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SHREE CEMENT LTD.

An ISO 9001, 14001, 45001 & 50001 Certified Company

Regd. Office:

BANGUR NAGAR, POST BOX NO.33, BEAWAR 305901, RAJASTHAN, INDIA

SCL/Ras/Unit-VIII/ESR/2021-2022/ 1893

Date: 10/09/2021

Speed Post

To,

The Member Secretary,

File No. C-092

Rajasthan Pollution Control Board,

4, Institutional Area, Jhalana Doongri Road,

JAIPUR-302004 (Rajasthan)

Sub: - Environmental Statement for the period from 1st April 2020 to 31st March 2021 for Cement Plant Unit-VIII of M/s Shree Cement Limited situated at Village- Ras Bhimgarh, Tehsil-Jaitaran, Dist- Pali (Raj).

Ref: - (1) CTO No. - F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/5277-5279 dated: 06/09/2017 (2) CTO No. - F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/3130-3132 dated 08/08/2018

Respected Sir,

We are submitting herewith Environmental Statement for the **period from 1**st **April 2020 to 31**st **March 2021** for **Cement Plant Unit-VIII** (Without Cement grinding) of M/s Shree Cement Limited situated at Village- Ras Bhimgarh, Tehsil- Jaitaran, Dist- Pali (Raj).

This is for your kind information please.

Thanking you, Yours faithfully,

For Shree Cement Ltd;

(Dr. Anil Kumar Trivedi)
Sr. GM (Environment)

ole

Copy to:-

1. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Jaipur, A-209&218, Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area, Jaipur – 304002, Rajasthan

2. The Regional Officer (Regional Office), Rajasthan State Pollution Control Board, S / A-6, Mandia Road, Industrial Area, Near Pali Urban Co-Operative Bank, Pali- 306401 (Raj.)

JAIPUR OFFICE: SB-187, Bapu Nagar, Opp. Rajasthan University, JLN Marg, Jaipur 302015 Phone: 0141 4241200, 4241204

NEW DELHI OFFICE: 122-123, Hans Bhawan, 1, Bahadurshah Zafar Marg, New Delhi 110002

Phone: 011 23370828, 23379218, 23370776

CORP. OFFICE: 21, Strand Road, Kolkata 700001 Phone: 033 22309601-4 Fax: 033 22434226

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ENVIRONMENTAL STATEMENT

FORM - V

M/s Shree Cement Limited: Unit-VIII Period from: April 2020 to March 2021

PART - A

1	Name and address of the Owner / Occupier of the Industry operation or process	M/s Shree Cement Ltd. Unit-VIII Cement Plant Village: Ras/Bhimgarh, Tehsil: Jaitaran, Dist:Pali - 306107 (Rajasthan)
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	1.55 Million TPA Clinker
4.	Year of Establishment	2010
5.	Date of the last Environmental Statement Submitted	10/09/2020

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

Process

N.A. (As plant is based on dry

Process technology)

Cooling and dust

30823 KL

Suppression

Domestic

57688 KL (Common for cement plant, power

plant, synthetic gypsum plant & mines).

Name of	Process Water Consumption per Unit of Product Output		
Product	During Previous Financial (2019-2020)	During Current Financial Year (2020-2021)	
Clinker	0.02938 KL/MT of Clinker	0.02906 KL/MT of Clinker	

(II) RAW MATERIAL CONSUMPTION:



	Name of	Consumption of Raw Material Per Unit of Output (Clinker)		
Name of Raw Material	Product	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)	
1. Limestone		1.484	1.492	
2. Laterite /Iron Ore	Clinker	0.023	0.016	
3. Performance Improver	Chikei	0.000	0.000	
4. Coal & Pet Coke		0.099	0.108	

(III) POWER CONSUMPTION (KWH/T OF CLINKER):

During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
53.11	50.03

(IV) TOTAL CLINKER PRODUCTION (MT):

During Previous Financial Year (2019-2020)		During Current Financial Year (2020-2021)
1047121	- 0	1060770

PART - C

DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT

Pollutants	Quantity of Pollutants Discharged (Mass/Day)	Concentration of Pollutants in Discharge (Mass/Value)	Percentage of variation from prescribed standard with reasons
Water	No waste water is being generated & discharged outside the plant premises.	technology, no liquid efflucement plant. The waste water generated canteen is being treated in sludge generated is being horticulture activities.	operated on dry process uent is generated from the I from the office toilet and a STP and treated water & g used in plantation and reated water is attached as



Air		Please refer Annexure – 1 & 2
	PM - 0.1030 T/Day	
	SO ₂ - 0.0595 T/Day	
	NO _x – 1.5148 T/Day	

PART – D HAZARDOUS WASTE

(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2016)

Hazardous		Total Ou	iantity (Ltrs.)	
Waste	During Previous Financial Year (2019-2020)		During Current Financial Year (2020-2021)	
a)From Process (Cement manufacturing is based on "Dry Process" No Hazardous waste is generated from the process except used oil which is drained from Machinery / Equipments)	Common author Hazardous Waste M Handling for Cemen Plant, Synthetic Gyps Sets and Nimbeti Lim Total Quantity ge April-2019 to March-Old Stock Total Used oil Sold-out to registered Co-processed in cemen Balance Quantity	enerated from 2020 = 26820 Ltrs. = 26820 Ltrs. recycler = 0.0 Ltrs. ent kiln = 26820 Ltrs.	Common authorization Waste Management & Cement Plant, Power I Gypsum Plant, D.G. Se Limestone Mines. Total Quantity generate 2020 to March-2021 Old Stock Total Used oil Sold-out to registered rec Co-processed in cement & Balance Quantity	Handling for Plant, Synthetic its and Nimbeti ed from April- = 65250 Ltrs. = 0 Ltrs. = 65250 Ltrs. ycler = 0.0 Ltrs. tiln = 65250 Ltrs.
(b) From Pollution Control Facilities	N.A.	o Dub	N.A.	V Elis

$\frac{PART - E}{SOLID \ WASTE}$

Sr.	Particulars	Total (Total Quantity		
No.		During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)		
(a)	From Process	Nil	Nil		
(b)	From Pollution Control Facility	Dust collected in the ESPs, Bag Houses and Bag Filters are recycled & reused in cement manufacturing.			
(c)	Quantity rejected or re- utilized within the unit	100%	100%		
	2. Sold	Nil	Nil		
	3. Disposed	Nil	Nil		



PART - F

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

Hazardous Wastes

A. No Hazardous waste is generated from the process except used oil which is basically petroleum-based or synthetic oil, black in color & flammable in nature, generated from machineries / equipment. Used oil is being Co-processed in cement kiln as authorization obtained from RSPCB.

B. Old and scrap lead acid batteries are sold to CPCB authorized recyclers

Sr.	Particulars	Total Quantity		
No.		During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)	
1	Used oil (Co processed in Cement Kiln)	26820 Ltr	65250 Ltr	
2	Lead acid battery waste (Sell to authorized recycler)	4.986 MT	11.170 MT	

B. Hazardous wastes were received and co-processed as specified under Hazardous Wastes (Management, Handling &Trans boundary Movement Rule, 2016) during the Current Financial Year: 2020-2021 (During the Period of April -2020 to March-2021)

S. No.	Type of hazardous waste	Category	Quantity (MT)
1	Paint Sludge	21.1	2757.327
2	ETP/CETP Sludge	35.3	18799.861
3	Phosphate sludge	12.5	633.888
4	Oil soaked cotton, Industrial Waste, residue containing oil, Grinding sludge etc.	5.2	4571.519
5	Incineration ash	36.2	12.835
6	SOBM/Drill cutting oil	2.1	16639.22
7	Cotton rags	33.2	9.6
8	Spent Clay	4.5	63.045
9	Waste or residues	23.1	1689.905
10	Organic Residue	4.4	14.22
11	Spent Carbon	28.3	1741.78
12	Expired products/Spent catalyst	28.2	196.66
13	Distillation residue	20.3	705.53
14	Spent Solvent	28.6	7259.18
15	Empty barrel	33.1	48.14



	Total Quantity		77067.044
31	Process waste sludge	26.1	2987.065
30	Expiry products	28.5	11.545
29	Disposal of barrel	34.2	4.16
28	Spent solvents	29.4	86.35
27	Dust for air filtration system	26.2	3.73
26	Organic residues	1.4	36.59
25	Evaporation residue	37.2	29.98
24	Date expiry medicine	Sch-I	6.25
23	Process waste residue	21.1	1042.339
22	Process residues & wastes	28.1	4050.915
21	Process wastes or residues	29.1	2238.105
20	Spent Solvent	20.2	7285.845
19	Mix liquid waste	Sch-I	1782.65
18	Spent resin	35.2	25.07
17	Spent catalyst	4.2	583.23
16	Distillation residue	36.1	1750.51

77067.044 MT hazardous waste has been co-processed at Ras complex during FY 2020-2021.

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines during current financial year April 2020 to March 2021 under the Bio-Medical Waste (Management & Handling) Rules 2016, are as follows.

	Bio-Medical W	Bio-Medical Waste Quantity (Kg) as per Color Coding									
Period	Yellow	Red	Blue	White							
April 2019 to March 2020	49.0	46.3	19.8	24.2							
April 2020 to March 2021	58.6	53.5	20.2	28.3							

Above mentioned waste has been sent to Sales Promoter, CBWTF Bio Medical Treatment Facility, Jaipur Bye Pass Road, Ajmer (Raj.) for further disposal.

E- Wastes:

Particulars	Total Quantity							
	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)						
From Process	Nil	Nil						
From Pollution Control Facility	Nil	Nil						

Solid Wastes:



Other Municipal solid waste generated from all units (Cement Plant, Power Plant, and Nimbeti Limestone Mines) of the entire campus is being collected, manage and disposed as per MSW Rules, 2016.

Battery Wastes:

As specified under Batteries (Management and Handling) Amendment Rules, 2010, we have purchased following new batteries of different categories is common for cement plant, power plant and mines –

Number of used batteries of categories mentioned in Sl. No 3 and Tonnage of scrap sent manufacturer/dealer/importer/registered recycler/or any other agency to whom the used batteries scrap was sent	Year (1st	Year Financial Apr 2019 to 31 st)				
Category:	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)		
(i) Automotive	W. ————————————————————————————————————					
a) Four wheeler	719	9.394	275	10.914		
b) Two wheeler	Nil	Nil	Nil	Nil		
(ii) Industrial			-			
a) UPS	0	0	32	0.256		
b) Motive Power	Nil	Nil	Nil	Nil		
c) Stand –by	Nil	Nil	Nil	Nil		
(iii) Others	Nil	Nil	Nil	Nil		
Total	719 Nos.	9.394 MT	307 Nos.	11.170 MT		

Used battery scraps were sent to CPCB authorized recyclers.

PART - G

IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION

M/s Shree 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 pollution control equipment like ESPs, Bag Houses and Bag Filters installed at various material transfer points to clean the process and arrest the fugitive emissions. The particulate matter collected in the pollution control equipment is recycled back in process and neutralizing the cost of operation of pollution control equipments and hence no cost impact on the production cost.



PART - G

IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION

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Synthetic Gypsum is being used in place of natural gypsum thus directly conserves the mineral gypsum. Waste Heat Recovery System (WHRS) is installed at Pre- heater and cooler section for trapping gasses of high temperatures are being used for generation of Green Power which has resulted in conservation of fuel, reduction of GHG emissions and water conservation.

Company has separate AFR cell looking after the utilization of alternative fuels and raw materials. Unit is utilizing ETP sludge, Paint sludge, oily rags, waste mix solids, phosphate sludge.

<u>PART – H</u>

ADDITIONAL MEASURES / INVESTMENTS PROPOSAL FOR ENVIRONMENT PROTECTION INCLUDING ABATEMENT OF POLLUTION

Green belt development and tree plantation is our ongoing process within our plant area and also outside the plant boundary. Every year we are doing new tree plantation to increase the density and bio-diversity of the area. Plantation has been carried out in an area of around 63.8 hectare with (Total land: 187.56 ha.) 165311 trees, which is $\sim 34 \%$ of the total land of plant area.

We have been incurred total Rs. 14,97,66,931 in environment management in following activities:

- 1. Plantation and greenbelt development and their maintenance.
- 2. General and periodically maintenance of all pollution control measures i.e. Bag houses, ESPs, dust collectors.
- 3. Flooring, paved roads and continuous housekeeping by vacuum sweeping machines machine and maintenance of vacuum sweeping machines.
- 4. Effective waste managements in plant, mine and colony premises.
- 5. General and periodically maintenance of CEMS and CAAQMS instruments.
- 6. Operation and reoccurring of STP installed in plant and colony premises.
- 7. Celebration of important days for spreading awareness tor protection of environment and conservation of natural resources.

The amount in same activities will be incurred in next year also.



<u>PART – I</u> <u>ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.</u>

- 1. We have full-fledged Environment Department with three separate cells, for monitoring, maintenance of pollution control equipment and Green Belt development.
- 2. Monitoring of stack emission and ambient air and water quality is being done regularly basis.
- 3. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.
- 4. Civil dept. taking care of Housekeeping.
- 5. Truck parking area and vehicle movement areas are paved and concreted to avoid any fugitive emissions.
- 6. Horticulture Department in coordination with environment department is taking care of tree plantation and green belt development. Every year during monsoon season, we are doing new tree plantation and every year carbon sequestration being is carried out during 2019-2020, 1772.86 tonnes of carbon and 6506.38 tonnes of CO2 eq. has been sequestered.
- 7. Effective operation and maintenance of Bag House at Raw Mill & Kiln, Coal Mill, Cement mill and Cooler ESP.
- 8. Effective operation of cooler ESP transformer and control panel in first field to further reduce PM emission levels.
- 9. Constructed concreted roads at Stacker and Reclaimer area for further reduction of fugitive emissions.
- 10. Installed new bag filters at various application like DBC, transfer points etc.
- 11. Modification of Coal Mill Bag House for further reduction of Particulate emissions.
- 12. Installed NOx mitigation systems in all cement kilns (Uint-3-10) as pollution control measure to achieve prescribed standards.
- 13. Covered shed and silos have been constructed for raw material storage.
- 14. Domestic waste water generated from office toilets and canteen is being treated at Sewage Treatment Plant (STP) and treated water is being utilized in plantation & gardening.
- 15. We are committed and maintaining Zero Liquid Discharge (ZLD) from our premises.

We are enclosing herewith following documents:-

Annexure-1 : Stack Emission monitoring report.

Annexure-2 : Ambient Air Quality (PM10, PM2.5, SO₂ and NO2) &

Ambient Noise Level monitoring report

Annexure-3 : STP treated water test report



Annexure: 1

Shree Cement Ltd, Ras

Unit-VIII

Stack Emission Monitoring Report (PM, SO₂ & NOx)

Year: 2020-2021

Sr.	Month		Raw Mill & Kiln Stack		Coal Mill Stack	Cooler Stack	
No		PM	NO _x	SO_2	PM	PM	
	U o M			m	g/Nm ³		
1	Apr-2020	0.0	0.0	0.0	0.0	0.0	
2	May-2020	11.0	325.3	1.0	13.0	8.0	
3	Jun-2020	22.0	234.8	24.4	12.0	6.0	
4	Jul-2020	11.6	220.0	34.0	18.1	9.8	
5	Aug-2020	16.9	384.0	6.0	17.1	12.8	
6	Sep-2020	14.7	371.0	9.0	12.9	10.1	
7	Oct-2020	14.7	330.8	18.6	16.6	11.8	
8	Nov-2020	18.0	542.3	8.1	15.0	8.0	
9	Dec-2020	17.0	592.7	17.4	18.0	12.0	
10	Jan-2021	14.0	456.4	13.0	18.0	10.0	
11	Feb-2021	13.0	404.9	21.1	16.0	8.0	
12	Mar-2021	16.9	467.1	17.6	17.1	12.8	
A	verage	14	361	14	14	9	



Annexure: 2

Shree Cement Ltd, Ras

Ambient Air Quality (µg/m³) Monitoring Report For The Period Of April 2020 To March 2021

Common for Cement plant & Power plant

Location →	Plant Boundary Near Main Gate				Plant Boundary Near Mess			Plant Boundary towards Stacker & Reclaimer				Plant boundary towards village Khera & Jawangarh					
		AAQ in μg/m³				AAQ in μg/m ³				AAQ in μg/m³				AAQ in μg/m³			
Parameter →	PM 2.5	PM 10	SO ₂	NO ₂	PM 2.5	PM 10	SO ₂	NO ₂	PM 2.5	PM 10	SO ₂	NO ₂	PM 2.5	PM 10	SO ₂	NO ₂	
Apr-2020	36.9	53.9	10.2	14.4	29.9	49.4	10.4	15.5	31.4	47.4	8.9	14.8	26.9	46.6	9.6	14.3	
May-2020	34.3	56.1	9.1	13.1	31.9	53.5	9.2	13.8	31.9	52.5	8.8	13.5	30.1	51.3	8.3	12.9	
Jun-2020	35.6	57.4	8.4	13.9	33.3	55.1	9.0	14.2	30.1	49.1	8.2	13.9	28.8	50.0	7.8	13.4	
Jul-2020	18.5	24.0	12.7	10.7	16.9	27.4	14.2	12.4	15.3	27.4	14.1	12.0	15.0	28.0	13.5	11.3	
Aug-2020	10.6	23.4	13.1	12.6	12.9	24.4	11.2	12.9	14.1	20.0	13.0	13.1	11.9	26.4	12.8	12.7	
Sep-2020	12.6	19.9	8.9	13.9	10.6	20.3	13.1	15.0	8.4	17.9	11.3	14.0	10.8	23.8	10.6	13.6	
Oct-2020	14.4	21.5	9.1	12.0	12.9	22.3	11.9	12.6	10.9	18.8	11.0	12.3	12.3	19.5	10.1	11.8	
Nov-2020	17.6	26.0	10.1	12.2	15.3	25.5	12.3	13.1	15.3	25.5	11.6	12.6	18.5	25.3	10.9	12.0	
Dec-2020	21.0	28.5	11.0	11.7	18.6	30.5	12.1	12.1	19.6	29.3	11.9	11.7	20.6	30.4	11.4	11.3	
Jan-2021	28.8	38.5	14.2	16.4	26.9	39.0	16.0	16.8	25.9	37.9	15.1	15.6	28.4	40.5	13.9	15.1	
Feb-2021	32.9	39.5	11.1	16.9	28.6	41.8	11.9	16.7	30.0	40.4	11.3	16.0	30.9	41.3	10.9	15.6	
Mar-2021	37.6	42.5	8.4	16.9	33.3	47.1	10.3	17.1	33.8	49.6	8.9	17.6	34.3	47.6	8.3	17.0	
Average	25.1	35.9	10.5	13.7	22.6	36.4	11.8	14.4	22.2	34.7	11.2	13.9	22.4	35.9	10.7	13.4	



Shree Cement Ltd, Ras

Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2020 To March 2021

Common for Cement plant & Power plant

Location		ındary Near n Gate		ndary Near Iess	towards	oundary Stacker & aimer	Plant boundary towards village Khera & Jawangarh Noise Level in dB(A)		
	Noise Lev	vel in dB(A)	Noise Lev	el in dB(A)	Noise Lev	el in dB(A)			
Parameter Month	Day time	Night time	Day time	Night time	Day time	Night time	Day time	Night time	
Apr-2020	51.5	42.6	48.2	37.6	46.0	36.7	43.5	37.1	
May-2020	72.6	61.2	67.7	56.4 70.4		61.5	65.3	56.1	
Jun-2020	72.1	62.3	67.2	54.2	69.5	61.7	62.6	55.7	
Jul-2020	70.5	62.0	67.2	54.3	69.4	62.0	62.5	54.6	
Aug-2020	48.7	64.8	64.2	55.6	71.5	61.8	61.3	56.0	
Sep-2020	71.7	62.3	67.3	62.0	71.2	61.8	67.3	62.3	
Oct-2020	72.1	68.0	70.5	62.3	71.5	66.3	67.0	63.2	
Nov-2020	71.7	67.0	69.2	61.9	70.6	65.8	68.6	64.2	
Dec-2020	72.6	63.4	71.2	62.8	65.8	67.3	68.1	60.1	
Jan-2021	70.2	62.3	73.1	62.8	60.8	59.7	66.1	62.4	
Feb-2021	68.2	59.3	70.3	62.6	65.2	61.9	62.3	58.2	
Mar-2021	70.3	64.1	66.9	60.7	73.1	63.8	65.5	59.4	
Average	67.7	61.6	66.9	57.8	67.1	60.9	63.3	57.4	



Annexure: 3

Shree Cement Ltd, Ras

(STP Treated Water Quality Report for the period of April' 2020 to March' 2021)

S. No.	Parameter	Apr- 20	May- 20	Jun- 20	Jul- 20	Aug- 20	Sep- 20	Oct- 20	Nov- 20	Dec- 20	Jan- 21	Feb- 21	Mar- 21	Avg.
1	рН	7.54	7.44	7.65	6.96	7.33	7.82	7.22	7.29	7.36	7.11	7.4	7.61	7.39
2	Total Suspended Solids (mg/L)	59	63	71	66	52	68	73	52	44	59	38	73	60
3	Oil and Grease (mg/L)	2.8	3.6	4.3	0.9	0.7	1.0	5.1	1.6	2.4	2.1	2.3	1.4	2.4
4	BOD 3days 27°C (mg/L)	14.6	17.8	19.5	21.7	14.8	17	22	11	10	16	12	19	16.3
5	COD (mg/L)	75	88	97	138	122	157	141	80	74	103	71	88	103