



தமிழ்நாடு சிமெண்ட் கழகம்

(தமிழ்நாடு அரசு நிறுவனம்)

TAMILNADU CEMENTS CORPORATION LIMITED
(A Government of Tamilnadu Undertaking)



அரியலூர் சிமெண்ட் ஆலை, அரியலூர் - 621 729 , அரியலூர் மாவட்டம், தமிழ்நாடு.

Ariyalur Cement Factory, Ariyalur - 621 729, Ariyalur District, Tamilnadu

E-mail : tanaridgmoffice@gmail.com website : www.tancem.com GSTIN : 33AABCT1819J1ZH

TANCER/ACW/1MTPA Cement Expansion Plant/Half Yearly Compliance Report/2024-2025

Date: 29.05.2024

The Additional Principal Chief Conservator of Forests (C),
Ministry of Environment, Forests and Climate change(MoEF&CC),
Integrated Regional Office (IRO),
1st Floor, Additional block, GPOA,
Shastri Bhavan, Haddows Road,
Nungambakkam,
Chennai-600 006.
Phone - 044-28222325

Sir,

Sub: Tamilnadu Cements Corporation Limited, Ariyalur - 1MTPA Cement Expansion Plant - Environmental clearance - Submission of half yearly Compliance report during the period from October-2023 to March -2024 - Reg.

Ref: Environmental Clearance - Cement Plant- 0.5 MTPA to 1.63 MTPA Cement Plant and 0.475 MTPA to 1.475 MTPA clinker - F.no.J-11011/83/2014-1A II (I), Dated: 08.09.2016.

We herewith submitting half yearly compliance report for the period from October-2023 to March -2024 related to Environmental Clearance letter issued to our cement plant.

Thanking you,

Yours faithfully,
For Tamilnadu Cements Corp. Ltd.,
Ariyalur Cement works

Dy. General Manager (Tech)

Encl:

1. MoEF conditions & Compliance report
2. Enterprise social commitment work with status.
3. Copy of Disaster management plan.
4. Copy of Environmental statement.
5. Copy of Stack emission, Air quality and water quality monitoring report.
6. Copy of Consent to Operate.

CC: CPCB/SPCB Zonal office.

Corporate Office : 5th Floor, Aavin Illam, No.3 A Pasumpon Muthuramalinga Thevar Road, Nandanam, Chennai - 600 035

Phone : 044 - 2852 5461, 044 28525471 Toll Free No. 1800 599 7635

E-mail : cscoc.tancem@tn.gov.in Fax : 044 - 28523991 Website : www.tancem.com

CIN : U40200TN1976SGC007081 GSTIN : 33AABCT1819J1ZH

COMPLIANCE REPORT

Sub: Expansion of Cement Plant by a new production line of 1 MTPA clinker and 1.13 MTPA cement production TPD at TANCEM, Ariyalur Cement Works, Ariyalur –Reg
Ref: MoEF . CL. Lt. F.No.J-11011/83/2014-1A II (I)Dated:08.09.2016.

A. SPECIFIC CONDITION

SL.NO	Conditions	Compliance																															
A	The present status of the project.	The Expansion plant was commissioned on 01.11.2019. The commercial production started on 21.03.2020.																															
i.	The project proponent should install 24x7 air monitoring devices to monitor air emissions, as provided by the CPCB and submit report to Ministry and its Regional Office.	<p>1. The Unit is maintaining all the online monitors continuously and efficiently for Expansion plant too. The data are continuously sending to Care Air Centre, TNPCB, Chennai and CPCB, Delhi. The reports are periodically submitted to the Ministry and its Regional Office. The following are the details of CEMS and CAAQMS,</p> <table border="1"> <thead> <tr> <th align="center">System</th> <th align="center">Location</th> <th align="center">Qty (Nos.)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Existing plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td align="center">1</td> </tr> <tr> <td>Kiln – I</td> <td align="center">1</td> </tr> <tr> <td>Kiln -II</td> <td align="center">1</td> </tr> <tr> <td>Cooler -I</td> <td align="center">1</td> </tr> <tr> <td>Cooler – II</td> <td align="center">1</td> </tr> <tr> <td rowspan="4">Expansion plant Online Stack Monitoring System (CEMS)</td> <td>Cement mill</td> <td align="center">1</td> </tr> <tr> <td>Coal mill</td> <td align="center">1</td> </tr> <tr> <td>Kiln</td> <td align="center">1</td> </tr> <tr> <td>Cooler</td> <td align="center">1</td> </tr> <tr> <td rowspan="2">Continuous AAQ monitoring system (CAAQMS)</td> <td>Cement mill</td> <td align="center">1</td> </tr> <tr> <td>AAQMS – 1</td> <td align="center">1</td> </tr> <tr> <td></td> <td>AAQMS - 2</td> <td align="center">1</td> </tr> </tbody> </table> <p>2. The above Existing and Expansion plant stacks data are connected to SPCB online server on 06.04.2016 (Existing plant)&18.10.2019 (Expansion plant), and CPCB online server on 25.01.2017 (Existing plant)& 12.04.2021 (Expansion plant). The AAQMS 1 & 2 are connected to SPCB and CPCB on 06.04.2016, 25.01.2017 respectively.</p> <p>3. The unit is periodically submits the CEMS and AAQMS monitoring report to Ministry and its Regional Office.</p>	System	Location	Qty (Nos.)	Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln – I	1	Kiln -II	1	Cooler -I	1	Cooler – II	1	Expansion plant Online Stack Monitoring System (CEMS)	Cement mill	1	Coal mill	1	Kiln	1	Cooler	1	Continuous AAQ monitoring system (CAAQMS)	Cement mill	1	AAQMS – 1	1		AAQMS - 2	1
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ii.	The Standards issued by the Ministry vide G.S.R. No. 612 (E) dated 25 th August, 2014 and subsequent amendment dated 9 th May, 2016 and 10 th May, 2016 regarding cement plants with respect to particulate matter, SO ₂ and NO _x shall be followed.	The Unit is operating and maintaining the air pollution control equipments efficiently and continuously to achieve emission(Particulate matter, SO ₂ , NO _x) standards prescribed by the Ministry.
iii.	Continuous stack monitoring facilities to monitor gaseous emissions from the process stacks shall be provided. After expansion, limit of PM shall be controlled to meet prescribed standards by installing adequate air pollution control viz Electrostatic precipitators to clinker cooler, bag house to raw mill/kiln and bag filters to coal mill and cement mill. Low NO _x burners shall be provided to control NO _x emissions. Regular calibration of the instruments must be ensured.	1) The unit has provided Continuous stack monitoring at both Existing and Expansion plant. 2) In the Expansion plant, PM limit is controlling as per prescribed standards by installed adequate air pollution control equipments viz Electrostatic precipitators for clinker cooler, bag filters for raw mill/kiln and bag filters for coal mill and cement mill, low NO _x burners to control NO _x emissions in kiln. Regular calibrations are being followed for stack monitoring instruments.
iv.	Efforts shall be made to achieve power consumption of 70 units/tonne for Portland Pozzolona Cement (PPC) and 95 units/tonne for Ordinary Portland Cement (OPC) production and thermal energy consumption of 670 Kcal/Kg of clinker.	We have achieved power consumption of 63.58units/tonne for Cement production and thermal energy consumption of 738 Kcal/Kg of clinker.
v.	The National Ambient Air Quality Standards issued by the Ministry vide G.S.R. No. 826(E) dated 16 th November, 2009 shall be followed.	The National Ambient Air Quality Standards issued by the Ministry are followed by us.
vi.	AAQ Modeling shall be carried out based on the specific mitigate measures taken in the existing project and proposed for the expansion project to keep the emissions well below prescribed standards.	The unit is maintaining the emission level below CPCB/TNPCB prescribed standards. The Existing and Expansion plant, outlet dust emission level is being maintained below 30 mg/Nm ³ .
vii.	Secondary fugitive emissions shall be controlled and shall be within the prescribed limits and regularly monitored. Guidelines/Code of Practice issued by the CPCB in this regard shall be followed.	The unit has engaged NABL accredited and CPCB empanelled laboratory M/s. R&C Environment Lab, Chennai to conduct fugitive emission monitoring. The lab was conducted fugitive emission monitoring and the emission level is within the norms. We herewith submit the report for fugitive emission in Annexure-I .

viii.	A statement on carbon budgeting including the quantum of equivalent CO ₂ being emitted by the existing plant operations, the amount of carbon sequestered annually by the existing green belt and the proposed green belt and the quantum of equivalent CO ₂ that will be emitted due to the proposed expansion shall be prepared by the project proponent and submitted to the Ministry and the Regional Office of the Ministry. This shall be prepared every year by the project proponent. The first such budget shall be prepared within a period of 6 months and subsequently it should be prepared every year.	Green belt area is under planning based on the quantum of equivalent CO ₂ that will be emitted in the expansion plant and the data will be submitted to the Ministry. This will be prepared and will be implemented by TANCEM.
ix.	For the employees working in high temperature zones falling in the plant operation areas, the total shift duration would be 4 hrs or less per day where the temperature is more than 50°C. Moreover, the jobs of these employees will be alternated in such a way that no employee is subjected to working in high temperature area for more than 1 hr continuously. Such employees would be invariably provided with proper protective equipments, garments and gears such as head gear, clothing, gloves, eye protection etc. There should also be an arrangement for sufficient drinking water at site to prevent dehydration etc.	<ol style="list-style-type: none"> 1. The condition indicated by the Ministry is following by us. 2. Employees working in those areas are provided with PPE & sufficient drinking water.
x.	Arsenic and Mercury shall be monitored in emissions, ambient air and water.	The unit is continuously monitoring Arsenic and Mercury in emissions and ambient air through M/s. R&C Environment Lab. The monitoring report meets the emission standards prescribed by the Board.
xi.	The coal yard shall be lined and covered.	The Coal yard lining and covering work is under progress.
xii.	The project proponent shall prepare a report on impact of project on surrounding reserve forests within six months and will get it approved from the State Forest Department. A copy of the same should be submitted to the Ministry and its Regional Office.	Not applicable.
xiii.	The project proponent shall take all precautionary measures for conservation and protection of wild fauna spotted in the study area. A Wildlife Conservation Plan specific to this project site shall be prepared in consultation with the State Forest and Wildlife Department. A copy of the Conservation plan shall be submitted to the Ministry and its Regional Office.	Not applicable.

xiv.	The project proponent will also provide the latest status of the environmental compliances in respect of its existing plant.	The unit is complying the Existing Renewal of Consent order conditions. The report is enclosed in Annexure-II .
xv.	Efforts shall be made to reduce impact of the transport of the raw materials and end products on the surrounding environment including agricultural land by the use of conveyors/rail mode of transport wherever feasible. The company shall have separate truck parking area. Vehicular emissions shall be regularly monitored.	<ol style="list-style-type: none"> 1.The Unit has taken measures to reduce impact of the transport of the raw materials and end products on the surrounding environment. 2. The Unit is using conveyors/rail mode for raw materials and end products transport. 3. The Unit has provided separate Truck parking area. 4.The Unit is regularly monitoring vehicular emissions.
xvi.	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 shall be adopted.	<ol style="list-style-type: none"> 1. The Unit has taken measures to reduce water consumption by using air cooled condensers. 2. The Unit has provided water treatment plant for recycling the waste water. The surplus water is using for Dust suppression, green belt development and other plant related activities. 3. Zero water discharge was adopted in the new Plant.
xvii.	Efforts shall be made to make use of rain water harvested. If needed, capacity of the reservoir shall be enhanced to meet the maximum water requirement. Only balance water requirement shall be met from other sources.	<ol style="list-style-type: none"> 1. Rain water harvesting work is under process for all the buildings in the New Plant. 2. The capacity of the old reservoir in the TANCEM Colony was enhanced to store more water.
xviii.	Regular monitoring of influent and effluent surface, sub-surface and ground water shall be ensured and treated wastewater shall meet the norms prescribed by the State Pollution Control Board or described under the Environment (Protection) Act, 1986 whichever are more stringent. Leachate study for the effluent generated and analysis shall also be regularly carried out and report submitted to the Ministry's Regional Office, SPCB and CPCB.	We are regularly monitoring of influent and effluent surface, sub-surface and ground water. The treated waste water meets standards prescribed by State Pollution Control Board and the Report is submitting periodically.
xix.	All the bag filter dust, raw mill dust, coal dust, clinker dust and cement dust from pollution control devices shall be recycled and reused in the process and used for cement manufacturing. Spent oil and batteries shall be sold to authorized recyclers / re-processors only.	<ol style="list-style-type: none"> 1. The dust from all the pollution control equipments are recycling and reusing in the cement manufacturing. 2. Spent oil and batteries will be disposed to the TNPCB/CPCB's authorized recyclers/re-processors only.
xx.	The kiln shall be provided with a flexible fuel feeding system to enable use of hazardous wastes and other wastes including biomass, etc.	The new kiln is provided with a flexible fuel feeding system.

xxi.	The proponent shall examine and prepare a plan for utilization of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition. For this, the proponent shall identify suitable industries with such wastes and enter into an MOU for long-term utilization of such wastes as per the Environment (Protection) Rules, 1986 and with necessary approvals.	The unit will prepare a plan for utilization of high calorific wastes such as chemical wastes, distillation residues, refuse derived fuels, etc as alternate fuels based on availability and composition.
xxii.	Efforts shall be made to use the high calorific hazardous waste in the cement kiln and necessary provision shall be made accordingly. The PP shall enter into an MOU with units with potential for generating hazardous waste and in accordance with Hazardous Waste Regulations and prior approval of the TNPCB.	The Unit has taken efforts to make use of the high calorific hazardous waste in the cement kiln and necessary provision will be made accordingly.
xxiii.	Green belt over 33% of the total project area shall be developed within plant premises with at least 10 meter wide green belt on all sides along the periphery of the project area and along road sides etc. by planting native and broad leaved species in consultation with local DFO, local community and as per the CPCB guidelines.	1) The unit has a total plant area of 67.15 Ha. Out of which 22.15 Ha area is covered with green belt that is 33 % of the total area. 2) The unit is planted 13,000 saplings. Further, under TNPCB Kurunkadugal scheme, the unit is planted 1600 saplings inside the plant premises during the financial year 2023-2024.
xxiv.	The project proponent shall provide for solar light system for all common areas, street lights, villages, parking around project area and maintain the same regularly.	Solar light system has been provided in our TANCEM Hospital and school areas and solar light system for all common areas, street lights, villages, parking around project area is under progress.
xxv.	The project proponent shall provide for LED lights in their offices and residential areas.	The LED lights are provided in the Expansion plant and Existing plant premises. The LED lights installation works in residential areas are under progress.
xxvi.	All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for the Cement plants shall be implemented.	The Unit has completed all the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP).

xxvii.	At least 2.5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues, locals need and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office. Implementation of such program shall be ensured by constituting a Committee comprising of the proponent, representatives of village Panchayat and District Administration. Action taken report in this regard shall be submitted to the Ministry's Regional Office.	The Unit has prepared the Enterprise social commitment plan (ESC) for an amount of RS. 13.52 crores nearly all the works are completed and the remaining pending works will be completed soon. Enterprise social commitment plan of Rs.13.5 crores work is under the supervision of collectorate officials, Ariyalur. The detailed execution of works is enclosed for your kind reference (Annexure-III).
xxviii.	In addition to the above provision of ESC, the proponent shall prepare a detailed CSR Plan for the next 5 years including annual physical and financial targets for the existing-cum-expansion project, which includes village-wise, sector-wise (Health, Education, Sanitation, Skill Development and infrastructure etc) activities in consultation with the local communities and administration. The CSR Plan will include the amount of 2% retain annual profits as provided for in Clause 135 of the Companies Act, 2013 which provides for 2% of the average net profits of previous 3 years towards CSR activities for life of the project. A separate budget head shall be created and the annual capital and revenue expenditure on various activities of the Plan shall be submitted as part of the Compliance Report to RO. The details of the CSR Plan shall also be uploaded on the company website and shall also be provided in the Annual Report of the company.	The implementation of Corporate social responsibility (CSR) plan for next five years will prepare and implement as per the direction of MOEF&CC.
xxix.	A Risk Assessment Study and Disaster Preparedness and Management Plan along with the mitigation measures shall be prepared with a focus of Disaster Prevention and a copy submitted to the Ministry's Regional Office, SPCB and CPCB within 3 months of issue of environment clearance letter.	Plan prepared and enclosed in Annexure – IV.
xxx.	To educate the workers, all the work places where dust may cause a hazard shall be clearly indicated as a dust exposure area through the use of display signs which identifies the hazard and the associated health effects.	The Unit has providing regular classes to educate the workers. The hazards places are provided display signboards.
xxxi.	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	1. The Unit has provided housing for labor's involved in construction work and all necessary infrastructure facilities are provided to them. 2. The project was completed and we have removed the temporary structures of labor's colony and toilets.

B. GENERAL CONDITIONS

i.	The project authorities must strictly adhere to the stipulations made by the Tamil Nadu Pollution Control Board and the State Government.	The Unit is adhered to the stipulations made by the Tamil Nadu Pollution Control Board and the State Government.
ii.	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).	The Unit will not carry out any expansion or modifications without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
iii.	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 PM _{2.5} , 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 Chennai and the SPCB/CPCB once in six months.	<p>1. The Unit has installed 2 locations of ambient air quality monitoring stations. The Ambient air quality and stack emissions are regularly submit to the Ministry including its Regional Office at Chennai and the SPCB/CPCB once in six months.</p> <p>2. As per the direction of TNPCB/ CPCB, the unit has found that GLCs in the receptors and identified the locations for proposed CAAQMS station with the help of M/s. Glens Innovation Labs Pvt Ltd., Chennai. Subsequently, they have conducted GLCs study in the receptors during 05.07.2022 to 09.07.2022 and submitted their report. Based on the report, we have sent a proposal to our Corporate Office to add the installation of CAAQMS. Once it is approved in the capital budget 2024-2025, we will install the CAAQMS at the end of October-2024.</p>
iv.	Industrial wastewater shall be properly collected. Treated so as to conform to the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended form time to time. The treated wastewater shall be utilized for plantation purpose.	We have provided STP for water treatment and it is being used for Green Belt Development. Every month TNPCB taking sewage samples which meets the standards prescribed under GSR 422 (E) dated 19 th May, 1993 and 31 st December, 1993 or as amended from time to time.
v.	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 should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	<p>1. Noise control measures such as acoustic hoods, silencers, enclosures etc, are provided in all the required areas.</p> <p>2. The unit has engaged NABL accredited and CPCB empanelled laboratory M/s. R&C Environment Lab, Chennai and TNPCB to conduct ambient noise level monitoring. The both noise level report is within the norms. The report is enclosed in Annexure – V.</p> <p>3. The Unit is maintaining the noise level within the standards.</p>

vi.	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories act.	Occupational health surveillance is regularly conducted for the workers and records are being maintained as per the factories act.
vii.	The company shall develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	Rain water harvesting structure works are under progress including recharging of ground water tables.
viii.	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>Necessary actions have been taken to comply with EIA/EMP recommendations.</p> <ol style="list-style-type: none"> 1. For Air environment, we have installed bag houses for Raw mill, Kiln, Coal mill, cement mill and ESP for Cooler. Further, we have provided Continuous monitoring Equipments, Sheds& Silos. 2. For Noise environment, the major noise generating sources are coal mill, Kiln, Raw mill, packers of cement plant and compressors. These sources are located far off from each other and in this regard all major machinery/equipment noise level is not exceeded as per OSHA limit. Further, we have provided measures such as enclosures provided in the noise generating sources, noise attenuating devices for workers, building's roof are constructed by reinforced concrete, compressor station vent valves equipped with mufflers/silencers. 3. For Wastewater management, we have installed Sewage Treatment Plant (STP) to treat wastewater and utilize for green belt development. 4. For Greenbelt development, We have planting 13000saplings in Plant and Colony. As per TNPCB Kurunkadugal scheme, we have planted 1600 saplings inside the plant premises. 5. Rain water harvesting work is under process for all the buildings in the new Plant. The capacity of the old reservoir in the TANCEM Colony was enhanced to store more water. 6. For Social welfare measures, The Unit has earmarked 2.5% of the total project cost i.e Rs.13.5 crores towards the Enterprise Social Commitment. 7. For EMP, the Unit has allotted an amount of Rs. 50 crores for pollution control equipment for Expansion Plant and Recurring expenditure of Rs 4.72 crores has been spent.

ix.	Requisite funds 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, Forest and Climate Change (MoEF&CC) 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 Chennai. The funds so provided shall not be diverted for any other purpose.	Requisite fund was earmarked towards Capital and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change (MoEF&CC) as well as the State Government.
x.	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, ZilaParishad/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.	The Unit has submitted copy of clearance letter to local panchayat. The clearance letter was also uploaded in TANCEM's website.
xi.	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 at Chennai. 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>1.The unit is uploaded the status of compliance of the stipulated environment clearance conditions, including results of monitored data in our TANCEM website and updating the same periodically. The compliance report is periodically sent to MOEF&CC, SPCB and CPCB.</p> <p>2.LED display board was commissioned and displayed in front of our main gate for the existing plant and expansion plant.</p>
xii.	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 MOEFCC, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Chennai / CPCB / SPCB shall monitor the stipulated conditions.	<p>1. The Unit has submitting six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data to the Regional Office of MOEFCC, the respective Zonal Office of CPCB and the SPCB.</p> <p>2. Every year we have conducting Ambient air quality, Ambient noise level and Stack monitoring through TNPCB and M/s.R&C Environment Lab, Chennai. The Report of the both survey meets emission standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016. The Report is enclosed in Annexure – VI and Annexure – V.</p> <p>3. The unit has engaged NABL accredited and CPCB empanelled laboratory M/s. R&C Environment Lab, Chennai to conduct fugitive emission monitoring. The lab was conducted fugitive emission monitoring and the emission level is within the norms. We herewith submit the report for fugitive emission in Annexure – I.</p>

xiii.	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 MOEFCC at Chennai by e-mail.	The Unit has submitting Environmental statement for each financial year ending 31 st March in Form-V and compliance of Environmental conditions to the TNPCCB and regional office of MOEF&CC Chennai. The environmental statement is enclosed in Annexure – VII.
xiv.	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 the Ministry of Environment, Forests and Climate Change (MoEFCC) 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 the Regional office at Chennai.	Project clearance had been advertised in the local two newspapers.
xv.	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.	The plant commercial production started on 21.03.2020. The land development work is under progress.



स्थापना १८५८
ESTD 1858
ISO 9001 Co.,

इंजिनियर्स

आर एंड सी पर्यावरण प्रयोगशाला,
पर्यावरण इंजीनियरिंग प्रयोगशाला प्रभाग,
१/६१, कुलकारई स्ट्रीट, वीओसी नगर मुख्य सड़क,
अदयालम्पेट, मदुरवोयल, चेन्नई-६०० ०९४, तमिल नाडु, भारत
वेबसाइट : <http://www.rcenvirolab.com>
ई-मेल : rcenvirolab@gmail.com
फोन : + ९१-४४-२६५३०१४४, २६२५४४६४, २६२५८२२९
९०४३० ७५९४९, फैक्स : + ९१-४४-२६२५ ८२९५

Annexure - I

Richardson & Cruddas (1972) Ltd.

(A Government of India undertaking)

रिचर्डसन एण्ड क्रुडस (१९७२) लिमिटेड

(भारत सरकार का उपक्रम)



CERT No. TC-7742

ENGINEERS

R&C Environment Lab,

Environmental Engineering Laboratory Division,
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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012462F	Report Date	17.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	07.11.2023	Sample Received on	07.11.2023
Sampling Consumable	Filter Paper & Dust Collector - EELAB/064-068	Test Commenced on	07.11.2023
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm	

RESULTS

S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
			Particulate Matter		
1	Expansion Coal Mill Feeding area	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	404.8	mg/Nm ³	500
2	Expansion Coal Mill Weight Feeder area		384.8		
3	Near Expansion Coal Conveyor Belt		326.4		
4	Expansion Kiln Inlet - Preheater Outlet		302.2		
5	Expansion Kiln Outlet - Clinker Cooler Inlet		316.6		

Remarks :

The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.

(Signature)
Authorized Signatory

Er.Arunkumar.V - Technical Manager

Note: mg/ Nm³ - Milligram Per Normal cubic metre

*** End of the Report ***



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पर्यावरण इंजीनियरिंग प्रयोगशाला प्रभाग,
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CERT No. TC-7742

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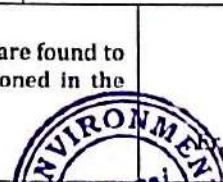
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ENVIRONMENTAL ENGINEERING LABORATORY

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TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012463F	Report Date	17.11.2023		
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.				
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363		
Sample Collection date	07.11.2023	Sample Received on	07.11.2023		
Sampling Consumable	Filter Paper & Dust Collector - EELAB/069-073	Test Commenced on	07.11.2023		
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023		
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm			
RESULTS					
S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
6	Expansion Cooler Outlet - Breaker point	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	340.4	mg/Nm ³	500
7	Expansion Clinker Silo Inlet		402.6		
8	Expansion Clinker Silo Outlet		414.2		
9	Expansion Gypsum Stacker - Unloading Point		384.4		
10	Expansion Packing House Truck Loading - 1		406.2		
Remarks :		The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.			
Note: mg/ Nm ³ - Milligram Per Normal cubic metre		 Authorized Signatory Arunkumar.V - Technical Manager			

**** End of the Report ****

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ENVIRONMENTAL ENGINEERING LABORATORY

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TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012464F	Report Date	17.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	07.11.2023	Sample Received on	07.11.2023
Sampling Consumable	Filter Paper & Dust Collector - EELAB/073-077	Test Commenced on	07.11.2023
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm	

RESULTS

S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
			Particulate Matter		
11	Expansion Packing House Truck Loading - 2	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	378.2	mg/Nm ³	500
12	Expansion Packing House Truck Loading - 3		372.6		
13	Expansion Packing House Truck Loading - 4		382.4		
14	Expansion Cement Mill Outlet		376.2		
15	Expansion Cement Mill Inlet		402.4		

Remarks :

The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.

Note: mg/ Nm³ - Milligram Per Normal cubic metre

Authorized Signatory
Er.Arunkumar.V - Technical Manager

**** End of the Report ****



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CERT No. TC-7742

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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012465F	Report Date	17.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	07.11.2023	Sample Received on	07.11.2023
Sampling Consumable	Filter Paper & Dust Collector - EELAB/078-082	Test Commenced on	07.11.2023
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm	

RESULTS

S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
			Particulate Matter		
16	Expansion Cement Mill Weigh Feeder	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	368.2	mg/Nm ³	500
17	Expansion Coal Crusher Feeding Point		396.4		
18	Expansion Coal Crusher		434.2		
19	Expansion Coal Mill Feeding Belt		410.4		
20	Expansion Packing House Roto Packer - 1		396.2		

Remarks :

The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.

Note: mg/ Nm³ - Milligram Per Normal cubic metre

Authorized Signatory

Er.Arunkumar.V - Technical Manager

**** End of the Report ****



Note: This report relates only to the particular sample submitted for test. Any correction not attested shall invalidate this report. This report shall not be reproduced except in full without our written approval. Sample are not drawn by us unless otherwise stated. Retention period of tested samples is 30 days only unless otherwise specified.

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TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012466F	Report Date	17.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	07.11.2023	Sample Received on	07.11.2023
Sampling Consumable	Filter Paper & Dust Collector - EELAB/083-087	Test Commenced on	07.11.2023
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm	

RESULTS

S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
			Particulate Matter		
21	Expansion Packing House Roto Packer - 2	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	410.2	mg/Nm ³	500
22	Expansion Lime Stone Crusher Hopper		388.6		
23	Expansion Lime Stone Stacker		356.4		
24	Expansion Flue Dust Stacker		398.6		
25	Expansion Raw Mill Weigh Feeder		386.4		

Remarks :

The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.

Note: mg/ Nm³ - Milligram Per Normal cubic metre

Authorized Signatory

Er.Arunkumar.V - Technical Manager

**** End of the Report ****



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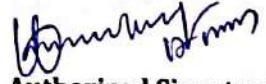
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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012467F	Report Date	17.11.2023		
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.				
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363		
Sample Collection date	07.11.2023	Sample Received on	07.11.2023		
Sampling Consumable	Filter Paper & Dust Collector - EELAB/088-092	Test Commenced on	07.11.2023		
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023		
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm			
RESULTS					
S. No.	Location Name	TEST METHOD	RESULT Particulate Matter	UNIT	Limits as per EPA
26	Expansion Raw Mill Additive Material Feeder	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	372.6	mg/Nm ³	500
27	Expansion Raw Mill Vertical Roller Mill(VRM)		368.4		
28	Existing Packing House Truck Loading - 1,2&3		392.8		
29	Existing Packing House Roto Packer		384.2		
30	Imported Coal Shed		336.4		
Remarks :		The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.			
Note: mg/ Nm³ - Milligram Per Normal cubic metre		 Authorized Signatory Arunkumar.V - Technical Manager			

**** End of the Report ****



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R&C/EE.LAB/CS/19

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स्थापना १८५८
ESTD 1858
ISO 9001 Co.,

इंजिनियर्स

आर एंड सी पर्यावरण प्रयोगशाला,
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Richardson & Cruddas (1972) Ltd.

(A Government of India undertaking)

रिचर्डसन एण्ड क्रुड्दास (१९७२) लिमिटेड

(भारत सरकार का उपक्रम)



CERT No. TC-7742
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ENVIRONMENTAL ENGINEERING LABORATORY

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TEST REPORT OF FUGITIVE DUST EMISSION

Report Number	TC7742230012468F	Report Date	17.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	07.11.2023	Sample Received on	07.11.2023
Sampling Consumable	Filter Paper & Dust Collector - EELAB/093-097	Test Commenced on	07.11.2023
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm	

RESULTS

S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
			Particulate Matter		
31	Indian Coal Shed	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	356.2	mg/Nm ³	500
32	Existing Plant Clinker Yard		362.6		
33	Existing Plant Clinker Unloading area		410.2		
34	Existing Plant Clinker D-Bucket Conveyor		392.6		
35	Existing Plant Cement Mill Inlet		428.2		

Remarks :

The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.

Note: mg/ Nm³ - Milligram Per Normal cubic metre

Authorized Signatory

Er.Arunkumar.V - Technical Manager

**** End of the Report ****



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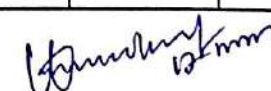
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Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363		
Sample Collection date	07.11.2023	Sample Received on	07.11.2023		
Sampling Consumable	Filter Paper & Dust Collector - EELAB/098-102	Test Commenced on	07.11.2023		
Sample Description	Fugitive Dust Emission - Particulate Matter Concentration	Test Completed on	17.11.2023		
Sampling Method	IS 5182 : Part 4: 1999(RA 2019)	Vol. of Air Sampled - 1 lpm			
RESULTS					
S. No.	Location Name	TEST METHOD	RESULT	UNIT	Limits as per EPA
36	Existing Cement Mill Outlet	IS 5182 : Part 4 : 1999 - Reaffirmed 2019	372.4	mg/Nm ³	500
37	Existing Cement Mill - Clinker Weigh Feeder		382.2		
38	Existing Cement Mill - Gypsum Weigh Feeder		388.4		
39	Existing Plant Clinker Transfer Point		404.6		
40	Existing Cement Mill Despatch Belt		424.0		
Remarks :		The sample was collected and analysed as per IS methods. The values are found to be well within the stipulated limits for which the norms are mentioned in the report.			
Note: mg/ Nm ³ - Milligram Per Normal cubic metre		 Authorized Signatory Er.Arunkumar.V - Technical Manager			

**** End of the Report ****



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Annexure – II

**COMPLIANCE STATUS REPORT FOR AIR ACT AS PER RENEWAL OF
CONSENT CONDITIONS OF 2022-24**

Special Additional Conditions:

Sl. No	Conditions	Compliance
i.	The unit shall install the approved retrofit emission control device/equipment with at least 70%Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas-based generators within the time frame prescribed in the notification No. TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.	The Unit has not met power failure problem since we have installed dedicated 110 KV sub-station power supply for our plant. The DG sets are in standby only not for continuous operation. Even though we have taken measures to install approved retrofit emission control devices.
ii.	The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.	Not applicable. Even though, the unit has taken measures to obtain the No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board.

Additional Conditions:

S. No	CONDITIONS	COMPLIANCE
1.	The unit shall operate and maintain the air pollution control measures efficiency and continuously so as to achieve the Ambient Air quality/ Emission standards prescribed by the Board & MoEF&CC.	1. The Unit is operating and maintaining the air pollution control equipments efficiently and continuously maintaining the ambient air quality / emission standards as notified by MoEE&CC vide notification dated 25.08.2014 & 10.05.2016. 2. Every year we are conducting Ambient air quality and Stack monitoring survey through TNPCB and M/s.R&C Environment Lab, Chennai. The ROA of the both surveys meets emission standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016. The Report is enclosed in Annexure – VI.
2.	The unit shall comply with the new emission standards prescribed by MoEF&CC vide notification dated 25.08.2014 & 10.05.2016.	
3.	The unit shall ensure that the noise generated by the unit shall adhere to the Ambient Noise Level standards prescribed by the Board.	1.Noise control measures such as acoustic hoods, silencers, enclosures etc., are provided in all the required areas. 2. The unit has engaged NABL accredited and CPCB empanelled laboratory M/s. R&C Environment Lab, Chennai to conduct ambient noise level monitoring. The lab was conducted ambient noise level measurement and the noise level is within the norms. Subsequently, TNPCB has conducted ambient noise level measurement. The report is enclosed in Annexure – V. 3. The Unit is maintaining the noise level standards prescribed by the Board.

4.	The industry shall ensure that all the dust accumulated in the premises (in old line and new line areas) are cleared immediately.	<p>1. The unit has installed permanent water sprinkler system water sprinklers 61 No's in Coal yard & Clinker yard areas, 11 No's in Limestone crusher (LS-1) area, 7 No's in Existing plant CCR, 8 No's in Existing plant Cement mill, 6 No's in new plant Gypsum shed road and 13 No's in Packing house road. a) The Portable water sprinkler has provided 2 No's in Existing plant Raw mill and cement mill areas b) 1 No in Existing plant Packing house c) 1 No Expansion plant cement mill d) 2 No's in Coal yard & Clinker yard areas.</p> <p>2. The unit has utilizing the water tanker lorry to spraying the water in the vehicle movement roads.</p> <p>3. The unit has utilizing contract street sweepers for housekeeping the entire premises. Also, the unit has utilizing 1 no of Skid loader with Road sweeping attachment for effective housekeeping.</p> <p>4. The unit has taken measures to clear all accumulated dust in the premises (in old line and new line areas) to keep dust free environment.</p>																												
5.	The unit shall not run existing plant until further orders from the Government, as committed.	We agreed in this regard and We will not operate the Existing plant except Cement mill and Packing house until further orders from the Government.																												
6.	The unit shall maintain the online stack monitoring system and the continuous AAQ monitoring system efficiently so as to send good quality data to Care Air Centre.	<p>1. The Unit is maintaining all the online monitors continuously and efficiently. The datas are continuously sending to Care Air Centre, TNPCB, Chennai and CPCB, Delhi. The following are the details of CEMS and CAAQMS,</p> <table border="1" data-bbox="781 1024 1442 1545"> <thead> <tr> <th>System</th> <th>Location</th> <th>Qty (Nos.)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Existing plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln - I</td> <td>1</td> </tr> <tr> <td>Kiln -II</td> <td>1</td> </tr> <tr> <td>Cooler -I</td> <td>1</td> </tr> <tr> <td>Cooler - II</td> <td>1</td> </tr> <tr> <td rowspan="4">Expansion plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln</td> <td>1</td> </tr> <tr> <td>Cooler</td> <td>1</td> </tr> <tr> <td>Cement mill</td> <td>1</td> </tr> <tr> <td rowspan="2">Continuous AAQ monitoring system (CAAQMS)</td> <td>AAQMS - 1</td> <td>1</td> </tr> <tr> <td>AAQMS - 2</td> <td>1</td> </tr> </tbody> </table> <p>2. The above Existing and Expansion plant stacks data are connected to SPCB online server on 06.04.2016 (Existing plant)&18.10.2019 (Expansion plant), and CPCB online server on 25.01.2017 (Existing plant)& 12.04.2021 (Expansion plant). The AAQMS 1 & 2 are connected to SPCB and CPCB on 06.04.2016 and 25.01.2017 respectively.</p>	System	Location	Qty (Nos.)	Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln - I	1	Kiln -II	1	Cooler -I	1	Cooler - II	1	Expansion plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln	1	Cooler	1	Cement mill	1	Continuous AAQ monitoring system (CAAQMS)	AAQMS - 1	1	AAQMS - 2	1
System	Location	Qty (Nos.)																												
Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1																												
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	Cooler	1																												
	Cement mill	1																												
Continuous AAQ monitoring system (CAAQMS)	AAQMS - 1	1																												
	AAQMS - 2	1																												

7.	The unit shall comply with the fugitive emission guidelines prescribed by CPCB vide PROBES/118/2007 dated: 06.07.2007.	The Unit is abiding and adheres to the CPCB guidelines on fugitive emission control as mentioned in notification. The following areas are concentrated to avoid fugitive emission as per CPCB guidelines. 1. Unloading section (limestone, coal and other relevant materials). 2. Material Handling Section (Including transfer Points). 3. Coal Storage Section. 4. Clinker cooler section. 5. Clinker stock piles section. 6. Storage of limestone, gypsum, fly ash and other additives. 7. Cement packing section. 8. Silo section and 9. Roads.
8.	The storage of coal, clinker, limestone, Gypsum, fly ash and other additives should be done under covered shed.	1) As per the direction of TNPCB, TANCEM is storing the raw materials in closed sheds only. a) The unit is utilizing 3 nos of closed sheds for coal storage with the capacities of one 5000 MT and two 500 MTs. Further, the unit is constructing two new coal shed with a capacity of 5000 MT each at cost of Rs.1.5 Crores . One shed is ready and another one will be completed in month time. b) Limestone is being stored in the 2 stockpiles capacity of 32,000 MT and 40,000 MT c) Gypsum is being stored in the 2 closed sheds capacity of 1,500 MT and 1,000 MT d) Raw meal is being stored in the 3 silos capacity of 4000 MT, 4000 MT and 10,000 MT. e) Wet Fly ash is being stored in the 2 closed sheds (capacity of 1,000 MT and 1,000 MT) f) Clinker is being stored in the silo at Expansion plant (Capacity of 22,200 MT) and in a stockpile at Existing plant (Capacity of 30,000 MT) g) Dry fly ash is being stored in the 3 metal hoppers (capacity of 200 MT, 200 MT and 1,750 MT). 2) TANCEM has provided the side cladding in the Coal unloading shed, Coal crusher shed, Flue dust shed and Gypsum shed during the financial year 2022-2023.
9.	The unit shall carry out cleaning of spilled materials such as Gypsum, fly ash, and Coal dust inside the working area periodically to avoid carryover of dust to the surrounding.	1. TANCEM has cleared old spilled materials like Gypsum, Fly ash, and Coal dust inside the working areas. 2. Further, TANCEM has engaged One JCB and tipper separately to clean the spilled materials like Gypsum, Fly ash, and Coal dust inside the working areas regularly.
10.	The unit shall pave all the areas where vehicle movement takes place.	The unit has taken measures and sent proposal to pave all the vehicle movement areas to CO. This work is estimated to complete by end of October-2024.

11.	The unit shall conduct the ground level concentration study due to various emission sources through a laboratory approved by CPCB within a month and install the CAAQM stations as already instructed by Board within 3 months.	The unit has found that GLCs in the receptors and identified the locations for proposed CAAQMS station with the help of M/s. Glens Innovation Labs Pvt Ltd., Chennai. Subsequently, they have conducted GLCs study in the receptors during 05.07.2022 to 09.07.2022 and submitted their report. Based on the report, we have sent a proposal to our Corporate Office to add the installation of CAAQMS. Once it is approved in the capital budget 2024-2025, we will install the CAAQMS at the end of October-2024.
12.	The performance efficiency of the APC devices shall be conducted through a laboratory approved by CPCB and report shall be submitted to TNPCB.	The unit has taken measures to conduct the efficiency test of APC devices by a CPCB approved laboratory. The performance efficiency report will be submitted to TNPCB during end of July-2024.
13.	Fugitive emission monitoring shall be conducted at cement mill, coal mill and Raw material handling area through a laboratory approved by CPCB and the report shall be submitted to TNPCB.	The unit has engaged NABL accredited and CPCB empanelled laboratory M/s. R&C Environment Lab, Chennai to conduct fugitive emission monitoring. The lab has conducted fugitive emission monitoring and the emission level is within the norms. We herewith submit the report for fugitive emission in Annexure-I.
14.	All continuous emission monitoring systems should be operated as per CPCB CEMs guidelines and the data shall be transmitted as per guidelines. Further the unit shall comply the following:	
a.	Kiln Stack Gaseous Analyzer:	
i.	Sampling flow rate shall be maintained at 60 TPH.	The unit is maintaining the sampling flow rate at 60 TPH.
ii.	NOX value shall be normalized and transmitted as NO2 instead of transmitting as NO.	NOX value is normalized and transmitted as NO2.
iii.	O2 correction shall be given for the NOX values.	O2 correction is given for NOX values.
iv.	Zero check shall be conducted daily and span check shall be conducted once in fortnight.	We are conducting the zero check on daily basis and span in a fort night.
v.	Proper record for drift observations shall be maintained.	We are checking the drift periodically and maintaining the observation record.
vi.	Analyzer values shall be directly transmitted to the TNPCB/CPCB server without having any intermediate server or PC.	The Analyzer values are directly transmitted to the TNPCB/CPCB server without having any intermediate server or PC.
b.	Kiln stack PM Analyzer:	
i.	Reference sampling port hole shall be provided for calibration/ manual iso kinetic sampling.	The unit is provided sampling port for calibration and manual Iso - kinetic sampling.
ii.	The unit shall ensure that the purge blower filter is not choked for adequate purge air supply to the analyzer.	We are regularly inspecting the purge blower filters and the purge air supply is normal.

iii.	The data shall be normalized and transmitted as mg/ Nm3 instead of mg/ m3.	The Datas are transmitted as mg/Nm3.																												
iv.	Dust factor check shall be done every month.	The unit is periodically checking the dust factor every month.																												
v.	The unit shall ensure that the analyzer should be TUV/ MCERTS certified analyzer.	The Unit is utilizing the stack and gaseous analyzers are certified analyzers.																												
vi.	Analyzer installed for coal mill, cement mill and raw mill shall be serviced and recalibrated since constant values were showing.	The unit was conducted performance calibration of the online continuous emission monitoring system.																												
c.	CAAQMS																													
i.	CAAQMS gaseous analyzers shall be serviced and recalibrated since they are not working properly.	The unit was conducted performance calibration of the online continuous ambient air quality monitoring system.																												
ii.	The unit shall rectify the filter tapes for PM10 and PM2.5 and ensure that they are working properly.	We have identified and changed the filter tapes in PM10, PM2.5 and it is running normally.																												
iii.	Calibrator shall be made available at the unit and inhouse calibration shall be done as per the guidelines.	We have calibrating the analyzer periodically and we will maintain the calibration record.																												
iv.	The performance calibration of all the online analyzers shall be conducted once in a year through a laboratory approved by CPCB and report shall be submitted to TNPCB.	<p>1. The Unit is maintaining all the online monitors continuously and efficiently. The data are continuously sending to Care Air Centre, TNPCB, Chennai and CPCB, Delhi. The calibration of these equipments are being conducted periodically. The following are the details of CEMS and CAAQMS,</p> <table border="1"> <thead> <tr> <th>System</th> <th>Location</th> <th>Qty (Nos.)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Existing plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln - I</td> <td>1</td> </tr> <tr> <td>Kiln -II</td> <td>1</td> </tr> <tr> <td>Cooler -I</td> <td>1</td> </tr> <tr> <td>Cooler - II</td> <td>1</td> </tr> <tr> <td rowspan="4">Expansion plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln</td> <td>1</td> </tr> <tr> <td>Cooler</td> <td>1</td> </tr> <tr> <td>Cement mill</td> <td>1</td> </tr> <tr> <td rowspan="2">Continuous AAQ monitoring system (CAAQMS)</td> <td>AAQMS - 1</td> <td>1</td> </tr> <tr> <td>AAQMS - 2</td> <td>1</td> </tr> </tbody> </table> <p>2. The above Existing and Expansion plant stacks data are connected to SPCB online server on 06.04.2016 (Existing plant)&18.10.2019 (Expansion plant), and CPCB online server on 25.01.2017 (Existing plant)& 12.04.2021 (Expansion plant). The AAQMS 1 & 2 are connected to SPCB and CPCB on 06.04.2016 and 25.01.2017 respectively.</p>	System	Location	Qty (Nos.)	Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln - I	1	Kiln -II	1	Cooler -I	1	Cooler - II	1	Expansion plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln	1	Cooler	1	Cement mill	1	Continuous AAQ monitoring system (CAAQMS)	AAQMS - 1	1	AAQMS - 2	1
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15.	The unit shall conduct a comprehensive Environmental audit through a laboratory approved by CPCB/MoEF once in a year which includes water audit, ETP/STP adequacy & efficacy, APCD performance efficiency etc., and shall furnish report to TNPCB.	The unit has taken measures to conduct the comprehensive environmental audit with a CPCB approved laboratory. The report will be submitted to TNPCB during end of July-2024.																	
16.	The unit shall continue to develop green belt in and around the unit premises.	1) The unit has a total plant area of 67.15 Ha. Out of which 22.15 Ha area is covered with green belt that is 33 % of the Total area. 2) The unit is planted 13,000 saplings. Further, under TNPCB Kurunkadugal scheme, the unit is planted 1600 saplings inside the plant premises during the financial year 2023-2024.																	
17.	The industry shall operate and maintain the water sprinklers and street sweepers provided by the industry at all times.	1. The unit has installed permanent water sprinkler system water sprinklers 61 No's in Coal yard & Clinker yard areas, 11 No's in Limestone crusher (LS-1) area, 7 No's in Existing plant CCR, 8 No's in Existing plant Cement mill, 6 No's in new plant Gypsum shed road and 13 No's in Packing house road. a) The Portable water sprinkler has provided 2 No's in Existing plant Raw mill and cement mill areas b) 1 No in Existing plant Packing house c) 1 No Expansion plant cement mill d) 2 No's in Coal yard & Clinker yard areas. 2. The unit has utilizing the water tanker lorry to spraying the water in the vehicle movement roads. 3. The unit has utilizing contract street sweepers for housekeeping the entire premises. Also, the unit has utilizing 1 no of Skid loader with Road sweeping attachment for effective housekeeping. 4. The unit is operating water sprinklers and engaging street sweepers at all times.																	
18.	The industry shall improve the house keeping in the entire premises.	1. The Unit has continuously cleaning all internal roads by road sweepers. After road sweeping, water tanker lorry sprays the water on roads to control fugitive emissions. 2. We have 1 no. skid loader with road sweeping attachment which one utilized for effective road sweeping purpose.																	
19.	The industry shall calibrate and maintain the online continuous emission monitoring system provided for the Kilns, Clinker coolers, cement mill & coal mills and also the continuous AAQMS so as to send quality data to the CAC, TNPCB, Chennai.	1. The Unit is maintaining all the online monitors continuously and efficiently. The datas are continuously sending to Care Air Centre, TNPCB, Chennai and CPCB, Delhi. The calibration of these equipments are being conducted periodically. The following are the details of CEMS and CAAQMS, <table border="1" data-bbox="777 1625 1442 1890"> <thead> <tr> <th>System</th> <th>Location</th> <th>Qty (Nos.)</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Existing plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln - I</td> <td>1</td> </tr> <tr> <td>Kiln -II</td> <td>1</td> </tr> <tr> <td>Cooler -I</td> <td>1</td> </tr> <tr> <td>Cooler - II</td> <td>1</td> </tr> <tr> <td></td> <td>Cement mill</td> <td>1</td> </tr> </tbody> </table>	System	Location	Qty (Nos.)	Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln - I	1	Kiln -II	1	Cooler -I	1	Cooler - II	1		Cement mill	1
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20.	The unit shall ensure that calibration is done at frequent intervals to keep the analyzer intact.	The unit is calibrating the analyzer periodically and maintaining the calibration record.																														
21.	The unit shall maintain all the online monitors continuously and efficiently and should ensure the online connectivity with Care Air Centre of TNPCB, Chennai to provide proper quality data at all times.	<p>1. The Unit is maintaining all the online monitors continuously and efficiently. The datas are continuously sending to Care Air Centre, TNPCB, Chennai and CPCB, Delhi. The following are the details of CEMS and CAAQMS,</p> <table border="1"> <thead> <tr> <th>System</th> <th>Location</th> <th>Qty (Nos.)</th> </tr> </thead> <tbody> <tr> <td rowspan="6">Existing plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln - I</td> <td>1</td> </tr> <tr> <td>Kiln -II</td> <td>1</td> </tr> <tr> <td>Cooler -I</td> <td>1</td> </tr> <tr> <td>Cooler - II</td> <td>1</td> </tr> <tr> <td>Cement mill</td> <td>1</td> </tr> <tr> <td rowspan="4">Expansion plant Online Stack Monitoring System (CEMS)</td> <td>Coal mill</td> <td>1</td> </tr> <tr> <td>Kiln</td> <td>1</td> </tr> <tr> <td>Cooler</td> <td>1</td> </tr> <tr> <td>Cement mill</td> <td>1</td> </tr> <tr> <td rowspan="2">Continuous AAQ monitoring system (CAAQMS)</td> <td>AAQMS - 1</td> <td>1</td> </tr> <tr> <td>AAQMS - 2</td> <td>1</td> </tr> </tbody> </table> <p>2. The above Existing and Expansion plant stacks data are connected to SPCB online server on 06.04.2016 (Existing plant)&18.10.2019 (Expansion plant), and CPCB online server on 25.01.2017 (Existing plant)& 12.04.2021 (Expansion plant). The AAQMS 1 & 2 are connected to SPCB and CPCB on 06.04.2016 and 25.01.2017 respectively.</p>	System	Location	Qty (Nos.)	Existing plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln - I	1	Kiln -II	1	Cooler -I	1	Cooler - II	1	Cement mill	1	Expansion plant Online Stack Monitoring System (CEMS)	Coal mill	1	Kiln	1	Cooler	1	Cement mill	1	Continuous AAQ monitoring system (CAAQMS)	AAQMS - 1	1	AAQMS - 2	1
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22.	The unit shall continuously operate and maintain the online analyzer and online display board installed in the entrance of the unit efficiently.	The Unit has maintaining all the online monitors continuously and efficiently. The LED online display board is installed in the plant entrance and it is functioning efficiently.																														

23.	The unit shall ensure that the emission meets the emission standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016 and shall comply with the condition stipulated in the MoEF&CC, O&M, F.No22-34/2018-1A dated 09.08.2018.	<p>1. The Unit is operating and maintaining the air pollution control equipments efficiently and continuously maintaining the ambient air quality / emission standards as notified by MoEE&CC vide notification dated 25.08.2014 & 10.05.2016.</p> <p>2. Every year we are conducting Ambient air quality and Stack monitoring survey through TNPCB and M/s. R&C Environment Lab, Chennai. The ROA of the both surveys meets emission standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016. The Report is enclosed in Annexure - VI.</p> <p>3. The Unit has complying with the condition stipulated in the MoEF&CC, O&M, F.No22-34/2018-1A dated: 09.08.2018.</p>
24.	All internal roads shall be cleaned with road sweeper then and there and the house keeping should be done all the time effectively and water sprinkling shall be done frequently so as to arrest the dust spreading due to vehicular movement.	<p>1. The Unit has cleaned all internal roads by road sweepers. After road sweeping, water tanker lorry spray the water on roads to control fugitive emissions.</p> <p>2. We have 1 no. skid loader with road sweeping attachment which one utilized for effective road sweeping purpose.</p>
25.	The unit shall increase the consumption of ETP sludge with immediate effect.	<p>1. As directed by TNPCB, 41 MTs of ETP sludge has been procured from M/s. Arunachalaa Enterprises during the month of November 2020. We have made an agreement with M/s. Arunachalaa Enterprises for supply of ETP Sludge from Dec-21. The unit is started consuming the sludge from Dec-21 itself.</p> <p>2. The unit has consumed 43.66 MTs of ETP sludge in December 2021, 395.145 MTs of ETP sludge in January 2022, 665.54 MTs of ETP sludge in February 2022, 604.465 MTs of ETP sludge in March 2022 and 113.38 MTs of ETP sludge in April 2022. In further course, we will take steps to increase the ETP sludge consumption immediately.</p>
26.	The industry shall utilise /enhance the usage of Alternate Fuels and Raw materials (AFR such as Plastic wastes, Hazardous wastes) for Co-processing/Co-incineration in Cement Kiln so as to improve the Thermal Substitution Ratio (TSR). Also the unit shall provide necessary infrastructure facilities such as feeding system, conveyor systems, etc., for co processing to achieve the TSR of 10% during 2022-23 within 3 months and report to the Board.	<p>1. M/s. Development Consultants Private Limited, Kolkata has been arranged to study and submit a Detailed Project Report (DPR) for the installation of AFR feeding system.</p> <p>2. The Consultant has given a Project report at the cost of Rs. 30 Crores. The Report (DPR) is under scrutiny of Board. On approval of board it will be installed at the end of December - 2024.</p> <p>3. In the meantime, we have provided the Bucket elevator, screw conveyor and Wood chipping machine to utilize the AFR in Kiln as Co-processing/Co-incineration. Subsequently, we have fed the AFR at the rate of 0.34% and 0.65% during the month of October-2021 and November-2021 respectively. We have achieved TSR 0.06 % in the Financial year 2021-2022, 5.61% in the Financial year 2022-2023 and 2% in the Financial year 2023-24.</p>

27.	The unit shall immediately take necessary action for providing infrastructure facilities to achieve the TSR as 10% and shall complete the same within 3 months to achieve 10%.	<p>1. M/s. Development Consultants Private Limited, Kolkata has been arranged to study and submit a Detailed Project Report (DPR) for the installation of AFR feeding system.</p> <p>2. The Consultant has given a Project report at the cost of Rs. 30 Crores. The Report (DPR) is under scrutiny of Board. On approval of board it will be installed at the end of December – 2024.</p> <p>3. In the meantime, we have provided the Bucket elevator, screw conveyor and Wood chipping machine to utilize the AFR in Kiln as Co-processing/Co-incineration. Subsequently, we have fed the AFR at the rate of 0.34% and 0.65% during the month of October-2021 and November-2021 respectively. We have achieved TSR 0.06 % in the Financial year 2021-2022, 5.61% in the Financial year 2022-2023 and 2% in the Financial year 2023-24.</p>
28.	The industry shall develop more green belt in the premises by planting more number of tree saplings.	<p>1) The unit has a total plant area of 67.15 Ha. Out of which 22.15 Ha area is covered with green belt that is 33 % of the Total area.</p> <p>2) The unit is planted 13,000 saplings. Further, under TNPCB Kurunkadugal scheme, the unit is planted 1600 saplings inside the plant premises during the financial year 2023-2024.</p>
29.	The unit shall operate the plant without attracting complaints from the nearby Public.	<p>1. The unit is continuously cleaning the roads by Road sweeping machine.</p> <p>2. The unit has utilizing the water tanker lorry to spraying the water in the vehicle movement roads.</p> <p>3. The unit has installed permanent water sprinkler system water sprinklers 61 No's in Coal yard & Clinker yard areas, 11 No's in Limestone crusher (LS-1) area, 7 No's in Existing plant CCR, 8 No's in Existing plant Cement mill, 6 No's in new plant Gypsum shed road and 13 No's in Packing house road. a) The Portable water sprinkler has provided 2 No's in Existing plant Raw mill and cement mill areas b) 1 No in Existing plant Packing house c) 1 No Expansion plant cement mill d) 2 No's in Coal yard & Clinker yard areas.</p> <p>We assure that this kind of lapse will not occur in future.</p>
30.	This consent order does not absolve from obtaining necessary permission / clearance from other Authority or under other Statute as applicable.	The Unit has obtained Permission/Clearance from the Concerned Authorities and Other Statutory.

**COMPLIANCE STATUS REPORT FOR WATER ACT AS PER RENEWAL OF CONSENT
CONDITIONS OF 2022-24**

Special Additional Conditions:

Sl.no	Conditions	Compliance
1.	The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board/National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.	Not applicable. Even though, the unit has taken measures to obtain the No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board.

Additional Conditions:

S. No	CONDITIONS	COMPLIANCE
1.	The Unit shall manufacture only the products for which consent is obtained and shall ensure that the production is within the consented quantity.	The unit is manufacturing only the products which the consent is obtained and the production is within the consented quantity.
2.	The unit shall operate and maintain the Sewage Treatment Plant efficiently and continuously to achieve the Standards prescribed by the Board at all times and the treated sewage shall be utilized for gardening within the premises as reported after meeting standards prescribed by the Board.	As per the Board's prescribed standards, The unit has been operating and maintaining the sewage treatment plant efficiently and continuously. TNPCB has testing sewage water analysis monthly which meets standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016. The report is enclosed in Annexure – VIII.
3.	The industry shall ensure that the sewage either treated or untreated is not discharged outside the premises.	The unit is utilizing STP treated water for gardening and green belt development. The treated or untreated sewage water is not discharged outside the premises.
4.	The unit shall ensure that no trade effluent generated from the process.	The unit does not produce any trade effluent in the cement manufacturing process.
5.	The unit shall increase the consumption of ETP sludge with immediate effect.	1. As directed by TNPCB, 41 MTs of ETP sludge has been procured from M/s. Arunachalaa Enterprises during the month of November 2020. We have made an agreement with M/s. Arunachalaa Enterprises for supply of ETP Sludge from Dec-21. The unit is started consuming the sludge from Dec-21 itself. 2. The unit has consumed 43.66 MTs of ETP sludge in December 2021, 395.145 MTs of ETP sludge in January 2022, 665.54 MTs of ETP sludge in February 2022, 604.465MTs of ETP sludge in March 2022 and 113.38MTs of ETP sludge in April 2022. In further course, we will take steps to increase the ETP sludge consumption immediately.
6.	The industry shall utilise /enhance the usage of Alternate Fuels and Raw materials (AFR such as Plastic wastes, Hazardous wastes) for Co-	1. M/s. Development Consultants Private Limited, Kolkata has been arranged to study and submit a Detailed Project Report (DPR) for the installation of AFR feeding system.

	processing/Co-incineration in Cement Kiln so as to improve the Thermal Substitution Ratio (TSR). Also the unit shall provide necessary infrastructure facilities such as feeding system, conveyor systems, etc., for co processing to achieve the TSR of 10% during 2022-23 within 3 months and report to the Board.	<p>2. The Consultant has given a Project report at the cost of Rs. 30 Crores. The report is under scrutiny of Board. On approval of board it will be installed at the end of December – 2024.</p> <p>3. In the meantime, we have provided the Bucket elevator, screw conveyor and Wood chipping machine to utilize the AFR in Kiln as Co-processing/Co-incineration. Subsequently, we have fed the AFR at the rate of 0.34% and 0.65% during the month of October-2021 and November-2021 respectively. We have achieved TSR 0.06 % in the Financial year 2021-2022, 5.61% in the Financial year 2022-2023 and 2% in the Financial year 2023-24.</p>
7.	The unit shall immediately take necessary action for providing infrastructure facilities to achieve the TSR as 10% and shall complete the same within 3 months to achieve 10%.	<p>1. M/s. Development Consultants Private Limited, Kolkata has been arranged to study and submit a Detailed Project Report (DPR) for the installation of AFR feeding system.</p> <p>2. The Consultant has given a Project report at the cost of Rs. 30 Crores. The Report (DPR) is under scrutiny of Board. On approval of board it will be installed at the end of December – 2024.</p> <p>3. In the meantime, we have provided the Bucket elevator, screw conveyor and Wood chipping machine to utilize the AFR in Kiln as Co-processing/Co-incineration. Subsequently, we have fed the AFR at the rate of 0.34% and 0.65% during the month of October-2021 and November-2021 respectively. We have achieved TSR 0.06 % in the Financial year 2021-2022, 5.61% in the Financial year 2022-2023 and 2% in the Financial year 2023-24.</p>
8.	The unit shall always possess valid NOC for water drawl from the competent Authority.	The unit has applied Renewal of NOC for water drawl in the concerned Authority.
9.	The unit shall continue to develop green belt with native species of trees to attenuate the Air/Noise pollution.	<p>1) The unit has a total plant area of 67.15 Ha. Out of which 22.15 Ha area is covered with green belt that is 33 % of the Total area.</p> <p>2) The unit is planted 13,000 saplings. Further, under TNPCB Kurunkadugal scheme, the unit is planted 1600 saplings inside the plant premises during the financial year 2023-2024.</p>
10.	The unit shall not use “Use and throw away Plastics” such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness within the industry premises. Instead it shall encourage use of eco-friendly alternatives such as banana leaf,	<p>1. The unit is not using ‘use and throw plastics’ such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bags and plastic flags irrespective of thickness, within the industry premises.</p> <p>2. The unit is using eco-friendly alternative such as banana leaf, areca nut palm plate, stainless steel, glass, porcelain plates/cups, cloth bag, jute bag etc.,</p>

	arecanut palm plate, stainless steel glass, porcelain plates cups, cloth bag, jute bags etc.	
11.	The unit shall operate the plant without attracting complaints from the nearby Public.	<p>1. The unit is continuously cleaning the roads by newly purchased Road sweeping machine.</p> <p>2. The unit has been utilizing the water tanker lorry to spraying the water in the vehicle movement roads.</p> <p>3. The unit has installed permanent water sprinkler system water sprinklers 61 No's in Coal yard & Clinker yard areas, 11 No's in Limestone crusher (LS-1) area, 7 No's in Existing plant CCR, 8 No's in Existing plant Cement mill, 6 No's in new plant Gypsum shed road and 13 No's in Packing house road. a) The Portable water sprinkler has provided 2 No's in Existing plant Raw mill and cement mill areas b) 1 No in Existing plant Packing house c) 1 No Expansion plant cement mill d) 2 No's in Coal yard & Clinker yard areas.</p> <p>We assure that this kind of lapse will not occur in the future.</p>
12.	This consent order does not absolve from obtaining necessary permission / clearance from other Authority or under other Statute as applicable.	The Unit has obtained Permission/Clearance from the Concerned Authorities and Other Statutory.

Annexure-III

TANCEM

New Cement Plant Project

Enterprise social commitment works

Sl. No.	Name of work	Place of work	Estimate cost (Rs. in lakhs)	Stage of work
1	Ariyalur Govt. hospital infrastructure facilities work		714	
1(a)	Construction of Additional 200 Bedded Ward with operation Theatre at Ariyalur Block. Government District Head Quarters Hospitals in Ariyalur. District including Electrical Arrangements.	Govt. Hospital, Ariyalur	616	Work completed
	Construction of steam Laundry Building at Ariyalur Government District Head Quarters Hospital in Ariyalur District including Electrical Arrangements.		61	Work completed
	Construction of Waiting Hall at Ariyalur Government District Head Quarters Hospital in Ariyalur District including Electrical Arrangements.		18	Work completed
	Construction of Mortuary Block at Ariyalur Government District Head Quarters Hospital in Ariyalur District including Electrical Arrangements.		19	Work completed
1(b)	Purchase of equipments for District Head Quarters Hospital at Ariyalur.		236	Equipments order by Collectorate through TNMSC was 90% of equipments received by Ariyalur hospital.

2	Infrastructure facilities at Panchayat Union and Government Schools		212	
2.1	Construction of additional class room (2 Units) at Panchayat Union Elementary School, Usenapath, Ariyalur Block.	Usenabath, ariyalur.	12.35	Work completed
2.2	Additional Building (3 Class Rooms) in Panchayat Union Elementary School, Thamaraikulam, Ariyalur Block.	Thamaraikulam, Ariyalur.	16.80	Work completed
2.3	Compound Wall in Panchayat Union Elementary School, Rajiv Nagar, Ariyalur Block.	Rajiv Nagar, Ariyalur.	10.72	Work completed
2.4	Additional Building (3 Class Rooms) in Panchayat Union Elementary School, Venkatakrisnapuram, Ariyalur Block.	Venkatakrisnapuram, Ariyalur	16.80	Work completed.
2.5	Compound Wall in Panchayat Union Elementary School, Ravuthanpatti, Ariyalur Block.	Ravuthanpatti, Ariyalur	9.76	Work completed.
2.6	Compound Wall in Government High School, Manakudi, Ariyalur Block.	Manakudi, Ariyalur	69.38	Work completed.
2.7	Additional Building (GF + 1st F) Government Higher Secondary School, Anandavadi, Senthurai Block.	Anandavadi, Senthurai, Ariyalur.	25.20	work completed
2.8	Providing Bore well and Motor in Panchayat Union Elementary School, Venkatakrisnapuram, Ariyalur Block.	Venkatakrisnapuram, Ariyalur.	3.50	Work completed.
2.9	Providing RO supply in Panchayat Union Elementary School, Thamaraikulam, Ariyalur Block.	Thamaraikulam, Ariyalur.	2.35	Work completed.
2.10	Painting to the existing building in Government High School, Manakudi, Ariyalur Block.	Manakudi, Ariyalur	7.00	Work completed.

2.11	Compound Wall in Panchayat Union Elementary School, Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur	1.06	Work completed.
2.12	Toilet for boys in Panchayat Union Elementary School, Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur	2.50	Work completed.
2.13	Toilet for girls in Panchayat Union Elementary School, Usenabath, Ariyalur Block.	Usenabath, Ariyalur	2.90	Work completed.
2.14	Toilet for girls in Panchayat Union Elementary School, Venkatakrisnapuram, Ariyalur Block.	Venkatakrisnapuram, Ariyalur.	2.90	Work completed.
2.15	Toilet for girls in Panchayat Union Elementary School, Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur.	2.90	Work completed.
2.16	Compound Wall in Panchayat Union Elementary School, Manakudi, Ariyalur Block.	Manakudi, Ariyalur	2.08	Work completed.
2.17	Providing Weathering course to the existing building, Panchayat Union Elementary School, Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur	2.00	Work completed.
2.18	Providing Bore well and Motor in Panchayat Union Elementary School, Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur	3.50	Work completed.
2.19	Construction of Arch in Panchayat Union Elementary School, Usenabath, Ariyalur Block.	Usenabath, Ariyalur.	1.20	Work completed.
2.20	Toilet for boys in Panchayat Union Elementary School, Valajanagaram, Ariyalur Block.	Valajanagaram, Ariyalur	2.50	Work completed.
2.21	Toilet for girls in Panchayat Union Elementary School, Valajanagaram, Ariyalur Block.	Valajanagaram, Ariyalur	2.90	Work completed.

	2.22	Compound Wall in Panchayat Union Elementary School, Venkatakrishnapuram, Ariyalur Block.	Venkatakrishnapuram, Ariyalur	6.30	Work completed.
	2.23	Toilet for boys in Panchayat Union Elementary School, Anandavadi, Sendurai Block, Ariyalur Block.	Anandavadi, Sendurai Ariyalur.	2.50	Work completed.
	2.24	Toilet for girls in Panchayat Union Elementary School, Anandavadi, Sendurai Block, Ariyalur Block.	Anandavadi, Sendurai Ariyalur.	2.90	Work completed.
3	Mass plantation, Formation of Percolation ponds and water harvesting structures			190	
	3.1	Rain water harvesting structure in SanthanaEri – Ravuthanpatti, Ariyalur Block.	Ravuthanpatti, Ariyalur	9.20	Work completed.
	3.2	Rain water harvesting structure in PeriyakuttaiEri – Valajanagaram, Ariyalur Block.	Valajanagaram, Ariyalur	11.85	Work completed.
	3.3	Tree plantation in SanthanaEri Bund – Ravuthanpatti, Ariyalur Block.	Ravuthanpatti, Ariyalur	3.20	Work completed.
	3.4	Rain water harvesting structure in VenkattanSavadiEri – Venkatakrishnapuram, Ariyalur Block.	Venkatakrishnapuram, Ariyalur	10.40	Work completed.
	3.5	Inlet Channel in ChettiEri – Ariyalur Block.	ChettiEri, Ariyalur	19.63	Work completed.
	3.6	Rain water harvesting structure in AyyasamyEri – Kallankurichi, Ariyalur Block.	Kallankurichi, Ariyalur	11.85	Work completed.
	3.7	Rain water harvesting structure in MeesaikaranEri – Thamaraikulam, Ariyalur Block.	Thamaraikulam, Ariyalur	12.50	Work completed.
	3.8	Rain water harvesting structure in Old Eri – Srinivasapuram, Ariyalur Block.	Srinivasapuram, Ariyalur.	10.46	Work completed.

3.9	Rain water harvesting structure in NagammalSavadi - Ariyalur South	Ariyalur South	22.13	Work completed.
3.10	Rain water harvesting structure in VasanEri - Ariyalur South	Ariyalur South	9.00	Work completed.
3.11	Rain water harvesting structure in KombukuzhiKuttai - Ariyalur South	Ariyalur South	7.74	Work completed.
3.12	Rain water harvesting structure in OppakonarEri - Eruthukaranpatti, Ariyalur	Eruthukaranpatti, Ariyalur	7.33	Work completed.
3.13	Rain water harvesting structure in Vadayathankuttai, Ariyalur	Vadayathankuttai, Ariyalur	7.11	Work completed.
3.14	Rain water harvesting structure in PerumalkuttaiEri, PeriyanaGalur, Ariyalur	PeriyanaGalur, Ariyalur	5.81	Work completed.
3.15	Rain water harvesting structure in SeranEri- Srinivasapuram, Ariyalur	Srinivasapuram, Ariyalur	5.05	Work completed.
3.16	Rain water harvesting structure in KalaranEri - Venkadakrishnapuram, Ariyalur	Venkadakrishnapuram Ariyalur	13.76	Work completed.
3.17	Rain water harvesting structure in KalaranEriLingathumedu - Kayarlabath, Ariyalur	Kayarlabath, Ariyalur	11.90	Work completed.
3.18	Rain water harvesting structure in ThelranKuttai - ThamaraiKulam, Ariyalur	ThamaraiKulam, Ariyalur	11.08	Work completed.

Annexure - IV

RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

S.No	CONTENT
1.1	Introduction
1.2	Objective of Plan
1.3.1	Identification of Major Hazards
1.3.2	Scope of Plan
1.3.3	Basis of Plan
1.4	Post Disaster Analysis and Evaluation
1.5	The Availability, Organization and Utilization of resources for emergencies
1.5.1	Incident Controller (IC)
1.5.2	Site Main Controller (SMC)
1.5.3	Essential Worker (EW)
1.5.4	Other Key Personnel
	Safety
	Assembly Points
	Fire Control Arrangements
	Medical Arrangement
	Transportation and Evacuation Arrangement.

1. DISASTER MANAGEMENT PLAN

1.1 INTRODUCTION

An emergency is said to have arisen when operators in the plant are not able to cope up with a potential hazardous situation i.e. loss of control of an incident causes the plant to go beyond its normal operating conditions, thus creating danger. When such an emergency evolves, chain of events affect the normal working within the factory area and / or which may cause injuries ,loss of life, substantial damage to property and environment both inside and outside the factory and a disaster is said to have occurred. The various steps involved in the process of disaster management can be summarized as:

- 1) Minimize risk occurrence (Prevention)
- 2) Rapid control (Emergency Response)
- 3) Effectively Rehabilitate Damaged Areas (Restoration)

Disaster management plan is evolved by careful scrutiny and interlinking of:

- 1) Types and causes of disaster.
- 2) Technical know – how
- 3) Resource availability

1.2 OBJECTIVES OF PLAN

This plan is developed to make best possible use of resources to:

- 1) Rescue the victims and treat them suitably.
- 2) Safeguard others (evacuating them to safer places).
- 3) Contain the incident and control it with minimum damage.
- 4) Identify the persons affected.
- 5) Preserve relevant records and equipment needed as evidence incase on an inquiry.
- 6) Rehabilitate the affected areas.

1.3.1 IDENTIFICATION OF MAJOR HAZARDS

- 1) Fire hazard
- 2) Earthquake hazard

1.3.2 SCOPE OF PLAN

The plan will set into action immediately after a fire occurs inside the plant. However, fire hazard will be restricted to fuel storage area only and hence no major disaster is envisaged.

1.3.3 BASIS OF PLAN

M/s. Tamilnadu Cements corporation Ltd. will prepare an onsite emergency plan. The basic guidelines of the plan are as given below:

1. Informative brochure on emergency will be distributed to each staff member of the plant and telephone numbers of key personnel to be contacted during an emergency will be placed at all the operator placement point in the plant.
2. Company will have a direct tele-link service line with the central control room as well as nearest fire station in case of severe emergency.
3. Workers would be trained regularly on fire hazard drill, which will be organized once in a month by the safety and fire department.
4. Various locations would be covered with fire hydrant system that would be tested and put into operation in such a manner that it remains operational during emergency.
5. 24 hours vehicle for service and in- plant first aid emergency kit would provide.

1.4 POST DISASTER ANALYSIS AND EVALUATION

When an emergency is over, it is desirable to carry out a detailed analysis of the causes of the accident to evaluate the influence of various factors involved and to propose methods to eliminate or minimize them in future simultaneously, the adequacy of the disaster preparedness plan will be evaluated and any short comings will be rectified.

1.5 THE AVAILABILITY, ORGANIZATION, AND UTILIZATION OF RESOURCES FOR EMERGENCIES

In order to maintain emergency response capability, certain facilities must be kept in a state of readiness, and sufficient supplies and equipment must be available. Typical examples are:

1. Emergency operation center
2. Communication equipment
3. Alarm systems
4. Personal protection Equipment
5. Fire fighting facilities ,equipment and supplies
6. Spill and vapour release control equipment and supplies
7. Medical facilities ,equipment and supplies
8. Monitoring systems
9. Transportation systems
10. Security and access control equipment

It is the responsibility of the plant management to ensure that the appropriate equipment and materials are available to respond to their very hazard- specific emergencies at the facility. One of the most important objectives of emergency planning is to create a response organization structure capable of being deployed in the shortest possible time during an emergency. Command and control of an emergency condition encompasses the key management functions necessary to ensure safeguard of the health and safety of employees, as well as the public living in the vicinity. These primary functions are as follow:

1. Detection of the emergency condition
2. Assessment of the condition
3. Classification of the emergency
4. Mitigation of the emergency conditions
5. Notification to management personnel
6. Notification to local ,state and government agencies
7. Activation and response of the necessary onsite and off- site support personnel
8. Continuous assessment and reclassification, as necessary
9. Initiation of protective actions
- 10.Aid to affected personnel
- 11.Recovery and re-entry

The key personnel shall be nominated with special responsibilities according to the laid down procedures and to make the best use of available resources, the key personnel are as under:

1. Alarm raiser
2. Incident controller
3. Site main controller
4. Essential workers
5. Other key personnel

The responsibilities of the above key personnel are as described below:

1.5.1 INCIDENT CONTROLLER (IC)

His responsibilities include:

1. As soon as the sound of siren or bell is heard, he will arrive at the site of incident.
2. Take the charge of the scene of the incident
3. To assess the scale of emergency. If the emergency is minor, he will start to activate on – site plan.
4. As per the incident, direct the essential workers to prevent it by using extinguishers in case of fire; by covering the liquid spillage by sand or suitable materials in case of liquid.

5. Direct the shutdown of the plant or part of the plant and evacuate the plant personnel to assembly point.
6. Direct all operations within the affected areas with the following priorities.
 - (a) Secure the safety of personnel.
 - (b) Minimize loss of material.
 - (c) Minimize damage to plant, property and environment.
7. To search for casualties.
8. To brief site main controller and keep informed of development of situation.
9. To preserve evidence that will be necessary for subsequent inquiry into the cause of emergency and concluding preventive measures.

1.5.1.2 SITE MAIN CONTROLLER (SMC)

He is the head authority of the organization. He will have overall responsibility for directing operating and calling for outside help from emergency control centre.

The site main controller shall wear white helmet for his easy identification .the responsibilities and duties of the site main controller include:

1. Relieve the incident controller of his responsibilities of overall charge of main control.
2. On consultation with incident controller and other key personnel, decide about the type of emergency.
3. To ensure that key personnel are called in.
4. To continuously review and assess possible developments to determine the most probable cause of events.
5. To direct the safe closure of the plant and evacuate the plant incident controller and other key person.

1.5.1.3 ESSENTIAL WORKERS (EW)

As soon as the essential workers hear the emergency siren or any emergency brought to the knowledge, they will first report to the incident controller. The team of essential workers trained in fire fighting and first –aid will be made available in the factory round the clock in all shifts.

Their responsibilities include:

1. To fight fire till a fire brigade takes the charge.
2. To help the fire brigade and mutual aid teams.
3. To do emergency engineering work like isolation of equipment, materials, process, providing temporary by-pass line for safe transfer of materials, urgent repairs and replacement, electrical work etc.

4. To provide emergency services like power, water, lighting, instrument, equipment etc.
5. To move equipment, special vehicles and transport to or from the scene of incident.
6. To provide first aid and medical help.
7. To carry out atmospheric tests and pollution control.

1.5.1.4 OTHER KEY PERSONNEL

Other key personnel are required to provide advice and to implement the decisions taken by the site main controller in the light of information received on the situation from the site emergency.

The responsibilities and duties of key personnel include:

(1) SAFETY:

The safety officer /supervisor will carry out the following:

- a) To provide necessary equipment like Fire Fighting Equipment (FFE) and Personal Protective Equipment (PPE).
- b) To accompany factory inspector during investigation of the emergency.
- c) To train workers /supervisors in safety and safe operating procedures.
- d) To assist the site main controller, incident controller in preparing a brief report of the incidents.

(2) ASSEMBLY POINTS:

The assembly points for gathering non –essential workers / persons will be fixed and will be clearly marked as per the wind direction.

(3) FIRE CONTROL ARRANGEMENTS:

Fire fighting trained personnel will be made available in all the shift. The responsibilities and duties include:

- (a) To fight the fire with available internal Fire Fighting Equipment.
- (b) To provide personal protective Equipment to the team.
- (c) To cordon the area and inform incident controller or site main controller about the development of emergency.
- (d) To trained personnel (essential workers) to use Personal Protective Equipment and Fire Fighting Equipment

(4) MEDICAL ARRANGEMENT:

The responsibilities and duties include:

- a) To provide first aid to the affected persons, and if necessary, send them to hospitals for further treatment.
- b) To keep a list of blood groupings ready and updated.

(5) TRANSPORTATION AND EVACUATION ARRANGEMENT:

For transportation of people, company's vehicles, cars, rickshaws etc. will be utilized. The hazard in the proposed cement plant is mainly associated with cement production phases and results in the form of dust, noise and fire.

The main hazards during the transportation and storing of material are:

- a) The airborne dust created during the storage of material.
- b) The conveyor belts during their normal operation as well as during their maintenance

In order to reduce the risk from airborne dust:

- a) To use dust suction systems.
- b) To implement the necessary procedures for the routine cleaning of the settled dust

In material transport systems there are moving parts that are a constant source of hazard for any persons working near these conveyors during normal operation or during the maintenance activities. For the safe operation of material transportation system all the necessary guards are applied to isolate the moving parts. Additionally where personnel is working at a short distance from the guards, emergency stops are provided within short distance of these operators.

During the normal operation of the transportation systems:

- a) The removal of guards by unauthorized personnel must be prevented.
- b) Any maintenance work during the operation of the transportation system must be avoided.
- c) Removing material during the operation of the conveyors must be avoided.
- d) The cleaning of overflows during operation must be avoided unless the cleaning is done by the conveyor operatives.
- e) The use of unauthorized passageways either over or under the transportation system must be avoided because there is the risk of personnel getting trapped by the conveyor or overflowing material can fall from height.
- f) The overhead bridges must be clean in order to minimize the possibility of the tripping and falling of the personnel performing the checks on the conveyor belts.
- g) Any intervention on the conveyor belt overload systems must be done by authorized personnel



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

Report No: 121/NLS/2023-2024/ Date.18.03.2024

1	Name of the Industry	M/s. Tamil Nadu Cements Corporation Ltd.,		
2	Address of the Industry	Ariyalur Cement Works Ariyalur Taluk, Ariyalur District.		
3	Date of survey	07.03.2024 & 08.03.2024		
4	Consent Order No.	2208243039244		
5	Category	Red/Large		
Type of survey		Ambient	Time of survey	Day
Meteorological Conditions		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.	15.00 to 16.00 Hrs.

SI No	Location	Duration (m)	Distance (m)	Direction	Sound Level-dB(A)		
					L _{eq}	L _{Min}	L _{Max}
1	Near New Coal Crushing Unit	10	400	N	50.3	46.4	62.4
2	Near CAAQ Monitoring Station	10	500	NE	53.4	48.2	64.8
3	Near Oxidation Pond	10	600	ESE	53.0	47.9	63.0
4	Near Admin Building	10	700	SW	52.8	50.0	60.7
5	Near Diesel Bunk	10	800	WNW	49.6	48.7	65.5

M. S. Senthil
18/3/24
Environmental Scientist,

Baraswathi
18/3/24
Deputy Chief Scientific Officers,
AEL, TNPCB, Trichy-15.

ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

SEASONAL ABSTRACT FOR NOISE LEVEL

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Sl. No.	Location	Day time, dB(A) (Mean Leq)	Night time, dB(A) (Mean Leq)
1	Plant Site	55.1	51.4
2	Allinagaram Village	49.3	46.6
3	Venkataramapuram Village	51.5	48.3
4	Srinivasapuram Village	48.7	45.1
5	Kallankurichi Village	47.9	42.5
6	Hastinapuram Village	53.4	47.8
7	Venkatakrishnapuram Village	52.2	48.2
8	Ariyalur Village	47.6	46.7

Annexure - VI

Tamilnadu Cements Corporation Limited, Kairalabad Village, Ariyalur District, Tamil Nadu.	EIA Report
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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012275F
Sample Description	Ambient Air Quality - AAQ1		Sampling date & time: 01.11.2023 & 02.11.2023 - 24 Hourly sampling
Sample drawn By	M/s.R&C Environment Lab,		
Sampling Method	R&C/EEL/LQMS/SOP-041		Test commenced on : 02.11.2023
Report date	08.11.2023		Test completed on : 07.11.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C		Relative Humidity: Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	9.3	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	9.6	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	55.6	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	25.4	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	31.2	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.8	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³- Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

Note: This report relates only to the particular sample submitted for test. Any correction not attested shall invalidate this report. This report shall not be reproduced except in full without our written approval. Sample are not drawn by us unless otherwise stated. Retention period of tested samples 15 days only unless otherwise specified.

R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

ENVIRONMENTAL ENGINEERING LABORATORY
(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012283F
Sample Description	Ambient Air Quality - AAQ1	Sampling date & time:	02.11.2023 & 03.11.2023 - 24 Hourly sampling
Sample drawn By	M/s.R&C Environment Lab.	Test commenced on :	03.11.2023
Sampling Method	R&C/EEL/LQMS/SOP-041	Test completed on :	08.11.2023
Report date	09.11.2023	Instrument Used : Respirable Dust Sampler & Fine Particulate Sampler	
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity: Min - 46%, Max - 64%	

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	9.4	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	10.4	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	56.5	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	26.2	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	31.4	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.4	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

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R&C/EEL/LQMS/QM/46

ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	: M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	: Acknowledgement Receipt number : 3324	Report Number	: TC774223012291F
Sample Description	: Ambient Air Quality - AAQ1	Sampling date & time:	04.11.2023 & 05.11.2023 - 24 Hourly sampling
Sample drawn By	: M/s.R&C Environment Lab.	Test commenced on :	05.11.2023
Sampling Method	: R&C/EEL/LQMS/SOP-041	Test completed on :	11.11.2023
Report date	: 13.11.2023		
Instrument Used	: Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	: Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	8.0	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	8.4	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	54.3	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	24.2	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	30.6	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.2	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

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R&C/EEL/LQMS/QM/46

Tamilnadu Cements Corporation Limited, Kairalabad Village, Ariyalur District, Tamil Nadu.	EIA Report
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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANGEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012299F
Sample Description	Ambient Air Quality - AAQ1		
Sample drawn By	M/s.R&C Environment Lab.	Sampling date & time:	06.11.2023 & 07.11.2023 - 24 Hourly sampling
Sampling Method	R&C/EEL/LQMS/SOP-041	Test commenced on :	07.11.2023
Report date	14.11.2023	Test completed on :	13.11.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	9.7	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	10.4	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	56.8	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	26.6	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	31.8	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.7	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

Note: This report relates only to the particular sample submitted for test. Any correction not attested shall invalidate this report. This report shall not be reproduced except in full without our written approval. Sample are not drawn by us unless otherwise stated. Retention period of tested samples 15 days only unless otherwise specified.

R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012307F
Sample Description	Ambient Air Quality - AAQ1		14.11.2023 & 15.11.2023 - 24 Hourly sampling
Sample drawn By	M/s.R&C Environment Lab.		Sampling date & time:
Sampling Method	R&C/EEL/LQMS/SOP-041	Test commenced on	15.11.2023
Report date	21.11.2023	Test completed on	20.11.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	8.5	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	9.5	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	54.4	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	25.3	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	30.8	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.4	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Delection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

Note: This report relates only to the particular sample submitted for test. Any correction not attested shall invalidate this report. This report shall not be reproduced except in full without our written approval. Sample are not drawn by us unless otherwise stated. Retention period of tested samples 15 days only unless otherwise specified.

R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANGEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012315F
Sample Description	Ambient Air Quality - AAQ1		Sampling date & time: 15.11.2023 & 16.11.2023 - 24 Hourly sampling
Sample drawn By	M/s.R&C Environment Lab.		
Sampling Method	R&C/EEL/LQMS/SOP-041	Test commenced on	16.11.2023
Report date	22.11.2023	Test completed on	21.11.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	10.1	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	10.7	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	56.8	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	26.9	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	31.2	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.6	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

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R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANGEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012323F
Sample Description	Ambient Air Quality - AAQ1		
Sample drawn By	M/s.R&C Environment Lab.	Sampling date & time:	25.11.2023 & 26.11.2023 - 24 Hourly sampling
Sampling Method	R&C/EEL/LQMS/SOP-041	Test commenced on :	26.11.2023
Report date	02.12.2023	Test completed on :	01.12.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	9.7	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	10.3	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	56.7	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	26.5	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	30.8	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.2	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³ - Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

Note: This report relates only to the particular sample submitted for test. Any correction not attested shall invalidate this report. This report shall not be reproduced except in full without our written approval. Sample are not drawn by us unless otherwise stated. Retention period of tested samples 15 days only unless otherwise specified.

R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

Tamilnadu Cements Corporation Limited, Kalralabad Village, Ariyalur District, Tamil Nadu.	EIA Report
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ENVIRONMENTAL ENGINEERING LABORATORY

(Recognized by Central Pollution Control Board/MoEF/Accredited By NABL)

TEST REPORT

Issued to	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Reference	Acknowledgement Receipt number : 3324	Report Number	TC774223012331F
Sample Description	Ambient Air Quality - AAQ1		Sampling date & time: 27.11.2023 & 28.11.2023 - 24 Hourly sampling
Sample drawn By	M/s.R&C Environment Lab.		
Sampling Method	R&C/EEL/LQMS/SOP-041	Test commenced on	28.11.2023
Report date	04.12.2023	Test completed on	02.12.2023
Instrument Used	Respirable Dust Sampler & Fine Particulate Sampler		
Ambient Temp	Min - 26.0°C, Max - 34.0°C	Relative Humidity:	Min - 46%, Max - 64%

S. No.	Parameters	RESULT (Plant site)	Unit	Test Method	NAAQ Standards
1	Sulphur Dioxide (SO ₂)	8.3	µg/m ³	IS: 5182(P-2) Reaff:2022	80
2	Nitrogen Dioxide (NO ₂)	8.6	µg/m ³	IS: 5182(P-6) Reaff:2022	80
3	PM ₁₀	54.4	µg/m ³	IS: 5182(P-23) Reaff:2022	100
4	PM _{2.5}	24.8	µg/m ³	IS: 5182(P-24) Reaff:2019	60
5	Carbon Monoxide (CO)	BDL (DL:1)	mg/m ³	IS: 5182(P-10) Reaff:2019	2
6	Lead (Pb)	BDL (DL:0.05)	µg/m ³	IS: 5182(P-22) Reaff:2019	1
7	Ozone (O ₃)	30.6	µg/m ³	IS: 5182(P-9) Reaff:2019	180
8	Ammonia (NH ₃)	9.7	µg/m ³	IS: 5182(P-25) Reaff:2018	400
9	Benzene (C ₆ H ₆)	BDL (DL:1)	µg/m ³	IS: 5182(P-11) Reaff:2022	5
10	Benzo(a)Pyrene (C ₂₀ H ₁₂)	BDL (DL:0.01)	ng/m ³	IS: 5182(P-12) Reaff:2019	1
11	Arsenic (As)	BDL (DL:1)	ng/m ³	APHA 3 rd Edn. (AP)	6
12	Nickel (Ni)	BDL (DL:5)	ng/m ³	IS: 5182(P-26) Reaff:2020	20
13	Mercury (Hg)	BDL (DL:1)	µg/m ³	APHA 3 rd Edn. (AP) / EPA Method IO-5	100

Note: PM₁₀-Particulate Matter ≤10 microns, PM_{2.5}-Particulate Matter ≤2.5 microns, BDL - Below the Detectable Limit, D.L - Detection Limit, µg/m³- Micrograms per cubic meter, mg/m³ - Milligrams Per cubic meter, ng/m³ - Nano grams Per cubic meter

*** End of Report***

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R&C/EEL/LQMS/QM/46

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

Annexure - VI

Tamilnadu Cements Corporation Limited, Kairalabad Village,
Ariyalur District, Tamil Nadu.

EIA Report

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012472F	Report Date	18.11.2023				
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 13,14,15	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 24 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Raw Mill KILN Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample A	Sample B	Sample C		
1	Stack Height	-	115.2	115.2	115.2	m	-
2	Stack Diameter	Circular Duct	3.35	3.35	3.35	m	-
3	Stack Temperature	IS 11255,Part 3-2018	154.2	156.4	152.6	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	7.2	7.0	7.4	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	164201.81	158305.40	168293.85	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	24.4	23.2	22.6	mg/Nm ³	30
<p>Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.</p> <p>Note: m - metre, mg/Nm³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm³/hr - Normal cubic metre per hour, °C - Degree Centigrade</p>							

**** End of the Report ****

GREEN CIRCLE, INC. Vadodara, Gujarat, INDIA.

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012473F	Report Date	18.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	08.11.2023	Sample Received on	08.11.2023
Sampling Consumable	Thimble - 18,19,20	Test Commenced on	08.11.2023
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023
Sampling Method	IS : 11255	Vol. of Air Sampled - 24 lpm	

RESULTS

S. No.	PARAMETER	TEST METHOD	Raw Mill KILN Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample D	Sample E	Sample F		
1	Stack Height	-	115.2	115.2	115.2	m	-
2	Stack Diameter	Circular Duct	3.35	3.35	3.35	m	-
3	Stack Temperature	IS 11255,Part 3-2018	156.2	154.4	153.2	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	7.2	7.4	7.2	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	163436.65	168134.54	163514.85	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	23.2	24.6	22.6	mg/Nm ³	30

Remarks :

The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.

Note: m - metre, mg/Nm³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm³/hr - Normal cubic metre per hour, °C - Degree Centigrade

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012478F			Report Date	18.11.2023		
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble – 10,11,12	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test		Test Completed on	17.11.2023			
Sampling Method	IS : 11255		Vol. of Air Sampled – 20 lpm				
RESULTS							
S. No.	PARAMETER	TEST METHOD	Coal Mill Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample A	Sample B	Sample C		
1	Stack Height	-	55.9	55.9	55.9	m	-
2	Stack Diameter	Circular Duct	1.0	1.0	1.0	m	-
3	Stack Temperature	IS 11255,Part 3-2018	58.6	59.4	60.2	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	22.4	21.8	20.6	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	58643.59	56749.96	53322.53	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	26.2	26.8	27.0	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA. Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012479F	Report Date	18.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	08.11.2023	Sample Received on	08.11.2023
Sampling Consumable	Thimble - 30,31,32	Test Commenced on	08.11.2023
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023
Sampling Method	IS : 11255	Vol. of Air Sampled - 20 lpm	

RESULTS

S. No.	PARAMETER	TEST METHOD	Coal Mill Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample D	Sample E	Sample F		
1	Stack Height	-	55.9	55.9	55.9	m	-
2	Stack Diameter	Circular Duct	1.0	1.0	1.0	m	-
3	Stack Temperature	IS 11255,Part 3-2018	58.2	59.4	58.6	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	23.2	22.6	21.4	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	60811.36	58832.53	55660.59	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	26.2	27.0	26.4	mg/Nm ³	30

Remarks :

The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.

Note: m - metre, mg/Nm³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm³/hr - Normal cubic metre per hour, °C - Degree Centigrade

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012470F	Report Date	18.11.2023				
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 01,02,03	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 26 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cooler Vent Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample A	Sample B	Sample C		
1	Stack Height	-	41.0	41.0	41.0	m	-
2	Stack Diameter	Circular Duct	2.5	2.5	2.5	m	-
3	Stack Temperature	IS 11255,Part 3-2018	182.5	184.4	185.2	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	7.6	7.5	7.6	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	90529.95	88677.87	89410.20	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	23.2	23.8	22.6	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.							
Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012471F	Report Date	18.11.2023				
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANGEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 04,05,06	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 26 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cooler Vent Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample D	Sample E	Sample F		
1	Stack Height	-	41.0	41.0	41.0	m	-
2	Stack Diameter	Circular Duct	2.5	2.5	2.5	m	-
3	Stack Temperature	IS 11255,Part 3-2018	183.2	186.4	182.6	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	7.6	7.4	7.5	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	90391.04	87114.58	88737.28	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	22.6	23.2	24.0	mg/Nm ³	30
<p>Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.</p> <p>Note: m - metre, mg/Nm³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm³/hr - Normal cubic metre per hour, °C - Degree Centigrade</p>							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012476F	Report Date	18.11.2023				
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 22,23,24	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 22 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cement Mill Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample A	Sample B	Sample C		
1	Stack Height	-	44.0	44.0	44.0	m	-
2	Stack Diameter	Circular Duct	1.6	1.6	1.6	m	-
3	Stack Temperature	IS 11255,Part 3-2018	140.2	142.4	140.8	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	15.6	16.0	15.4	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	83905.67	85322.50	82171.03	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	22.6	23.2	22.8	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA. Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012477F			Report Date	18.11.2023		
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 07,08,09	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 22 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cement Mill Expn. (Repeatability)			UNIT	Limits as per EPA
			Sample D	Sample E	Sample F		
1	Stack Height	-	44.0	44.0	44.0	m	-
2	Stack Diameter	Circular Duct	1.6	1.6	1.6	m	-
3	Stack Temperature	IS 11255,Part 3-2018	141.0	140.4	142.2	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	15.6	15.2	15.4	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	83743.53	81448.52	81893.96	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	21.6	22.0	21.2	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA. Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012474F			Report Date	18.11.2023		
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 16,17,21	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test		Test Completed on	17.11.2023			
Sampling Method	IS : 11255		Vol. of Air Sampled - 18 lpm				
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cement Mill Existing (Repeatability)			UNIT	Limits as per EPA
			Sample A	Sample B	Sample C		
1	Stack Height	-	25.8	25.8	25.8	m	-
2	Stack Diameter	Circular Duct	0.89	0.89	0.89	m	-
3	Stack Temperature	IS 11255,Part 3-2018	80.2	82.4	81.6	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	17.6	17.8	18.0	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	34265.66	34328.33	34678.66	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	27.2	26.4	25.6	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA.							
Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012475F	Report Date	18.11.2023				
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.						
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363				
Sample Collection date	08.11.2023	Sample Received on	08.11.2023				
Sampling Consumable	Thimble - 25,26,27	Test Commenced on	08.11.2023				
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023				
Sampling Method	IS : 11255	Vol. of Air Sampled - 18 lpm					
RESULTS							
S. No.	PARAMETER	TEST METHOD	Cement Mill Existing (Repeatability)			UNIT	Limits as per EPA
			Sample D	Sample E	Sample F		
1	Stack Height	-	25.8	25.8	25.8	m	-
2	Stack Diameter	Circular Duct	0.89	0.89	0.89	m	-
3	Stack Temperature	IS 11255,Part 3-2018	81.4	80.6	82.4	°C	-
4	Gas Velocity	IS 11255,Part 3-2018	18.2	17.4	17.8	m/sec	-
5	Gas Discharge	IS 11255,Part 3-2018	35313.82	33727.73	34216.15	Nm ³ /hr	-
6	Particulate Matter	IS 11255,Part 1-2019	27.4	25.6	26.6	mg/Nm ³	30
Remarks : The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report. Hyphen(-) denotes limits not provided by EPA. Note: m - metre, mg/Nm ³ - Milligram Per Normal cubic metre, m/sec - metre per second, Nm ³ /hr - Normal cubic metre per hour, °C - Degree Centigrade							

**** End of the Report ****

TEST REPORT OF PARTICULATE MATTER PERFORMANCE IN STACK

Project: Tamil Nadu Cements Corporation Ltd., Ariyalur.

Season: Post Monsoon

Period : October 2023 – December 2023

Report Number	TC7742230012480F	Report Date	18.11.2023
Customer Name & Address	M/s.TAMILNADU CEMENTS CORPORATION LTD., (TANCEM), Ariyalur Cement Factory, Ariyalur, Tamil Nadu - 621 729.		
Sample Drawn by	M/s. R&C Environment Lab.	Sample Reference No.	EELAB/3363
Sample Collection date	08.11.2023	Sample Received on	08.11.2023
Sampling Consumable	Thimble - 28,29,33,34,35	Test Commenced on	08.11.2023
Sample Description	Stack Emission - Particulate Matter Performance Test	Test Completed on	17.11.2023
Sampling Method	IS : 11255	Vol. of Air Sampled - 20 lpm	

RESULTS

S. No.	Location	RESULT - Parameter	
		Arsenic, As (mg/Nm ³)	Mercury, Hg (mg/Nm ³)
1	Expansion Cooler Vent	BDL (DL - 0.01)	BDL (DL - 0.01)
2	Expansion Raw Mill Kiln	BDL (DL - 0.01)	BDL (DL - 0.01)
3	Existing Cement Mill	BDL (DL - 0.01)	BDL (DL - 0.01)
4	Expansion Cement Mill	BDL (DL - 0.01)	BDL (DL - 0.01)
5	Expansion Coal Mill	BDL (DL - 0.01)	BDL (DL - 0.01)
EPA Limits		0.05	0.05
Test Methodology		EPA Method 0060	

Remarks :

The sample was collected and analysed as per IS methods. The values are found to well within the stipulated limits for which the norms are mentioned in the report.

Note: BDL - Below the Detectable Limit, DL - Detection Limit, mg/Nm³ - Milligram Per Normal cubic metre.

**** End of the Report ****



Tamil Nadu Pollution Control Board
Ambient Air Quality Survey Report

Report No: 121 /AAQS/2023-2024/ Date.18.03.2024

1. Name Address of the Industry : M/s. Tamil Nadu Cements Corporation Ltd.,
Ariyalur Cement Works
Ariyalur Taluk,
Ariyalur District.
3. Date of survey : 07.03.2024 & 08.03.2024
4. Duration of survey : 24 hours
5. Category : Red/Large
6. Consent Order No : 2208243039244

Ambient Temperature (°C)	Min	Max	Relative Humidity (%)	Min	Max
	26	38		27	70
Weather Condition	Clear Sky		Rain Fall (mm)	Nil	
Predominant Wind Direction	NE to SW		Mean Wind Speed (Km/hr)	7.0 km/hr	

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 top of scaffolding Near New Coal Crushing Unit	N	400	3.0	76	16.7	20.4
2.	On top of scaffolding Near CAAQ Monitoring Station	NE	500	3.0	68	15.3	19.0
3.	On top of scaffolding near Oxidation Pond	ESE	600	3.0	84	18.2	22.3
4.	On top of scaffolding near Admin Building	SW	700	3.0	89	20.1	24.6
5.	On top of scaffolding near Diesel Bunk	WNW	800	3.0	78	17.6	20.8

[Signature]
18/3/24
Environmental Scientist,

[Signature]
18/3/24
Deputy Chief Scientific Officers,
AEL, TNPCB, Trichy-15.



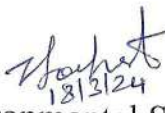
Tamil Nadu Pollution Control Board
Stack Monitoring Survey Report of Analysis


Report No : 121/SM/2023-24/ Date : 18.03.2024

1. Name and Address of the Industry : M/s.Tamil Nadu Cements Corporation Ltd.,
Ariyalur Cement Works
Ariyalur Taluk,
Ariyalur District
2. Date of Survey : 07.03.2024 & 08.03.2024
3. Consent Order No : 2208243039244
4. Category : Red/ Large

Stack Analysis Report

Sl. No	Stack attached to	Stack Temp °K	Velocity in (M/sec)	Discharge rate in (Nm ³ /hr)	Pollutants (mg/Nm ³)				
					PM	SO ₂	NO _x	CO PPM	O ₂ %
1	Raw Mill Kiln- New APC: Bag Filter Fuel: Coal	405	14.3	335238	24	89	251	96	11.0
2	Coal Mill-New APC: Bag Filter	343	14.0	34698	27	84	212	-	-
3	Cooler vent – New APC :ESP	398	15.2	201096	19	-	-	-	-
4	Cement Mill-New APC :Bag Filter	361	11.4	68373	25	-	-	-	-
5	Lime Stone Crusher APC: Bag Filter	310	10.6	36275	21	-	-	-	-
6.	DG Set 2500 KVA-I Fuel:HSD	413	12.2	5376	26	27	331	-	-
7.	DG Set 2500 KVA-II Fuel:HSD	387	13.0	6126	28	30	340	-	-
8.	Cement Mill-Old APC :Bag Filter	353	14.3	27130	28	-	-	-	-


18/3/24
Environmental Scientist,


18/3/24
Deputy Chief Scientific Officers,
AEL, TNPCB, Trichy-15.

Annexure - VI**Average Report****Industry****TAMILNADU CEMENTS CORPORATION LTD****Station****AAQMS_1****Avg Period****From: 01-Oct-2023 To: 31-Oct-2023****Date****Parameters****PM10(ug/m3)****PM2.5(ug/m3)****SO2(ug/m3)****NOx(ug/m3)****CO(ug/m3)**

01-10-2023

59.5

26.7

12.08

14.4

809.2

02-10-2023

34.7

15.5

22.62

380.3

357.9

03-10-2023

37.2

16.7

23.76

188.8

313.1

04-10-2023

38.6

17.3

12.81

1.4

133.4

05-10-2023

35.1

15.7

9.35

6.5

241.9

06-10-2023

42.7

19.2

15.30

18.7

352.2

07-10-2023

33.8

15.1

20.54

13.6

227.3

08-10-2023

28.7

12.9

26.71

8.3

174.9

09-10-2023

28.6

12.8

26.53

8.3

174.2

10-10-2023

28.8

12.9

26.52

8.3

175.5

11-10-2023

40.6

18.2

19.07

10.3

285.4

12-10-2023

39.0

17.5

20.23

7.3

509.6

13-10-2023

33.5

15.0

23.56

4.8

602.0

14-10-2023

46.8

21.0

14.43

16.1

450.2

15-10-2023

52.7

23.6

10.21

21.2

377.2

16-10-2023

38.9

16.9

15.87

16.8

483.3

17-10-2023

48.1

21.3

16.80

11.2

314.9

18-10-2023

42.4

19.0

10.66

13.8

358.2

19-10-2023

41.7

18.7

14.37

9.4

264.2

20-10-2023

39.2

17.6

15.66

15.7

440.2

21-10-2023

40.5

18.1

15.84

20.3

480.0

22-10-2023

33.7

15.1

24.49

25.7

496.5

23-10-2023

33.4

15.0

24.72

25.5

492.0

24-10-2023

38.4

17.2

22.27

20.0

434.1

25-10-2023

41.7

18.7

13.45

12.5

379.0

26-10-2023

40.4

18.1

16.84

8.9

393.8

27-10-2023

41.5

18.6

15.90

11.6

469.5

28-10-2023

34.4

15.4

22.97

16.2

420.4

29-10-2023

20.6

9.2

26.40

16.0

538.1

30-10-2023

36.1

16.2

16.91

11.4

358.0

31-10-2023

42.0

18.8

18.37

17.3

487.4

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_1				
Avg Period	From: 01-NOV-2023 To: 30-NOV-2023				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NOx(ug/m3)	CO(ug/m3)
01-11-2023	49.3	22.1	18.56	17.0	410.8
02-11-2023	45.1	20.2	17.87	16.0	332.8
03-11-2023	51.6	23.1	20.73	15.9	375.8
04-11-2023	32.6	14.6	10.75	8.8	247.5
05-11-2023	24.0	10.8	6.19	4.8	134.9
06-11-2023	21.9	9.8	14.60	9.2	337.1
07-11-2023	14.4	6.5	19.06	10.7	449.2
08-11-2023	36.2	16.2	17.06	12.1	583.4
09-11-2023	43.8	19.6	28.56	14.7	486.4
10-11-2023	52.0	23.3	16.20	6.1	413.5
11-11-2023	68.2	19.8	14.84	11.6	519.0
12-11-2023	77.5	15.2	18.96	16.2	453.7
13-11-2023	54.0	14.3	19.13	16.1	271.9
14-11-2023	48.4	19.1	16.37	17.2	309.4
15-11-2023	49.8	22.3	7.68	15.3	429.4
16-11-2023	45.4	20.4	21.77	12.9	430.7
17-11-2023	49.0	21.9	24.69	18.7	404.1
18-11-2023	44.4	19.9	11.09	17.7	269.4
19-11-2023	48.2	21.6	11.11	22.5	270.9
20-11-2023	37.1	16.6	21.60	22.5	270.5
21-11-2023	46.1	20.6	27.31	19.9	416.8
22-11-2023	48.8	21.3	15.08	9.7	465.2
23-11-2023	36.3	16.3	19.65	6.2	467.0
24-11-2023	51.2	22.9	24.55	6.2	585.9
25-11-2023	46.7	20.9	14.92	12.8	530.0
26-11-2023	28.3	12.7	21.05	16.8	130.5
27-11-2023	37.4	16.8	27.84	17.2	334.0
28-11-2023	56.6	25.4	15.63	21.8	519.3
29-11-2023	31.2	14.0	21.57	16.2	254.5
30-11-2023	38.3	22.7	21.54	12.9	386.8

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_1				
Avg Period	From: 01-DEC-2023 To: 31-DEC-2023				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NOx(ug/m3)	CO(ug/m3)
01-12-2023	47.6	29.9	18.92	15.9	446.6
02-12-2023	56.0	25.6	16.25	11.7	376.8
03-12-2023	60.6	21.6	14.99	9.2	338.8
04-12-2023	35.5	15.9	25.10	12.0	249.6
05-12-2023	46.7	20.9	26.49	13.7	89.9
06-12-2023	45.0	20.2	22.47	20.3	276.1
07-12-2023	46.7	20.9	19.09	6.7	745.2
08-12-2023	44.9	20.2	16.37	3.2	475.3
09-12-2023	44.7	20.0	17.15	12.2	411.3
10-12-2023	36.6	16.4	11.95	20.3	468.2
11-12-2023	30.0	13.4	22.87	11.2	630.0
12-12-2023	46.8	20.9	20.72	17.7	434.6
13-12-2023	52.0	23.3	19.36	17.3	234.1
14-12-2023	37.0	16.4	16.66	13.1	179.2
15-12-2023	40.5	18.2	19.42	9.9	390.8
16-12-2023	41.9	18.8	18.50	10.2	476.7
17-12-2023	36.0	16.1	9.05	18.4	328.7
18-12-2023	53.9	24.2	25.79	13.3	300.9
19-12-2023	49.5	22.4	10.66	15.8	460.1
20-12-2023	43.8	19.7	17.30	20.8	449.4
21-12-2023	43.5	19.5	20.59	16.5	607.6
22-12-2023	47.7	21.4	17.97	15.5	682.8
23-12-2023	54.8	24.5	20.31	19.6	401.4
24-12-2023	64.3	28.9	13.72	11.2	314.1
25-12-2023	39.1	17.6	18.35	15.7	438.6
26-12-2023	52.8	23.6	14.75	11.9	269.8
27-12-2023	48.1	21.6	19.02	14.8	402.6
28-12-2023	60.3	27.0	27.69	16.6	374.7
29-12-2023	57.3	25.3	22.23	15.0	373.9
30-12-2023	40.8	17.4	12.89	12.0	654.6
31-12-2023	55.6	24.6	9.26	8.7	699.7

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_1				
Avg Period	From: 01-JAN-2024 To: 31-JAN-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NOx(ug/m3)	CO(ug/m3)
01-01-2024	57.5	25.7	11.23	10.3	628.1
02-01-2024	51.3	23.0	19.86	17.8	482.8
03-01-2024	44.8	20.1	22.21	13.8	542.6
04-01-2024	44.0	21.7	17.63	18.8	362.0
05-01-2024	58.6	30.2	21.40	18.5	398.7
06-01-2024	60.4	28.5	24.46	14.3	392.6
07-01-2024	48.3	21.6	18.41	20.3	108.5
08-01-2024	42.1	18.9	14.94	18.7	317.9
09-01-2024	42.5	19.0	14.16	15.1	567.3
10-01-2024	67.2	30.1	25.93	15.1	187.4
11-01-2024	55.7	25.0	19.54	17.2	327.0
12-01-2024	38.2	17.1	11.16	19.8	596.6
13-01-2024	43.3	19.4	21.22	12.8	560.0
14-01-2024	52.0	23.3	13.08	20.1	355.6
15-01-2024	59.0	26.4	7.20	26.3	169.0
16-01-2024	46.6	20.9	14.06	22.4	377.1
17-01-2024	52.8	23.7	19.12	18.0	538.7
18-01-2024	47.8	21.4	19.55	23.2	360.0
19-01-2024	39.1	17.5	25.68	23.1	358.1
20-01-2024	46.9	21.0	25.91	20.1	448.3
21-01-2024	60.1	26.9	24.33	14.2	593.0
22-01-2024	53.9	24.1	12.97	18.9	620.5
23-01-2024	67.3	30.2	12.90	20.9	946.2
24-01-2024	46.5	20.8	21.20	15.1	544.6
25-01-2024	55.3	24.5	17.44	14.5	453.3
26-01-2024	67.4	30.2	12.20	16.1	541.2
27-01-2024	67.8	30.3	12.26	16.1	543.9
28-01-2024	67.6	30.3	12.22	16.1	542.6
29-01-2024	54.3	24.4	17.91	11.4	298.6
30-01-2024	42.0	18.9	25.59	6.4	134.8
31-01-2024	38.5	17.3	27.84	6.4	474.7

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_1				
Avg Period	From: 01-FEB-2024 To: 29-FEB-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NOx(ug/m3)	CO(ug/m3)
01-02-2024	61.2	27.4	26.86	21.6	566.3
02-02-2024	48.0	21.5	12.92	16.0	202.3
03-02-2024	44.8	20.1	18.39	15.0	278.1
04-02-2024	38.5	17.2	29.64	12.9	451.1
05-02-2024	38.2	17.1	29.30	12.7	447.4
06-02-2024	54.1	24.3	21.60	19.9	531.6
07-02-2024	55.4	24.8	24.46	24.1	416.1
08-02-2024	54.6	24.5	22.24	18.7	421.1
09-02-2024	44.9	20.1	22.39	18.3	309.2
10-02-2024	55.1	24.6	29.53	22.3	149.3
11-02-2024	67.0	30.0	29.45	22.4	225.9
12-02-2024	59.5	28.4	25.85	19.9	307.4
13-02-2024	43.5	19.5	20.41	11.1	623.5
14-02-2024	55.9	25.0	27.43	12.2	573.1
15-02-2024	50.8	22.5	20.88	22.9	148.7
16-02-2024	57.7	25.9	24.74	23.2	148.8
17-02-2024	54.7	24.5	21.45	20.2	341.4
18-02-2024	47.8	21.4	15.28	14.2	713.4
19-02-2024	52.5	23.5	20.07	15.9	542.8
20-02-2024	62.4	27.9	29.21	19.5	197.8
21-02-2024	60.2	27.0	27.52	19.0	216.9
22-02-2024	46.3	20.8	17.10	14.5	451.8
23-02-2024	48.1	21.6	26.28	8.0	305.8
24-02-2024	44.7	21.4	31.49	3.2	196.7
25-02-2024	43.4	23.0	26.95	6.8	241.4
26-02-2024	67.2	30.1	4.96	24.0	449.7
27-02-2024	49.1	22.0	13.67	18.0	587.0
28-02-2024	52.2	23.4	23.78	14.4	674.0
29-02-2024	51.7	23.2	21.67	10.0	759.6

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_1				
Avg Period	From: 01-MAR-2024 To: 31-MAR-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NOx(ug/m3)	CO(ug/m3)
01-03-2024	42.8	19.0	20.77	12.9	619.6
02-03-2024	60.1	27.0	25.52	16.2	512.2
03-03-2024	62.6	28.1	29.31	14.0	595.9
04-03-2024	62.1	27.8	28.96	13.8	591.3
05-03-2024	51.4	22.6	21.78	12.3	651.4
06-03-2024	43.2	17.7	16.05	7.2	814.4
07-03-2024	65.2	27.4	38.71	14.7	732.5
08-03-2024	67.8	28.6	47.61	24.6	575.5
09-03-2024	61.0	26.2	40.10	23.5	656.1
10-03-2024	48.2	21.6	27.04	21.2	799.1
11-03-2024	39.4	17.6	27.23	17.9	691.1
12-03-2024	29.2	13.1	26.99	12.0	500.6
13-03-2024	46.7	20.9	19.22	17.9	337.5
14-03-2024	54.2	24.3	21.89	18.9	391.6
15-03-2024	48.2	21.6	27.07	16.1	496.7
16-03-2024	47.9	21.4	26.91	16.0	493.4
17-03-2024	45.3	20.3	23.41	14.9	447.0
18-03-2024	47.9	21.5	25.08	9.6	224.0
19-03-2024	58.1	25.9	37.43	9.7	226.8
20-03-2024	50.9	22.8	29.20	14.1	552.9
21-03-2024	44.8	20.1	24.90	15.9	681.8
22-03-2024	42.9	19.2	30.08	12.8	451.2
23-03-2024	43.5	19.5	22.68	15.0	404.8
24-03-2024	62.1	27.8	7.88	19.1	313.5
25-03-2024	57.9	25.9	11.50	18.2	360.5
26-03-2024	34.4	15.4	23.35	19.6	280.2
27-03-2024	23.7	10.6	26.41	22.2	146.8
28-03-2024	52.3	23.5	26.19	16.8	328.7
29-03-2024	58.8	26.3	23.83	12.8	451.0
30-03-2024	41.2	18.5	15.56	17.8	723.6
31-03-2024	54.6	24.5	25.14	30.8	1077.8

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-Oct-2023 To: 31-Oct-2023				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-10-2023	29.9	13.8	44.1	15.8	164.9
02-10-2023	39.0	20.5	21.2	12.9	304.9
03-10-2023	35.6	17.7	13.0	11.9	266.1
04-10-2023	25.0	11.6	13.1	11.9	350.0
05-10-2023	28.5	13.2	17.2	14.8	351.8
06-10-2023	41.9	13.7	20.3	20.0	212.1
07-10-2023	42.0	10.3	17.5	20.0	212.5
08-10-2023	42.1	10.3	17.7	20.0	212.6
09-10-2023	42.1	10.3	17.4	20.0	212.7
10-10-2023	42.2	10.3	17.5	20.1	213.0
11-10-2023	35.5	8.9	12.9	12.8	135.9
12-10-2023	40.7	17.4	24.9	20.3	398.2
13-10-2023	46.0	22.8	34.3	27.3	578.6
14-10-2023	37.7	17.9	23.5	18.9	506.7
15-10-2023	33.5	15.4	18.5	14.8	469.4
16-10-2023	28.8	13.3	13.3	10.8	529.7
17-10-2023	36.0	16.5	24.5	15.7	294.7
18-10-2023	32.1	14.8	22.3	16.5	309.4
19-10-2023	35.1	16.1	24.0	19.9	446.2
20-10-2023	29.9	13.8	20.4	16.3	314.8
21-10-2023	45.0	20.5	9.9	19.3	124.6
22-10-2023	59.0	26.6	7.6	24.1	71.0
23-10-2023	59.0	26.6	7.6	24.1	71.0
24-10-2023	49.6	22.5	14.4	18.3	220.4
25-10-2023	28.1	13.1	19.0	8.0	334.4
26-10-2023	33.5	16.0	17.4	7.0	279.8
27-10-2023	37.3	17.1	21.9	16.4	222.8
28-10-2023	25.9	12.1	12.3	10.5	453.4
29-10-2023	16.9	8.1	5.0	4.0	603.9
30-10-2023	31.2	14.4	25.5	12.3	377.3
31-10-2023	36.6	16.8	39.8	16.0	144.1

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-NOV-2023 To: 30-NOV-2023				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-11-2023	42.2	19.2	35.2	14.2	337.0
02-11-2023	39.6	18.1	15.2	19.5	218.0
03-11-2023	50.5	22.9	9.9	26.1	141.8
04-11-2023	31.4	14.5	29.0	16.3	362.5
05-11-2023	16.7	8.0	42.7	8.8	529.0
06-11-2023	31.4	14.5	31.3	16.0	428.4
07-11-2023	42.1	19.2	25.1	20.0	354.3
08-11-2023	44.0	20.0	32.5	19.9	379.8
09-11-2023	52.7	23.9	36.6	22.6	484.6
10-11-2023	47.1	21.4	16.5	17.9	261.2
11-11-2023	46.5	21.2	18.8	15.3	421.2
12-11-2023	42.0	19.1	29.9	20.0	509.9
13-11-2023	33.4	15.4	30.1	26.7	511.8
14-11-2023	35.1	16.1	24.3	25.2	436.6
15-11-2023	39.9	18.2	21.4	17.1	146.7
16-11-2023	40.7	18.6	24.4	17.1	70.7
17-11-2023	44.1	20.1	12.7	14.4	341.8
18-11-2023	39.0	17.8	18.5	14.4	389.6
19-11-2023	42.0	19.1	9.8	14.4	318.4
20-11-2023	32.3	14.9	9.8	8.6	318.7
21-11-2023	41.5	18.9	16.3	13.4	215.7
22-11-2023	36.3	16.7	20.0	20.4	165.0
23-11-2023	33.3	15.3	27.4	16.0	400.3
24-11-2023	40.8	18.6	24.3	17.0	300.8
25-11-2023	50.1	22.7	23.3	18.2	321.0
26-11-2023	27.7	12.4	22.0	16.0	292.0
27-11-2023	38.5	17.0	10.6	17.3	373.9
28-11-2023	44.9	19.8	16.2	20.1	456.0
29-11-2023	34.6	15.2	20.1	24.1	341.6
30-11-2023	41.2	18.1	28.1	20.4	360.0

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-DEC-2023 To: 31-DEC-2023				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-12-2023	33.6	14.8	32.5	11.9	283.6
02-12-2023	43.0	19.0	20.7	19.5	381.8
03-12-2023	53.0	23.4	12.7	24.1	452.3
04-12-2023	33.7	14.9	15.4	7.4	494.4
05-12-2023	41.1	18.1	32.0	11.9	544.2
06-12-2023	26.5	11.7	44.6	26.5	606.1
07-12-2023	31.4	13.8	37.0	23.5	465.7
08-12-2023	39.2	17.3	22.6	18.8	327.7
09-12-2023	36.0	15.8	22.8	28.2	384.0
10-12-2023	39.6	17.5	30.2	24.8	342.5
11-12-2023	50.4	22.2	30.9	11.8	371.3
12-12-2023	62.8	27.7	30.4	11.8	211.9
13-12-2023	49.2	23.4	22.0	18.2	217.9
14-12-2023	48.2	22.7	11.7	26.1	151.3
15-12-2023	46.6	20.5	16.3	20.0	355.7
16-12-2023	41.2	16.5	30.0	22.4	417.8
17-12-2023	31.9	14.1	35.8	24.5	228.5
18-12-2023	42.1	18.5	25.5	14.0	354.3
19-12-2023	36.9	16.2	32.0	7.7	278.6
20-12-2023	33.6	14.8	35.8	4.0	233.8
21-12-2023	42.9	18.9	24.4	14.7	361.2
22-12-2023	50.3	22.2	15.4	25.3	463.8
23-12-2023	38.0	16.8	23.4	18.1	284.9
24-12-2023	31.3	13.8	19.4	14.9	166.5
25-12-2023	42.1	18.5	25.6	20.0	354.5
26-12-2023	52.2	23.0	33.8	9.9	440.3
27-12-2023	50.6	22.3	32.9	8.2	426.8
28-12-2023	46.6	20.5	21.3	16.7	295.1
29-12-2023	45.6	20.1	24.6	14.5	309.4
30-12-2023	35.2	15.5	30.6	10.0	353.2
31-12-2023	51.6	22.7	35.7	20.9	195.3

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-JAN-2024 To: 31-JAN-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-01-2024	53.3	23.5	34.0	24.1	196.4
02-01-2024	41.8	18.4	25.5	19.9	352.4
03-01-2024	35.2	15.5	30.3	20.0	199.0
04-01-2024	34.3	15.1	30.7	18.1	181.3
05-01-2024	39.6	17.5	25.5	18.7	412.4
06-01-2024	36.9	16.2	23.4	21.4	478.2
07-01-2024	42.3	18.6	18.1	4.0	320.6
08-01-2024	43.7	18.7	16.5	11.4	277.6
09-01-2024	45.6	18.3	13.2	27.7	175.2
10-01-2024	33.1	13.7	25.2	21.8	122.0
11-01-2024	31.2	13.7	26.6	20.6	230.2
12-01-2024	52.3	23.0	17.1	22.9	481.3
13-01-2024	40.2	17.7	24.4	11.4	338.7
14-01-2024	51.7	22.8	29.7	9.4	484.6
15-01-2024	52.6	23.2	29.8	9.6	521.1
16-01-2024	29.3	13.2	16.9	19.6	341.3
17-01-2024	41.9	22.2	25.5	12.0	318.4
18-01-2024	43.3	20.1	17.8	21.5	397.4
19-01-2024	34.2	16.1	11.4	29.5	287.7
20-01-2024	39.5	18.4	16.1	20.8	237.6
21-01-2024	48.3	22.3	24.9	5.6	162.9
22-01-2024	21.5	10.5	14.1	20.0	353.8
23-01-2024	17.0	8.5	10.7	20.2	357.6
24-01-2024	35.7	16.7	21.9	15.8	229.3
25-01-2024	51.5	23.7	28.2	13.2	457.7
26-01-2024	55.0	25.2	28.0	13.3	641.2
27-01-2024	43.9	20.4	22.3	21.4	457.5
28-01-2024	38.8	18.1	19.0	24.1	254.8
29-01-2024	43.7	20.3	19.5	18.2	327.9
30-01-2024	39.7	18.5	14.5	26.0	535.0
31-01-2024	51.7	23.8	14.6	25.9	582.1

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-FEB-2024 To: 29-FEB-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-02-2024	28.5	15.2	32.9	26.1	549.0
02-02-2024	42.0	19.5	33.1	30.0	141.5
03-02-2024	37.9	17.7	25.7	26.9	243.2
04-02-2024	50.0	23.0	24.1	12.9	559.2
05-02-2024	38.6	18.0	29.8	10.1	288.5
06-02-2024	36.6	17.1	26.8	16.2	235.6
07-02-2024	43.1	20.0	26.8	23.1	353.2
08-02-2024	38.8	18.1	25.5	24.6	479.8
09-02-2024	37.5	17.5	25.8	20.4	568.1
10-02-2024	42.8	19.8	26.8	15.1	459.4
11-02-2024	50.5	23.3	20.9	20.1	354.7
12-02-2024	47.8	22.1	25.3	18.0	327.1
13-02-2024	54.8	25.1	26.8	13.7	476.3
14-02-2024	57.2	26.2	16.5	14.8	266.0
15-02-2024	47.4	24.3	31.1	25.9	491.4
16-02-2024	50.5	27.0	31.4	26.0	520.9
17-02-2024	47.2	24.3	26.1	23.2	435.6
18-02-2024	41.8	19.4	16.5	17.8	271.5
19-02-2024	38.3	17.9	25.7	26.1	373.2
20-02-2024	35.9	16.8	30.9	31.1	433.4
21-02-2024	37.4	17.5	30.4	30.5	420.1
22-02-2024	50.8	23.4	21.6	20.1	227.8
23-02-2024	37.0	17.3	18.3	15.9	365.7
24-02-2024	26.8	12.8	16.1	12.8	470.0
25-02-2024	31.1	14.7	18.4	14.8	488.1
26-02-2024	50.9	23.4	30.0	24.2	570.8
27-02-2024	40.0	18.7	19.1	28.2	391.3
28-02-2024	33.6	15.8	12.5	30.8	283.4
29-02-2024	39.2	18.3	24.7	23.6	330.6

	Average Report				
Industry	TAMILNADU CEMENTS CORPORATION LTD				
Station	AAQMS_2				
Avg Period	From: 01-MAR-2024 To: 31-MAR-2024				
Date	Parameters				
	PM10(ug/m3)	PM2.5(ug/m3)	SO2(ug/m3)	NO2(ug/m3)	CO(ug/m3)
01-03-2024	39.9	18.6	23.1	23.0	415.8
02-03-2024	52.6	24.2	20.4	22.4	414.6
03-03-2024	54.6	25.0	25.1	20.0	466.9
04-03-2024	49.4	22.8	22.3	15.4	515.0
05-03-2024	35.2	16.5	26.7	17.7	413.0
06-03-2024	33.1	15.6	28.8	29.0	257.6
07-03-2024	56.4	25.8	36.5	20.1	339.5
08-03-2024	61.9	28.3	57.9	20.2	178.4
09-03-2024	54.7	25.1	45.3	23.8	348.6
10-03-2024	41.9	19.5	21.5	30.7	667.2
11-03-2024	37.8	17.6	15.7	23.3	504.7
12-03-2024	UNDER MAINTENANCE				
13-03-2024					
14-03-2024	38.8	21.7	31.7	14.7	501.8
15-03-2024	33.9	15.9	25.0	12.0	356.2
16-03-2024	33.5	15.8	24.9	12.0	353.0
17-03-2024	37.4	17.5	22.4	14.4	333.2
18-03-2024	54.7	25.1	30.9	26.1	223.2
19-03-2024	54.6	25.0	45.3	25.9	222.9
20-03-2024	49.0	22.6	32.7	23.9	223.6
21-03-2024	37.9	17.7	8.3	19.9	223.5
22-03-2024	35.8	16.8	13.3	19.1	293.4
23-03-2024	25.1	12.1	38.5	14.7	652.1
24-03-2024	25.1	12.1	37.7	14.7	653.4
25-03-2024	31.0	14.7	34.3	16.4	559.6
26-03-2024	50.2	23.1	20.6	12.1	244.6
27-03-2024	56.1	25.7	17.5	6.1	158.9
28-03-2024	40.2	18.7	27.8	18.7	344.6
29-03-2024	36.3	17.0	29.7	22.6	399.7
30-03-2024	39.4	18.4	29.3	15.4	416.1
31-03-2024	49.6	22.8	22.4	16.8	665.6

Average Report						
Industry	TAMILNADU CEMENTS CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-OCT-2023 To: 31-OCT-2023					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM-COAL MILL (mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL(mg/Nm3)
01-10-2023	15.020	134.9	3.6	1.239	14.529	20.03
02-10-2023	14.364	145.4	7.3	1.176	13.258	15.52
03-10-2023	17.023	148.5	8.5	1.353	12.275	14.98
04-10-2023	8.916	11.9	3.3	2.666	8.153	16.26
05-10-2023	KILN BRICKS REPLACEMENT WORK					10.27
06-10-2023						8.52
07-10-2023						11.04
08-10-2023						13.02
09-10-2023						12.74
10-10-2023						UNDER MAINTENANCE
11-10-2023						
12-10-2023						
13-10-2023						6.63
14-10-2023						9.97
15-10-2023						11.09
16-10-2023						5.14
17-10-2023						9.30
18-10-2023						10.99
19-10-2023						15.75
20-10-2023						18.42
21-10-2023						12.03
22-10-2023						13.12
23-10-2023						14.00
24-10-2023						15.45
25-10-2023						14.78
26-10-2023	19.38					
27-10-2023	20.04					
28-10-2023	20.41					
29-10-2023	24.01					
30-10-2023	15.97					
31-10-2023						

Average Report						
Industry	TAMILNADU CEMENTS CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-NOV-2023 To: 30-NOV-2023					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM –COAL MILL(mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL(mg/Nm3)
01-11-2023	KILN BRICKS REPLACEMENT WORK					16.92
02-11-2023						18.96
03-11-2023						18.79
04-11-2023						22.32
05-11-2023						23.82
06-11-2023	11.493	113.7	29.7	2.130	9.842	17.22
07-11-2023	13.640	166.7	35.0	2.422	10.658	6.02
08-11-2023	13.108	178.3	10.2	2.831	11.086	8.11
09-11-2023	14.416	166.8	12.8	2.526	11.379	10.39
10-11-2023	14.219	175.8	13.6	2.245	12.156	13.37
11-11-2023	14.003	155.2	17.2	2.229	12.425	14.06
12-11-2023	13.124	176.6	19.3	2.266	12.524	13.75
13-11-2023	13.913	172.0	18.3	2.245	12.996	12.72
14-11-2023	14.975	181.5	17.7	2.395	14.687	16.61
15-11-2023	14.482	163.5	19.5	3.745	14.287	15.46
16-11-2023	14.484	157.6	18.6	2.287	13.704	10.17
17-11-2023	14.057	120.7	15.9	2.178	10.625	4.78
18-11-2023	14.086	140.1	18.2	2.390	10.782	6.66
19-11-2023	14.726	106.2	14.0	2.227	10.852	7.56
20-11-2023	15.111	99.7	16.2	2.268	9.530	9.17
21-11-2023	14.561	112.0	13.3	2.433	9.034	9.45
22-11-2023	16.003	112.8	15.6	2.287	9.307	11.56
23-11-2023	15.681	88.4	17.2	2.240	9.696	12.92
24-11-2023	14.116	47.3	17.9	2.239	6.753	16.43
25-11-2023	16.746	106.4	19.7	2.756	10.367	17.34
26-11-2023	17.294	140.3	22.3	2.393	11.627	18.28
27-11-2023	17.900	115.2	23.0	2.321	11.549	17.82
28-11-2023	16.559	163.7	25.5	2.304	11.244	9.08
29-11-2023	18.126	75.1	13.6	2.959	11.221	7.21
30-11-2023	16.677	117.0	23.1	2.294	11.141	9.66

Average Report						
Industry	TAMILNADU CEMENTS CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-DEC-2023 To: 31-DEC-2023					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM-COAL MILL(mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL(mg/Nm3)
01-12-2023	17.446	96.2	21.7	2.454	12.250	10.40
02-12-2023	17.476	159.2	28.1	2.224	11.545	9.53
03-12-2023	20.409	159.9	28.8	2.238	10.770	10.20
04-12-2023	14.131	10.8	17.8	2.213	7.410	13.56
05-12-2023	17.496	113.8	22.3	2.285	8.737	16.37
06-12-2023	16.635	155.3	25.8	2.100	9.036	18.23
07-12-2023	14.946	46.7	23.5	2.144	7.286	20.14
08-12-2023	14.782	24.2	21.0	2.194	5.936	21.95
09-12-2023	16.416	170.7	29.3	2.215	10.020	11.27
10-12-2023	17.050	179.9	29.2	2.245	10.729	5.17
11-12-2023	17.593	167.5	30.6	2.294	11.703	9.41
12-12-2023	16.782	170.1	32.0	2.282	11.550	11.92
13-12-2023	17.142	170.5	29.9	2.844	11.655	7.90
14-12-2023	18.546	152.8	30.1	2.466	12.293	4.93
15-12-2023	16.714	201.9	35.5	2.327	12.085	7.12
16-12-2023	19.579	153.5	33.2	3.162	12.113	8.45
17-12-2023	22.314	115.0	26.0	2.333	10.764	8.84
18-12-2023	19.348	108.1	28.2	2.469	9.460	8.92
19-12-2023	17.818	133.2	30.6	2.817	10.039	9.91
20-12-2023	20.828	112.2	25.3	2.306	11.659	8.96
21-12-2023	18.166	147.4	30.6	2.282	11.193	13.38
22-12-2023	17.469	157.4	28.9	2.333	11.043	17.38
23-12-2023	19.124	140.8	28.1	2.295	11.964	16.95
24-12-2023	17.428	155.3	30.0	2.315	12.191	19.00
25-12-2023	18.734	141.2	31.9	3.237	11.893	16.70
26-12-2023	17.294	155.0	31.9	2.285	12.667	12.64
27-12-2023	20.233	148.1	31.2	2.302	13.527	13.18
28-12-2023	11.206	173.3	32.3	2.331	12.659	13.80
29-12-2023	5.860	56.5	27.2	2.492	9.492	14.12
30-12-2023	7.793	135.4	29.9	2.271	11.680	14.48
31-12-2023	6.233	157.5	27.3	2.287	12.651	14.47

Average Report						
Industry	TAMILNADU CEMENT CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-JAN-2024 To: 31-JAN-2024					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM-COAL MILL(mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL(mg/Nm3)
01-01-2024	9.221	122.1	27.0	2.284	13.651	15.36
02-01-2024	5.986	149.2	28.6	2.290	14.069	15.89
03-01-2024	8.835	128.7	29.0	2.384	14.174	8.95
04-01-2024	5.971	160.7	29.5	2.271	13.845	9.74
05-01-2024	8.127	141.6	28.8	2.265	14.373	9.36
06-01-2024	9.898	124.3	25.3	3.843	15.551	7.74
07-01-2024	6.382	142.9	25.4	2.308	15.173	8.41
08-01-2024	10.158	117.3	28.0	2.333	15.104	9.87
09-01-2024	7.806	147.6	30.8	2.299	13.821	10.02
10-01-2024	7.220	167.6	38.9	2.286	14.284	8.60
11-01-2024	7.678	159.6	30.8	2.283	14.970	11.01
12-01-2024	7.708	150.2	30.6	2.514	15.059	12.18
13-01-2024	10.856	131.2	28.9	3.145	14.356	10.42
14-01-2024	7.306	185.4	28.1	2.288	13.855	9.19
15-01-2024	7.888	180.5	34.2	2.716	12.796	9.23
16-01-2024	7.780	160.8	34.3	3.106	11.784	9.20
17-01-2024	9.226	162.7	34.1	2.206	11.340	9.73
18-01-2024	11.004	32.0	24.0	2.293	9.601	10.89
19-01-2024	KILN BRICKS REPLACEMENT WORK					13.12
20-01-2024						13.49
21-01-2024						13.35
22-01-2024						13.40
23-01-2024						14.32
24-01-2024						15.33
25-01-2024						16.07
26-01-2024						17.36
27-01-2024						19.12
28-01-2024						20.35
29-01-2024						21.06
30-01-2024						12.21
31-01-2024						3.35

Average Report						
Industry	TAMILNADU CEMENT CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-FEB-2024 To: 29-FEB-2024					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM-COAL MILL(mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL (mg/Nm3)
01-02-2024						4.22
02-02-2024						3.54
03-02-2024						5.09
04-02-2024						7.27
05-02-2024						7.83
06-02-2024						10.84
07-02-2024						11.06
08-02-2024						11.80
09-02-2024						13.22
10-02-2024						13.75
11-02-2024	KILN BRICKS REPLACEMENT WORK					15.08
12-02-2024						15.99
13-02-2024						17.07
14-02-2024						18.60
15-02-2024						11.58
16-02-2024						11.10
17-02-2024						12.75
18-02-2024						12.06
19-02-2024						12.19
20-02-2024						13.53
21-02-2024						13.18
22-02-2024	4.639	335.9	13.1	2.096	8.005	13.72
23-02-2024	3.427	347.3	10.8	2.079	8.554	15.43
24-02-2024	2.750	315.3	8.0	2.058	6.699	15.73
25-02-2024	3.598	360.1	8.4	2.172	10.015	15.91
26-02-2024	3.410	239.9	1.8	2.206	11.051	17.16
27-02-2024	4.386	148.8	2.7	2.204	10.707	18.56
28-02-2024	3.444	149.0	12.6	2.169	9.916	19.70
29-02-2024	5.594	127.1	6.7	2.276	10.295	18.62

Average Report						
Industry	TAMILNADU CEMENT CORPORATION LTD					
Station	EXPANSION PLANT STACK					
Avg Period	From: 01-MAR-2024 To: 31-MAR-2024					
Date	Parameters					
	PM-KILN (mg/Nm3)	KILN –NOX (mg/Nm3)	KILN –SO2 (mg/Nm3)	PM-COAL MILL(mg/Nm3)	PM-COOLER (mg/Nm3)	PM-CEMENT MILL(mg/Nm3)
01-03-2024	3.566	156.5	4.6	2.178	10.654	18.67
02-03-2024	6.548	103.5	12.3	2.131	7.098	19.07
03-03-2024	3.460	144.3	12.2	2.120	8.425	18.95
04-03-2024	3.451	137.6	5.7	2.131	9.722	18.94
05-03-2024	3.491	134.8	5.8	2.105	9.379	19.01
06-03-2024	4.485	117.2	9.2	2.084	8.434	20.00
07-03-2024	4.970	102.2	11.6	2.106	6.191	17.02
08-03-2024	4.942	91.6	6.3	2.088	4.239	9.61
09-03-2024	5.005	105.5	18.0	2.071	6.724	11.23
10-03-2024	6.094	98.2	21.8	2.130	7.077	12.06
11-03-2024	3.104	123.7	18.0	2.044	7.443	16.04
12-03-2024	4.332	132.2	23.8	2.015	9.377	16.50
13-03-2024	4.556	130.7	8.6	2.039	9.773	17.27
14-03-2024	3.432	135.0	10.8	2.018	9.551	15.74
15-03-2024	4.685	110.8	16.5	2.003	9.310	17.66
16-03-2024	3.407	116.0	20.7	1.958	8.620	21.17
17-03-2024	4.598	107.1	22.5	2.026	9.230	21.24
18-03-2024	4.691	106.1	22.1	2.017	10.291	13.47
19-03-2024	4.024	116.1	19.3	2.221	8.905	13.42
20-03-2024	4.916	114.4	9.3	2.048	9.393	9.86
21-03-2024	3.953	130.3	29.8	2.076	11.413	10.46
22-03-2024	4.537	118.6	24.0	2.043	9.731	10.63
23-03-2024	4.648	122.7	3.8	2.068	10.550	11.20
24-03-2024	5.586	108.5	5.2	2.077	8.806	11.06
25-03-2024	5.864	108.4	4.4	2.120	9.487	12.33
26-03-2024	5.229	113.1	5.1	2.097	9.714	12.12
27-03-2024	4.983	123.8	2.9	2.046	8.532	12.61
28-03-2024	UNDER MAINTENANCE					
29-03-2024						
30-03-2024	4.776	95.8	1.9	2.027	8.834	7.40
31-03-2024	3.721	116.6	6.7	2.974	7.287	18.66



தமிழ்நாடு சிமெண்ட் கழகம்

(தமிழ்நாடு அரசு நிறுவனம்)

TAMILNADU CEMENTS CORPORATION LIMITED
(A Government of Tamilnadu Undertaking)



அரியலூர் சிமெண்ட் ஆலை, அரியலூர் - 621 729 , அரியலூர் மாவட்டம், தமிழ்நாடு.

Ariyalur Cement Factory, Ariyalur - 621 729, Ariyalur District, Tamilnadu

E-mail : tanaridgloffice@gmail.com website : www.tancem.com GSTIN : 33AABCT1819J1ZH

20.09.2023

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING

31ST MARCH 2023

1. Name and address of the owner / occupier of the industry operation or process : Managing Director
Tamilnadu Cements Corpn. Ltd.,
5th Floor, Aavin Illam, No.3A,
Pasumpon Muthuramalinga Thevar Road,
Nandanam,
Chennai - 600 035.
2. Industry Category : Large (Red)
3. Year of Establishment : 1979
4. Operating Capacity : 3000 MT/day
5. Date of last environmental statement submitted : September - 2022

PART - B

WATER AND RAW MATERIALS CONSUMPTION:

1. WATER CONSUMPTION

Process	:	Nil
Cooling	:	547 K.L./Day
Domestic	:	110 K.L./Day

Name of the product	Water consumption per unit of products	
	For the year 2021-22	For the year 2022-23
Cement	0.19 K.L	0.17 K.L

2. RAW MATERIAL CONSUMPTION:

SL.NO	Name of the Raw Material	Consumption of Raw Material Per Unit of Output	
		For the year 2021-22	For the year 2022-23
1	Coal lignite etc.,	0.1305	0.114
2	Gypsum	0.0322	0.034
3	Fly ash	0.2514	0.298
4	Lime stone	1.272	1.158

Cont...2

Corporate Office : 5th Floor, Aavin Illam, No.3 A Pasumpon Muthuramalinga Thevar Road,
Nandanam, Chennai - 600 035

Phone : 044 - 2852 5461, 044 28525471 Toll Free No. 1800 599 7635

E-mail : cscoc.tancem@tn.gov.in Fax : 044 - 28523991 Website : www.tancem.com

CIN : U40200TN1976SGC007081 GSTIN : 33AABCT1819J1ZH

PART – C

POLLUTION – DISCHARGED TO ENVIRONMENT /UNIT OF OUTPUT

(Parameter as specified in the consent issued)

Pollutants	Quantity of pollutants discharged mass/day	Concentration of pollutants in discharge Mass/Volume	Percentage of variation from prescribed standards
a)WATER 1. P.H.Value 2. B.O.D. 3. C.O.D. 4.Total Suspended solids	90 KL/day Sewage	7.12 10 mg/Ltr 64 mg/Ltr 20 mg/Ltr	Below tolerance limit
b) AIR 1.From Limestone Crusher (Expansion) a.Spm	22.173 kg	26 mg/NM ³	Below tolerance limit
2.From Kiln(Expansion) a. So ₂ b. NO _x c.Spm	833.46 kg 2087.6 kg 222.26 kg	105 mg/NM ³ 263 mg/NM ³ 28 mg/NM ³	Above tolerance limit Below tolerance limit Below tolerance limit
3. From Coal mill (Expansion) a.So ₂ b. NO _x c. Spm	93.55 kg 211.77 kg 22.96 kg	110 mg/NM ³ 249 mg/NM ³ 27 mg/NM ³	Above tolerance limit Below tolerance limit Below tolerance limit
4.From Cooler ESP (Expansion) a.So ₂ b. NO _x c. Spm	--- --- 106.18 kg	--- --- 22 mg/NM ³	Below tolerance limit
5.From Cement Mill Bag House (Expansion) a. Spm	37.606 kg	23 mg/NM ³	Below tolerance limit
6.From Cement Mill Bag House (Existing) a. Spm	18.359 kg 3655.9 kg	24 mg/NM ³	Below tolerance limit

Cont...3

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT

1. WATER			
Average sewage let out /day	=	90 K.L	
Average daily cement production in the year 2022-2023	=	$\frac{1451321}{365}$	
	=	3976.22 MT/Day	
Water Pollution discharged to Environment/Unit of output	=	$\frac{90}{3976.22} = 0.0226$	K.L
2. AIR:			
Total Pollution discharged into Atmosphere from all the chimneys/day	=	3.6559 MT	
Average daily Cement production in the Year 2022-2023	=	$\frac{1451321}{365}$	
	=	3976.22 MT/Day	
Air pollution discharged into environment Unit of output	=	$\frac{3.6559}{3976.22}$	0.00092 MT

PART – D

As specified under Hazardous wastes/management and handling rules 2016

Hazardous	Total Quantity in kgs	
	2020-2021	2021-2022
1. From Process	0.2 T Waste Oil and reused for Lubrication.	
2. From Pollution control facilities	Nil	

PART – E

SOLID WASTE:

Solid Waste	Total quantity in MTs	
	2021-2022	2022-2023
1. From Process	Nil	Nil
2. From Pollution control facilities	281411.39	217451.93
3. Quality recycled or re-utilised	281411.39	217451.93

All the materials collected in pollution Control equipments are reutilized.

PART – F

The Hazardous Waste generated in the plant is waste Lub oil and it is 0.2 T. It is stored in barrels and utilized for open gear lubrication in the plant. It is not transported outside the plant area.

PART – G

Since the materials collected in the pollution control facilities are either intermediate products or final products, they are again fed into the system and hence there is lot of savings in the intermediate and final products.

For example the plant has saved nearly 217451.93 MT of intermediate product through Limestone (Expansion) Bag filter, Kiln (Expansion) Bag houses, Coal Mill (Expansion) Bag houses and Cooler (Expansion) ESP. It has also saved nearly 160771.5 MT of cement (final product) from the both Existing and Expansion plant cement mill bag houses.

The above figure shows that not only lot of valuable final product is saved but also intermediate products like limestone powder, Raw meal powder, Cooler powder and coal powder are saved. The above intermediate products are nothing but limestone and coal, which are valuable natural resources.

PART – H

Tamilnadu Cements Corporation Limited, Ariyalur Cement Works has taken all our efforts to control pollution by installing latest pollution control equipments in major dust emanating areas.

The Pollution Control equipments available at TANCEM are listed below:

i.	ESPs	=	4 nos
ii.	Bag House	=	4 no
iii.	RABHs	=	2 nos.

- ❖ Since January – 2021, Existing plant was not in operation except Cement mill and Packing house. 1 ESP Cooler (Expansion) is emitting dust below 30 mg/Nm³. The Raw mill /Kiln (Expansion) Bag house, Coal mill (Expansion) Bag house and Cement Mill (Existing & Expansion) Bag House emission level is below 30 mg/Nm³. In Expansion plant, all major stacks i.e kiln, Coal mill, Cooler, Cement mill, which designed dust emission level is below 30 mg/Nm³.
- ❖ To adhere to the pollution control norms we have taken the following measures.
 - We have commissioned RABH instead of kiln ESP for kiln II and I on 21.12.2015 and 06.03.2016 respectively at the cost of 16.1 crores (designed emission level below 30mg/Nm³).
 - Cooler ESP-II is functioning from May-2013 and Cooler ESP-I is functioning from July-2013. Designed emission level is 30 mg/Nm³.

Cont ...5

- We have planned coal mill ESP upgrading into a new bag filters.
- In Expansion plant, we have installed Bag houses for Kiln, Coal mill, Cement mill and ESP for Cooler. The Pollution control equipments are commissioned on 01.11.2019.
- Green Belt:

In Our mines area we have already planted 12.50 lakhs plants/saplings. In Our colony and Plant area, we are having at about 10,000 trees. In addition to that we have planted 2370 saplings in the plant/colony area in the past few years. In the year 2013-14 we have planted 6000 new saplings on the eastern side of our plant through forest dept. In the year 2016-2017 world environment day celebrations and planted 150 new saplings in our production plant areas. In the year of 2019-20 we had celebrated world environment day on 5th June the theme of Biodiversity and planted 100 new saplings in our oxidation pond areas. In the year of 2020-2021, we had celebrated world environment day in the theme of Ecosystem Restoration and planted 120 saplings in Expansion plant and Oxidation pond areas. In the year of 2021-2022, we have celebrated world environment day in the theme of Only One Earth and planted 250 saplings in Plant premises. In the year 2022-2023, We have planted 1095 saplings under TNPCB Kurunkadugal scheme and Further 100 saplings planted on the occasion of World Environment Day with the theme of 'Beat Plastic Pollution' in the plant premises.

- AAQMS station 2 nos installed and all the major stacks (10 nos) are having online stack monitors through which the data's are transmitted through exclusive Broad band line to TNPCB/CPCB.

REMARKS AND CONCLUSION:

1. The figures given in this reports are based on the following:
 - a. Plant production report for the year 2021-2022 and 2022-2023
 - b. Stack monitoring and ambient air quality survey reports of Tamilnadu pollution Control board taken in and February – 2023.
 - c. Major equipments design data.

TAMILNADU CEMENTS CORPORATION LIMITED
ARIYALUR
ANNEXURE

ENVIRONMENTAL AUDIT REPORT:

PART-B:

I. WATER AND RAW MATERIAL CONSUMPTION:

1. Water consumption per unit of production:
 Total water consumption in a year = (547+110) x 365
 = 2,39,805 KL / year
- Total production of cement in the year
 2021-2022 = 11,99,227 MT
- Hence water consumption per unit of cement
 Production in the year (2021-2022) = $\frac{2,39,805}{11,99,227}$
 = 0.19 KL.
- Total production of cement in the year
 2022-2023 = 1451321 MT
- Hence water consumption per unit of cement
 Production in the year (2022-2023) = $\frac{2,39,805}{1451321}$ = 0.17 KL.

II. RAW MATERIAL CONSUMPTION:

Consumption of Raw material/Ton of Cement Production

- a) Total Cement production in the year
 2021-2022 = 1199227 MT
- b) Total Cement Production in the year
 2022-2023 = 1451321 MT

**CONSUMPTION OF DIFFERENT RAW MATERIALS IN THE YEAR
2022-2023**

SL.NO		2021-2022 (Qty.in MTs.)	2022-2023 (Qty.in MTs.)
1	Coal	1,56,513	165128
2	gypsum	38,557	49431
3	Fly ash	3,01,598	432208
4	Lime stone	15,25,417	1681331

CONSUMPTION OF DIFFERENT RAW MATERIALS /TONNE OF CEMENT PRODUCTION

SL.NO		2021-2022 (Qty.in MTs.)	2022-2023 (Qty.in MTs.)
1	Coal	0.1305	0.114
2	gypsum	0.0322	0.034
3	Fly ash	0.2514	0.298
4	Lime stone	1.272	1.158

PART-C

I. WATER POLLUTION (By TNPCB report on 06.03.2023):

1. P.H. Value	=	7.12
Tolerance limit prescribed by TNPCB	=	5.5-9.0
2. B.O.D at 27 ⁰ C for 3 days	=	10 mg/lt.
Tolerance limit	=	20 mg/lt.
3. C.O.D	=	64 mg/lt.
Tolerance limit	=	100 mg/lt.
4. Total suspended solids	=	20 mg/lt.
Tolerance limit	=	30 mg/lt.

II. AIR POLLUTION:

Parameters and limits specified in the consent order

i.	SO ₂	=	100 mg/Nm ³
ii.	CO	=	2000 mg/Nm ³
iii.	NO _x	=	600 mg/Nm ³

POLLUTION GENERATED IN DIFFERENT STACKS:

I. LIMESTONE CRUSHER (EXPANSION):

Velocity of gas in the stack	=	11.42 m/sec.at 311 K
Area of the stack	=	0.985 m ² (1.12 m dia)
Gas discharge through the stack	=	11.42 x 0.985
	=	11.244 m ³ /sec.
	=	9.87 Nm ³ /sec
	=	35534 Nm ³ /hr

POLLUTANTS IN LIMESTONE CRUSHER (EXPANSION) STACK:

i.	SO ₂	=	-----
ii.	NO _x	=	-----
iii.	Spm	=	26 mg/Nm ³
Total Spm emission /day	=	$\frac{26 \times 35534 \times 24}{10^6}$	
	=	22.173 kgs.	

% Variation of actual emission from the Standards = Below tolerance limit

II. KILN (EXPANSION):

Velocity of gas in the stack	=	15.99 m/sec. at 418 K
Area of the stack	=	8.8 m ² (3.35 m dia)
Gas discharge through the stack	=	15.99 x 8.8
	=	140.67 m ³ /sec.
	=	91.872 Nm ³ /sec
	=	330739 Nm ³ /hr

POLLUTANTS IN KILN (EXPANSION) STACK:

i.	SO ₂	=	105 mg/Nm ³
ii.	NO _x	=	263 mg/Nm ³
iii.	Spm	=	28 mg/Nm ³
iv.	CO	=	Nil

$$\begin{aligned} \text{Total SO}_2 \text{ emission/day} &= \frac{105 \times 330739 \times 24}{10^6} \\ &= 833.46 \text{ kgs} \end{aligned}$$

$$\begin{aligned} \text{Total NO}_x \text{ emission/day} &= \frac{263 \times 330739 \times 24}{10^6} \\ &= 2087.6 \text{ kgs.} \end{aligned}$$

$$\begin{aligned} \text{Total Spm emission/day} &= \frac{28 \times 330739 \times 24}{10^6} \\ &= 222.26 \text{ kgs.} \end{aligned}$$

% Variation of actual emission from the Standards = SO₂ Above tolerance limit.

III. COAL MILL (EXPANSION)

Velocity of gas in the stack	=	15.75 m/sec. at 343 K
Area of the stack	=	0.785 m ² (1 m dia)
Gas discharge through the stack	=	15.75 x 0.785
	=	12.37 m ³ /sec.
	=	9.84 Nm ³ /sec
	=	35436 Nm ³ /hr

POLLUTANTS IN COAL MILL (EXPANSION) STACK

i.	SO ₂	=	110 mg/Nm ³
ii.	NO _x	=	249 mg/Nm ³
iii.	Spm	=	27 mg/Nm ³

$$\begin{aligned} \text{Total SO}_2 \text{ emission/day} &= \frac{110 \times 35436 \times 24}{10^6} \\ &= 93.55 \text{ kgs} \end{aligned}$$

$$\begin{aligned} \text{Total NO}_x \text{ emission/day} &= \frac{249 \times 35436 \times 24}{10^6} \\ &= 211.77 \text{ kgs.} \end{aligned}$$

$$\begin{aligned} \text{Total Spm emission/day} &= \frac{27 \times 35436 \times 24}{10^6} \\ &= 22.96 \text{ kgs.} \end{aligned}$$

% Variation of actual emission from the Standards = SO₂ Above tolerance limit

IV. COOLER (EXPANSION):

$$\begin{aligned} \text{Velocity of gas in the stack} &= 16.4 \text{ m/sec.at } 393 \text{ K} \\ \text{Area of the stack} &= 4.9 \text{ m}^2 \text{ (2.5 m dia)} \\ \text{Gas discharge through the mill/day} &= 16.4 \times 4.9 \\ &= 80.4 \text{ m}^3/\text{sec.} \\ &= 55.86 \text{ Nm}^3/\text{sec} \\ &= 201096 \text{ Nm}^3/\text{hr} \end{aligned}$$

POLLUTANTS IN COOLER (EXPANSION) STACK

i.	SO ₂	=	----
ii.	NO _x	=	----
iii.	Spm	=	22 mg/Nm ³

$$\begin{aligned} \text{Total Spm emission /day} &= \frac{22 \times 201096 \times 24}{10^6} \\ &= 106.18 \text{ kgs.} \end{aligned}$$

% Variation of actual emission from the Standards = Below tolerance limit

V. CEMENT MILL (EXPANSION):

$$\begin{aligned} \text{Velocity of gas in the stack} &= 12.58 \text{ m/sec.at } 363 \text{ K} \\ \text{Area of the stack} &= 2 \text{ m}^2 \text{ (1.6 m dia)} \\ \text{Gas discharge through the stack} &= 12.58 \times 2 \\ &= 25.163 \text{ m}^3/\text{sec.} \\ &= 18.924 \text{ Nm}^3/\text{sec} \\ &= 68126 \text{ Nm}^3/\text{hr} \end{aligned}$$

POLLUTANTS IN CEMENT MILL (EXPANSION) STACK:

iv.	SO ₂	=	-----
v.	NO _x	=	-----
vi.	Spm	=	23 mg/Nm ³

$$\begin{aligned} \text{Total Spm emission /day} &= \frac{23 \times 68126 \times 24}{10^6} \\ &= 37.606 \text{ kgs.} \end{aligned}$$

% Variation of actual emission from the Standards = Below tolerance limit

VI. CEMENT MILL BAG HOUSE (EXISTING):

Velocity of gas in the stack	=	18.5 m/sec.at 353 K
Area of the stack	=	0.62 m ² (0.89 m dia)
Gas discharge through the stack	=	18.5 x 0.62
	=	11.45 m ³ /sec.
	=	8.85 Nm ³ /sec
	=	31873 Nm ³ /hr

POLLUTANTS IN CEMENT MILL BAG HOUSE (EXISTING) STACK:

i.	SO ₂	=	-----
ii.	NO _x	=	-----
iii.	Spm	=	24 mg/Nm ³
Total Spm emission /day		=	$\frac{24 \times 31873 \times 24}{10^6}$
		=	18.359 kgs.
% Variation of actual emission from the Standards		=	Below tolerance limit

MATERIAL SAVINGS:

1. LIMESTONE CRUSHER (EXPANSION):

Average dust concentration in the Limestone crusher Bag house inlet	=	37 gm/Nm ³
	=	37000 mg/Nm ³
Bag house outlet emission	=	26 mg/Nm ³
Gas flow rate	=	35534 x24
	=	852816 Nm ³ /day
Limestone crusher (Expansion) running hours in the year 2022 – 2023	=	3967.5 Hrs.
	=	165.3 days
Material saving in the Limestone crusher Bag house in the year 2022-2023	=	$\frac{(37000-26) \times 852816 \times 165.3}{10^9}$
	=	5212.24 MT

2. KILN (EXPANSION):

Average dust concentration in the kiln Bag house inlet	=	9.9165 gm/Nm ³
	=	9916.5 mg/Nm ³
Bag house outlet emission	=	28 mg/Nm ³
Gas flow rate	=	330739x24
	=	7937736 Nm ³ /day

Cont...11

Kiln (Expansion) running hours in the year 2022 – 2023	= 7940.25 Hrs. = 330.84 days
Material saving in the kiln Bag house in the year 2021-2022	= $\frac{(9916.5-28) \times 7937736 \times 330.84}{10^9}$ = 25968.39 MT
3. <u>COAL MILL (EXPANSION):</u>	
Average dust concentration in the Coal mill Bag house inlet	= 301.9653 gm/Nm ³ = 301965.3 mg/Nm ³
Bag house outlet emission	= 27 mg/Nm ³
Gas flow rate	= 35436x24 = 850464 Nm ³ /day
Coal mill (Expansion) running hours in the year 2022 – 2023	= 6966 Hrs. = 290.25 days
Material saving in the Coal mill Bag house in the year 2022 – 2023	= $\frac{(301965.3-27) \times 850464 \times 290.25}{10^9}$ = 74532.62 MT.
4. <u>COOLER (EXPANSION):</u>	
Average dust concentration in the kiln Bag house inlet	= 70.0015 gm/Nm ³ = 70001.5 mg/Nm ³
Bag house outlet emission	= 22 mg/Nm ³
Gas flow rate	= 201096x24 = 4826304 Nm ³ /day
Cooler (Expansion) running hours in the year 2022 – 2023	= 7940.25 Hrs. = 330.84 days
Material saving in the Cooler ESP in the year 2022-2023	= $\frac{(70001.5-22) \times 4826304 \times 330.84}{10^9}$ = 111738.68 MT
5. <u>CEMENT MILL BAG HOUSE (EXPANSION):</u>	
Average dust concentration in the Cement Mill Bag House Inlet	= 387.1612 gm/Nm ³ = 387161.2 mg/Nm ³
Bag House outlet emission	= 23 mg/Nm ³
Gas Flow rate	= 68126x24 = 1635024 Nm ³ /day
Cement mill running hours in the year 2022 – 2023	= 4850 hrs = 202.08 days

$$\begin{aligned} \text{Material saving in the Cement mill Bag House} &= \frac{(387161.2-23) \times 1635024 \times 202.08}{10^9} \\ \text{in the year 2022 - 2023} &= 127912.65 \text{ MT} \end{aligned}$$

6. CEMENT MILL BAG HOUSE (EXISTING):

$$\begin{aligned} \text{Average dust concentration in the Cement Mill Bag House} &= 182 \text{ gm/Nm}^3 \\ \text{Inlet} &= 182000 \text{ mg/Nm}^3 \\ \text{Bag House outlet emission} &= 24 \text{ mg/Nm}^3 \\ \text{Gas Flow rate} &= 31873 \times 24 \\ &= 764952 \text{ Nm}^3/\text{day} \\ \text{Cement mill running hours in the year} & \\ \text{2022 - 2023} &= 5665.25 \text{ hrs} \\ &= 236.05 \text{ days} \\ \text{Material saving in the Cement mill Bag House} &= \frac{(182000-24) \times 764952 \times 236.05}{10^9} \\ \text{in the year 2022 - 2023} &= 32858.85 \text{ MT} \end{aligned}$$

TOTAL MATERIAL SAVINGS:

Sl.NO	EQUIPMENT	INTERMEDIATE PRODUCTS MTs.	FINAL PRODUCTS MTs.
1.	Limestone Crusher (Expansion)	5212.24	
2.	Kiln Bag house (Expansion)	25968.39	
3.	Coal mill Bag house (Expansion)	74532.62	
4.	Cooler ESP (Expansion)	111738.68	
5.	Cement Mill Bag House (Expansion)		127912.65
6.	Cement Mill Bag House (Existing)		32858.85
	Total	217451.93	160771.5

$$\begin{aligned} \text{Total material collected from Pollution Control equipment} &= 217451.93 + 160771.5 \\ &= 378223.43 \text{ MTs} \end{aligned}$$

Yours faithfully,
For Tamilnadu Cements Corporation Ltd,
Ariyalur Cement Works,


Deputy General Manager (Tech)



தமிழ்நாடு சிமெண்ட் கழகம்

(தமிழ்நாடு அரசு நிறுவனம்)

TAMILNADU CEMENTS CORPORATION LIMITED
(A Government of Tamilnadu Undertaking)



அரியலூர் சிமெண்ட் ஆலை, அரியலூர் - 621 729 , அரியலூர் மாவட்டம், தமிழ்நாடு.
Ariyalur Cement Factory, Ariyalur - 621 729, Ariyalur District, Tamilnadu

E-mail : tanaridgmooffice@gmail.com website : www.tancem.com GSTIN : 33AABCT1819J1ZH

CONSOLIDATED STATEMENT FOR TNPCB ROA OF THE TREATED SEWAGE SAMPLES (2023-24)

Date of sample collection	Location	DEE CodeNo.	pH	Total suspended solids mg/l	BOD at 27 degree C for 3 days mg/l	COD mg/l	Ammonical Nitrogen mg/l	Total Nitrogen mg/l
12.04.2023	STP	BA-104/DEE/ARY	8.0	48	13	64	<5	1.11
	Oxidation pond	BA-105/DEE/ARY	7.62	66	10	56	<5	16.75
17.05.2023	STP	BA122	7.45	08	14	80	5.6	31.86
	Oxidation pond	BA123	7.56	34	06	40	<5	2.33
21.06.2023	STP	BA-143/DEE/ARY	7.69	54	10	48	<5	4.20
	Oxidation pond	BA-144/DEE/ARY	7.49	10	03	24	<5	3.04
17.07.2023	STP	BA-157/DEE/ARY	7.74	40	09	48	5.6	10.36
	Oxidation pond	BA-158/DEE/ARY	8.10	10	19	96	11.2	18.36
02.08.2023	STP	BA-170/DEE/ARY	7.58	26	18	96	8.4	24.0
	Oxidation pond	BA-171/DEE/ARY	7.32	12	10	72	<5	3.22
13.09.2023	STP	BA-182/DEE/ARY	7.54	12	10	64	-	30.3
	Oxidation pond	BA-183/DEE/ARY	7.56	04	<2	16	-	25
26.10.2023	STP	BA-196/DEE/ARY	7.48	22	10	72	-	8.4
	Oxidation pond	BA-197/DEE/ARY	7.89	16	10	56	-	6.6
24.11.2023	STP	BA-216/DEE/ARY	7.29	20	5	16	-	3.4
	Oxidation pond	BA-217/DEE/ARY	7.52	20	4	24	-	4.6
14.12.2023	STP	BA-230/DEE/ARY	7.10	08	06	40	-	5.3
	Oxidation pond	BA-231/DEE/ARY	7.70	24	04	32	-	7.4
09.01.2024	STP	BA-249/DEE/ARY	8.77	12	10	32	-	2.4
	Oxidation pond	BA-250/DEE/ARY	6.57	06	04	16	-	0.4
20.02.2024	STP	BA-269/DEE/ARY	7.41	20	11	56	-	7.2
	Oxidation pond	BA-270/DEE/ARY	8.14	18	9	48	-	7.2

Dy. General Manager (Tech)

Corporate Office : 5th Floor, Aavin Illam, No.3 A Pasumpon Muthuramalinga Thevar Road, Nandanam, Chennai - 600 035

Phone : 044 - 2852 5461, 044 28525471 Toll Free No. 1800 599 7635

E-mail : csco.tancem@tn.gov.in Fax : 044 - 28523991 Website : www.tancem.com

CIN : U40200TN1976SGC007081 GSTIN : 33AABCT1819J1ZH

Category of the Industry :

RED



CONSENT ORDER NO. 2208243039244 DATED: 12/07/2022.

PROCEEDINGS NO.T4/TNPCB/F.0288ARY/RL/ARY/A/2022 DATED: 12/07/2022

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT –M/s. TAMILNADU CEMENTS CORPORATION LTD , S.F.No. 32,33,42,45 to 50,53,79,80,81,84,87,88,89,, KAIRLABATH village, Ariyalur Taluk and Ariyalur District - Renewal of Consent for the operation of the plant and discharge of emissions under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) –Issued- Reg.

REF: 1. Proc.No. T4/TNPCB/F.0288ARY/RL/ARY/W&A/2021 DATED: 01/11/2021
2. IR.No : F.0288ARY/RL/JCEE-M/ARY/2022 dated 19/05/2022

RENEWAL OF CONSENT is hereby granted under Section 21 of the Air (Prevention and Control of Pollution) Act, 1981 as amended in 1987 (Central Act 14 of 1981) (hereinafter referred to as “The Act”) and the rules and orders made there under to

The Deputy General Manager
M/s.TAMILNADU CEMENTS CORPORATION LTD,
S.F.No. 32,33,42,45 to 50,53,79,80,81,84,87,88,89,,
KAIRLABATH village,
Ariyalur Taluk,
Ariyalur District.

Authorizing the occupier to operate the industrial plant in the Air Pollution Control Area as notified by the Government and to make discharge of emission from the stacks/chimneys.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending March 31, 2024

RAGUPATHI
SANGANAN

Digitally signed by RAGUPATHI
SANGANAN
Date: 2022.07.13 18:00:45 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products (Col. 2) at the rate (Col. 3) mentioned below. Any change in the products and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	CLINKER	1475000	MT/ANNUM
2.	ORDINARY PORTLAND CEMENT AND PORTLAND POZZOLANA CEMENT	1630000	MT/ANNUM
By-Product Details			
1.	No by product	0	0
Intermediate Product Details			
1.	No intermediate product	0	0

2. This renewal of consent is valid for operating the facility with the below mentioned emission/noise sources along with the control measures and/or stack. Any change in the emission source/control measures/change in stack height has to be brought to the notice of the Board and fresh consent/Amendment has to be obtained.

I Point source emission with stack :				
Stack No.	Point Emission Source	Air pollution Control measures	Stack height from Ground Level in m	Gaseous Discharge in Nm3/hr
1	LIMESTONE CRUSHER - I (EXISTING)	Cyclone Separator with stack	14.9	30000
2	LIMESTONE CRUSHER - I (EXPANSION)	Bag Filters with stack	22.5	50000
3	LIMESTONE STORAGE-I TRANSFER POINT (EXPANSION)	Bag Filters	15.8	6500
4	LIMESTONE STORAGE-II TRANSFER POINT (EXPANSION)	Bag Filters	24.8	5600
5	RAW MILL (EXISTING)	Bag Filters with stack	12.5	30000
6	RAW MILL FEED HOPPER (EXPANSION)	Bag Filters	10.5	14000
7	RAW MILL TRANSFER POINT (EXPANSION)	Bag Filters	23.06	7500
8	RAW MILL (EXPANSION)	Bag Filters	28.88	13000
9	RAW MILL TRANSFER POINT (EXPANSION)	Bag Filters	26.3	4500
10	RAW MEAL SILO TRANSFER POINT (EXPANSION)	Bag Filters	53.3	8000
11	RAW MEAL SILO TRANSFER POINT (EXPANSION)	Bag Filters	11.2	10000
12	KILN-I (EXISTING)	Reverse Air Bag House with Stack	58.3	200000
13	KILN-II (EXISTING)	Reverse Air Bag House with Stack	58.3	200000
14	KILN (EXPANSION)	Bag Filters with stack	115.2	597600
15	KILN FEED TRANSFER POINT (EXISTING)	Bag Filters with stack	11.5	30000
16	KILN FEED TRANSFER POINT (EXPANSION)	Bag Filters	39.1	8000
17	KILN FEED TRANSFER POINT (EXPANSION)	Bag Filters	107.4	3720
18	BLENDING SILO-I (EXISTING)	Bag Filters with stack	11.5	30000
19	BLENDING SILO-II (EXISTING)	Bag Filters with stack	11.5	30000
20	CLINKER COOLER-I (EXISTING)	ESP with stack	37.22	200000
21	CLINKER COOLER-II (EXISTING)	ESP with stack	37.22	200000
22	CLINKER COOLER (EXPANSION)	ESP with stack	41	338400

23	CLINKER COOLER TRANSFER POINT (EXISTING)	Bag Filters with stack	18.9	30000
24	CLINKER COOLER TRANSFER POINT (EXPANSION)	Bag Filters	1.2	6000
25	DEEP BUCKET CONVEYOR TRANSFER POINT (EXISTING)	Bag Filters with stack	7	30000
26	CLINKER STOCK PILE TRANSFER POINT (EXISTING)	Cyclone Separator with stack	10.5	30000
27	CLINKER SILO (EXPANSION)	Bag Filters	38.8	35000
28	CLINKER SILO TRANSFER POINT (EXPANSION)	Bag Filters	4.98	17500
29	CLINKER SILO TRANSFER POINT (EXPANSION)	Bag Filters	19.5	1500
30	COAL MILL (EXISTING)	ESP with stack	25.8	60000
31	COAL MILL (EXPANSION)	Bag Filters with stack	55.9	72360
32	COAL MILL TRANSFER POINT (EXPANSION)	Bag Filters	38.15	3500
33	COAL MILL TRANSFER POINT (EXPANSION)	Bag Filters	38.15	3500
34	COAL CRUSHER (EXISTING)	Bag Filters with stack	14.15	20000
35	CEMENT MILL (EXISTING)	Bag Filters with stack	38.5	60000
36	CEMENT MILL TRANSFER POINT (EXISTING)	Bag Filters with stack	13.5	30000
37	CEMENT MILL (EXPANSION)	Bag Filters with stack	44	38880
38	CEMENT MILL SEPARATOR (EXPANSION)	Bag Filters with stack	44	51840
39	CEMENT MILL TRANSFER POINT (EXPANSION)	Bag Filters	14.3	5000
40	CEMENT MILL TRANSFER POINT (EXPANSION)	Bag Filters	28.55	11000
41	CEMENT MILL FEED TRANSFER POINT (EXPANSION)	Bag Filters	28.55	8000
42	CEMENT MILL TRANSFER POINT (EXPANSION)	Bag Filters	16.45	7000
43	CEMENT MILL SEPARATOR TRANSFER POINT (EXPANSION)	Bag Filters	15.9	3000
44	CEMENT SILO TRANSFER POINT (EXPANSION)	Bag Filters	45.17	6600

45	CEMENT SILO TRANSFER POINT (EXPANSION)	Bag Filters	12.07	10000
46	CEMENT SILO TRANSFER POINT (EXPANSION)	Bag Filters	10.12	5200
47	CEMENT SILO TRANSFER POINT (EXPANSION)	Bag Filters	45.17	6600
48	CEMENT SILO (EXPANSION)	Bag Filters	17.1	25000
49	FLY ASH HOPPER (EXISTING)	Bag Filters with stack	11.5	30000
50	FLY ASH SILO (EXPANSION)	Bag Filters	33.8	13000
51	PACKING HOUSE-I (EXISTING)	Bag Filters with stack	13	30000
52	PACKING HOUSE-II (EXISTING)	Bag Filters with stack	13	30000
53	PACKING PLANT (EXPANSION)	Bag Filters	17.1	25000
54	DG SET 2500 KVA (EXISTING)	Stack	8	15000
55	DG SET 1000 KVA (EXPANSION)	Stack	30	7000
II	Fugitive/Noise emission :			
Sl. No.	Fugitive or Noise Emission sources	Type of emission	Control measures	
1.	TRANSPORT VEHICLE MOVEMENT LOADING & UNLOADING	Fugitive	WATER SPRAYING BY TIPPER AND WATER SPRINKLER SYS.	
2.	DG SET 2500 KVA 1 NO	Noise	ACOUSTIC ENCLOUSE	
3.	DG SET 1000 KVA 1 NO	Noise	ACOUSTIC ENCLOUSE	

Special Additional Conditions:

- i. The unit shall install the approved retrofit emission control device/equipment with at least 70% Particulate matter reduction efficiency on all DG sets with capacity of 125 KVA and above or otherwise the unit shall be shift to gas based generators within the time frame prescribed in the notification No. TNPCB/Labs/DD(L)02151/2019 dated 10.06.2020 issued by TNPCB.
- ii. The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions:

1. The unit shall operate and maintain the air pollution control measures efficiency and continuously so as to achieve the Ambient Air quality / Emission standards prescribed by the Board & MoEF &CC.
2. The unit shall comply with the new emission standards prescribed by MoEF&CC vide notification dated 25.08.2014 &10.05.2016.
3. The unit shall ensure that the noise generated by the unit shall adhere to the Ambient Noise Level standards prescribed by the Board.
4. The industry shall ensure that all the dust accumulated in the premises (in old line and new line areas) are cleared immediately.
5. The unit shall not run existing plant until further orders from the Government, as committed.
6. The unit shall maintain the online stack monitoring system and the continuous AAQ monitoring system efficiently so as to send good quality data to Care Air Centre.
7. The unit shall comply with the fugitive emission guidelines prescribed by CPCB vide PROBES/118/2007 dated: 06.07.2007.
8. The storage of coal, clinker, lime stone, Gypsum, fly ash and other additives should be done under covered shed.
9. The unit shall carry out cleaning of spilled materials such as Gypsum, Fly ash, and Coal dust inside the working area periodically to avoid carryover of dust to the surrounding.
10. The unit shall pave all the areas where vehicle movement take place.
11. The unit shall conduct the ground level concentration study due to various emission sources through a laboratory approved by CPCB within a month and install the CAAQM stations as already instructed by Board within 3 months.
12. The performance efficiency of the APC devices shall be conducted through a laboratory approved by CPCB and report shall be submitted to TNPCB.
13. Fugitive emission monitoring shall be conducted at cement mill, coal mill and Raw material handling area through a laboratory approved by CPCB and the report shall be submitted to TNPCB.
14. All continuous emission monitoring systems should be operated as per CPCB CEMs guidelines and the data shall be transmitted as per guidelines. Further the unit shall comply the following:
 - a. Kiln Stack Gaseous Analyzer:
 - (i) Sampling flow rate shall be maintained at 60 TPH.
 - (ii) NOX value shall be normalized and transmitted as NO₂ instead of transmitting as NO.
 - (iii) O₂ correction shall be given for the NOX values.
 - (iv) Zero check shall be conducted daily and span check shall be conducted once in fortnight.
 - (v) Proper record for drift observations shall be maintained.
 - (vi) Analyzer values shall be directly transmitted to the TNPCB/CPCB server without having any intermediate server or PC.
 - b. Kiln stack PM Analyser:
 - (i) Reference sampling port hole shall be provided for calibration/ manual iso kinetic sampling.
 - (ii) The unit shall ensure that the purge blower filter are not choked for adequate purge air supply to the analyzer.
 - (iii) The data shall be normalized and transmitted as mg/ Nm³ instead of mg/ m³.
 - (iv) Dust factor check shall be done every month.
 - (v) The unit shall ensure that the analyzer should be TUV/MCERTS certified analyser.
 - (vi) Analyzer installed for coal mill, cement mill and raw mill shall be serviced and recalibrated since constant values were showing.
 - c. CAAQMS
 - (i) CAAQMS gaseous analyzers shall be serviced and recalibrated since they are not working properly.
 - (ii) The unit shall rectify the filter tapes for PM₁₀ and PM_{2.5} and ensure that they are working properly.
 - (iii) Calibrator shall be made available at the unit and inhouse calibration shall be done as per the guidelines.
 - (iv) The performance calibration of all the online analyzers shall be conducted once in a year through a laboratory approved by CPCB and report shall be submitted to TNPCB.
15. The unit shall conduct a comprehensive Environmental audit through a laboratory approved by CPCB/MoEF once in a year which includes water audit, ETP/STP adequacy & efficacy, APCD performance efficiency etc, and shall furnish report to TNPCB.
16. The unit shall continue to develop more green belt in and around the unit premises.
17. The industry shall operate and maintain the water sprinklers and street sweepers provided by the industry at all times.
18. The industry shall improve the house keeping in the entire premises.
19. The industry shall calibrate and maintain the online continuous emission monitoring system provided for the Kilns, Clinker coolers, cement mill & coal mills and also the continuous AAQMS so as to send quality data to the CAC, TNPCB, Chennai.
20. The unit shall ensure that calibration is done at frequent intervals to keep the analyzer intact.
21. The unit shall maintain all the online monitors continuously and efficiently and should ensure the online connectivity with Care Air Centre of TNPCB, Chennai to provide proper quality data at all

times.

22. The unit shall continuously operate and maintain the online analyzer and online display board installed in the entrance of the unit efficiently.

23. The unit shall ensure that the emission meets the emission standards as notified by MoEE&CC vide GSR497 (E) dated: 10.05.2016 and shall comply with the condition stipulated in the MoEF&CC,O&M,F.No22-34/2018-1A dated 09.08.2018.

24. All internal roads shall be cleaned with road sweeper then and there and the house keeping should be done all the time effectively and water sprinkling shall be done frequently so as to arrest the dust spreading due to vehicular movement.

25. The unit shall increase the consumption of ETP sludge with immediate effect.

26. The industry shall utilise /enhance the usage of Alternate Fuels and Raw materials (AFR such as Plastic wastes, Hazardous wastes) for Co- processing/Co-incineration in Cement Kiln so as to improve the Thermal Substitution Ratio (TSR). Also the unit shall provide necessary infrastructure facilities such as feeding system, conveyor systems, etc., for co processing to achieve the TSR of 10% during 2022-23 within 3 months and report to the Board.

27. The unit shall immediately take necessary action for providing infrastructure facilities to achieve the TSR as 10% and shall complete the same within within 3 months to achieve 10%.

28. The industry shall develop more green belt in the premises by planting more number of tree saplings.

29. The unit shall operate the plant without attracting complaints from the nearby Public.

30. This consent order does not absolve from obtaining necessary permission / clearance from other Authority or under other Statute as applicable.

RAGUPATHI
SANGANAN

Digitally signed by RAGUPATHI
SANGANAN
Date: 2022.07.13 18:01:19 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**

To
The Deputy General Manager,
M/s.TAMILNADU CEMENTS CORPORATION LTD,
TAMIL NADU CEMENTS CORPORATION LIMITED, ARIYALUR CEMENT WORKS,ARASU
NAGAR,ARIYALUR,
Pin: 621729

Copy to:

- 1.The Commissioner, ARIYALUR-Panchayat Union, Ariyalur Taluk, Ariyalur District .
2. The District Environmental Engineer, Tamil Nadu Pollution Control Board, ARIYALUR.
3. The JCEE-Monitoring, Tamil Nadu Pollution Control Board, Triuchirappalli.
4. File

Category of the Industry :

RED



CONSENT ORDER NO. 2208143039244 DATED: 12/07/2022.

PROCEEDINGS NO.T4/TNPCB/F.0288ARY/RL/ARY/W/2022 DATED: 12/07/2022

SUB: Tamil Nadu Pollution Control Board - RENEWAL OF CONSENT – M/s. TAMILNADU CEMENTS CORPORATION LTD , S.F.No. 32,33,42,45 to 50,53,79,80,81,84,87,88,89,, KAIRLABATH village, Ariyalur Taluk and Ariyalur District - Renewal of Consent for the operation of the plant and discharge of sewage and/or trade effluent under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act 6 of 1974) – Issued- Reg.

REF: 1. Proc.No. T4/TNPCB/F.0288ARY/RL/ARY/W&A/2021 DATED: 01/11/2021
2. IR.No : F.0288ARY/RL/JCEE-M/ARY/2022 dated 19/05/2022

RENEWAL OF CONSENT is hereby granted under Section 25 of the Water (Prevention and Control of Pollution) Act, 1974 as amended in 1988 (Central Act, 6 of 1974) (hereinafter referred to as “The Act”) and the rules and orders made there under to

The Deputy General Manager
M/s.TAMILNADU CEMENTS CORPORATION LTD,
S.F.No. 32,33,42,45 to 50,53,79,80,81,84,87,88,89,,
KAIRLABATH Village ,
Ariyalur Taluk ,
Ariyalur District .

Authorising the occupier to make discharge of sewage and /or trade effluent.

This is subject to the provisions of the Act, the rules and the orders made there under and the terms and conditions incorporated under the Special and General conditions stipulated in the Consent Order issued earlier and subject to the special conditions annexed.

This RENEWAL OF CONSENT is valid for the period ending March 31, 2024

RAGUPATHI
SANGANAN

Digitally signed by RAGUPATHI
SANGANAN
Date: 2022.07.13 17:59:38 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**

SPECIAL CONDITIONS

1. This renewal of consent is valid for operating the facility for the manufacture of products/byproducts (Col. 2) at the rate (Col 3) mentioned below. Any change in the product/byproduct and its quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Sl. No.	Description	Quantity	Unit
Product Details			
1.	CLINKER	1475000	MT/ANNUUM
2.	ORDINARY PORTLAND CEMENT AND PORTLAND POZZOLANA CEMENT	1630000	MT/ANNUUM
By-Product Details			
1.	No by product	0	0
Intermediate Product Details			
1.	No intermediate product	0	0

2. This renewal of consent is valid for operating the facility with the below mentioned outlets for the discharge of sewage/trade effluent. Any change in the outlets and the quantity has to be brought to the notice of the Board and fresh consent has to be obtained.

Outlet No.	Description of Outlet	Maximum daily discharge in KLD	Point of disposal
Effluent Type : Sewage			
1.	SEWAGE	110.0	On land for gardening
Effluent Type : Trade Effluent			
1.	No trade effluent	0.0	Not applicable

Special Additional Conditions:

The unit shall obtain No Objection Certificate (NOC) from the Tamil Nadu Bio Diversity Board /National Bio Diversity Authority if the unit is using any Biological resources or knowledge associated thereto as per the provisions of Biological Diversity Act 2002.

Additional Conditions:

1. The Unit shall manufacture only the products for which consent is obtained and shall ensure that the production is within the consented quantity.
2. The unit shall operate and maintain the Sewage Treatment Plant efficiently and continuously to achieve the Standards prescribed by the Board at all times and the treated sewage shall be utilized for gardening within the premises as reported after meeting standards prescribed by the Board.
3. The industry shall ensure that the sewage either treated or untreated is not discharged outside the premises.
4. The unit shall ensure that no trade effluent generated from the process.
5. The unit shall increase the consumption of ETP sludge with immediate effect.
6. The industry shall utilise /enhance the usage of Alternate Fuels and Raw materials (AFR such as Plastic wastes, Hazardous wastes) for Co- processing/Co-incineration in Cement Kiln so as to improve the Thermal Substitution Ratio (TSR). Also the unit shall provide necessary infrastructure facilities such as feeding system, conveyor systems, etc., for co processing to achieve the TSR of 10% during 2022-23 within 3 months and report to the Board.
7. The unit shall immediately take necessary action for providing infrastructure facilities to achieve the TSR as 10% and shall complete the same within within 3 months to achieve 10%.
8. The unit shall always possess valid NOC for water drawl from the competent Authority.
9. The unit shall continue to develop green belt with native species of trees to attenuate the Air/Noise pollution.
10. The unit shall not use "Use and throw away Plastics" such as plastic sheets used for food wrapping, spreading on dining table etc., plastic plates, plastic coated tea cups, plastic tumbler, water pouches and packets, plastic straw, plastic carry bag and plastic flags irrespective of thickness within the industry premises. Instead it shall encourage use of eco friendly alternatives such as banana leaf, areca nut palm plate, stainless steel glass, porcelain plates cups, cloth bag, jute bags etc.
11. The unit shall operate the plant without attracting complaints from the nearby Public.
12. This consent order does not absolve from obtaining necessary permission / clearance from other Authority or under other Statute as applicable.

RAGUPATHI
SANGANAN

Digitally signed by RAGUPATHI
SANGANAN
Date: 2022.07.13 18:00:10 +05'30'

**For Member Secretary,
Tamil Nadu Pollution Control Board,
Chennai**

To
The Deputy General Manager,
M/s.TAMILNADU CEMENTS CORPORATION LTD,
TAMIL NADU CEMENTS CORPORATION LIMITED, ARIYALUR CEMENT WORKS,ARASU
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4. File
