O/C

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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/Unit-IX/ESR/2021-2022/998

Date: 10/09/2021
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 1st April 2020 to 31st March 2021 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 1st April, 2020 to 31st March, 2021** 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;

(Dr. Anil Kumar Trivedi)
Sr. GM (Environment)

Copy to: -

O/C
SCL RAS

1. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Jaipur , A-209&218, Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area, Jaipur – 304002, Rajasthan
2. The Regional Officer (Regional Office), Rajasthan State Pollution Control Board, S / A-6, Mandia Road, Industrial Area, Near Pali Urban Co-Operative Bank, Pali- 306401 (Raj.)

ENVIRONMENTAL STATEMENT

FORM – V

M/s Shree Cement Limited: Unit- IX
Period from: April 2020 to March 2021

PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	M/s Shree Cement Ltd. Unit-IX Cement Plant 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	10.09.2020

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	:	44813 KL
Domestic	:	57688 KL (Common for cement plant, power plant, synthetic gypsum plant & mines).

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
Clinker	0.0224 KL/MT of Clinker	0.0222 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 (2019-2020)	During Current Financial Year (2020-2021)
1. Limestone	Clinker	1.494	1.490
2. Laterite /Iron Ore		0.026	0.020
3. Coal & Pet Coke		0.095	0.112

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

During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
53.77	54.52

(IV) TOTAL CLINKER PRODUCTION (MT):

During Previous Financial Year ((2019-2020)	During Current Financial Year (2020-2021)
1798414	2017948

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
Water	No waste water is being generated & discharged outside the plant premises.	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 canteen is being treated in STP and treated water & sludge generated is being used in plantation & horticulture activities. Analysis Report of STP treated water is attached as Annexure-3	
Air	PM -0.1867 T/Day SO_2 - 0.0635 T/Day NO_x -2.4691 T/Day	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 (2019-2020)	During Current Financial Year (2020-2021)
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)	Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, Synthetic Gypsum Plant, D.G. Sets 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 = 0.0 Ltrs. Co-processed in cement kiln = 26820 Ltrs. Balance Quantity = 0 Ltrs	Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, Synthetic Gypsum Plant, D.G. Sets and Nimbeti Limestone Mines. Total Quantity generated from April-2020 to March-2021 = 65250 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 65250 Ltrs. Sold-out to registered recycler = 0.0 Ltrs. Co-processed in cement kiln = 65250 Ltrs. Balance Quantity = 0 Ltrs
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E
SOLID WASTE

Sr. No.	Particulars	Total Quantity	
		During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
(a)	From Process	Nil	Nil
(b)	From Pollution Control Facility	Dust collected in the ESPs, Bag Houses and Bag Filters are recycled & reused in cement manufacturing.	
(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 (2019-2020)	During Current Financial Year (2020-2021)
1	Used oil (Co processed in Cement Kiln)	26820 Ltr	65250 Ltr
2	Lead acid battery waste (Sell to authorized recycler)	4.986 MT	11.170 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 : 2020-2021 (During the Period of April -2020 to March-2021)

S. No.	Type of hazardous waste	Category	Quantity (MT)
1	Paint Sludge	21.1	2757.327
2	ETP/CETP Sludge	35.3	18799.861
3	Phosphate sludge	12.5	633.888
4	Oil soaked cotton, Industrial Waste, residue containing oil, Grinding sludge etc.	5.2	4571.519
5	Incineration ash	36.2	12.835
6	SOBM/Drill cutting oil	2.1	16639.22
7	Cotton rags	33.2	9.6
8	Spent Clay	4.5	63.045
9	Waste or residues	23.1	1689.905
10	Organic Residue	4.4	14.22
11	Spent Carbon	28.3	1741.78
12	Expired products/Spent catalyst	28.2	196.66
13	Distillation residue	20.3	705.53
14	Spent Solvent	28.6	7259.18
15	Empty barrel	33.1	48.14

16	Distillation residue	36.1	1750.51
17	Spent catalyst	4.2	583.23
18	Spent resin	35.2	25.07
19	Mix liquid waste	Sch-I	1782.65
20	Spent Solvent	20.2	7285.845
21	Process wastes or residues	29.1	2238.105
22	Process residues & wastes	28.1	4050.915
23	Process waste residue	21.1	1042.339
24	Date expiry medicine	Sch-I	6.25
25	Evaporation residue	37.2	29.98
26	Organic residues	1.4	36.59
27	Dust for air filtration system	26.2	3.73
28	Spent solvents	29.4	86.35
29	Disposal of barrel	34.2	4.16
30	Expiry products	28.5	11.545
31	Process waste sludge	26.1	2987.065
Total Quantity			**77067.044**

77067.044 MT hazardous waste has been co-processed at Ras complex during FY 2020-2021

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines during current financial year April 2020 to March 2021 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 2019 to March 2020	49.0	46.3	19.8	24.2
April 2020 to March 2021	58.6	53.5	20.2	28.3

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 (2019-2020)	During Current Financial Year (2020-2021)
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 sold out used/ scrap batteries of different categories is common for cement plant, power plant and mines to CPCB authorized recycler. The details are as follows:

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 2019 to 31st Mar 2020)**		**Current Year Financial Year (1st Apr 2020 to 31st Mar 2021)**	
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	719	9.394	275	10.914
b) Two wheeler	Nil	Nil	Nil	Nil
(ii) Industrial				
a) UPS	0	0	32	0.256
b) Motive Power	Nil	Nil	Nil	Nil
c) Stand –by	Nil	Nil	Nil	Nil
(iii) Others	Nil	Nil	Nil	Nil
Total	**719 Nos.**	**9.394 MT**	**307 Nos.**	**11.170 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.

We have been incurred total Rs. 14,97,66,931 in environment management in following activities:

1. Plantation and greenbelt development and their maintenance.
2. General and periodically maintenance of all pollution control measures i.e. Bag houses, ESPs, dust collectors.
3. Flooring, paved roads and continuous housekeeping by vacuum sweeping machines machine and maintenance of vacuum sweeping machines.
4. Effective waste managements in plant, mine and colony premises.
5. General and periodically maintenance of CEMS and CAAQMS instruments.
6. Operation and reoccurring of STP installed in plant and colony premises.
7. Celebration of important days for spreading awareness tor protection of environment and conservation of natural resources.

The amount in same activities will be incurred in next year also.

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 2020-2021, 1772.86 tonnes of carbon and 6506.38 tonnes of CO2 eq. has been 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 NOx mitigation systems in all cement kilns (Uint-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, PM2.5, SO_2 and NO2) & Ambient Noise Level monitoring report
Annexure-3 : STP treated water test report

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Annexure: 1

Shree Cement Ltd, Ras

Unit-IX

Stack Emission Monitoring Report (PM, SO_2 & NOx)

Year: 2020-2021

Sr. No	Month	Raw Mill & Kiln Stack			Coal Mill Stack	Cooler Stack
		PM	NO_x	SO_2	PM	PM
	U o M	mg/Nm^3				
1	Apr-2020	0.0	0.0	0.0	0.0	0.0
2	May-2020	23.0	394.4	9.5	17.0	18.0
3	Jun-2020	22.0	511.3	26.2	13.0	26.0
4	Jul-2020	25.3	499.1	2.0	12.2	8.1
5	Aug-2020	21.6	459.7	1.0	15.4	10.0
6	Sep-2020	19.5	366.2	8.4	16.3	12.9
7	Oct-2020	26.5	502.5	10.0	12.7	8.3
8	Nov-2020	19.0	464.8	11.6	18.0	6.0
9	Dec-2020	20.0	597.5	13.4	17.0	9.0
10	Jan-2021	22.0	506.4	10.4	13.0	7.0
11	Feb-2021	25.0	423.9	16.1	17.0	11.0
12	Mar-2021	21.6	453.9	13.2	15.4	10.0
Average		**20**	**432**	**10**	**14**	**11**

Annexure: 2

Shree Cement Ltd, Ras

Ambient Air Quality (µg/m³) Monitoring Report For The Period Of April 2020 To March 2021

Common for Cement plant & Power plant

Location →	Plant Boundary Near Main Gate				Plant Boundary Near Mess				Plant Boundary towards Stacker & Reclaimer				Plant boundary towards village Khera & Jawangarh			
	AAQ in µg/m³				AAQ in µg/m³				AAQ in µg/m³				AAQ in µg/m³			
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-2020	36.9	53.9	10.2	14.4	29.9	49.4	10.4	15.5	31.4	47.4	8.9	14.8	26.9	46.6	9.6	14.3
May-2020	34.3	56.1	9.1	13.1	31.9	53.5	9.2	13.8	31.9	52.5	8.8	13.5	30.1	51.3	8.3	12.9
Jun-2020	35.6	57.4	8.4	13.9	33.3	55.1	9.0	14.2	30.1	49.1	8.2	13.9	28.8	50.0	7.8	13.4
Jul-2020	18.5	24.0	12.7	10.7	16.9	27.4	14.2	12.4	15.3	27.4	14.1	12.0	15.0	28.0	13.5	11.3
Aug-2020	10.6	23.4	13.1	12.6	12.9	24.4	11.2	12.9	14.1	20.0	13.0	13.1	11.9	26.4	12.8	12.7
Sep-2020	12.6	19.9	8.9	13.9	10.6	20.3	13.1	15.0	8.4	17.9	11.3	14.0	10.8	23.8	10.6	13.6
Oct-2020	14.4	21.5	9.1	12.0	12.9	22.3	11.9	12.6	10.9	18.8	11.0	12.3	12.3	19.5	10.1	11.8
Nov-2020	17.6	26.0	10.1	12.2	15.3	25.5	12.3	13.1	15.3	25.5	11.6	12.6	18.5	25.3	10.9	12.0
Dec-2020	21.0	28.5	11.0	11.7	18.6	30.5	12.1	12.1	19.6	29.3	11.9	11.7	20.6	30.4	11.4	11.3
Jan-2021	28.8	38.5	14.2	16.4	26.9	39.0	16.0	16.8	25.9	37.9	15.1	15.6	28.4	40.5	13.9	15.1
Feb-2021	32.9	39.5	11.1	16.9	28.6	41.8	11.9	16.7	30.0	40.4	11.3	16.0	30.9	41.3	10.9	15.6
Mar-2021	37.6	42.5	8.4	16.9	33.3	47.1	10.3	17.1	33.8	49.6	8.9	17.6	34.3	47.6	8.3	17.0
Average	25.1	35.9	10.5	13.7	22.6	36.4	11.8	14.4	22.2	34.7	11.2	13.9	22.4	35.9	10.7	13.4

Shree Cement Ltd, Ras

Ambient Noise Level dB(A) Monitoring Report For The Period Of April 2020 To March 2021

Common for Cement plant & Power plant

Location →	Plant Boundary Near Main Gate		Plant Boundary Near Mess		Plant Boundary towards Stacker & 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 → Month ↓	Day time	Night time	Day time	Night time	Day time	Night time	Day time	Night time
Apr-2020	51.5	42.6	48.2	37.6	46.0	36.7	43.5	37.1
May-2020	72.6	61.2	67.7	56.4	70.4	61.5	65.3	56.1
Jun-2020	72.1	62.3	67.2	54.2	69.5	61.7	62.6	55.7
Jul-2020	70.5	62.0	67.2	54.3	69.4	62.0	62.5	54.6
Aug-2020	48.7	64.8	64.2	55.6	71.5	61.8	61.3	56.0
Sep-2020	71.7	62.3	67.3	62.0	71.2	61.8	67.3	62.3
Oct-2020	72.1	68.0	70.5	62.3	71.5	66.3	67.0	63.2
Nov-2020	71.7	67.0	69.2	61.9	70.6	65.8	68.6	64.2
Dec-2020	72.6	63.4	71.2	62.8	65.8	67.3	68.1	60.1
Jan-2021	70.2	62.3	73.1	62.8	60.8	59.7	66.1	62.4
Feb-2021	68.2	59.3	70.3	62.6	65.2	61.9	62.3	58.2
Mar-2021	70.3	64.1	66.9	60.7	73.1	63.8	65.5	59.4
Average	67.7	61.6	66.9	57.8	67.1	60.9	63.3	57.4

Annexure: 3

Shree Cement Ltd, Ras

(STP Treated Water Quality Report for the period of April' 2020 to March' 2021)

S. No.	Parameter ↓	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Avg.
1	pH	7.54	7.44	7.65	6.96	7.33	7.82	7.22	7.29	7.36	7.11	7.4	7.61	7.39
2	Total Suspended Solids (mg/L)	59	63	71	66	52	68	73	52	44	59	38	73	60
3	Oil and Grease (mg/L)	2.8	3.6	4.3	0.9	0.7	1.0	5.1	1.6	2.4	2.1	2.3	1.4	2.4
4	BOD 3days 27°C (mg/L)	14.6	17.8	19.5	21.7	14.8	17	22	11	10	16	12	19	16.3
5	COD (mg/L)	75	88	97	138	122	157	141	80	74	103	71	88	103