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SHREE CEMENT LTD.

Regd. Office:

BANGUR NAGAR, POST BOX NO.33, BEAWAR 305 901, RAJASTHAN, INDIA



SCL/Ras/Unit-IV/Env. Statement /2018-19/

8396

Date: 22/09/2018

File No. C-053

To,

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

Sub:- Environmental Statement for the period from April 2017 to March 2018 for Cement Plant Unit-IV of M/s Shree Cement Limited situated at Village-Ras Bhingarh, Tehsil- Jaitaran, Dist- Pali (Raj).

Ref: - CTO No. - F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/9645-9647 dated 21/02/2018

Sir,

We are submitting herewith Environmental Statement for the period from April 2017 to March 2018 for Cement Plant Unit-IV 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;

Rakesh Bhargava

(Rakesh Bhargava)
Sr. Vice President (Environment)

Encl: a/a

Copy to:-

1. Chief Conservator of Forests (Central), Ministry of Environment & Forests, Central Regional Office, Kendriya Bhawan, 5th Floor Sector H, Aliganj, Lucknow – 226024 (U.P.)
2. The Regional Officer (Regional Office), Rajasthan Board for the Prevention & Control of Pollution, S / A-6, Mandia Road, Industrial Area, Near Pali Urban Co-Operative Bank, PALI-MARWAR- 306401 (Raj.)

o/c Environment Department, Ras

JAIPUR OFFICE : SB-187, Bapu Nagar, Opp. Rajasthan University, JLN Marg, Jaipur-302 015

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ENVIRONMENTAL STATEMENT
M/s Shree Cement Limited : Unit- IV
Period from : April 2017 to : March 2018

FORM – V

PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Cement Plant Unit-IV M/s Shree Cement Ltd. 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 SCL Unit-IV	1.2 Million TPA Clinker 2.2 Million TPA Cement
4.	Year of Establishment	2007
5.	Date of the last Environmental Statement Submitted	20/09/2017

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	:	43453 KL
Domestic	:	68924 KL (Common for Cement Plant & Power Plant)

Name of Product	Process Water Consumption per Unit of Clinker Output	
	During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
Clinker	0.0423 KL / MT of Clinker	0.0410 KL / MT of Clinker
Cement	0.0387 KL / MT of Cement	0.03866 KL / MT of Cement

(II) RAW MATERIAL CONSUMPTION:

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output (Cement)	
		During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
1. Limestone	Cement	1.36	1.310
2. Laterite/Iron Ore		0.016	0.018
3. Slag		0.005	0.000
4. Performance Improver		0.042	0.000
5. Gypsum		0.062	0.072
6. Coal & Pet Coke		0.087	0.091
7. Sludge		0.0007	0.001

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

During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
85.91	82.57

(IV) TOTAL CEMENT PRODUCTION (MT):

Product	During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
Clinker	984559	1059794
Cement	1075385	1123871

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
(a)	Water	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 mess is treated in STP and treated water is used in plantation. Analysis Report of STP treated water is attached as Annexure-3	
(b)	Air	Please refer Annexure – 1 & 2	

PART – D

HAZARDOUS WASTE

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

Hazardous Waste	Total Quantity (Ltrs.)	
	During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
(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)	<p>Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, D.G.Set and Nimbeti Limestone Mines.</p> <p>Total Quantity generated from April-2016 to March-2017 = 6720 Ltrs.</p> <p>Old Stock = 0 Ltrs.</p> <p>Total Used oil = 6720 Ltrs.</p> <p>Sold-out to registered recycler = 6720 Ltrs.</p> <p>Balance Quantity= 0 Ltrs</p>	<p>Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, D.G.Set and Nimbeti Limestone Mines.</p> <p>Total Quantity generated from April-2017 to March-2018 = 18270 Ltrs.</p> <p>Old Stock = 0 Ltrs.</p> <p>Total Used oil = 18270 Ltrs.</p> <p>Sold-out to registered recycler = 18270 Ltrs.</p> <p>Balance Quantity= 0 Ltrs</p>
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E

SOLID WASTE

		Total Quantity	
		During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
(a)	From Process	Nil	Nil
(b)	From Pollution Control Facility	Dust collected in the ESPs, Bag Houses and Bag Filters are recycled to the system.	
(c)	1. 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

Cement manufacturing is based on “Dry Process”. No Hazardous waste is generated from the process except used oil which is drained from Machineries / Equipments. The used oil & Lead acid batteries are sold to CPCB authorized recyclers.

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines during current financial year April 2017 to March 2018 under the Bio-Medical Waste (Management & Handling) Rules 2016, are as follows.

	Bio-Medical Waste Quantity (Kg) as per Colour Coding			
	Red	Blue/White	Yellow	Black
April 2016 to March 2017	39.44	39.19	40.31	39.96
April 2017 to March 2018	39.105	38.05	37.92	38.91

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

E- Wastes:

	Total Quantity	
	During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
From Process	1370 Kg.	1740 Kg.
From Pollution Control Facility	Nil	Nil

Solid Wastes: - N.A.

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 -

1	Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency	During 1 st Apr 2017 to 31 st Mar 2018	
	Category:	(i) No. of Batteries	(i) No. of Batteries
	(i) Automotive		
	a) Four wheeler	207	8.652
	b) Two wheeler	Nil	Nil
	(ii) Industrial		
	a) UPS	455	4.640
	b) Motive Power	Nil	Nil
	c) Stand -by	Nil	Nil
	(iii) Others	Nil	Nil
Total	662 Nos	13.292 MT	
2	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	During 1 st Apr 2017 to 31 st Mar 2018	
	Category:	(i) No. of Batteries	(i) No. of Batteries
	(i) Automotive		
	a) Four wheeler	140	4.952
	b) Two wheeler	Nil	Nil
	(ii) Industrial	Nil	Nil
	a) UPS	291	2.328
	b) Motive Power	Nil	Nil
	c) Stand -by	Nil	Nil
	(iii) Others	Nil	Nil
Total	613 Nos	9.030 MT	

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 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 in process and neutralizing the cost of operation of pollution control equipment 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 of high temperatures gases and are used for generation of Green Power which as resulted in conservation of fuel, reduction of GHG emissions and water conservation.

PART – H

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

Green belt development and tree plantation is our ongoing process. Plantation has been carried out in an area of around 63.8 hectare with (Total land: 187.56 hc.)165311 trees, which is ~34 % of the total land of plant area.

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.
3. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.
4. Civil Deptt taking care of Housekeeping.
5. Horticulture Department is taking care of tree plantation and green belt development. Every year we are doing tree plantation.
6. Conversion of ESP to Bag House has been done in Raw Mill and Kiln stack.
7. Upgraded cooler ESP transformer and control panel in first field to further reduce PM emission levels.
8. Constructed concreted roads at Stacker and Reclaimer area for further reduction of fugitive emissions.

9. Installed new bag filters at various application like DBC, transfer points etc.

10. Modification of Coal Mill Bag House for further reduction of Particulate emissions.

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

Shree Cement Ltd, Ras : Unit-IV
Stack Emission Report (PM All values in mg/Nm³)
Year: 2017-18

S. No.	Month	Raw Mill & Kiln Stack	Coal Mill Stack	Cooler Stack	Cement Mill Stack
1	Apr-17	8	20	15	21
2	May-17	8	23	19	15
3	Jun-17	9	20	15	19
4	Jul-17	10	18	12	16
5	Aug-17	12	15	14	9
6	Sep-17	10	13	6	19
7	Oct-17	13	17	5	14
8	Nov-17	16	19	8	12
9	Dec-17	18	12	9	14
10	Jan-18	11	18	7	13
11	Feb-18	14	18	10	20
12	Mar-18	17	19	10	21
Average		12	18	11	16

NR*-Not Running

Shree Cement Ltd, Ras

Ambient Air Quality ($\mu\text{g}/\text{M}^3$) & Noise Level Monitoring Report For The Period Of April 2017 To Mar 2018

Common for Cement plant & Power plant

Year:-2017-2018

Location →	Plant Boundary Near Main Gate										Plant Boundary Near Mess										Plant Boundary towards Stackers & Reclaimer										Plant boundary towards village Khera & Jawangarh									
	AAQ in $\mu\text{g}/\text{M}^3$					Noise Level in dB(A)					AAQ in $\mu\text{g}/\text{M}^3$					Noise Level in dB(A)					AAQ in $\mu\text{g}/\text{M}^3$					Noise Level in dB(A)														
	P M 2.5	PM- 10	SO ₂	NO ₂	Day time	Nig ht time	PM 2.5	PM 10	SO ₂	NO ₂	Day time	Nig ht time	PM 2.5	PM 10	SO ₂	NO ₂	Day time	Nig ht time	PM 2.5	PM 10	SO ₂	NO ₂	Day time	Nig ht time	PM 2.5	PM 10	SO ₂	NO ₂	Day time	Nig ht time										
Apr-17	36.	57.0	10.6	12.1	73.2	65.2	33.5	53.3	10.2	11.6	62.3	59.2	32.1	50.3	9.5	10.8	72.5	63.2	30.0	47.6	9.2	10.5	62.3	54.30	30.0	47.6	9.2	10.5	62.3	54.30										
May-17	37.	57.8	10.4	11.6	71.2	65.3	31.6	54.5	10.3	11.4	69.5	62.3	30.8	52.3	9.8	10.9	72.3	51.5	28.4	46.6	9.5	10.7	72.3	58.60	28.4	46.6	9.5	10.7	72.3	58.60										
Jun-17	36.	55.1	9.8	11.5	71.9	66.1	32.1	52.0	9.8	11.1	72.6	63.9	30.5	49.1	9.2	10.7	73.1	58.5	30.5	48.0	8.9	10.5	70.2	66.10	30.5	48.0	8.9	10.5	70.2	66.10										
Jul-17	34.	54.0	8.8	11.2	72.5	66.9	31.0	48.9	9.1	10.3	73.2	65.1	29.3	47.4	8.4	10.3	71.7	59.7	27.5	46.1	8.0	10.1	68.2	65.20	27.5	46.1	8.0	10.1	68.2	65.20										
Aug-17	35.	55.4	8.3	11.1	73.5	66.9	30.4	49.8	8.6	10.7	72.6	68.1	28.3	47.9	8.0	13.8	68.4	70.6	26.6	46.9	7.6	12.2	67.5	63.50	26.6	46.9	7.6	12.2	67.5	63.50										
Sep-17	35.	54.1	8.8	11.5	73.2	67.2	31.6	50.8	8.9	11.1	71.5	61.5	28.8	48.6	8.3	10.8	72.2	65.4	27.0	48.1	8.0	10.7	68.2	60.50	27.0	48.1	8.0	10.7	68.2	60.50										
Oct-17	36.	56.6	8.4	11.8	73.2	67.2	33.5	52.4	8.8	11.3	71.5	61.5	31.1	49.8	8.4	11.1	72.2	65.4	28.0	47.3	7.9	11.0	68.2	60.50	28.0	47.3	7.9	11.0	68.2	60.50										
Nov-17	37.	55.1	8.7	12.0	71.7	67.0	31.4	51.4	9.1	11.6	69.2	61.9	32.6	48.0	8.6	11.4	70.6	65.8	29.4	45.4	8.1	11.2	68.6	64.20	29.4	45.4	8.1	11.2	68.6	64.20										
Dec-17	35.	51.1	8.9	12.3	72.5	68.2	32.6	50.3	9.3	12.1	70.6	62.4	30.8	49.3	8.9	11.9	71.9	66.7	28.6	48.3	8.4	11.6	67.2	63.40	28.6	48.3	8.4	11.6	67.2	63.40										
Jan-18	36.	55.5	8.6	12.5	73.2	66.7	32.0	51.3	9.0	12.3	71.5	65.4	30.0	48.0	8.6	12.1	70.2	64.7	27.9	47.3	8.1	11.8	68.7	62.20	27.9	47.3	8.1	11.8	68.7	62.20										
Feb-18	37.	54.1	8.4	12.1	72.5	68.1	32.8	49.9	9.2	12.0	70.6	66.8	30.6	50.6	8.4	11.8	71.2	63.8	29.0	44.6	7.9	11.5	67.8	61.50	29.0	44.6	7.9	11.5	67.8	61.50										
Mar-18	37.	57.3	8.1	12.2	73.0	67.8	28.9	50.0	8.4	11.2	71.1	66.1	29.9	48.1	7.8	11.3	69.9	63.4	27.1	48.4	7.4	11.0	69.7	61.20	27.1	48.4	7.4	11.0	69.7	61.20										
Average	36.	55.3	9.0	11.8	72.6	66.9	31.8	51.2	9.2	11.4	70.5	63.7	30.4	49.1	8.7	11.4	71.4	63.2	28.3	47.1	8.2	11.1	68.2	61.8	28.3	47.1	8.2	11.1	68.2	61.8										

(STP Treated Water Quality, Year 2017-2018)

S. No.	Parameter ↓	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Avg
1	pH	7.26	7.32	7.22	7.48	7.35	7.23	7.41	7.33	7.41	7.49	7.38	7.33	7.35
2	Suspended Solids	70.6	72.1	78.2	39.5	51.3	54.2	54.2	65.2	45.5	36.4	40.2	38.1	53.79
3	Oil and Grease	1.86	2.02	1.56	2.18	1.57	1.95	2.48	1.05	1.35	1.84	1.99	2.04	1.82
4	BOD 3days 27°C	21.5	19.5	18.5	20.1	18.2	16.2	16.4	18.3	19.8	21.2	19.4	17.5	18.88
5	COD	51.6	48.2	52.6	62.4	51.3	58.2	65.5	74.3	78.9	83.4	77.6	85.7	65.81