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# SHREE CEMENT LTD.

Regd. Office:

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



SCL/RAS/ CPP /Env. Statement/2018-19/

o/c  
8386

Date: 22/09/2018

To,

File No. P-120

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 238 MW Power Plant (160 MW Thermal Power Generation & 78 MW Waste Heat Power Generation) including 1000 KVA D.G. Set 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)/2008-2009/8240-8242 dated 29/12/2017  
2. CTO No. -F. (CPM) / Pali (Jaitaran)/1024 (1) /2013-2014 /7087-7089 dated 22/01/2016.

Sir,

We are submitting herewith the Environmental Statement for the period from April 2017 to March 2018 for 238 MW Power Plant (160 MW Thermal Power Generation & 78 MW Waste Heat Power Generation) including 1000 KVA D.G. Set 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;

*R. Bhargava*

*o/c Environment  
Department, Ras*

(Rakesh Bhargava)

Sr. Vice President (Environment)

Copy to:-

1. Chief Conservator of Forests (Central), Ministry of Environment & Forests, Central Regional Office, Kendriya Bhawan, 5<sup>th</sup> 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.)

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**  
**Captive Power Plant Including D.G. Set**  
**Period from : April, 2017 : March, 2018**

**FORM – V**

**PART – A**

1.	Name and address of the Owner / Occupier of the Industry operation or process	Captive Power Plant 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	160MW Thermal Power generation 78 MW Waste Heat recovery based 1000 KVA D.G.
4.	Year of Establishment	Power Plant: 2007-2010 Waste Heat Power Plant: 2009-14 D.G. Set: 2006
5.	Date of the last Environmental Statement submitted	20/09/2017

**PART – B**

**WATER AND RAW MATERIAL CONSUMPTION**

**(I) WATER CONSUMPTION:**

Process & Cooling/ Construction : 274368 KL

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

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
Power	0.00021 KL / KWH	0.00022 KL / KWH

**(II) RAW MATERIAL CONSUMPTION:(Power Plant)**

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output (Power)	
		During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
1. Water	Power	0.00021 KL / KWH	0.0002275 KL / KWH
3. Coal (Fuel)		0.00022643 Metric ton / KWH	0.00028556 Metric ton / KWH

**(III) RAW MATERIAL CONSUMPTION: (D.G. SET)**

D.G. Set is not operated on continuous basis. D.G. Set is operated only during the breakdown/shutdown of Power Plant. The total fuel consumption during the year 2017-2018 was nil.

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of Output (LTR / KWH)	
		During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
H.S. Diesel	Power	0.00	0.00

**(IV) POWER CONSUMPTION (KWH/KWH OF POWER):**

During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
0.0637	0.0709

**(V) TOTAL POWER PRODUCTION (KWH):**

During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
1110136292	1205685218

**(VI) TOTAL D.G. POWER PRODUCTION (KWH):**

During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
0.00 KWH	0.00 KWH

**PART – C**

**DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT**

<b>Pollutants</b>	<b>Quantity of Pollutants Discharged (Mass/Day)</b>	<b>Concentration of Pollutants in Discharge (Mass/Value)</b>	<b>Percentage of variation from prescribed standard with reasons</b>
(a)	Water	<p>The waste water generated from the office toilet and mess is treated in STP and treated water is used in plantation.</p> <p>Analysis Report of STP treated water is attached as <b>Annexure-4</b>.</p> <p>During the year 2017-2018 total <b>46995</b> KL waste water was generated from the Power plant. The entire waste water generated from the power plant is used for the Synthetic Gypsum Manufacturing and ash quenching.</p>	
(b)	Air	Please refer <b>Annexure – 2 &amp; 3</b>	

**PART – D**

**HAZARDOUS WASTE**

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

<b>Hazardous Waste</b>	<b>Total Quantity (Ltrs.)</b>	
	<b>During Previous Financial Year (2016-2017)</b>	<b>During Current Financial Year (2017-2018)</b>
a) From Process	<p>Common authorization for Hazardous Waste Management &amp; 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 &amp; 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 (Metric ton)	
		During Previous Financial Year (2016-2017)	During Current Financial Year (2017-2018)
(a)	From Process	Bed Ash : Nil	Bed Ash : Nil
(b)	From Pollution Control Facility	Fly Ash : 0 Synthetic Gypsum : 78694	Fly Ash : 0 Synthetic Gypsum : 137984
(c)	1. Quantity rejected or re- utilized within the unit	Fly ash and Bed ash are generated from the power plant as a solid waste are characterized as Synthetic gypsum due to limestone feeding for Desulfurization.	
	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**

No Hazardous waste is generated from the Unit except used oil which is drained from Machineries / Equipment. 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.

Period	Bio-Medical Waste Quantity (Kg) as per Color 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 <sup>st</sup> Apr 2017 to 31 <sup>st</sup> 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
	<b>Total</b>	<b>662 Nos</b>	<b>13.292 MT</b>
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 <sup>st</sup> Apr 2017 to 31 <sup>st</sup> Mar 2018	
	Category:	(i) No. of Batteries	(i) No. of Batteries
	(i) Automotive		
	a) Four wheeler	164	5.438
	b) Two wheeler	Nil	Nil
	(ii) Industrial		
	a) UPS	449	3.592
	b) Motive Power	Nil	Nil
	c) Stand –by	Nil	Nil
	(iii) Others		
	<b>Total</b>	<b>613 Nos</b>	<b>9.030 MT</b>

Used battery scrap was sent to CPCB authorized recycler

### **Solid Wastes:**

Only Fly ash and Bed ash is generated from the power plant as a solid waste which is used in the cement manufacturing process of our existing cement plants.

## **PART – G**

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

Captive Power Plant is being operated on environmentally clean technology. The stack emissions from the plant are controlled by ESP's. Bag Filters are installed at various material transfer points to clean the process and arrest the fugitive emissions. The boiler Ash collected in the pollution control equipment is used in the process of existing cement plants, thus it can be said that the utilization of raw material is being done at their cost. Since the system is operated on total recycle, there is no effect on the cost of production.

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 dept. taking care for of House keeping.
5. Horticulture Department is taking care of tree plantation and green belt development. Every year we are doing tree plantation.
6. Air cooled condensers has been installed at all the boilers for water conservation,



7. Waste water generated is reused in synthetic gypsum plant.

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 analysis report
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**Shree Cement Ltd; Ras**  
**Captive Power Plant**  
**Stack Emission Report ( All values in mg/Nm<sup>3</sup>)**  
**Year:- 2017-18**

S. No.	Month	Boiler-II & III	Boiler-IV & V	Boiler-VI & VII
1	Apr-17	22	27	25
2	May-17	NR	22	28
3	Jun-17	23	28	31
4	Jul-17	NR	26	31
5	Aug-17	22	29	15
6	Sep-17	29	25	20
7	Oct-17	20	24	30
8	Nov-17	29	26	27
9	Dec-17	NR	24	29
10	Jan-18	16	30	28
11	Feb-18	26	27	32
12	Mar-18	31	29	28
<b>Average</b>		<b>24</b>	<b>26</b>	<b>27</b>

NR\* Boiler 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 Stackler & 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)			AAQ in $\mu\text{g}/\text{M}^3$			Noise Level in		
	PM 2.5	PM-10	SO <sub>2</sub>	NO <sub>2</sub>	Day time	Night time	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	Day time	Night time	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	Day time	Night time	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	Day time	Night time
Apr-17	36.9	57.	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.	54.3
May-17	37.3	57.	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.	58.6
Jun-17	36.0	55.	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.	66.1
Jul-17	34.8	54.	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.	65.2
Aug-17	35.1	55.	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.	63.5
Sep-17	35.0	54.	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.	60.5
Oct-17	36.9	56.	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.	60.5
Nov-17	37.4	55.	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.	64.2
Dec-17	35.0	51.	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.	63.4
Jan-18	36.1	55.	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.	62.2
Feb-18	37.1	54.	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.	61.5
Mar-18	37.9	57.	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.	61.2
Average	36.3	55.	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.	61.8

## Annexure: 4

## (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

