations within three months.	1. We have installed and operating water spraying system at required raw material unloading stations. 2. Bag filters have been installed and operating at all transfer points of conveyors. 3. Our raw coal storage system is already covered by closed sheds.
7.	CPCB, NCBM, BIS and oil refineries will jointly prepare the policy on use of Petroleum coke as fuel in cement kiln by July 2003.	Petcoke is being used at cement kiln and qty used is mentioned in the Consent order issued by TNPCB.



**Chettinad Cement Corporation Private Limited, Ariyalur Works,
Keelapalur – 621707**

S.No	ACTION POINTS	COMPLIANCE STATUS
8.	After performance evolution of various types of continuous monitoring equipments and feedback from the industries and equipment manufacturers. NTF will decide feasible unit operations / sections for installation of continuous monitoring equipments. The industry will install the Continuous monitoring system (CMS) by December 2003.	SPM continuous monitoring system has already been installed in our unit for all the main stacks.
9.	Tripping in Kiln ESP to be minimized by July 2003 as per the recommendations of NTF.	Tripping in Kiln ESP is not applicable to us as we have installed Reverse air bag house which is a continuous working system.
10.	Industries will submit the target date to enhance the utilization of waste material by April 2003.	We are completely using the fly ash generated from our captive power plant.
11.	NCBM will carry out a study on Hazardous waste utilization in cement kiln by December 2003.	We started utilizing the hazardous waste in our cement kiln after getting authorization from TNPCB.
12.	Cement Industries will carry out feasibility study and submit target dates to CPCB for cogeneration of power by July 2003.	The kiln exit gasses are utilized for drying of raw materials and cooler vent gases are utilized for cement grinding section. Hence cogeneration of power is unviable since the exit gases are leaving to stack at a temperature < 150 Deg C.



ANNEXURE-12



Tamil Nadu Pollution Control Board

Ambient Air Quality Survey Report

Report No: 102/AAQS/2022-2023 Dated:27.02.2023

- 1.Name and Address of the Industry : M/s. Chettinad Cement Corporation Pvt. Ltd.,
(Cement Plant),
Keelapalur Village,
Ariyalur Taluk,
Ariyalur District
- 2.Date of Survey : 15.02.2023 & 16.02.2023
- 3.Duration of Survey : 24 Hours
- 4.Category : Red/Large
- 5.Consent Order No. : 2108236856135

Ambient Temperature (°C)	Min 26	Max 32	Relative Humidity (%)	Min 28	Max 54
Weather Condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	NE to SW		Mean Wind Speed (Km/hr)	4.2 Km/hr	

Sl. No	Location of Sampling Stations	From Source			Pollutants in µg/m3		
		Dire.	Dist. (m)	Ht. from gl (m)	PM ₁₀	SO ₂	NO ₂
1.	On the top of scaffolding near Temple inside the colony	NNE	800	2.0	80	13.1	14.2
2.	On the top of scaffolding near STP inside the colony	NE	700	2.0	82	14.0	15.2
3.	On top of scaffolding near Truck yard	ESE	500	2.0	85	17.3	18.2
4.	On top of scaffolding near Rain water Harvesting Pond	SW	600	2.0	88	19.8	21.2
5.	On top of Scaffolding near AAQ station	WNW	700	2.0	83	15.8	16.3

K. [Signature]
27/2/23
Environmental Scientist

[Signature]
27/2/23
Assistant Director,
AEL, TNPCB, Trichy.





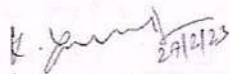
Tamil Nadu Pollution Control Board
Stack Monitoring Survey Report of Analysis

Report No:102/AAQS/2022-2023 Dated:27.02.2023

- 1.Name and Address of the Industry : M/s. Chettinad Cement Corporation Pvt. Ltd.,
(Cement Plant),
Keelapalur Village,
Ariyalur Taluk,
Ariyalur District.
- 2.Date of Survey : 15.02.2023 & 16.02.2023
- 3.Category : Red/Large
- 4.Consent Order No. : 2108236856135

Stack Analysis Report

Sl. No	Stack attached to	Stack Temp °K	Velocity in (M/sec)	Discharge rate in (Nm³/hr)	Pollutants (mg/Nm³)				
					PM	SO ₂	NO _x	CO PPM	O ₂ %
1.	Raw Mill Kiln Line-II Fuel: Coal, APC: Bag House	360	13.5	571993	26	52	468	103	14.4
2.	Coal Mill Line-II APC : Bag House	344	12.2	67635	27	34	482	91	14.3
3.	Cooler Vent Line-II APC: ESP	488	15.7	270304	20	-	-	-	-
4.	Cement Mill Line-II APC: Bag Filter	338	12.1	339247	26	-	-	-	-
5.	Fly Ash Bin – Line-II APC: Bag Filter	309	11.6	7890	28	-	-	-	-
6.	Fly Ash Bin – Line-I APC: Bag Filter	310	9.5	3142	24	-	-	-	-
7.	Lime stone primary crusher APC: Bag Filter	309	9.5	14527	29	-	-	-	-
8.	Coal crusher APC: Bag Filter	310	9.5	25693	27	-	-	-	-


Environmental Scientist


Assistant Director,
AEL,TNPCB,Trichy.





Tamil Nadu Pollution Control Board

Ambient Noise Level Survey Report of Analysis

Report No: 102/AAQS/2022-2023 Dated:27.02.2023

1	Name of the Industry	M/s. Chettinad Cement Corporation Pvt. Ltd.,
2.	Address of the Industry	(Cement Plant), Keelapalur Village, Ariyalur Taluk, Ariyalur District.
3.	Date of Survey	15.02.2023 & 16.02.2023
4.	Consent Order No.	2108236856135
5.	Category	Red/Large
Type of Survey		Ambient
Meteorological Conditions		Calm

Logging Parameters

Instrument Used	Casella	Serial No.	0499485
Logging Interval	10 Minutes in each Point	Measuring Range	50-110dB(A)
Weighting	"A"	Time Weighting	Fast
Sound Incidence	Random	Time of Survey in Hrs.	11.00 to 12.30 Hrs

SI No	Location	Duration (m)	Distance (m)	Direction	Sound Level -dB(A)		
					L _{eq}	L _{Min}	L _{Max}
1.	Near Temple inside the colony	10	800	NNE	43.0	34.0	53.7
2.	Near STP inside the colony	10	700	NE	45.1	40.2	54.4
3.	Near Truck Yard	10	500	ESE	57.5	50.4	65.8
4.	Near Rain water Harvesting plant	10	600	SW	43.1	39.3	56.1
5.	Near AAQ station	10	700	WNW	45.5	39.9	55.2

K. Jeyaraj
27/2/23
Environmental Scientist

[Signature]
27/02/23
Assistant Director,
AEL, TNPCB, Trichy.





Tamil Nadu Pollution Control Board

Ambient Air Quality Survey Report

Report No: 40 /AAQS/2022-2023 Date: 17.10.2022

- | | |
|----------------------------|--|
| 1. Name of the Industry | : M/s . Chettinad Cement Corporation
Private Limited-Captive Power Plant, |
| 2. Address of the Industry | : SF.No: 89-91
: Keelapalur Village,
: Ariyalur Taluk,
: Ariyalur -District |
| 3. Date of survey | : 14.09.2022 & 15.09.2022 |
| 4. Duration of survey | : 24 hours |
| 5. Category | : Red / Large |
| 6. Consent Order No | : 2108236851156 |

Ambient Temperature (°C)	Min	Max	Relative Humidity (%)	Min	Max
	24	35		44	83
Weather Condition	Clear		Rain Fall (mm)	Nil	
Predominant Wind Direction	SW to NE		Mean Wind Speed (Km/hr)	11.6	

Ambient Air Quality Survey Report of Analysis

Sl. No	Location of Sampling Stations	From Source			Pollutants in $\mu\text{g}/\text{m}^3$		
		Dire.	Dist. (m)	Ht. from GL (m)	PM ₁₀	SO ₂	NO ₂
1.	On the top of Scaffolding Near Guest house inside the colony	N	800	2.0	79	14.7	19.4
2.	On top of Scaffolding Near Temple inside the colony	NNE	800	2.0	82	16.4	21.1
3.	On top of Scaffolding Near Truck yard	SE	600	2.0	77	13.3	18.2
4.	On top of Scaffolding Near Rain water Harvesting pond	SW	750	2.0	74	11.2	15.9
5.	On top of Scaffolding Near AAQ Station	NW	800	2.0	76	11.8	16.8

[Signature]
Environmental Scientist

[Signature]
Assistant Director,
AEL, TNPCB, Trichy.





Tamil Nadu Pollution Control Board

Stack Monitoring Survey- Report of Analysis

Report No: 40 /AAQS/2022-2023 Date.17.10.2022

1. Name of the Industry : M/s. Chettinad Cement Corporation Private Limited- Captive Power Plant,
2. Address of the Industry : SF.No: 89-91
: Keelapalur Village,
: Ariyalur Taluk,
: Ariyalur -District
: 15.09.2022
3. Date of survey : 24 hours
4. Duration of survey : Red / Large
5. Category : 2108236851156
6. Consent Order No.

Stack Analysis Report

Sl. No	Stack attached to	Pollutants in $\mu\text{g}/\text{m}^3$							
		Stack Temp $^{\circ}\text{K}$	Velocity in (M/Sec)	Discharge rate in (Nm^3/hr)	PM_{10}	SO_2	NO_x	CO PPM	O_2 %
1.	Boiler 1 & 2 Fuel : Coal APC: ESP	390	13.9	786028	28.0	231	293	52	12.3
2.	Boiler - 3 Fuel: Coal APC: ESP	382	10.5	609185	24	219	275	43	11.8

[Signature]
Environmental Scientist

[Signature]
Assistant Director,
AEL, TNPCB, Trichy.





Tamil Nadu Pollution Control Board
Ambient Noise Level Survey - Report of Analysis

Report No:40 /NLS/2022-2023/Date./7.10.2022

1	Name of the Industry	M/s. Chettinad Cement Corporation Pvt. Ltd., Captive Power Plant,
2	Address of the Industry	SF.No.89-91 Keelapalur Village, Ariyalur Taluk, Ariyalur District.
3	Date of survey	14.09.2022 & 15.09.2022
4	Consent Order No.	2108236851156
5	Category	Red / Large
Type of survey		Ambient
Meteorological Conditions		Time of survey: Day Calm

Logging Parameters

Instrument Used	Casella	Serial No.	0499485
Logging Interval	10 Minutes in each point	Measuring Range	50-110 dB(A)
Weighting	"A"	Time Weighting	Fast
Sound Incidence	Random	Time of survey in Hrs.	09.00 - 11.00

SI No	Location	Duration (m)	Distance (m)	Direction	Sound Level -dB(A)		
					L _{eq}	L _{Min}	L _{Max}
1	Near Guest house inside the colony	10	800	N	51.4	48.7	65.2
2	Near Temple inside the colony	10	800	NNE	50.9	47.5	55.6
3	Near Truck yard	10	600	SE	55.2	52.1	61.9
4	Near Rain water Harvesting pond	10	750	SW	53.7	49.7	61.5
5	Near AAQ Station	10	800	NW	54.2	52.3	59.7

B. O. Srinivasan
Environmental Scientist

S. H. H. H.
Assistant Director,
AEL, TNPCB, Trichy.





Dt.: 01.08.2022

Chettinad Cement Corporation Private Limited, Ariyalur Works
Cement Plant, Captive Power Plant & Lime Stone Mines

Internal Circular

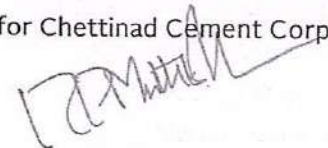
Sub: Environment & Safety Management Cell committee

Environment & Safety Management cell members is formed to take care of Environment safe guards measures in the Plant & Lime Stone Mines area. Now, the committee members are revised and listed below.

S.No.	Name of the Executive	Designation
1	Shri. R.P. Muthiah	Chairman & Plant Head
2	Shri. M. Jagadeesan	Vice Chairman & Operation Head
3	Shri. V. Ramesh	Secretary & Environment Head
4	Shri. Sivaji Samineni	Instrumentation Head
5	Shri. M.A. Rajavel	HR Head
6	Shri. M. Rajamohan	QUAS Head
7	Shri. L.V. Senthil Kumar	Electrical Head
8	Shri. S. Ramesh	Mines Head
9	Shri. P. Kanakaraj	Mech-Pre Clinkerisation Head
10	Shri. M. Radhakrishnan	Mech-Post Clinkerisation Head
11	Shri. K. Girisan	CPP Head
12	Shri. J. Meenakshi sundaram	Civil Head
13	Shri. S. Ashok Kumar	Safety Head
14	Shri. V. Palaniappan	Accounts Head
15	Shri. Dr. C. Vinoth	Medical Officer
16	Shri. M. Raja Chidambaram	Public Relations Officer(PRO)

Note- Committee will be revised after three years. Changes in the members if any to be replaced with new members within 15 days period.

for Chettinad Cement Corporation Private Limited


R. P. Muthiah
Vice President [Works]

Copy to: Team Members

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-14

Chettinad Cement Corporation Private Limited, Ariyalur Works Keelapalur - 621707. Ariyalur District. Tamil Nadu.				
Environment Management Program Expenses for FY 2019-20, 2020-21 & 2021-22				
No.	Pollution Abatement Measures	2019-20	2020-21	2021-22
A	Air Pollution Control measures	Rs. In Lakhs		
1	Bag filter Maintenance & replacement	17.9	32.5	58.8
2	ESP Maintenance	9.6	1.7	1.2
3	Maintenance of Water Spray Systems to control the fugitive emission at all dust prone areas	4.5	4.5	4.5
4	All Emission Monitoring Analyzers maintenance	21.0	29.9	24.8
5	Emission monitoring Survey	11.8	18.8	20.4
6	Fugitive Control Road Sweeping	30.0	30.0	42.0
7	House Keeping Activities	6.3	6.5	6.5
8	Step ladder provision for CPP stack	31.6	3.3	2.0
B	Water Pollution Control measures			
9	Operation & Maintenance cost of Effluent treatment Plant	3.8	5.2	5.2
10	Effluent quality Monitoring	1.9	1.6	1.5
C	Environment Conservation Measures			
11	Rainwater Harvesting - catchment area increase & Maintenance	0.5	0.0	0.5
12	Green Belt development	10.1	10.0	10.0
13	Environmental awareness training	7.5	4.9	9.4
	Total Amount in Rs. In Lakh	156.6	148.9	186.8



Digital Display Board in the Main Gate



Compliance of Notification published by MoEF&CC on 12.08.2021
Single Use Plastic Ban Awareness Board installed by our Plant



Plant Main Road

Plant Gate Entrance



Colony Entrance Gate

Limestone Entrance Gate



Single Use Plastic Ban Awareness for our Employee & Workmen



