Chettinad cement
Pedagarlapadu Project

CCCPL/DACHEPALLI/ENV/2022
28th September, 2022

The Environmental Engineer,
Andhra Pradesh Pollution Control Board,
Regional Office, D. No: 135-43, 1st Floor,
Lucky Complex, JKC College Road,
GUNTUR – 522007 (Andhra Pradesh)

Sub: Submission of Environmental Statement (Form-V) under Rule No.14 of E (P) Rules, 1986 & amendments thereof for our Integrated Cement Plant (3.5 MTPA Cement & 20 MW WHRB) located at Pedagarlapadu (V), Dachepalli (M), Guntur District, Andhra Pradesh for the period of 2021-22 - Reg.

Ref: 1. CFO Order No APPCB/VJA/GNT/347/CFO/HO/2020 Dated 03/07/2020.
2. EC F.N. J-11011/421/2011-IA.II (I), Dated 24.02.2015.

Dear Sir,

Reference to the Consent Order and Environmental Clearance cited above, we are herewith submitting Environmental Statement (Form-V) under Rule No.14 of E (P) Rules, 1986 & amendments thereof for our Integrated Cement Plant (3.5 MTPA Cement & 20 MW WHRB) located at Pedagarlapadu (V), Dachepalli (M), Guntur District, Andhra Pradesh for the period of 2021-22.

This is for your information & records please.

Thanking you,

Yours faithfully,
For **Chettinad Cement Corporation Private Limited**

Seetharamulu Ch
Joint President (Works)

Copy: Inspector General of Forests,
Integrated Regional Office (IRO), Vijayawada Green House Complex,
Vijayawada – 520010, Andhra Pradesh – Soft copy through e-mail.

ENVIRONMENTAL STATEMENT

(FORM - V)

FOR FINANCIAL YEAR 2021-22

CEMENT – 3.5 MTPA & WHRB – 20 MW

CHETTINAD CEMENT CORPORATION PRIVATE LIMITED

Pedagarlapadu (V), Dachepalli (M),

Guntur (Dist.), Andhra Pradesh - 522437

FORM – V

(See Rule 14)

Environmental Statement Report for Financial Year Ending 31st March 2022

Part – A

A.	Name and address of the owner / occupier of the industry operation or process	:	**Sri. Seetharamulu Ch** **Joint President –Works (Unit Head)** Chettinad Cement Corporation Private Limited Pedagarlapadu (V) & Kesanupalli (V) Dachepalli (M), Guntur District – 522 437 Andhra Pradesh.
B.	Industry category Primary – (STC Code)	:	--
C.	Secondary- (SIC Code)	:	--
D.	Production capacity	:	Cement - 3.5 MTPA & WHRB – 20 MW
E.	Year of establishment	:	2018
F.	Date of last environmental statement submitted	:	20.09.2021

Part – B

Water and Raw Material Consumption

1. Water consumption in (KLD):

Industrial	:	635
Domestic	:	270
Greenbelt	:	90

Name of the products	Process water consumption per unit of products (m^3/Tonne of Product)	
	During the current financial year (2020-21)	During the current financial year (2021-22)
Clinker (m3 /Ton)	0.031	0.043
Cement (m3 /Ton)	0.029	0.047
WHRB (m^3 /MW)	--	1.302

2. Raw Material Consumption:

Name of raw materials	Name of products	Consumption of raw material per unit of output (MT of Raw materials/ MT of Product)	
		During the current financial year (2020-21)	During the current financial year (2021-22)
Limestone	Clinker	1.4260	1.4063
Laterite	Clinker	0.1120	0.1000
Pond Ash-Raw Mix	Clinker	0.0022	0.0137
Fly ash-Raw Mix	Clinker	0.0037	0.0042
Imported Coal	Clinker	0.1720	0.1382
Indigenous Coal	Clinker	0.0000	0.0015
Imported Gypsum	Cement	0.0160	0.0151
Chemical Gypsum	Cement	0.0160	0.0072
Fly ash in PPC	Cement	0.3300	0.3355

Part – C

Pollution Discharged To Environment/Unit of Output

(Parameter as specified in the consent issued)

Pollutants		Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
a) Water	**Pollutants**	**Kg/day**	**mg/L**	**%**
Domestic - Sewage Treatment Plant	Total Suspended Solids	0.573	11.2	-88.82
	Biological Oxygen Demand	0.460	9.0	-70.11
	Oil & Grease	0.0	0.0	-100.00
	Faecal Coliform (MPN)	10.08	196.7	-80.33
b) Air	**Pollutants**	**Kg/day**	**mg/Nm^3**	**%**
Emissions from Stacks	Kiln / Raw Mills -PM	99.5	13.9	-53.63
	Kiln / Raw Mills - SO_2	0.0	0.0	-100.0
	Kiln / Raw Mills - NO_x	3375.2	471.7	-21.39
	Clinker Cooler - PM	100.9	19.1	-36.48
	Coal Mill – PM	13.4	13.7	-54.33
	Cement Mill - PM	26.7	17.5	-41.74

Part – D
Hazardous Waste

As specified under

Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016

Hazardous waste	Total Quantity (MT)	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
a) Form Process		
Used / Waste Oil	Nil	Nil
Waste / Residues containing oil	Nil	Nil
b) Form Pollution Control Facilities	Nil	Nil

Part – E
Solid Waste

Solid waste	Total Quantity (Tonnes)	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
A. From process	Nil	Nil
B. From pollution control facilities	Cement dust from APCD's was recycled back in to process.	Cement dust from APCD's was recycled back in to process.
C. 1. Quantity recycled or re-utilized within the unit	Nil	Nil
2. Sold	Nil	Nil
3. Disposed	Nil	Nil

Part – F

Please specify the characteristics (in terms of concentration and quantum) of hazardous as well as solid wastes and indicates disposal practice adopted for both these categories of wastes

- Hazardous waste was not generated & not disposed for the period of 2021-22.
- No Solid waste is generated in the Manufacturing process.

Part – G

Impact of the Pollution Control Measures on Conservation of Natural Resources and Consequently On the Cost of Production

- We, M/s. Chettinad Cement Corporation Private Limited are operating Integrated Cement Plant (Cement 3.5 MTPA, WHRB with Power Generation capacity of 20 MW) at Pedagarlapadu (V), Dachepalli (M), Guntur District after obtaining CFO vide Order No APPCB/VJA/GNT/347/CFO/HO/2020 Dated 03.07.2020 valid up to 29.02.2024.
- We have installed Air Pollution Control Devices (APCD's) designed for complying with new emission standards such as RABH for Kiln & Raw Mill, Bag House's for Coal Mill & Cement Mill, ESP for Clinker cooler.
- We have installed state of art Pyro Redox Low NOx Calciner technology at our pyro processing section to reduce the NOx emissions below the prescribed standards.

RABH for Kiln & Raw Mill

ESP for Clinker Cooler

Bag House for Coal Mill

Bag House for Cement Mill

Pyro redox for NOx reduction

- Adequate dust collection and extraction systems provided at material transfer points, silo tops to avoid fugitive emissions. About 90 numbers of Pulse Jet Bag Filters are provided at various transfer points for effective controlling of pollution from the manufacturing process. Thus collection dust is being recycled back in to the process.

Bag filter at cement silos top

Bag filter at blending silo top

- For controlling of fugitive emissions, Closed sheds provided for storage & handling of the Limestone, Coal, Additive and Gypsum.

Closed Limestone Storage Shed

Closed Additive Storage Shed

Gypsum storage shed & conveying

Coal Storage Shed

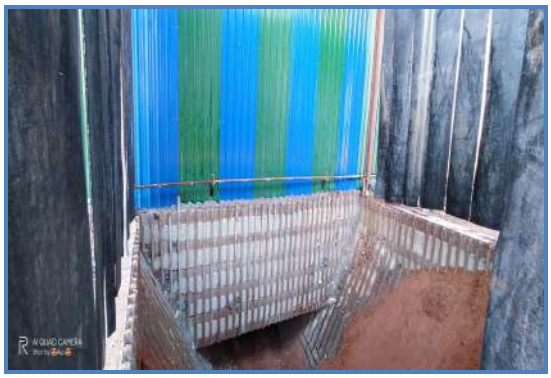
- All the Material transfer conveyors belts are covered with GI cladding / closed conveying system to avoid dust emissions. Transfer points of BC's are provided with Bag filters.

Cladding for all BC's **Bag filters at clinker transport system**

- Fly ash is stored in silo, transported through Bouzers & unloaded pneumatically for controlling the fugitive emissions. Clinker is stored in Silo for avoiding fugitive emissions.

- All the Internal roads are made with Cement Concrete to reduce the dust emission. Vacuum / pneumatic dust collection system (Road Sweeping Machine) is in place for cleaning the internal roads & maintaining housekeeping. Regular water spraying on roads is practiced.

- Water sprinkling system & Rubber curtains at Hoppers to suppress to dust while unloading the materials



- We have developed greenbelt covering all along the plant boundary, along the internal roads and in vacant places. As on 2021-22, greenbelt developed in an area of 81.50 Acres with 37,602 saplings. Further, we are in the process of completing greenbelt in an area of 26 Acres.

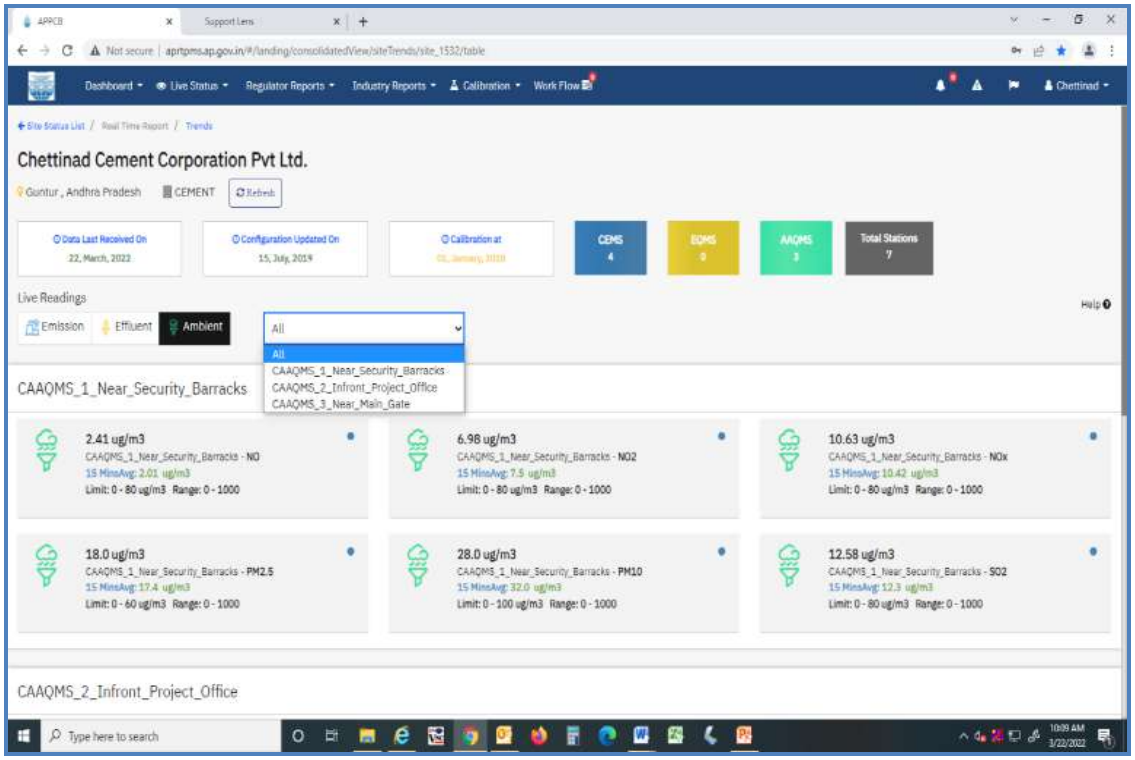
Year	Saplings Planted	Area in Ha	Area in Acres	Survival Rate (%)
2017-18	4500	4.05	10.00	96%
2018-19	2800	2.52	6.22	96%
2019-20	3411	1.82	4.49	98%
2020-21	2705	2.43	6.01	98%
2021-22	24186	22.17	54.77	90%
Total	**37602**	**32.99**	**81.50**	

- We have installed 03 No's Continuous Ambient Air Quality Monitoring (CAAQM) Stations covering Predominant directions & real time data is connected & uploaded to both APPCB and CPCB Websites.

CAAQM-1 @ Security Barracks

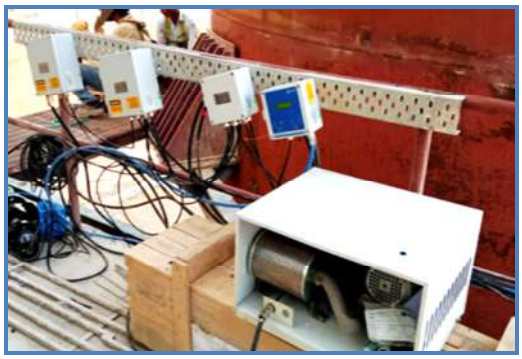
CAAQM-2 @ Project Office

CAAQM-3 @ Main Gate



CAAQMS Data connectivity to APPCB website

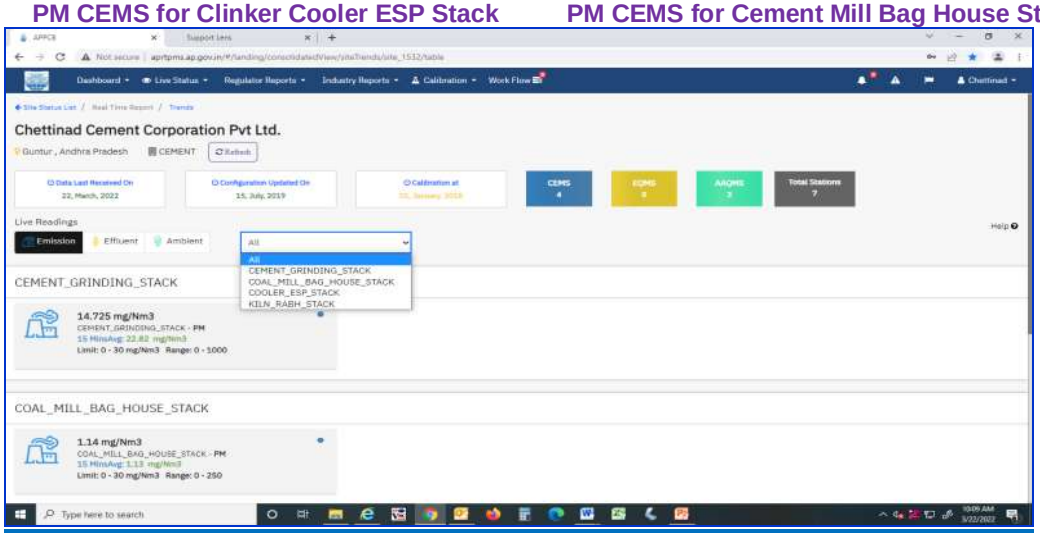
- Continuous Emission Monitoring Systems (CEMS) has been installed for 4 No's major stacks and connected to APPCB and CPCB Websites.

PM & Gaseous CEMS for Kiln & Raw Mill RABH Stack


PM CEMS for Coal Mill Bag House Stack


PM CEMS for Clinker Cooler ESP Stack **PM CEMS for Cement Mill Bag House Stack**



CEMS Data connectivity to APPCB website

- We have provided Display Board at the Plant Entrance gate for displaying real time stack emissions and CAAQM stations data in public domain.

- Sewage Treatment Plant with capacity of 150 KLD was installed for treatment of domestic effluents. The treated waste water is utilized for greenbelt development. 18708 KL of domestic waste water treated in STP during 2021-2022 and used for greenbelt development purpose. Thus, the same amount of fresh water was saved.

- Environmental Monitoring are carried out by deputing MoEF recognized 3rd party and the reports are regularly submitted to concerned Statutory Authorities.
- We have installed 2 no's of Piezometers with telemetry system at our Plant site & Mines Office Complex for continuous measurement of Ground Water levels.

Part – H

Additional Investment for Environmental Protection Including Abatement of Pollution

- An amount of Rs.9.28 Crores incurred towards capital expenditure during the year 21-22.

Description	Amount
CEMENT MILL-PROCESS BAG FILTERS	132,839
COAL MILL-PROCESS BAG FILTERS	197,206
PYRO-ALTERNATIVE FUEL	91,803,801
RAW MILL-PROCESS BAG FILTERS	105,104
PLANT-COMM-STP-CIVIL	524,482
Grand Total (in Crores)	**9.28**

- An amount of 7.46 Crores incurred towards revenue expenditure for environment protection measures during the year 2021-22.

Description	Amount
GREEN FIELD DEVELOPMENT	3,017,441
ENVIRONMENT MONITORING CHARGES	462,800
AMC FOR CEMS / CAAQMS / BMW	97,625
GREENBELT (MAN POWER /TANKER)	2,207,157
GENERAL SPARES & CONSUMABLES	890,444
ENVIRONMENT AWARENESS	9,794
FACTORY STP MAINTENACE	24,689
ELECTRICITY CONSUMPTION FOR APCE's	67890318.84
Grand Total (in Crores)	**7.46**

PART – I

Any Other Particulars for Improving the Quality of the Environment

- Greenbelt was developed in an area of 81.50 ha with 37,602 no's of plants covering Cement Plant and Colony as on 31.03.2022.
- We have initiated for implementation of ISO - 14001 Environment Management System for taking utmost care of the Environment.
- We are constructing wind barrier of 1.7 kms length along the boundary with an investment of around 3.0 crores.
- We have initiated for developing dedicated shed with full-fledge handling facility for Pre-processing and Co-processing of hazardous waste.
- Initiated for Procurement & installation of Bio-gas Plant for disposal of bio-degradable waste.

Chettinad Cement Corporation Private Limited
Pedagarlapadu Project

Authorized Signatory

Seetharamulu Ch
Joint President –Works (Unit Head))

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