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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/Mines/Env. Statement /2019-2020 6037

Date: 10/09/2020
Speed Post

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

Mines Cell

Sub:- Environmental Statement for the period from April 2019 to March 2020 for
Nimbeti Limestone Mines of M/s 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

Sir,

We are submitting herewith the Environmental Statement for the **period from April 2019 to March 2020** for **Nimbeti Limestone Mines** (A Captive Mine of M/s 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;

for

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

Encl: a/a

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, Babu 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

o/c SCL

Ras

ENVIRONMENTAL STATEMENT

FORM - V

Nimbeti Limestone Mine of M/s Shree Cement Limited

Period from: April 2019 to March 2020

PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	Nimbeti Limestone Mine M/s Shree Cement Ltd; 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	10/09/2019

PART – B

WATER AND RAW MATERIAL CONSUMPTION

Water consumption	
Process (Dust suppression, Crusher)	73600 KL
Domestic	63987 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 (2018-2019)	During Current Financial Year (2019-2020)
Mining of Limestone	0.00584	0.00464

2. Raw Material Consumption:

Name of Raw Materials	Name of Products	Consumption of raw material per unit of output	
		During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
N.A.	Limestone		
Not Applicable			

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

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
1.18	1.176

4. Total Limestone Production (in Lac Tones):

During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
174.6356	158.52774

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 WASTES

As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rules, 2016)

Hazardous Waste	Total Quantity (Kg.)	
	During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
(a) From Process	<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	Not Applicable	
(b)	From pollution control facility	Not Applicable	
(c)	1. Quantity recycled or re-utilized within the unit	Not Applicable	
	2. Sold	Not Applicable	
	3. Disposed: During mining of limestone disposed of overburden. (in Lac tones) *	18.51	48.897

- Overburden is being dumped in overburden dump 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. 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		
		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
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	During Previous Financial Year (2018-2019)	During Current Financial Year (2019-2020)
From Process	Nil	Nil
From Pollution Control Facility	Nil	Nil

Solid Wastes: - Solid waste from the mines is overburden (waste rock) is being handled by shovel & dumper combination from working face and dumped systematically at overburden dump yard.

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 (1 st Apr 2018 to 31 st Mar 2019)		Current Year Financial Year (1 st Apr 2019 to 31 st Mar 2020)	
		(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)
	Category:				
	(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)	
		(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)	(i) No. of Batteries	(ii) Approximate Weight (In Metric Tonnes)
	Category:				
	(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

In respect of the pollution abatement measures taken up on conservation of natural resources and 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 / investment proposal for environment protection including abatement & prevention 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 2019 total 92460 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.

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, PM2.5, SO₂ and NO₂)

Shree Cement Ltd, Ras														
Year:-2019-2020														
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-19	36.0	58.0	8.3	11.4	31.5	53.0	8.0	11.5	391.5	8.3	11.5	349.5	8.6	11.5
May-19	34.0	54.0	8.9	12.1	35.5	55.5	7.6	12.9	412.5	8.5	11.3	347.5	9.2	12.0
Jun-19	36.5	53.5	8.3	12.9	32.0	54.5	8.1	11.9	375.5	9.1	11.9	381.0	8.6	12.6
Jul-19	15.0	22.5	8.3	10.3	14.0	21.5	8.7	10.1	82.0	9.9	11.5	85.5	9.5	12.4
Aug-19	15.0	20.0	8.0	10.0	17.5	27.0	8.3	9.9	90.5	9.6	11.1	100.5	9.5	12.4
Sep-19	37.5	57.4	8.7	18.8	39.5	58.7	7.9	19.8	82.5	8.3	9.5	99.5	10.2	10.4
Oct-19	31.5	44.5	8.2	9.0	34.5	49.0	8.3	8.9	102.5	8.3	9.4	105.5	9.4	10.2
Nov-19	33.0	45.0	8.4	10.5	35.0	48.5	8.5	10.5	142.0	8.1	9.0	134.0	9.9	10.9
Dec-19	39.5	50.5	8.8	13.6	40.0	52.5	8.7	12.8	202.0	8.3	13.2	163.5	8.7	12.6
Jan-20	34.5	46.0	9.5	14.3	33.0	48.5	10.2	13.5	290.0	9.7	13.4	235.0	9.1	12.8
Feb-20	30.5	49.0	9.8	15.1	31.5	47.0	10.9	14.5	274.5	9.2	13.1	258.0	9.9	13.5
Mar-20	34.0	51.0	9.4	14.2	28.5	41.5	9.8	14.8	243.5	9.0	12.4	238.5	10.1	14.2
Average	31.4	45.9	8.7	12.7	31.0	46.4	8.7	12.6	224.1	8.9	11.5	208.2	9.4	12.1

*** Suspended Particulate Matter (µg/m³)**

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:-2019-2020								
Ambient Noise Level (Leq-dB(A) Mines								
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-19	72.50	63.05	66.75	58.85	71.85	57.40	66.10	56.15
May-19	73.10	64.20	67.70	55.25	71.35	59.60	65.20	57.15
Jun-19	70.95	64.20	67.05	54.50	72.70	58.70	66.90	58.05
Jul-19	71.50	64.70	66.25	53.10	70.65	59.80	64.55	57.45
Aug-19	71.55	62.80	65.60	52.55	70.60	59.80	64.10	57.45
Sep-19	70.99	63.17	67.45	59.55	71.35	61.10	64.70	54.25
Oct-19	71.40	64.60	66.90	57.70	70.90	62.60	65.00	58.30
Nov-19	70.90	63.80	64.70	57.00	69.90	61.40	62.80	56.90
Dec-19	71.20	66.30	63.70	58.00	71.50	61.50	61.30	56.00
Jan-20	71.20	59.50	61.20	55.10	71.60	61.50	62.40	58.10
Feb-20	71.60	60.50	58.50	53.90	73.10	63.30	63.60	59.90
Mar-20	72.90	63.20	59.90	55.40	73.20	64.10	64.50	59.70
Average	71.6	63.3	64.6	55.9	71.6	60.9	64.3	57.5

Annexure- 3
Organizational Structure for Environment Management
NIMBETI LIMESTONE MINES
Organizational Structure for Environment Management

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

S. No.	Name	Designation
1	Dr. Anil Kumar Trivedi	Sr. General Manager (Environment)
2	Sh. Pankaj Agarwal	Assistant Vice President (Mines)
3	Sh. Manish Bohra	Addi. General Manager (Mines)
4	Sh. Lalit Kumar Bora	Assist. GM (Environment)
5	Dr. R. L. Meena	Assist. GM (Environment)
6	Sh. G. L. Yadav	Assistant Manager (Environment)
7	Sh. Piyush Singh Brijvasi	Officer (Environment)
8	Sh. Mohit Kumar	Assistant Officer (Environment)
9	Sh. Chandra Kant Tyagi	Assistant Officer (Environment)
10	Sh. Rajesh Yadav	Manager (Horticulture)

Annexure: 4

(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