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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-VII/ESR/2021-2022/1898

Date: 10/09/2021  
Speed Post

To,  
The Member Secretary,  
Rajasthan Pollution Control Board,  
4, Institutional Area, Jhalana Doongri Road,  
JAIPUR-302004 (Rajasthan)

File No. C-164

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

Ref: - (1) CTO No.- F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/11913-11915 dated: 30/03/2017.  
(2) CTO No.- F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/3124-3126 dated 08/08/2018

Respected Sir,

We are submitting herewith Environmental Statement for the period from 1<sup>st</sup> April 2020 to 31<sup>st</sup> March 2021 for **Cement Plant Unit-VII** (Without Cement grinding) of **M/s Shree Cement Limited** situated at Village- Ras Bhingarh, 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)

Encl: a/a

Copy to:-

- o/c
- SCL RAS
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, Babu Nagar, Opp. Rajasthan University, JLN Marg, Jaipur 302015  
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## ENVIRONMENTAL STATEMENT

### FORM – V

**M/s Shree Cement Limited: Unit- VII**  
**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. Cement Plant Unit-VII 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	2009
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 Suppression	:	31174 KL
Domestic	:	57688 KL (Common for cement plant, power plant, synthetic gypsum plant & mines).

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year 2019-2020)	During Current Financial Year (2020-2021)
Clinker	0.0296 KL/MT of Clinker	0.0286 KL/MT of Clinker

**(II) RAW MATERIAL CONSUMPTION:**

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output (Clinker)	
		During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
1. Limestone	Clinker	1.487	1.496
2. Laterite /Iron Ore		0.0211	0.017
3. Slag		0.000	0.000
4. Performance Improver		0.000	0.000
5. Coal & Pet Coke		0.0997	0.1098

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

During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
50.91	48.70

**(IV) TOTAL CLINKER PRODUCTION (MT):**

During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
939964	1090059

**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.		As the plant is being operated on dry process technology, no liquid effluent is generated from the cement plant. The waste water generated from the office toilet and canteen is being treated in STP and treated water & sludge generated is being used in plantation & horticulture activities. Analysis Report of STP treated water is attached as Annexure-3			
Air	<table border="1"> <tr> <td>PM -0.1091 T/Day</td> </tr> <tr> <td>SO<sub>2</sub> - 0.0768 T/Day</td> </tr> <tr> <td>NO<sub>x</sub> -1.3327 T/Day</td> </tr> </table>	PM -0.1091 T/Day	SO <sub>2</sub> - 0.0768 T/Day	NO <sub>x</sub> -1.3327 T/Day		Please refer Annexure – 1 & 2
PM -0.1091 T/Day						
SO <sub>2</sub> - 0.0768 T/Day						
NO <sub>x</sub> -1.3327 T/Day						



**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. No.	Particulars	Total Quantity	
		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

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

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.

Period	Bio-Medical Waste Quantity (Kg) as per Color Coding			
	Red	Blue	Yellow	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 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	Previous Year Financial Year (1 <sup>st</sup> Apr 2019 to 31 <sup>st</sup> Mar 2020)		Current Year Financial Year (1 <sup>st</sup> Apr 2020 to 31 <sup>st</sup> Mar 2021)	
	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)
<b>(i) Automotive</b>				
a) Four wheeler	719	9.394	275	10.914
b) Two wheeler	Nil	Nil	Nil	Nil
<b>(ii) Industrial</b>				
a) UPS	0	0	32	0.256
b) Motive Power	Nil	Nil	Nil	Nil
c) Stand –by	Nil	Nil	Nil	Nil
<b>(iii) Others</b>	Nil	Nil	Nil	Nil
<b>Total</b>	<b>719 Nos.</b>	<b>9.394 MT</b>	<b>307 Nos.</b>	<b>11.170 MT</b>

Used battery scrap was sent to CPCB authorized recycler.

**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.



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.

## **PART – H**

### **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 ~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.

## **PART – I**

### **ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.**

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 2020-2021, 1772.86 tonnes of carbon and 6506.38 tonnes of CO<sub>2</sub> 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 Re-claimer 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 NO<sub>x</sub> mitigation systems in all cement kilns (Unit-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 (PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub> and NO<sub>2</sub>) &  
Ambient Noise Level monitoring report
- Annexure-3 : STP treated water test report

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**Shree Cement Ltd, Ras**

**Unit-VII**

**Stack Emission Monitoring Report (PM, SO<sub>2</sub> & NO<sub>x</sub>)**

**Year: 2020-2021**

Sr. No	Month	Raw Mill & Kiln Stack			Coal Mill Stack	Cooler Stack
		PM	NO <sub>x</sub>	SO <sub>2</sub>	PM	PM
	U o M	mg/Nm <sup>3</sup>				
1	Apr-2020	0.0	0.0	0.0	0.0	0.0
2	May-2020	15.0	122.8	5.0	20.0	5.0
3	Jun-2020	13.0	244.7	22.6	12.0	20.
4	Jul-2020	17.8	348.3	39.7	18.5	10.5
5	Aug-2020	17.7	387.6	15.4	13.5	9.8
6	Sep-2020	20.3	277.8	49.2	15.9	18.8
7	Oct-2020	20.3	391.0	16.7	10.0	8.0
8	Nov-2020	14.0	410.0	9.0	13.0	9.0
9	Dec-2020	13.0	421.0	0.0	12.0	10.0
10	Jan-2021	11.6	416.7	19.7	20.0	6.0
11	Feb-2021	14.0	452.3	12.6	10.0	23.0
12	Mar-2021	17.7	520.1	35.2	13.5	9.7
<b>Average</b>		<b>15</b>	<b>333</b>	<b>19</b>	<b>13</b>	<b>11</b>

### Shree Cement Ltd, Ras

#### Ambient Air Quality ( $\mu\text{g}/\text{m}^3$ ) 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 $\mu\text{g}/\text{m}^3$				AAQ in $\mu\text{g}/\text{m}^3$				AAQ in $\mu\text{g}/\text{m}^3$				AAQ in $\mu\text{g}/\text{m}^3$			
Parameter →	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>
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
<b>Average</b>	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

<b><u>Shree Cement Ltd, Ras</u></b>								
<b>Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2020 To March 2021</b>								
<b>Common for Cement plant &amp; Power plant</b>								
<b>Location</b> →	<b>Plant Boundary Near Main Gate</b>		<b>Plant Boundary Near Mess</b>		<b>Plant Boundary towards Stacker &amp; Reclaimer</b>		<b>Plant boundary towards village Khera &amp; Jawangarh</b>	
	<b>Noise Level in dB(A)</b>		<b>Noise Level in dB(A)</b>		<b>Noise Level in dB(A)</b>		<b>Noise Level in dB(A)</b>	
<b>Parameter</b> → <b>Month</b> ↓	<b>Day time</b>	<b>Night time</b>	<b>Day time</b>	<b>Night time</b>	<b>Day time</b>	<b>Night time</b>	<b>Day time</b>	<b>Night time</b>
	Apr-2020	51.5	42.6	48.2	37.6	46.0	36.7	43.5
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
<b>Average</b>	67.7	61.6	66.9	57.8	67.1	60.9	63.3	57.4

**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	pH	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