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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/CPP /Env. Statement/2020-2021/ 6037

Date: 10/09/2020
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 2019 to March 2020 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 2019 to March 2020 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.)

JAIPUR OFFICE : SB-187, Bapu Nagar, Opp. Rajasthan University, JLN Marg, Jaipur 302015
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NEW DELHI OFFICE : 122-123, Hans Bhawan, 1, Bahadurshah Zafar Marg, New Delhi 110002
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ENVIRONMENTAL STATEMENT

FORM – V

M/s Shree Cement Limited - Captive Power Plant Including D.G. Set
Period from: April 2019 to March 2020

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	160 MW Thermal Power generation 103.33 MW Waste Heat recovery based Power Generation 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	10/09/2019

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

Process & Cooling/ Construction : 278228 KL

Domestic : 63987 KL (Common for Cement Plant, Power Plant, Synthetic Gypsum Plant and Mines)

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
Power	0.000229 KL / KWH	0.000258 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 (2018-2019)	During Current Financial Year (2019-2020)
1. Water	Power	0.0002290 KL / KWH	0.000258 KL / KWH
2. Coal (Fuel)		0.00027097 Metric ton / KWH	0.00027944 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 and 2019 - 2020 was nil.

Name of Raw Material	Name of Product	Consumption of Raw Material per unit of Output (LTR / KWH)	
		During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
H.S. Diesel	Power	0.00	0.00

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

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
0.0676	0.0612

(V) TOTAL POWER PRODUCTION (KWH):

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
1223298542	1078816345

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

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
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	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 and horticulture activities. Analysis Report of STP treated water is attached as Annexure-4 . 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.	
(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 (2018-2019)	During Current Financial Year (2019-2020)
a) From Process	Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, Sy. Gypsum Plant, D.G.Set and Nimbeti Limestone Mines. Total Quantity generated from April-2018 to March-2019 = 12780 Ltrs. Old Stock = 0 Ltrs.	Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, Sy. Gypsum Plant, D.G.Set and Nimbeti Limestone Mines. Total Quantity generated from April-2019 to March-2020 = 26820 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 26820 Ltrs. Sold-out to registered recycler

	Total Used oil = 12780 Ltrs. Sold-out to registered recycler = 0.0 Ltrs. Co-processed in cement kiln = 12780 Ltrs. Balance Quantity= 0 Ltrs	= 0.0 Ltrs. Co-processed in cement kiln = 26820 Ltrs. Balance Quantity= 0 Ltrs
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E
SOLID WASTE

Sr. No.	Particulars	Total Quantity (Metric ton)	
		During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
(a)	From Process	Bed Ash : Nil	Bed Ash : Nil
(b)	From Pollution Control Facility	Fly Ash : 0 Synthetic Gypsum : 143933	Fly Ash : 0 Synthetic Gypsum : 114660
(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

A. Cement manufacturing is based on “Dry Process” technology. No Hazardous waste is generated from the process except used oil which is drained from machineries / equipment. Used oil is being Co-processed in cement kiln as authorization obtained from RSPCB. Old and scrap lead acid batteries are sold to CPCB authorized recyclers.

Sr. No.	Particulars	Total Quantity	
		During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
1	Used oil (Co processed in Cement Kiln)	12780 KL	26820 KL
2	Lead acid battery waste (Sell to authorized recycler)	7.854 MT	4.986 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 (2019-2020) – (During the Period of April -2019 to March-2020)

S. No.	Type of hazardous waste	Category	Quantity (MT)
1	a) Paint Sludge	21.1	1913.782
2	b) ETP/CETP Sludge	35.3	21572.714
3	c) Phosphate sludge	12.5	199.395
4	d) Oil soaked cotton, Industrial Waste, residue containing oil, Grinding sludge etc.	5.2	4526.749
5	e) Spent acid	26.3	33072.88
6	f) Incineration ash	36.2	95.685
7	g) SOBM	2.1	32126.544
8	h) Cotton rags	33.2	68.645
9	i) Spent Clay	4.5	501.973
10	j) Waste or residues	23.1	2099.45
11	k) Organic Residue	4.4	33.402
12	l) Spent Carbon	28.3	293.33
13	m) Co-Incenerable waste	28.2	668.12
14	n) Distillation residue	28.1	684.92
15	o) Spent Solvent	28.6	551.915
16	p) Plastic waste	33.1	25.42
17	q) Iron Sludge	26.1	1036.34
18	r) Other Waste	N.A	354.84
Total Quantity			99826.104

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines during current financial year April 2019 to March 2020 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 2018 to March 2019	39.21	28.448	41.065	32.01
April 2019 to March 2020	49.00	46.3	19.83	24.171

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 (2018-2019)	During Current Financial Year (2019-2020)
From Process	Nil	Nil
From Pollution Control Facility	Nil	Nil

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.

Other Municipal solid waste generated from all units (Cement Plant, Power Plant, Sy. Gypsum 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, Sy. Gypsum Plant and Limestone Mines –

1.	Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency	Previous Year Financial Year (1st Apr 2018 to 31st Mar 2019)		Current Year Financial Year (1st Apr 2019 to 31st Mar 2020)	
	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	219	9.568	195	4.917
	b) Two wheeler	Nil	Nil	Nil	Nil
	(ii) Industrial				
	a) UPS	66	0.563	310	9.166
	b) Motive Power	Nil	Nil	Nil	Nil
	c) Stand –by	Nil	Nil	Nil	Nil
	(iii) Others	Nil	Nil	3	0.004
	Total	285 Nos	10.131 MT	508 Nos	14.087 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 Financial Year (1st Apr 2018 to 31st Mar 2019)		Current Year Financial Year (1st Apr 2019 to 31st Mar 2020)
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		301	7.854	168	4.986
b) Two wheeler		Nil	Nil	Nil	Nil
(ii) Industrial					
a) UPS		112	0.896	0	0
b) Motive Power		Nil	Nil	Nil	Nil
c) Stand –by		Nil	Nil	Nil	Nil
(iii) Others		Nil	Nil	Nil	Nil
Total		413 Nos	8.750 MT	719 Nos	9.394 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

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 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.

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. 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 2018-2019, 3810.66 Tons of CO₂ was sequestered.
7. Air cooled condensers has been installed at all the boilers for water conservation.
8. Covered shed and silos have been constructed for raw material storage.
9. 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.
10. We are committed and maintaining Zero Liquid Discharge (ZLD) from our premises.
11. 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, PM_{2.5}, 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: - 2019-2020

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-2019	31.3	86	426	34.2	119	334	41.2	63	224
2	May-2019	27.4	105.8	256.4	32.4	172	228	39.7	52	269
3	Jun-2019	NR	0	0	31.8	129.4	424.3	35.5	60.2	291.5
4	Jul-2019	26.3	98.6	250.1	38	68	281	34	70	412
5	Aug-2019	0	0	0	35	98	398	32	45	250
6	Sep-2019	30	65	220	33.4	90	242	36.8	42	222
7	Oct-2019	37	61	125	33	116	230	41	77	251
8	Nov-2019	29	89	326	34	124	299	39	85	359
9	Dec-2019	NR	NR	NR	44.2	121.5	375.9	37.9	298.4	146.2
10	Jan-2020	28	168	146	41	75	129	36	152	103
11	Feb-2020	21	132	203	37.5	95	335	39.5	114	292
12	Mar-2020	26	106	486	33	121	193	37	95	265
Average		26	83	222	36	111	289	37	96	257

Shree Cement Ltd, Ras																
Ambient Air Quality ($\mu\text{g}/\text{m}^3$) Monitoring Report For The Period Of April 2019 To March 2020																
Common for Cement plant & Power plant																
Year:-2019-2020																
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-2019	34.5	48.1	8.4	11.2	35.1	46.3	7.3	10.9	33.6	46.3	8.0	10.9	32.3	40.5	7.7	10.5
May-2019	32.9	46.8	8.7	12.0	33.8	43.6	8.7	11.2	32.5	44.6	8.4	11.3	31.8	41.4	8.0	10.9
Jun-2019	34.6	48.3	8.5	11.3	34.9	46.9	8.4	11.6	34.3	43.9	8.2	11.2	31.6	43.1	7.8	10.8
Jul-2019	28.9	41.8	8.1	10.4	29.4	41.0	8.1	10.8	31.1	42.9	8.0	10.7	28.9	39.6	7.5	10.1
Aug-2019	20.5	30.0	8.2	9.7	21.4	30.9	8.4	9.6	21.4	31.6	7.9	9.3	20.3	29.0	7.6	9.0
Sep-2019	26.8	36.3	8.2	9.7	25.5	36.1	8.2	9.7	28.0	38.8	6.9	9.5	25.3	35.5	7.6	9.1
Oct-2019	31.2	42.7	8.4	9.9	30.1	41.5	8.4	9.7	35.5	46.9	7.0	9.6	29.8	39.3	7.6	9.3
Nov-2019	33.4	53.3	8.9	12.1	32.5	48.0	8.9	11.9	31.8	44.8	7.5	11.8	27.5	44.0	8.1	11.4
Dec-2019	35.4	50.5	9.4	12.7	33.3	47.8	9.2	13.3	32.0	45.8	7.8	12.7	28.6	45.3	8.5	12.2
Jan-2020	36.9	53.9	9.8	13.9	29.9	49.4	10.	14.9	31.4	47.4	8.4	14.0	26.9	46.6	9.1	13.5
Feb-2020	35.6	51.8	10.3	14.1	34.3	52.3	10.	14.2	30.9	49.8	8.8	13.7	29.6	49.0	9.4	13.1
Mar-2020	33.7	53.0	9.9	12.8	31.5	51.5	9.9	13.0	29.0	51.8	7.6	12.9	28.5	48.2	9.0	12.3
Average	32.0	46.3	8.9	11.6	31.0	44.6	8.8	11.7	30.9	44.5	7.9	11.5	28.4	41.8	8.2	11.0

Shree Cement Ltd, Ras								
Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2019 To March 2020								
Common for Cement Plant & Power Plant								
Year:-2019-2020								
Location →	Plant Boundary Near Main Gate		Plant Boundary Near Mess		Plant Boundary towards Stacker & Reclaimer		Plant boundry 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-2019	72.60	63.40	71.20	62.80	65.80	67.30	68.10	60.10
May-2019	71.80	66.20	72.1	62.80	66.90	65.80	62.60	59.90
Jun-2019	72.40	65.20	71.00	61.80	67.90	63.80	64.60	60.80
Jul-2019	71.90	64.10	70.50	61.40	68.90	64.50	64.60	60.90
Aug-2019	73.70	64.70	71.10	60.30	72.60	62.50	68.60	59.30
Sep-2019	73.20	67.20	72.00	63.20	69.50	62.00	67.50	61.00
Oct-2019	74.10	68.10	70.20	65.40	68.60	62.30	65.90	61.30
Nov-2019	72.30	67.60	65.60	58.80	70.60	65.80	67.20	62.40
Dec-2019	71.60	66.60	68.50	57.90	69.50	64.50	65.20	58.90
Jan-2020	71.90	65.60	64.60	59.60	72.60	62.20	62.60	59.60
Feb-2020	70.50	63.70	64.00	58.60	73.20	63.40	61.50	57.20
Mar-2020	71.90	60.60	64.90	59.40	72.20	61.70	60.30	56.80
Average	72.33	65.25	68.51	61.00	69.86	63.82	64.89	59.85

