Chettinad Cement/Kallur/Environmental Statement/Cement Plant & CPP/2017

28th Sep, 2017

Member Secretary
Karnataka state Pollution Control Board
49, Church Street
Bangalore
Karnataka – 560 001

Sir,

Sub: Submission of Environmental Statement in "From V" for the year 2016-17 under Environment (Protection) Rules, 1986 - Cement Plant & Captive Power Plant of Chettinad Cement Corporation Private Limited located at Kallur & Sangem K Villages, Chincholi Taluk , Kalaburagi District, Karnataka

We submit herewith the **"Environmental Statement"** 1986 for the year 2016-17 in the prescribed format **(Form V)** under Environment (Protection) Rules, pertaining to our Cement Plant & Captive Power Plant located Kallur & Sangem K Villages, Chincholi Taluk , Kalaburagi District, Karnataka.

Kindly acknowledge the receipt of the same.

Yours faithfully,
for Chettinad Cement Corporation Private Limited

C Janaradhana reddyy
Joint President (Works)

Copy to :

1. Scientist 'E' & In-Charge, CPCB, Bengaluru
2. Director (SZ),MoEFCC, Bengaluru
3. Senoir Environmental Officer.KSPCB, Zonal Office, Kalaburagi
4. Environmental Officer,KSPCB, Regional Office,Kalaburagi

Chettinad Cement Corporation Private Limited
Kallur Works, Sangam K
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Chincholi (TK), Kalaburagi (Gulbarga) (DT)
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FORM - V

(Rule 14 of Environment (Protection) Rules, 1986)

Environmental Statement for the Financial Year ending the 31st March 2017

PART – A

(i)	Name and address of the owner / occupier of the industry operation or process.	:	**C.Janaradhana reddy,** **Joint President (Works)** Chettinad Cement Corporation Private Limited Kallur Works Kallur & Sangem K Villages Chinholi Taluk Kalaburagi District Karnataka Pincode : 585 305
(ii)	Industry category Primary (STC Code) Secondary (SIC Code)	 : :	 Red Large 1007- Cement
(iii)	Production Capacity	:	Cement : 2.5 million tons per annum (mtpa) Power : 30 mega watt (mw)
(iv)	Year of Establishment	:	2012
(v)	Date of Last Environment Statement submitted	:	27th Sep , 2016

PART – B

Water and Raw Material Consumption

(i) Water Consumption m^3/day

Process (Cement)	:	78.23
Process (Power)	:	282.23
Cooling (Cement)	:	5.26
Cooling (Power)	:	44.69
Domestic	:	48.43

Name of the Product	Process Water Consumption (m^3) per unit (metric ton) of Product Output	
	During the Previous Financial Year (2015-16)	During the Current Financial Year (2016-17)
Cement	0.0315	0.0193
Power	0.312	0.669

(ii) Raw Material /Fuel Consumption

a. Cement Plant

Name of the Raw Material		Name of the Product	Consumption of Raw Material /Fuel (metric ton) per unit (metric ton) of Output	
			During the Previous Financial Year (2015-16)	During the Current Financial Year (2016- 17)
1	Limestone	Cement	1.356	1.319
2	Laterite		0.064	0.065
3	Iron Ore		0.003	0.015
4	Imported Coal		0.089	0.082
	Others		0.021	0.022
	Total Fuel		0.110	0.104
6	Gypsum		0.033	0.034
7	Fly Ash		0.250	0.262

Alternate Fuels & Raw Materials (AFR)

Name of the AFR	Name of the Product	Consumption of AFR (metric ton) per unit (metric ton) of Output	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016- 17)
Paint Sludge , ETP Sludge, Process Residue, Spent Carbon, Solid Organic Solvent, Liquid Organic Solvent, Process Residue, N – Butanol Salt	Cement	0.001	0.002

b. Power Plant

Name of the Raw Material		Name of the Product	Consumption of Raw Material (metric ton) per MW of Output	
			During the Previous Financial Year (2015-16)	During the Current Financial Year (2016 - 17)
1	Imported Coal	Power	0.596	0.569
	Others		0.055	0.066
	Total Fuel		0. 651	0.636

PART – C

Pollution Discharged to Environment / Unit of output
(Parameter as specified in the Consent issued)

a. Cement Plant

Pollutant	Quantity of Pollutant Discharged (mass/day) (kg/day)	Concentration of Pollutant in Discharges (Mass/volume) (mg/litre)	Percentage of Variation from prescribed Standard with reasons
(a) Water			
TSS	0.67	18.5	Compared to Standard less by 85 %
BOD	0.16	4.5	Compared to Standard less by 95 %
(b) Air			
Pollutant	Quantity of Pollutant Discharged (mass/day) (kg/day)	Concentration of Pollutant in Discharges (Mass/volume) mg/Nm^3	Percentage of Variation from prescribed Standard with reasons
PM #	484.6	19.5	Compared to Standard less by 35 %
SO_2	-	19.0	Compared to Standard less by 81 %
NOx	-	418.3	Compared to Standard less by 48 %

Compared to allowed Pollution Load of 0.125 kg of PM per ton of Clinker , actual load was 0.064 kg per of PM per ton of Clinker, which was less by 49 %

b. Power Plant

Pollutant	Quantity of Pollutant Discharged (mass/day) (kg/day)	Concentration of Pollutant in Discharges (Mass/volume) mg/litre Except pH	Percentage of Variation from prescribed Standard with reasons
(a) Water			
pH	--	7.7	Less than the norm
TDS	24.20	751.0	Compared to Standard less by 93 %
TSS	0.80	24.8	Compared to Standard less by 95 %
Chloride	5.56	172.6	Compared to Standard less by 96 %
Sulphate	3.54	109.7	Compared to Standard less by 98 %
Pollutant	Quantity of Pollutant Discharged (mass/day) (kg/day)	Concentration of Pollutant in Discharges (Mass/volume) mg/Nm^3	Percentage of Variation from prescribed Standard with reasons
(b) Air			
PM	115.32	19.03	Compared to Standard less by 62 %

PART – D

Hazardous Wastes

[As specified under Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016]

Cement Plant & Captive Power Plant

Hazardous Waste		Total Quantity Generated	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016- 17)
(a)	From Process Used Oil (Category No 5.1)	11.795 kl	24.10 kl
(b)	From Pollution Control Facilities	NIL	NIL

PART – E

Solid Waste

Cement Plant & Captive Power Plant

Solid Waste		Total Quantity in metric ton	
		During the Previous Financial Year (2015-16)	During the Current Financial Year (2016- 17)
(a)	From Process **Captive Power Plant** Bottom Ash (Generated Quantity)	 2130	 1440
(b)	From Pollution Control Facilities- Generated **Captive Power Plant** Fly Ash from ESP (Generated Quantity) Sewage Treatment Plant (STP) common for Cement Plant & Captive Power Plant and there is no generation of any sludge from the same.	 13903	 15654
(c)	1. Quantity recycled or re-utilized within the unit a. Bottom Ash b. Fly Ash	 2130 15234	 1440 15654
	2. Sold a. Bottom Ash b. Fly Ash	 NIL NIL	 NIL NIL
	3. Disposed a. Bottom Ash b. Fly Ash	 NIL NIL	 NIL NIL

PART – F

Please specify the characterizations (in terms of composition of quantum) of hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes

Cement Plant & Captive Power Plant

Name of the Waste		Quantity	Characteristics	Disposal Practice Adopted
A. Hazardous Waste				
1	Used / Spent Oil (Category No.5.1)	Opening Stock (as on 01.04.2016) : NIL Generation (Apr'16-Mar'17) : 24.10 kl Consumption (Apr'16-Mar'17) : 24.10 kl Closing Stock (as on 31.03.2017) : Nil	Liquid 5000-7000 kcal/Kg of GCV and less than 5 ppm of Cd+Cr+Ni	Out of 24.10 kl , a quantity of 4.1 kl used for lubrication purpose in conveyor other motors within the Plant and 20.0 kl sent to authorized recycler
2	Paint Sludge, ETP Sludge, Process Residue, Spent Carbon, Solid Organic Solvent, Liquid Organic Solvent, Process Residue	Opening Stock (as on 01.04.2016) : 123.4 tons Receipt (Apr'16-Mar'17) : 2462.6 tons Consumption (Apr'16-Mar'17) : 2550.0 tons Closing Stock (as on 31.03.2017) : 36.0 tons	Wastes containing Calorific value of 3500 - 5000 kcal/kg	Used as Alternate fuel in the kiln
B. **Solid Waste**				
1	Bottom Ash	Opening stock (as on 01.04.2016) : NIL Generation (Apr'16 –Mar'17) : 1440 tons Consumption (Apr'16-Mar'17) : 1440 tons Closing stock (as on 31.03.2017) : NIL	Solid SiO_2 : 70-80%, Fe_2O_3 : 2-5 % LOI : 4 -6 % Al_2O_3 : 18-30%	100% reused within the premises as replacement of boiler bed materials and as sand for masonry works..

Name of the Waste		Quantity	Characteristics	Disposal Practice Adopted
2	Fly Ash	Opening stock (as on 01.04.2016) : 0.55 tons Generation (Apr'16 –Mar'17) : 15654 tons Consumption (Apr'16-Mar'17) : 15654.07 tons Closing stock (as on 31.03.2017): 0.48 tons	Solid SiO_2 : 25-35%, Fe_2O_3 : 2-3% LOI : 10-15% K_2O+ Na_2O : <1%	100 % of Fly Ash is used in our Cement Plant located within the same premises for Cement Production.

PART – G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of production

- Reduction in specific consumption of Water from 0.051 to 0.033 m^3 per ton of Cement
- Reduction in specific consumption of Limestone from 1.356 to 1.319 per ton of Cement
- Reduction in specific consumption of Coal from 0.110 to 0.104 per ton of Cement
- Reduction in specific consumption of Coal from 0.651 to 0.636 ton per mw of power generated

PART – H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution

Investment Proposal for Environmental Production for the year 2017-18

- Rs 75 lakhs for Air Pollution Control Measures (replacement of bag filters)
- Rs.8 lakhs for other measures like plantation of saplings , providing additional rainwater harvesting structures etc.,

PART – I

Any other particulars for improving the quality of environment

- Zero effluent discharge implemented and waste water generated is being used within the Plant for various purposes
- Proper maintenance of Pollution Control Equipment including ETP and STP ensured for effective and efficient operation of the same
- Environmental Monitoring carried out to assess the effectiveness of Pollution Control Measures and initiate required action , if any required . Environmental Monitoring Cost during 2016-17 was Rs 11 Lakhs
- So far around 80299 trees were planted covering an area of 50.18 ha
- Quality Management System (ISO 9001), Environmental Management System (ISO14001) and Occupational Health & Safety Management System (OSHAS 18001) are in place to ensure that all operations are carried out in compliance with international standards

Place : Kallur
Date : 28th Sep, 2017

(Signature of the Authorized Person)
Name : **C Janaradhana Reddy**
Designation : **Joint President (Works)**