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SHREE CEMENT LTD.

Regd. Office:

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



SCL/RAS/PPP /Env. Statement/2019-20/ 8971

Date: 10/09/2019

Speed Post

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

File No. P-120

Sub:- Environmental Statement for the period from April 2018 to March 2019 for 238 MW Power Plant (160 MW Thermal Power Generation & 103.33 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(Tech)/Pali(Jaitaran)/2(1)/2008-2009/5907-5909 dated 11/01/2019.

Respected Sir,

We are submitting herewith the Environmental Statement for the period from April 2018 to March 2019 for 238 MW Power Plant (160 MW Thermal Power Generation & 103.33 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;

(Dr. Anil Kumar Trivedi)

Sr. GM (Environment)

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.)

ofe Environment dept Raj

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ENVIRONMENTAL STATEMENT - FORM – V
M/s Shree Cement Limited - Captive Power Plant Including D.G. Set
Period from: April 2018 to March 2019

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 103.33 MW Waste Heat recovery based 1000 KVA D.G.
4.	Year of Establishment	Power Plant: 2007-2010 Waste Heat Power Plant: 2009-2014 D.G. Set: 2006
5.	Date of the last Environmental Statement submitted	22/09/2018

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

Process & Cooling/ Construction : 280167 KL

Domestic : 704300 KL (Common for
Cement Plant & Power Plant)

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2017-2018)	During Current Financial Year (2018-2019)
Power	0.00022 KL / KWH	0.000229 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 (2017-2018)	During Current Financial Year (2018-2019)
1. Water	Power	0.0002275 KL / KWH	0.0002290 KL / KWH
1. Coal (Fuel)		0.00028556 Metric ton / KWH	0.00027097 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 2018-2019 was nil.

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of Output (LTR / KWH)	
		During Previous Financial Year (2017-2018)	During Current Financial Year (2018-2019)
H.S. Diesel	Power	0.00	0.00

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

During Previous Financial Year (2017-2018)	During Current Financial Year (2018-2019)
0.0709	0.0676

(V) TOTAL POWER PRODUCTION (KWH):

During Previous Financial Year (2017-2018)	During Current Financial Year (2018-2019)
1205685218	1223298542

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

During Previous Financial Year (2017-2018)	During Current Financial Year (2018-2019)
0.00 KWH	0.00 KWH

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	<p>The waste water generated from the office toilet and canteen is treated in STP and treated water & sludge generated is used in horticulture activities. Analysis Report of STP treated water is attached as Annexure-4.</p> <p>During the year 2018-2019 total 40228 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 Annexure – 2 & 3	

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 (2017-2018)	During Current Financial Year (2018-2019)
a) From Process	<p>Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, D.G.Set and Nimbeti Limestone Mines. Total Quantity generated from April-2017 to March-2018 = 18270 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 18270 Ltrs. Sold-out to registered recycler = 18270 Ltrs. 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. Total Quantity generated from April-2018 to March-2019 = 12780 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 12780 Ltrs. Sold-out to registered recycler = 0.0 Ltrs. Co-processed in cement kiln = 12780 Ltrs. 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 (2017-2018)	During Current Financial Year (2018-2019)
(a)	From Process	Bed Ash : Nil	Bed Ash : Nil
(b)	From Pollution Control Facility	Fly Ash : 0 Synthetic Gypsum : 137984	Fly Ash : 0 Synthetic Gypsum : 214146
(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 2018 to March 2019 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 2017 to March 2018	39.105	38.05	37.92	38.91
April 2018 to March 2019	39.21	28.448	41.065	32.01

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 (2017-2018)	During Current Financial Year (2018-2019)
From Process	1740 Kg.	Nil
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	Previous Year 1st Apr 2017 to 31st Mar 2018		Current Year 1st Apr 2018 to 31st Mar 2019	
	Category:	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)
	(i) Automotive				
	a) Four wheeler	207	8.652	219	9.568
	b) Two wheeler	Nil	Nil	Nil	Nil
	(ii) Industrial				
	a) UPS	455	4.640	66	0.563
	b) Motive Power	Nil	Nil	Nil	Nil
	c) Stand –by	Nil	Nil	Nil	Nil
	(iii) Others	Nil	Nil	Nil	Nil
	Total	662 Nos	13.292 MT	285 Nos	10.131 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	Previous Year 1st Apr 2017 to 31st Mar 2018		Current Year 1st Apr 2018 to 31st Mar 2019	
	Category:	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)
	(i) Automotive				
	a) Four wheeler	164	5.438	301	7.854
	b) Two wheeler	Nil	Nil	Nil	Nil
	(ii) Industrial				
	a) UPS	449	3.592	112	0.896
	b) Motive Power	Nil	Nil	Nil	Nil
	c) Stand –by	Nil	Nil	Nil	Nil
	(iii) Others	Nil	Nil	Nil	Nil
	Total	613 Nos	9.030 MT	413 Nos	8.750 MT

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 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.

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 Housekeeping.
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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Annexure: 1

Shree Cement Ltd; Ras - Captive Power Plant
Stack Emission Report (PM, SO₂ & NO_x)
(All values in mg/Nm³)
Year: - 2018-19

S. No.	Month	Boiler-II & III			Boiler-IV & V			Boiler-VI & VII		
		PM	NO _x	SO ₂	PM	NO _x	SO ₂	PM	NO _x	SO ₂
1	Apr-18	27	287	556	31	287	564	33	217	493
2	May-18	19	204	553	26	201	489	22	227	508
3	Jun-18	33	217.5	564.3	35	226.4	517.2	29	189.4	542.9
4	Jul-18	22	222	545	28	246	512	25	195	487
5	Aug-18	26	210	563	33	233	501	28	206	493
6	Sep-18	32	210.9	542.6	37	219.6	512.8	29	192.6	532.9
7	Oct-18	34	227	522	30	238	574	29	201	495
8	Nov-18	35	206	564	34	226	537	30	165	501
9	Dec-18	29	206	551.8	39	207.3	525.6	33	182.6	528.4
10	Jan-19	26	98	203	32	85	232	35	106	265
11	Feb-19	30	105	269	35	159	218	32	136	363
12	Mar-19	31	92.3	360.4	36	128.4	390.2	39	98.4	126.5
Average		29	190	483	33	205	464	30	176	445

Shree Cement Ltd, Ras																
Ambient Air Quality ($\mu\text{g}/\text{M}^3$) Monitoring Report For The Period Of April 2018 To March 2019																
Common for Cement plant & Power plant																
Year:-2018-2019																
Location →	Plant Boundary Near Main Gate				Plant Boundary Near Mess				Plant Boundary towards Stack & 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 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-18	36.1	54.8	7.9	12.1	31.0	48.6	8.2	11.0	28.3	47.8	7.7	11.1	25.6	46.8	7.2	10.8
May-18	34.6	53.3	7.7	11.3	31.6	48.3	9.2	11.4	30.6	47.0	8.1	10.8	27.1	46.9	7.5	10.6
Jun-18	33.6	51.1	7.9	10.9	32.5	44.8	8.6	10.8	31.8	47.8	7.7	10.6	29.0	46.3	7.3	10.3
Jul-18	30.8	48.3	7.9	10.4	31.0	47.6	8.4	10.5	31.5	45.4	7.8	10.3	29.1	44.8	7.4	9.9
Aug-18	28.5	46.3	8.1	10.7	28.9	46.5	8.6	10.1	27.8	43.3	8.0	10.4	25.0	39.3	7.6	10.1
Sep-18	29.0	48.4	8.2	10.3	29.4	49.0	8.3	10.6	31.1	48.0	8.0	10.6	28.4	44.9	7.6	10.2
Oct-18	30.1	45.1	8.4	10.9	34.4	45.1	9.0	11.1	37.6	45.9	8.9	10.9	33.1	44.6	8.4	10.5
Nov-18	28.5	41.9	8.6	10.6	36.5	45.9	8.8	10.9	37.3	43.8	9.0	10.8	33.5	45.5	8.6	10.3
Dec-18	33.4	49.6	9.3	11.7	30.4	43.0	10.0	11.5	33.5	47.9	9.2	11.5	31.5	46.3	8.8	11.2
Jan-19	34.6	45.2	8.9	12.0	33.5	41.9	9.1	11.9	36.8	40.9	8.8	11.9	32.0	43.5	8.5	11.5
Feb-19	36.5	52.4	8.7	12.3	31.6	46.6	8.5	12.3	32.0	45.9	8.2	12.1	28.1	43.0	7.9	11.7
Mar-19	36.3	52.0	14.4	11.6	33.3	47.8	8.8	11.5	35.8	48.3	9.4	11.5	29.5	42.0	9.2	11.1
Average	32.7	49.0	8.8	11.2	32.0	46.3	8.8	11.1	32.8	46.0	8.4	11.0	29.3	44.5	8.0	10.7

Shree Cement Ltd, Ras								
<u>Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2018 To March 2019</u>								
<u>Common for Cement plant & Power plant</u>								
<u>Year:-2018-2019</u>								
Location →	Plant Boundary Near Main Gate		Plant Boundary Near Mess		Plant Boundary towards Stackers & Reclaimer		Plant boundary towards village Khera & Jawangarh	
	Noise Level in dB(A)		Noise Level in dB(A)		Noise Level in dB(A)		Noise Level in dB(A)	
Parameter →	Day time	Night time	Day time	Night time	Day time	Night time	Day time	Night time
Apr-18	71.20	66.90	72.60	65.50	70.60	60.70	68.90	62.10
May-18	72.40	67.20	70.30	64.80	67.60	61.20	65.10	60.30
Jun-18	70.60	64.20	72.60	63.40	66.40	61.60	63.60	59.20
Jul-18	68.20	59.30	70.30	62.60	65.20	61.90	62.30	58.20
Aug-18	71.30	59.90	68.60	61.30	67.20	62.20	61.90	57.50
Sep-18	68.20	59.30	70.30	62.60	65.20	61.90	62.30	58.20
Oct-18	70.10	58.20	64.00	60.10	71.50	63.30	63.30	55.50
Nov-18	65.00	56.90	71.00	60.50	68.50	60.10	60.10	57.10
Dec-18	71.20	59.90	70.20	57.50	65.30	60.80	61.00	59.90
Jan-19	73.10	62.90	70.60	61.70	67.40	62.50	64.30	60.40
Feb-19	72.80	63.20	69.20	60.90	68.60	66.90	63.50	61.40
Mar-19	71.50	62.70	70.20	61.30	67.30	69.10	62.30	58.10
Average	70.5	61.7	70.0	61.9	67.6	62.7	63.2	59.0

Annexure: 3

(STP Treated Water Quality, Year 2018-2019)														
S. No.	Parameter ↓	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Avg.
1	pH	7.29	7.3	7.33	7.26	7.66	7.36	7.26	7.31	7.22	7.39	7.5	7.44	7.36
2	Total Suspended Solids	42.3	46.3	48.2	42.1	46.6	48.2	56	43.2	40.3	43.6	40	42	44.90
3	Oil and Grease	3.1	3.4	3.1	3.9	2.95	1.56	2.04	1.8	1.8	2	<4.0	2.53	3.1
4	BOD 3days 27°C	18.4	17.5	15.7	13.2	15	16.7	15.3	17.9	11.2	13.3	11.9	24	15.84
5	COD	89.3	92.3	90.1	98.5	95.1	86.5	95.3	89.2	98.1	135	146	62.9	98.19