CIN No. : L26943RJ1979PLC001935

: 01462 228101-6 Phone Toll Free: 1800 180 6003 / 6004 : 01462 228117 / 228119

: shreebwr@shreecement.com E-Mail Website: www.shreecement.com



## SHREE CEMENT L

An ISO 9001, 14001, 50001 & OHS 18001 Certified Company

Read. Office:

BANGUR NAGAR, POST BOX NO.33, BEAWAR 305901, RAJASTHAN, INDIA

SCL/Ras/Unit-III/ESR/2021-22///999

Date: 10/09/2021

File No. C-057

Speed Post

To.

The Member Secretary,

Rajasthan Pollution Control Board,

4, Institutional Area, Jhalana Doongri Road,

JAIPUR-302004 (Rajasthan)

Sub:- Environmental Statement for the period from 1st April 2020 to 31st March 2021 for Cement Plant-Unit-III of M/s Shree Cement Limited situated at Village - Ras Bhimgarh, Tehsil -Jaitaran, Dist. - Pali (Raj).

Ref:- (1) CTO No. F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/1204-1206 dated 19/05/2017

(2) CTO No. F(Tech)/Pali(Jaitaran)/2(1)/2008-2009/3100-3102 dated 07/08/2018

Respected Sir,

We are submitting herewith Environmental Statement for the period from 1st April 2020 to 31st March 2021 for Cement Plant Unit-III 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)

OIC

Encl: a/a Copy to:-

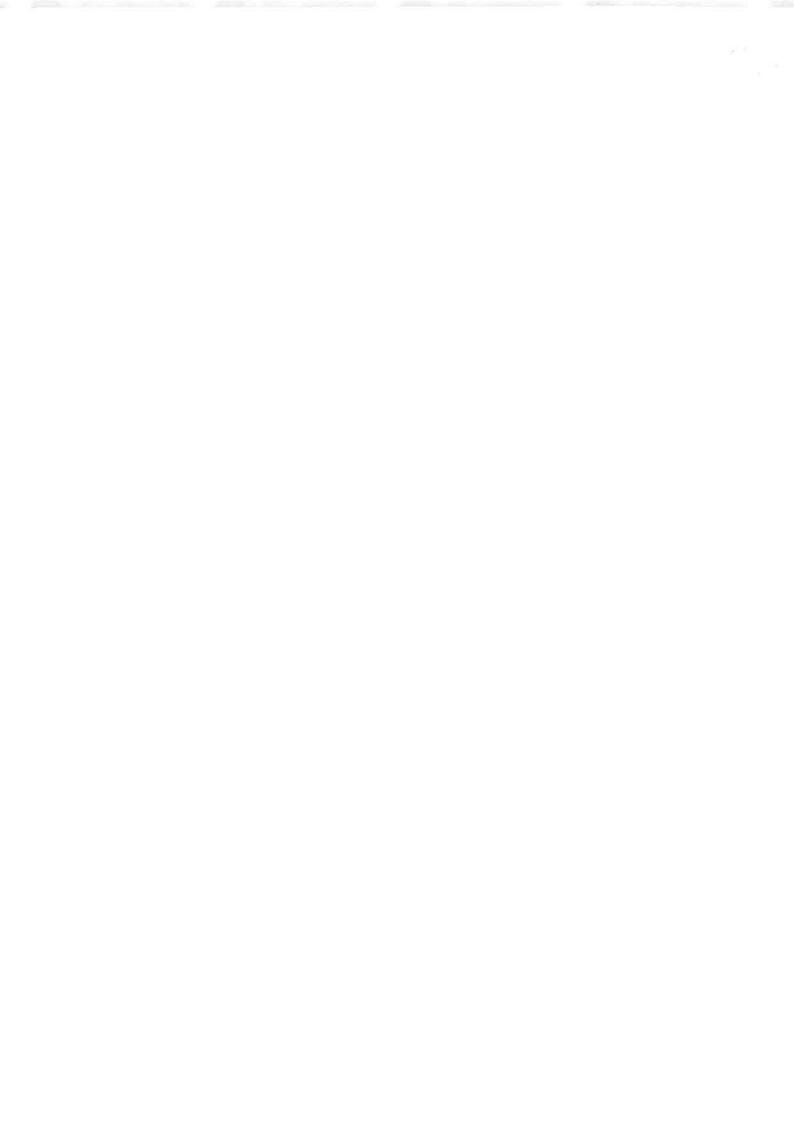
- 1. Deputy Director General of Forests (C), Ministry of Environment, Forest and Climate Change, Integrated Regional Office, Jaipur, A-209&218, Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area, Jaipur – 304002, Rajasthan
- 2. The Regional Officer (Regional Office), Rajasthan State Pollution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

JAIPUR OFFICE: SB-187, Bapu Nagar, Opp. Rajasthan University, JLN Marg, Jaipur 302015 Phone: 0141 4241200, 4241204, Fax: 0141 4241219

NEW DELHI OFFICE: 122-123, Hans Bhawan, 1, Bahadurshah Zafar Marg, New Delhi 110002

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CORP. OFFICE: 21, Strand Road, Kolkata 700001 Phone: 033 22309601-4 Fax: 033 22434226





#### **ENVIRONMENTAL STATEMENT**

### FORM - V

M/s. Shree Cement Limited: Unit - III 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-III Cement Plant Village: Ras/ Bhimgarh, Tehsil: Jaitaran, Dist: Pali-306107 (Rajasthan)
2.	Industry Category Primary (S.T.C. Code) Secondary (S.I.C. Code)	Red Category
3,	Production Capacity	1.55 Million TPA Clinker 2.2 Million TPA Cement
4.	Year of Establishment	2005
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

44304 KL

Suppression

Domestic

57688 KL (Common for cement plant, power plant,

synthetic gypsum plant & mines)

Name of	Process Water Consumption per Unit of Clinker & Cement Output			
Product	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)		
Clinker	0.04234 KL/ MT of Clinker	0.04313 KL/ MT of Clinker		
Cement	0.03362 KL/ MT of Cement	0.04081 KL/ MT of Cement		



### (II) RAW MATERIAL CONSUMPTION: (CEMENT/CLINKER)

	Name of	Consumption of Raw Material Per Unit of Output (Cement)		
Name of Raw Material	Name of Product	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)	
1. Limestone		1.276	1.447	
2. Laterite /Iron Ore	Cement/	0.019	0.016	
3. Gypsum	Clinker	0.066	0.068	
4. Coal & Pet Coke		0.086	0.096	
5. Fly Ash		0.034	0.014	

## (III) POWER CONSUMPTION (KWH/T OF CLINKER & CEMENT):

Product	During Current Financial Year (2019-2020)	During Current Financial Year (2020-2021)
Cement	80.96	79.67
Clinker	51.38	49.85

## (IV) TOTAL CLINKER & CEMENT PRODUCTION (MT):

Product	During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)
Clinker	1035971	1027300
Cement	1304879	1085742

#### PART - C

### DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT

Pollutants	Quantity of Pollutants Discharged	Concentration of Pollutants	Percentage of variation from prescribed standard
	(Mass/Day)	in Discharge	with reasons
		(Mass/Value)	
		As the plant is being operated on dry process technologies	
Water	No waste water is being	er is being no liquid effluent is generated from the ceme	
	generated & discharged		
	outside the plant	canteen is being treated	in STP and treated water &
	premises.	sludge generated is be	eing used in plantation &
		horticulture activities.	
		Analysis Report of STP treated water is attached as	
		Annexure-3	



Air		
	PM – 0.1796 T/Day	Please refer Annexure – 1 & 2
	SO <sub>2</sub> – 0.1061 T/Day	
	NO <sub>x</sub> -3.4887 T/Day	
	1 × × × × × × × × × × × × × × × × × × ×	

## $\underline{PART} - \underline{D}$

<u>HAZARDOUS WASTE</u>
(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2016)

Hazardous	Total Quantity (Ltrs.)			
Waste	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**

		Total Quantity	
Sr. No.	Particulars	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)	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. No Hazardous waste is generated from the process except used oil which is basically petroleum-based or synthetic oil, black in color & flammable in nature, generated from machineries / equipment. Used oil is being Co-processed in cement kiln as authorization obtained from RSPCB.

B. Old and scrap lead acid batteries are sold to CPCB authorized recyclers.

Sr.		Total Quantity		
No. Particulars		During Previous Financial Year (2019-2020)	During Current Financial Year (2020-2021)	
1	Used oil (Co processed in Cement Kiln)	26820 Ltrs.	65250 Ltrs.	
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



Continuation sheet

Evaporation residue 37.2 29.98							
31		26.1					
30	Expiry products	28.5	11.545				
29	Disposal of barrel	34.2	4.16				
28	Spent solvents	29.4	86.35				
27	Dust for air filtration system	26.2	3.73				
26	Organic residues	1.4	36.59				
25	Evaporation residue	37.2	29.98				
24	Date expiry medicine	Sch-I	6.25				
23	Process waste residue	21.1	1042.339				
22	Process residues & wastes	28.1	4050.915				
21	Process wastes or residues	29.1	2238.105				
20	Spent Solvent	20.2	7285.845				
19	Mix liquid waste	Sch-I	1782.65				
18	Spent resin	35.2	25.07				
17	Spent catalyst	4.2	583.23				
16	Distillation residue	36.1	1750.51				
15	Empty barrel	33.1	48.14				
14	Spent Solvent	28.6	7259.18				
13	Distillation residue	20.3	705.53				
12	Expired products/Spent catalyst	28.2	196.66				

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									
T eriod	Red	Blue	Yellow	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						

<u>Solid Wastes:</u> - Other Municipal solid waste generated from all units (Cement Plant, Power Plant, Synthetic 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 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		Year Financial Apr 2019 to 31 <sup>st</sup>				
Category:	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)		
(i) Automotive		V.				
a) Four wheeler	168	4.986	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	168 Nos.	4.986 MT	307 Nos.	11.170 MT		



#### 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. 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 equipment 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, etc.

#### 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  $\sim 34$  % 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, ambient air, noise & water quality is being done regularly basis.
- 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 Re-claimer 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 (PM, SO2 & NOx)

Annexure-2: Ambient Air Quality (PM10, PM2.5, SO<sub>2</sub> and NO2) & Ambient Noise Level

monitoring report

Annexure-3: STP treated water test report

\*\*\*\*\*\*



Annexure: 1

## Shree Cement Ltd, Ras

## Unit-III

## Stack Emission Monitoring Report (PM, SO<sub>2</sub> & NOx)

## Year: 2020-2021

S. No.	Month		Raw Mill & Kiln Stack		Coal Mill Stack	Cooler Stack	Cement Mill Stack PM							
5.110.	IVIOITEII	PM	NOx	SO <sub>2</sub>	PM	PM								
	UoM		mg/Nm³											
1	Apr-2020	0	0	0	0	0	0							
2	May-2020	12	433	7	14	18	14							
3	Jun-2020	17	405	29	13	07	13							
4	Jul-2020	14	389	16	11	13	18							
5	Aug-2020	10	505	6	15	09	20							
6	Sep-2020	16	465	2	13	11	14							
7	Oct-2020	16	502	14	13	11	25							
8	Nov-2020	15	598	11	14	20	16							
9	Dec-2020	23	402	09	13	16	19							
10	Jan-2021	12	368	13	15	20	13							
11	Feb-2021	26	371	17	12	10	22							
12	Mar-2021	10	483	22	15	16	20							
Av	erage	14	410	12	12	13	16							



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/m <sup>3</sup>				AAQ in μg/m³			AAQ in μg/m <sup>3</sup>				AAQ in μg/m <sup>3</sup>			
Parameter →	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>
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 ->		ndary Near n Gate		indary Near Iess	towards	oundary Stacker & aimer	Plant boundary towards village Khera & Jawangarh  Noise Level in dB(A)		
	Noise Lev	el in dB(A)	Noise Lev	vel in dB(A)	Noise Lev	el 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	67.7 56.4		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	70.6 65.8		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.
ī	рН	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