

CIN No. : L26943RJ1979PLC001935
Phone : 01462-228101-6
Toll Free : 1800 180 6003/6004
Fax : 01462 228117 / 228119
E-Mail : shreebwr@shreecement.com
Website : www.shreecement.com

O/C Env. Ras



SHREE CEMENT LTD.

An ISO 9001, 14001, 45001 & 50001 Certified Company

Regd. Office

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

SCL/Mines/Env Statement/2022-2023 *5361*

Date: 10.09.2022

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

Mines Cell

Sub :- Environmental Statement for the period from 1st April 2021 to 31st March 2022 for Nimbeti Limestone Mines of Shree Cement Limited situated near Village- Nimbeti Ras, Tehsil- Jaitaran, Dist Pali (Raj)

Ref: - CTO No.- F(Mines)/Pali(Jaitaran)/100(1)/2017-2018/8221-8225 dated 28/12/2017

Respected Sir,

We are submitting herewith the Environmental Statement for the period from **1st April 2021 to 31st March 2022** for **Nimbeti Limestone Mines** (A Captive Mine of Shree Cement Ltd.) situated near Village- Nimbeti Ras, Tehsil- Jaitaran, Dist- Pali (Raj).

This is for your kind information please.

Thanking you,
Yours faithfully,

For Shree Cement Limited;

(Signature)
(Satish Chander)
Vice President & Unit Head

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, 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

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

Phone : 011 23370828, 23379218, 23370776

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

ENVIRONMENTAL STATEMENT

FORM - V

Nimbeti Limestone Mine of Shree Cement Limited

Period from: April 2021 to March 2022

PART - A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Shree Cement Ltd., Nimbeti Limestone Mine Village: Nimbeti/Ras, Tehsil: Jaitaran, Dist : Pali -306107 (Rajasthan)
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	25.3 Million TPA Limestone
4.	Year of Establishment	1997
5.	Date of the last Environmental Statement Submitted	10.09.2021

PART - B

WATER AND RAW MATERIAL CONSUMPTION

Water consumption	
Process (Dust suppression, Crusher)	108944 KL
Domestic	66982 KL (Common for Cement Plant, Power Plant, Synthetic Gypsum Plant and Mines)

1. Water Consumption

Name of Products	Process Water Consumption Per Unit of Output (KL / MT of Limestone)	
	During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
Mining of Limestone	0.00504	0.00655

2. Raw Material Consumption:

Name of Raw Materials	Name of Products	Consumption of raw material per unit of output	
		During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
N.A.	Limestone		
Not Applicable			

3. Power Consumption (KWH/T of Limestone):

During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
1.126	1.125

4. Total Limestone Production (in Lac Tones):

During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
154.72489	166.29339

PART – C
DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT

Pollutants	Quantity of pollutants discharged (mass/day)	Concentration of pollutants in discharges (mass/volume)	Prevent age of variation from prescribed standards with reasons
(a) Water	Waste water generated from office toilets is being treated in STP and treated effluent and sludge generated is being used in plantation and horticulture activities. Analysis Report of STP treated water is attached as Annexure-4. Waste water generated from mines work shop is being used for dust suppression after removing the oil & grease traces.		
(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 (2020-2021)	During Current Financial Year (2021-2022)
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-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 kilns = 65250 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-2021 to March-2022 = 100985 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 100985 Ltrs. Sold-out to registered recycler = 0.0 Ltrs. Co-processed in cement kilns = 100985 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 (2020-2021)	During Current Financial Year (2021-2022)
(a)	From Process	Not Applicable	
(b)	From Pollution Control Facility	Not Applicable	
(c)	1. Quantity rejected or re- utilized within the unit	Not Applicable	
	2. Sold	Not Applicable Nil	
	3. Disposed: During mining of limestone disposed of overburden (in Lac tonnes)*	4.80215	5.84766

*Overburden is being dumped in overburden yard.

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. No.	Particulars	Total Quantity	
		During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
1	Used oil (Co processed in Cement Kiln)	65250 Ltrs.	100985 Ltrs.
2	Lead acid battery waste (Sell to authorized recycler)	11.170 MT	11.282 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 : 2021-2022 (During the Period of April -2021 to March-2022)

S. No.	Type of hazardous waste	Category	Quantity (MT)
1	Spent catalyst and molecular sieves	1.6	52.730
2	Drill cutting (oil and Gas exploring industries)	2.1	15285.731
3	Oil emulsion sludge	4.1	1759.460
4	Spent catalyst	4.2	494.460
5	Organic Residue from process	4.4	70.417
6	Spent Clay containing oil	4.5	91.493
7	Used Oil/ Spent Oil (Co-processing)	5.1	16.770
8	Grinding/Oily/waste or residues containing oil	5.2	7535.863
9	Phosphate sludge	12.5	386.081
10	Sludge from acid recovery unit	13.2	583.500
11	Carbon residue	18.2	25.270
12	"Contaminated aromatic, aliphatic or naphthenic solvents may or may not be fit for reuse"	20.1	14.935
13	Spent solvent	20.2	11559.555
14	Distillation residues	20.3	2657.330
15	Process waste residues and sludges	21.1	3763.565
16	Waste/ Residues Not made with vegetable or animal material	23.1	2963.025
17	Process waste sludge/ residues containing acid or other toxic metals or organic complexes	26.1	1460.799

18	Dust from air filtration system	26.2	6.345
19	"Spent acid (sulphuric acid) sch-I (26.3) and sch-II B-15"	26.3	100222.247 Utilizes as a RAW material for Synthetic Gypsum.
20	Process Residues and wastes	28.1	5869.375
21	Spent catalyst/spent carbon	28.2	7.775
22	Spent carbon	28.3	753.590
23	Off specification products	28.4	628.250
24	Date Expired Products (Pharma Industries)	28.5	123.615
25	Spent Solvent (Pharma Industries)	28.6	2385.02
26	Process waste/ residues	29.1	6272.270
27	Sludge Containing Residual Pesticides	29.2	18.105
28	Spent solvents	29.4	63.190
29	Contaminated cotton rags or other cleaning materials	33.2	61.640
30	Exhaust Air or Gas cleaning residue	35.1	10.070
31	Spent Ion exchange resin containing toxic metals	35.2	125.815
32	Chemical Sludge from Waste treatment	35.3	29355.414
33	Any process or distillation residue	36.1	3063.301
34	Incineration ash	37.2	41.775
35	Waste Mix Liquid	Sch-1	2408.233
Total Quantity			200137.014

Total 200137.014 MT hazardous waste has been co-processed/utilized at Ras complex during FY 2021-2022.

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines. During current financial year April-2021 to March-2022 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 2020 to March 2021	58.6	53.5	20.2	28.3
April 2021 to March 2022	54.7	50.0	22.2	26.8

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 (Kg)	
	During Previous Financial Year (2020-2021)	During Current Financial Year (2021-2022)
From Process	Nil	Nil
From Pollution Control Facility	Nil	Nil

Total 10680 KG e waste generated from different categories i.e. electrical, instrumentation & information technology etc. is common for cement plant, power plant and mines. We have sold out generated e-waste of to RPCB authorized/registered recycler only.

Solid Wastes: - 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	Previous Year Financial Year (1 st Apr 2020 to 31 st Mar 2021)		Current Year Financial Year (1 st Apr 2021 to 31 st Mar 2022)	
	(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	275	10.914	219	7.25
b) Two wheeler	Nil	Nil	Nil	Nil
(ii) Industrial				
a) UPS	32	0.256	504	4.032
b) Motive Power	Nil	Nil	Nil	Nil
c) Stand -by	Nil	Nil	Nil	Nil
(iii) Others				
	Nil	Nil	Nil	Nil
Total	307 Nos.	11.170 MT	723 Nos.	11.282 MT

PART – G**IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION**

1. Low grade limestone is used with high grade lime stone for conservation of lime stone.
2. Automatic water sprinkler system has been installed for water spraying on haulage road.
3. Controlled blasting is being done for further reduction of fugitive emissions.

PART – H**ADDITIONAL MEASURES / INVESTMENTS PROPOSAL FOR ENVIRONMENT PROTECTION INCLUDING ABATEMENT OF POLLUTION**

1. Blasting is being done by using of shock tube detonators (Down line detonators in combination of Noise less trunk line detonators) which is latest technology available, resulting in reduction of noise level and ground vibration to a great extent.
2. We are using Rock breakers for breaking of oversize boulders instead of secondary blasting which eliminated vibration, noise, fly rocks & reducing greenhouse gases which have caused due to secondary blasting.
3. Massive plantation has been carried out within and outside mine lease area. Up to March 2022 total 104224 nos. of trees has been planted in mine lease area.
4. Operator independent truck dispatch system (OITDS) has been installed for reducing down time heavy earth equipment's thereby reducing emissions.
5. Closed unloading hopper with water sprinkling arrangement is provided for unloading of limestone.
6. We have been incurred total Rs. 2.90 Crore in environment management activities such as plantation and greenbelt development and their maintenance, general and periodically maintenance of all pollution control measures, celebration of important days for spreading awareness for protection of environment and conservation of natural resources etc.

PART – I**Any other particular for improving the quality of the environment: -**

1. Wet drilling system/dust cyclone precipitator with drilling machine is used while drilling so that dust is suppressed immediately and the same drill cutting is being used as stemming material for blast hole.
2. The haul road is maintained using motor grader and soil compactor. Water is sprayed on haul road by sprinkler attached with tipper (water tanker).

3. Dust generated during unloading of limestone in hopper is suppressed by Water spraying in the form shower with pressure from nozzle fitted to main water pipe line (Atomized water sprinkler system) in both of crusher, so that dust generated while crushing is suppressed. Water is sprinkled at material transfer chute to prevent generation of dust.
4. Control Blasting is being done which has low velocity of detonation therefore air pollution, is very meager. Non electric blasting system is used to reduce ground vibration.
5. All personal protective equipments (PPE's) provided to all Mine Employee i.e. Dust-Masks (Respirator), Ear Plug, Eye Goggle, Ear Mark etc. concern to them as additional measures of air & noise control.
6. Construction of grease and oil catchers at washing ramp to avoid pollution. Separated oil and grease from above catchers is sent to plant with used oil.
7. We have an organizational structure for Environment Management to carry out implementation of environment measures envisaged in the EMP (Please refer Annexure-3)
8. Full flashed environment laboratory monitors ambient air quality for PM10, PM2.5, SO2, NO2 and Noise level.

Annexure-1
**Ambient Air Quality Monitoring Report
(SPM, PM₁₀, PM_{2.5}, SO₂ and NO₂)**

Shree Cement Ltd, Ras														
Year:-2021-2022														
Ambient Air Quality at Nimbeti Mine (µg/m ³)														
Location Month	Mines office				Near Nimbeti village				Near Mines crusher			Near Mines phase		
	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	PM _{2.5}	PM ₁₀	SO ₂	NO ₂	SPM *	SO ₂	NO ₂	SPM *	SO ₂	NO ₂
Apr-21	36.5	42.0	7.9	9.8	28.0	45.0	8.2	9.3	393.5	8.7	9.9	495.0	8.3	9.3
May-21	31.0	43.0	8.7	9.3	26.0	37.0	8.6	9.6	418.0	8.0	8.4	313.0	8.1	9.4
Jun-21	33.5	40.5	8.2	10.5	28.0	41.5	7.7	9.4	455.0	8.1	8.8	375.5	8.6	9.5
Jul-21	28.5	34.0	8.2	8.5	24.5	37.5	8.1	8.4	347.5	7.9	8.7	343.0	9.1	9.6
Aug-21	22.0	35.0	9.2	9.5	21.5	38.0	9.5	9.8	324.5	8.5	9.6	314.5	8.0	8.2
Sep-21	16.5	26.5	8.7	10.2	19.5	26.5	7.9	8.8	273.5	8.0	9.0	276.5	7.4	8.1
Oct-21	30.5	38.0	9.3	13.2	29.5	39.0	8.5	13.9	432.5	8.0	8.7	324.5	8.6	9.8
Nov-21	27.5	36.0	10.2	13.6	24.5	34.5	10.4	12.7	301.5	8.8	11.1	300.5	8.3	11.9
Dec-21	27.5	38.5	10.8	14.8	29.0	38.0	9.7	14.7	394.0	9.1	11.4	322.5	9.9	10.8
Jan-22	40.5	45.5	9.4	8.7	36.5	51.0	10.4	10.2	483.0	9.8	9.5	548.5	10.3	10.4
Feb-22	39.5	43.0	9.1	8.7	34.0	47.0	10.8	11.3	469.5	10.8	9.6	526.5	9.9	10.2
Mar-22	31.0	47.5	11.3	17.8	32.0	43.0	15.9	11.4	269.0	14.7	10.6	287.0	16.6	15.4
Avg.	30.4	39.1	9.3	11.2	27.8	39.8	9.6	10.8	380.1	9.2	30.4	39.1	9.3	11.2

* Suspended Particulate Matter

NOTE: -

Frequency of mines monitoring changed from Quarterly to Twice in a month by MoEF by the Circular dated 14/5/2009 & 27/5/2009.

Annexure-2
Ambient Noise Level monitoring report

Shree Cement Ltd, Ras								
Year:-2021-2022								
Mines - Ambient Noise Level { Leq-dB(A)}								
Location Month	Near Mines Office		Near Nimbeti Village		Near Mines Crusher		Near Mines Phase	
	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time	Day Time	Night Time
Apr-21	69.8	61.5	64.6	52.8	72.2	61.5	64.0	56.0
May-21	71.7	62.7	66.3	54.5	72.9	63.0	65.0	55.1
Jun-21	73.9	67.2	67.6	56.6	73.5	64.7	66.0	56.3
Jul-21	71.3	61.2	68.8	56.9	69.2	60.0	61.8	55.7
Aug-21	69.5	64.2	67.1	54.5	72.7	58.7	66.9	58.1
Sep-21	72.1	63.2	71.9	55.9	71.4	61.1	64.7	53.3
Oct-21	70.7	58.8	67.4	52.5	72.8	70.2	67.8	55.2
Nov-21	67.9	59.1	66.5	53.1	71.0	62.8	66.6	54.3
Dec-21	71.1	61.8	64.9	53.8	72.1	63.1	64.0	57.2
Jan-22	69.0	59.4	62.1	57.6	70.9	64.6	67.3	61.1
Feb-22	67.1	59.1	62.9	58.8	69.6	64.6	68.1	60.9
Mar-22	67.0	60.9	64.7	61.2	70.8	64.1	72.1	63.9
Average	70.1	61.6	66.2	55.7	71.6	63.2	66.2	57.3

Organizational Structure for Environment Management**NIMBETI LIMESTONE MINES**

We have an Environment Management Cell to carry out implementation of Environment Measures envisaged in the EMP., as follows: -

S. No.	Name	Designation
1	Sh. Pankaj Agarwal	Assistant Vice President (Mines)
2	Sh. P. C. Barber	Dy. General Manager (Mines)
3	Sh. G. L. Yadav	Dy. Manager (Environment)
4	Sh. Arambh Jaiman	Sr. Engineer (Environment)
5	Sh. Sanjay Sharma	Officer (Environment)
6	Sh. Chandra Kant Tyagi	Assistant Officer (Environment)
7	Sh. Rajesh Yadav	Manager (Horticulture)

Annexure: 4
Shree Cement Ltd, Ras
(STP Treated Water Quality Report for the period of April' 2021 to March' 2022)

S. No.	Parameter ↓	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Avg.
1	pH	7.3	7.61	7.29	7.25	7.56	7.88	7.22	7.6	7.29	6.94	7.88	7.1	7.39
2	Total Suspended Solids (mg/L)	44	73	42.3	48	57	61	68	49	42.3	49	72	48	60
3	Oil and Grease (mg/L)	3.1	1.37	2.21	3.2	3.1	1.14	2.4	1.7	2.21	2.17	2.44	1.4	2.4
4	BOD 3days 27°C (mg/L)	17.6	14	25	14	9	21	26	22	25	20	14	12	16.3
5	COD (mg/L)	98	114	74.2	90.7	78	49.2	87	106	74.2	101	97	122	103