

M/s. ZUARI CEMENT LIMITED, Krishna Nagar, Yerraguntla, Kadapa (Dist)-516 311



ENVIRONMENTAL STATEMENT (FORM-V) FOR THE FINANCIAL YEAR 2024-25

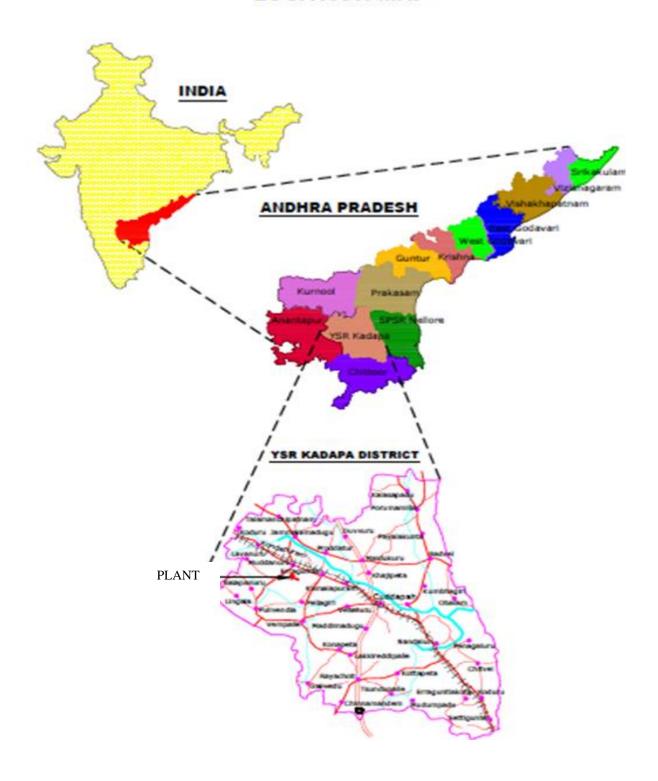
INTRODUCTION:

M/s. Zuari Cement Limited (ZCL) is part of Heidelberg Cement group, number 1 producer of aggregates, the number 2 in cement and number 3 in ready-mixed concrete worldwide. The Plant was established in the year of 1985 and expanded in 1999 & 2010. After the commissioning of Line-2 in the year 2010, the production capacity has enhanced to 5.4 MTPA. M/s. Zuari Cement Limited is manufacturing different types of Cement with a production capacity of Clinker- 4.3 Million Tonne/Annum and Cement - 5.4 Million Tonne/Annum. Waste heat recovery power plant (WHRPP) 21 MW installed by using heat gases from both lines. The Yerraguntla unit is An ISO 9001,ISO 14001,50001& ISO 45001certified company.

LOCATION:

M/s. Zuari Cement Limited is located at Krishnanagar, Yerraguntla, Kadapa District of Andhra Pradesh. The plant is situated 5km away from Yerraguntla by the side of Yerraguntla - Vempalli road. The plant site falls under the Latitude 14^o 35' – 14^o 45' of North and Longitude of 78^o30' – 78^o35' of East. The project area is rocky in nature. The site comes under arid zone.

LOCATION MAP



FORM - V (See rule 14) ENVIRONMENTAL STATEMENT REPORT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH, 2025.

FORM V

(See Rule-14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st March17

PART - A

(I) Name and address of the Owner/

Occupier of the Industry operation Of process

: Shri. Vimal Kumar Jain Director –Technical,

The Plam Drive, Tower-A, Flat No 302, Sector 66,

Gurugram,

Haryana - 122102.

Works:

Mr. M. Gopalakrishna Murthy,

Head-Works

Krishnanagar - 516 311

Yerraguntla, Kadapa District, A.P.

(II) Industry Category Primary (STC Code)

Secondary (STC Code)

Large

(III) Production Capacity : Clinker - 4.3 million Tonne/annum

Cement - 5.4 million Tonne/annum

WHRPP - 21MW

(IV) Year of establishment : 1985 & expansion in 1999 and 2010.WHRPP - 2022

(V) Date of the last environmental

Statement submitted

: 23.09.2024

PART – B

Water & Raw Material Consumption

(I) Water Consumption (m³/Day): 1415

	Process water consumption per unit of product output							
Name of Product	During the Previous financial	During the current financial year						
	year 2023-24	2024-25						
Cement	0.22	0.22						

(II)RAW MATERIAL CONSUMPTION:

	Consumption of Raw Mat	erial per unit of product output
Name of Raw Materials	During the Previous financial year 2023-24	During the current financial year 2024-25
Limestone	1.118	1.131
Aluminous laterite	0.0591	0.0626
GCP Dust	0.0004	0.0009
Red mud	0.0058	0.0065
Iron Ore	0.0123	0.0133
Feld spar	NIL	0.0001
Coal & Other Fuels	0.0883	0.0816
Alternative Fuel- RDF	0.0017	0.0037
Alternative Fuel- Biomass (Ricehusk, mango kernels etc)	0.0055	0.0108
Alternative Fuel- Pharma waste	0.0021	0.0030
Alternative Fuel- FRP, wastepaper & Dolachar	0.0013	0.0026
Flyash -Wet	0.1116	0.0928
Flyash -Dry	0.0435	0.0341
Gypsum -Mineral	0.0069	0.0104
Gypsum -Chemical	0.0228	0.026
Carbon black	0.0065	0.0065
Slag	0.000	0.0052

PART - C

Pollution discharge to environment/units of output (Parameter as specified in the consent issued)

TREATED SEWAGE WATER ANALYSIS REPORT FOR FY 2024-25

		Cond	centrations of	pollutants in	discharge	T
Month	Solids Oxygen Oxygen Demand Oxyge		Bio- chemical Oxygen Demand	Oil and Grease	Percentage of variation from prescribed standards (with reason)	
		F	Prescribed sta	ndard		
	5.5-9.0	100	250	30	10	Within the limits
Apr-24	7.41	11	13	6	<1.0	Within the limits
May-24	7.60	10	12	5	<1.0	Within the limits
Jun-24	7.41	12	14	7	<1.0	Within the limits
Jul-24	7.69	14	17	9	<1.0	Within the limits
Aug-24	7.81	13	15	8	<1.0	Within the limits
Sep-24	7.35	12	14	7	<1.0	Within the limits
Oct-24	7.61	13	15	8	<1.0	Within the limits
Nov-24	7.40	12	13	7	<1.0	Within the limits
Dec-24	7.69	13	14	8	<1.0	Within the limits
Jan-25	7.51	11	13	7	<1.0	Within the limits
Feb-25	7.40	10	12	6	<1.0	Within the limits
Mar-25	7.58	8	10	5	<1.0	Within the limits
Average	7.54	11.58	13.50	6.92	<1.0	Within the limits

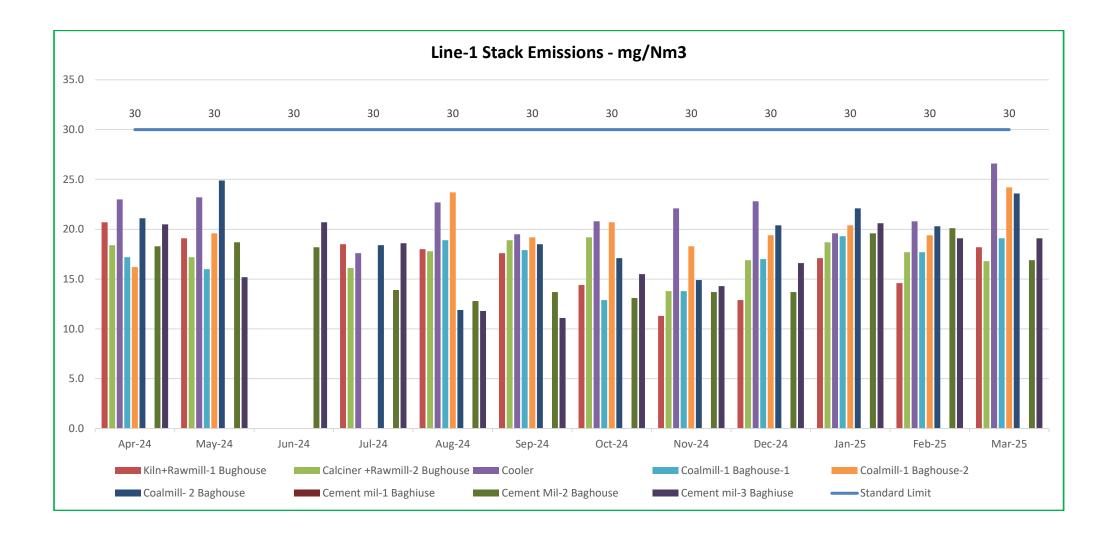
Note: All values are in mg/l except pH - Value

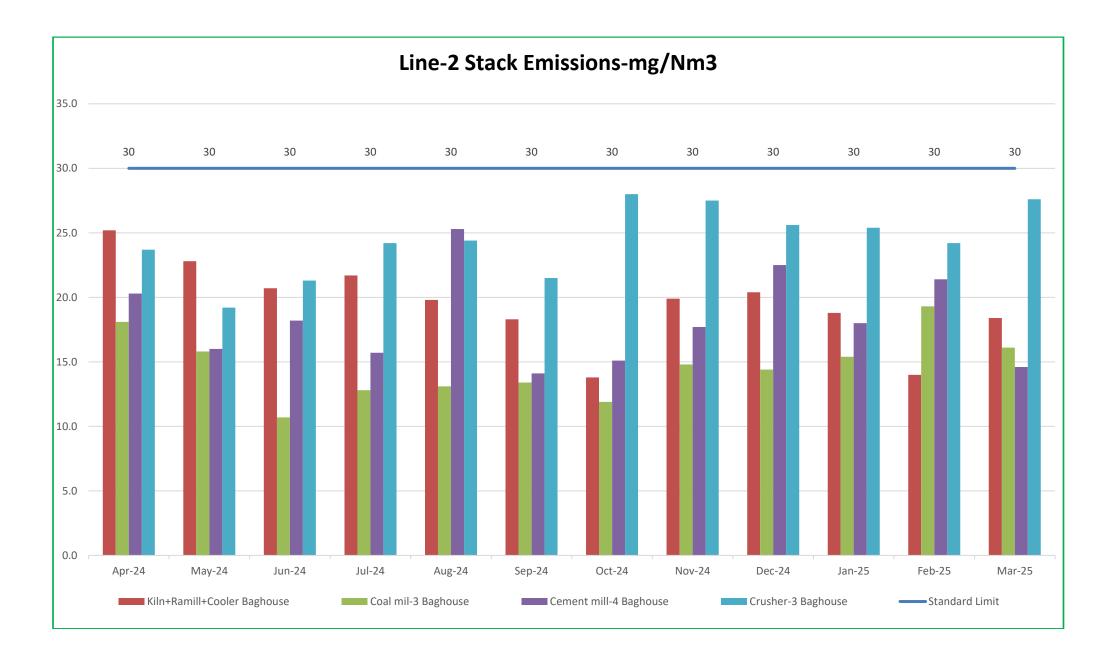
Treated water is used for horticulture / plantation purpose

Stack Emission Results for the year 2024-25 (Particulate Matter in mg/Nm3) Standard Limit -30mg/Nm3

Location	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	variation from prescribed standards (with reason)
Line-I													
Kiln+Rawmill-1 Bag house	20.7	19.1		18.5	18.0	17.6	14.4	11.3	12.9	17.1	14.6	18.2	Within the limits
Calciner +Rawmill-2 Baghouse	18.4	17.2		16.1	17.8	18.9	19.2	13.8	16.9	18.7	17.7	16.8	Within the limits
Cooler ESP	23.0	23.2		17.6	22.7	19.5	20.8	22.1	22.8	19.6	20.8	26.6	Within the limits
Coalmill-1 Baghouse-1	17.2	16.0			18.9	17.9	12.9	13.8	17.0	19.3	17.7	19.1	Within the limits
Coalmill-1 Baghouse-2	16.2	19.6			23.7	19.2	20.7	18.3	19.4	20.4	19.4	24.2	Within the limits
Coalmill-2 Baghouse	21.1	24.9		18.4	11.9	18.5	17.1	14.9	20.4	22.1	20.3	23.6	Within the limits
Cement mill-1 Baghouse													
Cement mill-2 Baghouse	18.3	18.7	18.2	13.9	12.8	13.7	13.1	13.7	13.7	19.6	20.1	16.9	Within the limits
Cement mill-3 Baghouse	20.5	15.2	20.7	18.6	11.8	11.1	15.5	14.3	16.6	20.6	19.1	19.1	Within the limits
DG Set 1500KV						SD	•						
DG Set 750KV						SD							
Line-II													
Kin+Rawmill+ Cooler Baghouse	25.2	22.8	20.7	21.7	19.8	18.3	13.8	19.9	20.4	18.8	14.0	18.4	Within the limits
Coal mill -3 Baghouse	18.1	15.8	10.7	12.8	13.1	13.4	11.9	14.8	14.4	15.4	19.3	16.1	Within the limits
Cement Mill-4 Baghouse	20.3	16.0	18.2	15.7	25.3	14.1	15.1	17.7	22.5	18.0	21.4	14.6	Within the limits
Limestone Crusher Baghouse	23.7	19.2	21.3	24.2	24.4	21.5	28.0	27.5	25.6	25.4	24.2	27.6	Within the limits

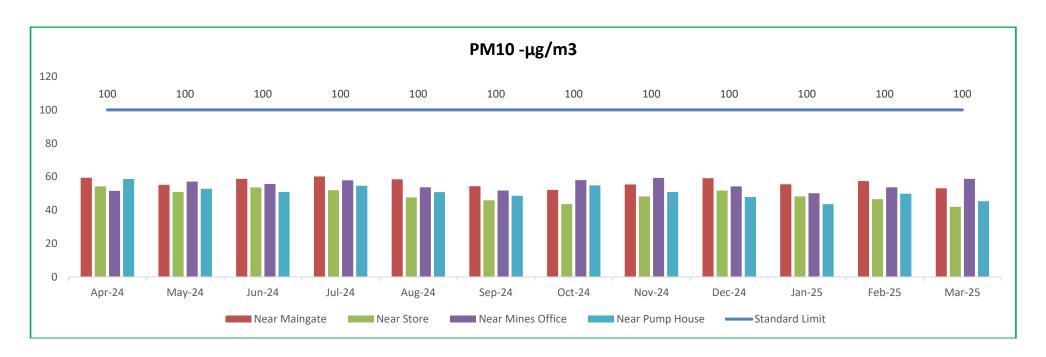
SD-Shut Down



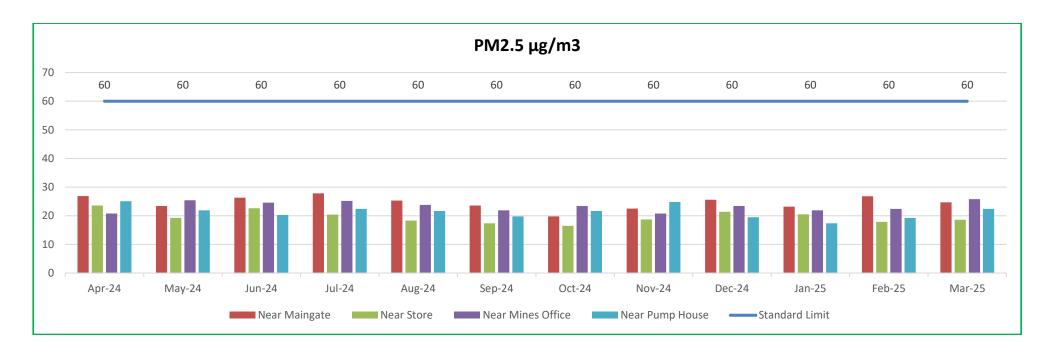


AMBIENT AIR QUALITY RESULTS FOR THE YEAR -2024-25

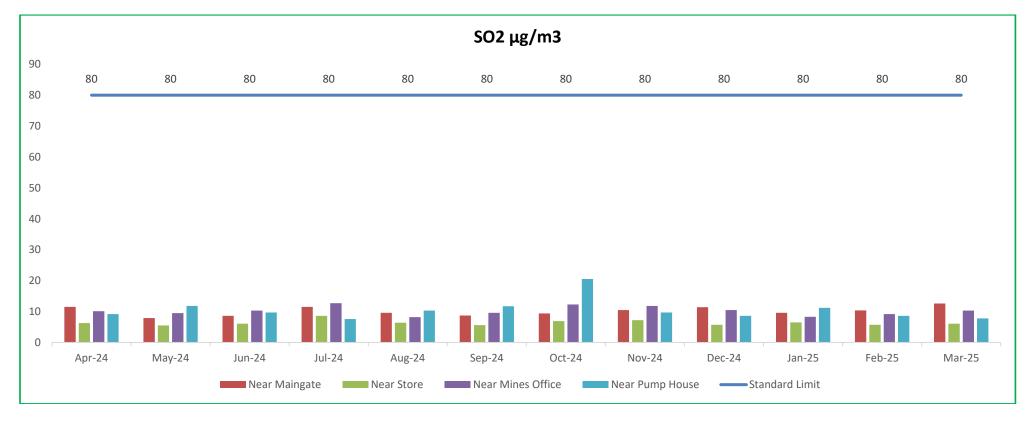
PM10- μg/m3	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
Standard Limit	100	100	100	100	100	100	100	100	100	100	100	100
Near Main gate	59.4	55.2	58.7	60.1	58.4	54.3	52.1	55.4	59.1	55.5	57.4	53.1
Near Store	54.2	50.9	53.5	51.9	47.6	45.9	43.6	48.2	51.7	48.2	46.5	41.9
Near Mines Office	51.5	57.1	55.6	57.8	53.6	51.7	57.9	59.3	54.2	50.1	53.6	58.7
Near Pump House	58.6	52.8	50.9	54.6	50.8	48.6	54.8	50.9	47.8	43.6	49.8	45.3



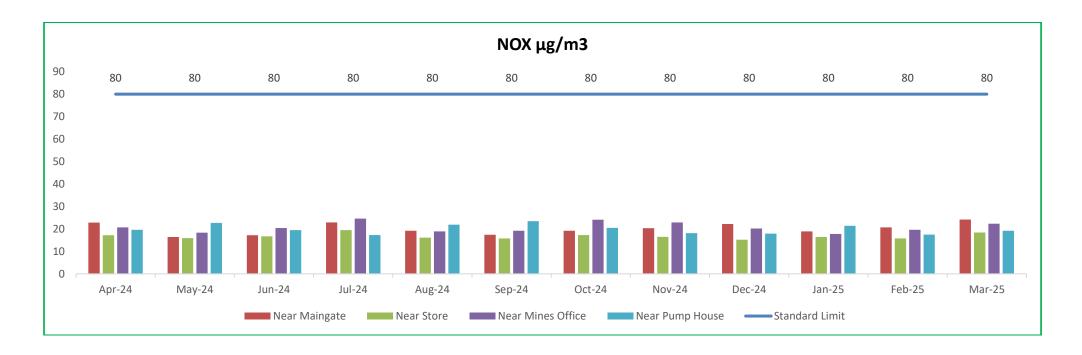
PM2.5 μg/m3	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
Standard Limit	60	60	60	60	60	60	60	60	60	60	60	60
Near Main gate	26.9	23.4	26.3	27.8	25.3	23.6	19.8	22.5	25.6	23.2	26.8	24.7
Near Store	23.6	19.3	22.6	20.4	18.3	17.4	16.5	18.7	21.4	20.5	17.9	18.6
Near Mines Office	20.8	25.4	24.6	25.2	23.8	21.9	23.4	20.8	23.4	21.9	22.4	25.8
Near Pump House	25.1	21.9	20.3	22.4	21.7	19.8	21.7	24.8	19.5	17.4	19.2	22.4



SO2 µg/m3	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
Standard Limit	80	80	80	80	80	80	80	80	80	80	80	80
Near Main gate	11.5	7.9	8.6	11.5	9.6	8.7	9.4	10.5	11.4	9.6	10.4	12.6
Near Store	6.3	5.5	6.1	8.6	6.4	5.6	6.9	7.2	5.7	6.5	5.7	6.1
Near Mines Office	10.1	9.5	10.3	12.7	8.2	9.6	12.3	11.8	10.5	8.3	9.2	10.3
Near Pump House	9.2	11.8	9.7	7.6	10.3	11.7	20.5	9.7	8.6	11.2	8.6	7.8



NOX μg/m3	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
Standard Limit	80	80	80	80	80	80	80	80	80	80	80	80
Near Main gate	22.8	16.4	17.2	22.9	19.2	17.4	19.2	20.3	22.2	18.9	20.7	24.2
Near Store	17.2	15.9	16.7	19.5	16.1	15.8	17.3	16.5	15.2	16.4	15.8	18.4
Near Mines Office	20.7	18.3	20.4	24.6	18.9	19.2	24.1	22.9	20.2	17.8	19.6	22.3
Near Pump House	19.6	22.7	19.5	17.3	21.9	23.5	20.5	18.1	17.9	21.4	17.5	19.2



Note: CO and All ambient air quality results are well within the limit.

AMBIENT NOISE RESULTS FOR THE YEAR -2024-25

	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-
Location	24	24	24	24	24	24	24	24	24	25	25	25
	D	D	D	D	D	D	D	D	D	D	D	D
Plant												
Boundary-												
East	64.1	63.2	60.8	63.2	62.6	59.4	61.5	63.1	61.9	60.7	62.6	63.9
Plant												
Boundary-												
West	65.9	62.5	61.4	62.6	64.2	62.9	63.2	64.9	63.4	61.4	63.9	64.2
Plant												
Boundary-												
North	61.4	64.9	63.2	64.1	63.8	64.1	65.6	66.4	65.2	64.3	61.4	60.8
Plant												
Boundary-												
South	60.5	61.7	59.9	60.5	61.7	60.5	62.8	60.8	62.6	61.5	59.5	58.4
Near Health												
Centre	55.4	58.8	57.6	58.4	57.5	58.6	59.4	62.5	58.5	57.2	54.8	55.7
Near New												
Guest House	64.1	63.2	60.8	63.2	62.6	59.4	61.5	63.1	61.9	60.7	62.6	63.9

	Apr-	May-	Jun-	Jul-	Aug-	Sep-	Oct-	Nov-	Dec-	Jan-	Feb-	Mar-25
Location	24	24	24	24	24	24	24	24	24	25	25	
	N	N	N	N	N	N	N	N	N	N	N	N
Plant												
Boundary-												
East	59.3	58.1	55.6	58.7	57.1	54.3	56.9	58.2	56.3	55.4	57.2	58.1
Plant												
Boundary-												
West	60.2	57.4	56.2	57.4	59.3	57.1	58.4	59.6	58.9	56.1	58.6	59.5
Plant												
Boundary-												
North	56.8	59.6	58.3	59.5	58.9	59.5	60.2	61.7	60.8	59.5	56.7	55.6
Plant												
Boundary-												
South	55.6	56.7	54.1	55.6	56.4	55.2	57.3	55.9	57.1	56.2	54.5	53.2
Near Health												
Centre	50.9	53.2	52.8	53.2	52.2	53.6	54.8	57.1	53.6	52.8	49.8	50.8
Near New												
Guest House	52.4	54.8	57.7	54.1	51.8	52.9	51.7	49.8	51.7	54.9	52.9	54.9

D-DAY TIME N-NIGHT TIME

Note: All ambient noise levels well within the limit.

PART - D

HAZARDOUS WASTE

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

	Total Qu	antity (Kg)
Hazardous Waste (*)	During current financial year	During current financial year
	2023-24	2024-25
(a) From Process		
(i) Waste / residue	13.80	25.87
containing oil		23.67
(ii) Waste Oil	5.96	7.61
(iii) Used Batteries	5.02	6.69
(b) From Pollution	NIL	NIL
Control Facility		

Note: Waste Oil and Grease Generated from Cement Plant, WHRPP & Lime stone Mines. Hazardous waste disposed to authorized recyclers approved by CPCB/APPCB. And, Co - Processed of other industries wastes as Alternate Fuel in our kiln. Details of Alternate fuels 2024-25 are given below:

	Alternative Fuel	QTY -MT
	Rice Husk	22693
	Jawar husk	279
	Ground nut	9760
	RDF	13425
	Arca Nut	68
2024-25	Wood Chips	4024
2024-25	Mango Kernals	2161
	Plastic Waste	4654
	FRP Waste	340
	Dolachar	2384
	Carbon Powder	23381
	Pyrolysis oil	266
	Pharma waste-Solid and Liquid	10869
	Solid mix Waste TSDF/GEPIL	139
	MSW	1719

PART - E

SOLID WASTE

	Total Quantity		
Name of Product	During the Previous financial	During the current financial year	
	year 2023-24	2024-25	
(a) From Process	Nil	Nil	
(b) From Pollution Control Facility	Dust collected in the ESP, Bag Houses and Bag Filters are recycled to the Process		
(c) Quantity recycled or Reutilized.	100%	100%	

PART - F

Please specify characterization (in terms of composition of quantum) of Hazardous as well as solid wastes and indicate disposal practice adopted for both these categories of wastes:

Hazardous Wastes: Waste Oil and Grease Generated from Cement Plant, WHRPP & Mines.

Hazardous waste Co processed / internal used and used batteries are sold to

authorized recyclers.

Solid Waste : Sludge at Sewage Treatment Plant is used as manure for Plantation purpose.

PART - G

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

M/s Zuari Cement Limited is being operated on dry process technology, which is cost effective and environmentally clean technology. The advantage of dry process is also in fuel economy. The stack emissions from the plant are controlled by equipment like ESP and Bag Houses. Bag Filters have been installed at all material transfer points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment is recycled in process and neutralizing the cost of operation of pollution control equipment's and hence no cost impact on the production cost.

To emphasis on conservation of the natural resources & to reduce the disposal problems of the waste, we are using Pharma waste, Refuse Derived Fuel (RDF), Carbon black powder and biomass wastes as alternative fuel in our kiln.

M/s Zuari Cement Limited has installed 21 MW WHRPP and 500kva solar power plant at the plant premises.

PART - H

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

Electrostatic Precipitators are conventionally used for Pollution Control in cement Plants. Zuari
has gone a step further and invested enormously to reduce emissions levels by replacing the
ESP with BAGHOUSE in Line-1 Kiln section, Pre Calciner-Section, Cement Mill – 1 & Cement
mill-3.





Replaced L-1 K line ESP by Baghouse



To reduce the fugitive emissions, we had installed additional bag filters at clinker belt area.



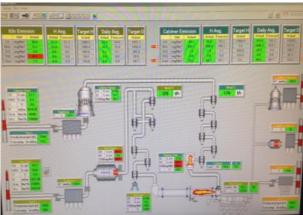


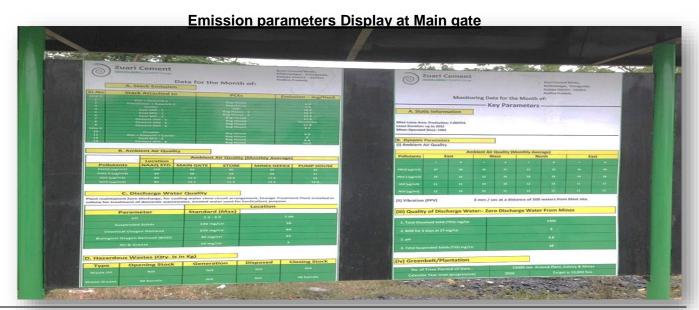
Coal Shed has been constructed for coal storage to avoid fugitive emissions.



Installed Continues Emission monitoring system for Dust and Gases.







To Accurate Accounting of Water Consumption Electromagnetic water meters installed





Sewage treatment Plant for Domestic waste water treatment -250KLD.







All internal roads have been concreted and regular clean haven done by Sweeping machines.







All Raw materials and finished products kept under covered sheds/silos.



Lime stone Shed



Additives Shed



Coal Shed



Gypsum Shed

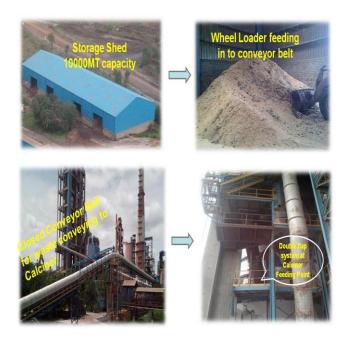


Fly ash Silo



Clinker Silo

Plant has installed state of art technology system for Alternative Fuel Feeding.





Solid Waste Feeding System

Liquid Waste Feeding System



Alternative Fuels Storage shed.

Green Belt Development

Plant Overview



Plant Front Road



Plant Roads







Inside Plant





Miyawaki Plantation





Plantation: 2024-25: 2200 nos Mines Viewpoint



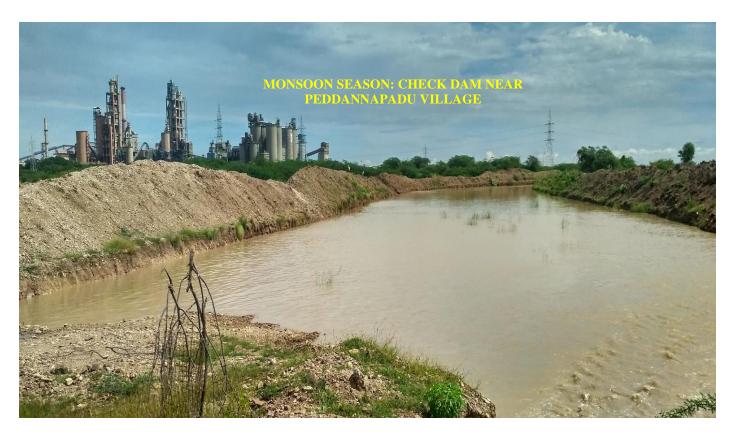






Rainwater harvesting:









PART - I

Any other particulars for improving the quality of the environment.

- Zuari Cement has certified ISO-14001 (Environmental Management Systems) by TUV.
- To create Environmental awareness Zuari Cement is celebrated World Environment Day every year.
- Massive Plantation has been done at inside and outside the plant &mines.
- To reduce water consumption, Collection Pond has been made in plant to collect Rainwater/spillage water which is used for the Plant process.
- Ensure water sprinkling system in Crusher and Transfer point of Conveyor belt for effective fugitive dust suppression
- Ensure proper storage and disposal of Hazardous waste.
- Massive green belt development program for dust suppression as well as noise Control.
- Provision bag filters /dust collectors in all material transfer points.
- The pollution auto control equipment's are always maintained in healthy condition and are run as an integral part of production process.
- Dust suppression over the roads by using proper water sprinkling.
- Atomized water spray system at Limestone & Coal handling areas.
- The Sewage Treatment Plant treated water is completely used for Horticulture purpose.
- The sludge form Sewage Treatment Plant used as manure for plantation purpose.
- The valuable raw materials/finished products are recovered from the Pollution Control facility and reused in the process.
- Installed SNCR System for NOX Emission control.

ZCL developed procedure for handling of waste (i.e., both Hazardous and Non-Hazardous).

PROCEDURE FOR HANDLING OF WASTE (HAZARDOUS AND NON HAZARDOUS)

PURPOSE : To establish a system for safe handling and transport of wastes.

SCOPE : Applicable to all Operations.

DISTRIBUTION:

Plant Head All HOD's Section Head's

RESPONSIBILITIES:

Sectional In-charges / Executors are responsible for implementation of this procedure in their respective areas

PROCEDURE:

The following solid and liquid wastes are generated in the process of Cement manufacturing process.

SL.NO	TYPE OF WASTE	METHOD OF DISPOSAL	RESPONSIBILIT Y			
1	Over burden	This waste is dumped to backfill at matured excavated area in pit for reclamation and rehabilitation and to make the bund as per the approved mining scheme by Indian Bureau of Mines.	HOD-Mines			
2	Tyres	Collected at designated place in garage and transferred to scrap yard and stocked in premarked area till their disposal. Scrap Disposal form to be submit to store in charge by concerned dept.	HOD –Mines /HEEM in charge			
3	Structural Steel scrap, Used spares, Electrode Buts, conveyor belts, Hoses and Rubber Parts.	Collected at designated place and transferred to scrap yard and stocked in premarked area till their disposal. Scrap Disposal form to be submit to store in charge by concerned dept.	HOD-Mech /HOD -E&I /HOD -Store			
4	Electrical Cable	Copper and Aluminium cables are separated and Collected at designated place and transferred to Scrap yard and stocked in	HOD-E&I			



Waste bins and awareness







Rain guns at Mines Road

Automatic water sprinklers/Rain guns at Plant Road





Plantation

Additional Shredder for AFR







Clinker Stockpile



Wet Drilling at Mines

Water Spray at Crusher











Rain guns at Limestone stockpile

Sewage Treatment Plant





Additional shed for storage of AFR

Geo textile matting at mines



Lime stone Shed



Additives Shed





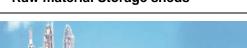


Gypsum Shed

Flyash Silo

Raw material Storage sheds







Green view







Solid AFR feeding system



Dry fog system for wagon unloading

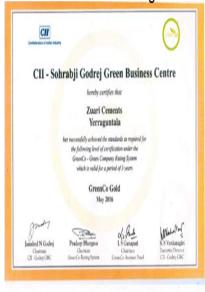






Awards:

Greenco Gold rating Award



"GreenPro Award



Apex Gold rating Award



Apex Platinum rating Award



"QCFI Award



Energy management Award



CSR

1. Promotion of Education:

Support to local village schools by way of donating books and furniture on need basis Merit scholarships to Engineering and MBBS students. Providing Quality education to employees' children and near by village children through DAV institution school in colony.

2. Health and Medical Support:

Includes organizing Super specialty Health camps at Health for employees and villagers and medical camps in 4 villages, General Health check up and distribution of medicines to the local villagers from Zuari Cement Health Center.

3. Rural Development & Village Infrastructure:

Providing Drinking water through RO plants. Providing public toilets, drainage facilities, dust bins and village internal CC / Gravel roads and street lights.

4. Skill development and Self employment programs:

Organizing skill development training for women from the villages in the areas of Tailoring and screen printing, Agarbatti manufacturing making them self empowered.

CSR: Skill Development programs:

Since last couple of years skill development programs to the local village women as a part of women empowerment program, the women were given training in the arrears of tailoring, screen printing, agarbatti making. The produced made by these women where displayed on specially organized function in colony as well as corporate office, Bangalore.

HEALTH PROGRAMME

1. Rural Health Camps

Under our Health programme, our Health Centre is contributing to serve the society at large. All the nearby villages are regularly getting benefitted from our Health Centre. Apart from this we regularly organize Rural Health camps.

Our Company doctor and nurses are available round the clock at the Health Centre for medical check-up, consultation. Free medicines are provided to villagers. These

Health Centre are directly beneficial for the villagers particularly expecting mothers, children, rural girls and old age person.

Through our hospital all the medicines are providing free of cost to nearby community members.

2. Mega Multi-speciality Health camps

Mega Health check-up & consultation camp are regularly being organized for the nearby villages. In the Mega Health camp various multi-speciality doctors from Well known Hospitals from Hyderabad have provided their services to the villagers in the areas of Opthalmology-Eye Camps, Orthopeadic and Heart Speciality

The free health check-up, consultation & free medicines services are provided through this camp.

3. Health Awareness to School Children:

Our Company doctor is also regularly giving Health Awareness training programmes for the school children ranging from seasonal health issues and various age related health issues.

LIVELIHOOD PROGRAMME

Skill Development Training to rural women & girls

Under Skill India Campaign, a model training centre is developed near our unit. Our aim is to provide an opportunity to rural women & girls to enhance their skill through various skill development trainings.

We are continuously providing quality environment to rural women & girls for getting knowledge upgradation & develop own skills.

Through skill development training programmes, now rural women & girls can generate income through small sewing & stitching works at village level. The quality computer training facility is also being provided through this centre.

Through various skill training agencies, the quality training programmes were organized through the full year.

CSR Expenditure 2024-2025

S. No	CSR Project/ Activity Identified	Focus Area (Education/health & Medical Support/ Skill development/ Rural Development)	Amount -Lacks
1	Promotion of Education	Education	380000/-
2	Health & Medical Support	Health & Medical Support	500000/-
3	Rural Development & Infrastructures	Rural Development	2200000/-
	•	TOTAL	6500000/-