



SHREE CEMENT LTD.

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SCL/Ras/Unit-IX/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. C-144

Sub: - Environmental Statement for the period from April 2019 to March 2020 for Cement Plant Unit-IX of M/s Shree Cement Limited situated at Village- Ras Bhimgarh, Tehsil- Jaitaran, Dist- Pali (Raj).

Ref: - CTO No. - F(Tech)/Pali(Jaitaran)/1024(1)/2013-2014/1054-1056 dated 17/06/2019

Respected Sir,

We are submitting herewith Environmental Statement for the **period from April, 2019 to March, 2020** for Cement Plant **Unit-IX (Without Cement grinding)** of M/s Shree Cement Limited situated at Village- Ras Bhimgarh, Tehsil- Jaitaran, Dist- Pali (Raj).

This is for your kind information please.

Thanking you,
Yours faithfully,

For Shree Cement Ltd;

for

(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-302 015
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o/c SCL
Ras

ENVIRONMENTAL STATEMENT

FORM – V

M/s Shree Cement Limited: Unit- IX
Period from: April 2019 to March 2020

PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Cement Plant Unit-IX 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	2.85 Million TPA Clinker
4.	Year of Establishment	2013
5.	Date of the last Environmental Statement Submitted	10.09.2019

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	:	40395 KL
Domestic	:	63987 KL (Common for Cement Plant, Power Plant Synthetic Cement Plant & Mines)

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
Clinker	0.0215 KL/MT of Clinker	0.0224 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 (2018-2019)	During Current Financial Year (2019-2020)
1. Limestone	Clinker	1.489	1.494
2. Laterite /Iron Ore		0.019	0.026
3. Coal & Pet Coke		0.093	0.095

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

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
51.83	53.77

(IV) TOTAL CLINKER PRODUCTION (MT):

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
2103419	1798414

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>As the plant is being operated on dry process technology, no liquid effluent is generated from the cement plant.</p> <p>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.</p> <p>Analysis Report of STP treated water is attached as Annexure-3</p>	
(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 (2018-2019)	During Current Financial Year (2019-2020)
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, Synthetic Gypsum Plant, D.G.Set and Nimbeti Limestone Mines.</p> <p>Total Quantity generated from April-2018 to March-2019 = 12780 Ltrs.</p> <p>Old Stock = 0 Ltrs.</p> <p>Total Used oil = 12780 Ltrs.</p> <p>Sold-out to registered recycler = 0.0 Ltrs.</p> <p>Co-processed in cement kiln = 12780 Ltrs.</p> <p>Balance Quantity= 0 Ltrs</p>	<p>Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, Synthetic Gypsum Plant, D.G.Set and Nimbeti Limestone Mines.</p> <p>Total Quantity generated from April-2019 to March-2020 = 26820 Ltrs.</p> <p>Old Stock = 0 Ltrs.</p> <p>Total Used oil = 26820 Ltrs.</p> <p>Sold-out to registered recycler = 0.0 Ltrs.</p> <p>Co-processed in cement kiln = 26820 Ltrs.</p> <p>Balance Quantity= 0 Ltrs</p>
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E
SOLID WASTE

Sr. No.	Particulars	Total Quantity	
		During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
(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

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			
	Yellow	Red	Blue	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 further 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: - 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-

1.	Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency	Previous Year Financial Year (1 st Apr 2018 to 31 st Mar 2019)		Current Year Financial Year (1 st Apr 2019 to 31 st 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 (1 st Apr 2018 to 31 st Mar 2019)		Current Year Financial Year (1 st Apr 2019 to 31 st 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

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.

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 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 2018-19, 3810.66 Tons of CO₂ was 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 Reclaimer 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_x 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 (PM₁₀, PM_{2.5}, SO₂ and NO₂) &
Ambient Noise Level monitoring report

Annexure-3 : STP treated water test report

Annexure: 1

Shree Cement Ltd, Ras - Unit-IX
Stack Emission Report – PM, NO_x & SO₂
(PM All values in mg/Nm³)
Year: 2019-2020

S. No.	Month	Raw Mill & Kiln Stack			Coal Mill Stack	Cooler Stack
		PM	NO _x	SO ₂	PM	PM
1	Apr-2019	23	602	0	27	7
2	May-2019	15.1	571.5	0	22.3	8.2
3	Jun-2019	NR	NR	NR	NR	NR
4	Jul-2019	22	602	0	13	7
5	Aug-2019	25	571.5	0	14	11
6	Sep-2019	18.5	530	11	19.5	8.6
7	Oct-2019	27	516	0	13	9
8	Nov-2019	23	443	0	16	8
9	Dec-2019	25.8	543.9	0	18.3	5.9
10	Jan-2020	22	426	0	13	7
11	Feb-2020	26	523	0	26	6
12	Mar-2020	24	522	0	19	9
Average		23	532	1	18	8

Annexure: 2

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 Stacker & Reclaimer				Plant boundry 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	SO₂	NO₂	PM 2.5	PM 10	SO₂	NO₂	PM 2.5	PM 10	SO₂	NO₂	PM 2.5	PM 10	SO₂	NO₂
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	10.0	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	10.5	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								
<u>Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2019 To March 2020</u>								
<u>Common for Cement plant & Power plant</u>								
<u>Year:-2019-2020</u>								
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

(STP Treated Water Quality, Year 2019-2020)														
S. No.	Parameter ↓	Apr- 19	May- 19	Jun- 19	Jul- 19	Aug- 19	Sep- 19	Oct- 19	Nov- 19	Dec- 19	Jan- 20	Feb- 20	Mar- 20	Avg.
1	pH	7.38	7.51	7.29	7.3	7.12	7.37	7.26	7.36	7.35	7.54	7.46	7.33	7.36
2	Total Suspended Solids	32	30	34	39	42	36	53	68	32	59	53	65	45.25
3	Oil and Grease	2	2.9	3.1	2.5	2.9	2.8	1.89	1.44	<4.0	2.84	1.85	2.03	2.39
4	BOD 3days 27°C	10	11	15	13	16	12	11	10	18	14.6	12.4	16.2	13.27
5	COD	79.9	61.2	58.4	60	55	43	59	74	47.8	75.1	89.5	93.2	66.34