



# SHREE CEMENT LIMITED

(UNIT-SHREE RAIPUR CEMENT PLANT)

Village: Khaparadih, Tehsil: Simga, Distt. Baloda Bazar-Bhatapara (C.G) Pin: 493332,  
Ph.:07727-203101, CIN No. : L26943RJ1979PLC001935



SRCP /BB/ENV/2019-20/222

01C

Date: 03/09/2019

To,  
The Member Secretary,  
Chhattisgarh Environment Conservation Board,  
Paryavas Bhavan, North Block, Sector-19  
Naya Raipur (C.G)

Sub: - Submission of Environment Statement of Shree Lime Stone mine for the year 2018-19 by Shree Raipur Cement Plant (A unit of Shree Cement Ltd.) mine located at Village Semaradih and Bharuwadih in Baloda Bazar - Bhatapara District (Chhattisgarh).

Ref: Consent to Operate (Air & Water) letter No.- 7562/TS/CECB/2019, dated 08/02/2019.

Dear Sir,

Kindly referred to above subject matter and reference letter. In this regards, we are submitting herewith the **Environmental Statement in Form-V** for the year **2018-2019** of Shree Lime Stone Mine located at Village Semaradih and Bharuwadih in Baloda Bazar - Bhatapara District (Chhattisgarh).

Hope you will find this in Order

Thanking you,

**Yours faithfully,**  
**For Shree Raipur Cement Plant**  
**(A unit of Shree Cement Ltd.)**

**R K Vijay**  
**Jt. VP (Operations)**



Enclosed: - As above.

CC to :- Regional Officer, Chhattisgarh Environment Conservation Board, Commercial Complex, Chhattisgarh Housing Board Colony Kabir Nagar, Raipur (C.G.) - 492099

**ENVIRONMENTAL STATEMENT**  
**FORM – V**  
**Shree Raipur Cement Plant**  
**(A Unit of Shree Cement Ltd)**  
**(Shree Lime Stone Mine)**  
**Period from: April 2018 to March 2019**

**PART – A**

1.	Name and address of the Owner / Occupier of the Industry operation or process	Shree Lime Stone Mine M/s Shree Cement Ltd Village – Bharuadih - Semradih, Tahsil – Balodabazar, Distt – Baloda Bazar -Bhatapara Chhattisgarh – 493332
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	8.6 Million TPA Limestone
4.	Year of Establishment	2015
5.	Date of the last Environmental Statement Submitted	04/09/2018

**PART – B**  
**WATER AND RAW MATERIAL CONSUMPTION**

**(I) WATER CONSUMPTION:**

Process : N.A.

Cooling and dust  
Suppression : 88.73 KLD

Domestic : 1.79 KLD



Name of Product	Process Water Consumption per Unit of Product Output (KL/MT of Lime stone)	
	During Previous Financial Year (2017-18)	During Current Financial Year (2018-19)
Limestone mine	0.0106	0.0045

**(II) RAW MATERIAL CONSUMPTION:**

Name of Raw Materials	Name of Products	Consumption of raw material per unit of output	
		During Previous Financial Year (2017-18)	During Current Financial Year (2018-19)
Lime Stone		4112837 MT	6572418 MT

**(III) POWER CONSUMPTION (KWH/T OF LIMESTONE):**

During Previous Financial Year (2017-18)	During Current Financial Year (2018-19)
1.63	1.54

**(IV) TOTAL LIMESTONE PRODUCTION (MT):**

During Previous Financial Year (2017-18)	During Current Financial Year (2018-19)
4112837	6572418





**PART – C**

**DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT**

<b>Pollutants</b>	<b>Quantity of Pollutants Discharged (Mass/Day)</b>	<b>Concentration of Pollutants in Discharge (Mass/Value)</b>	<b>Percentage of variation from prescribed standard with reasons</b>
(a)	Water	Waste water generated from office toilets is treated with septic tank followed by soak pit.  Waste water generated from washing ramp is being reutilized for washing after separating the oil & grease contaminant.	
(b)	Air	Please refer Annexure – 1 & 2	

**PART – D**

**HAZARDOUS WASTE**

((As specified under Hazardous & other wastes (Management and Transboundary Movement) Rule, 2016)

<b>Hazardous Waste</b>	<b>Total Quantity (Ltrs.)</b>	
	<b>During Current Financial Year (2017-18)</b>	<b>During Current Financial Year (2018-19)</b>
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)	Nil	Nil
(b) From Pollution Control Facilities	N.A.	N.A.



**PART – E**  
**SOLID WASTE**

		Total Quantity (MT)	
		During Previous Financial Year (2017-18)	During Current Financial Year (2018-19)
(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. Solid	Not Applicable	
	3. Disposed (During mining of limestone disposed of overburden)		
	a. Top soil for reclamation (MT)	358573	Nil
	a. Over burden (MT)	1883902	1876968
	b. Total Qty (MT)	2242475	1876968

Note:- Overburden is being dumped along with mine lease area, and Plantation is also being done on the overburden.

**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:**

**Battery Wastes:**

As specified under Batteries (Management and Handling) Amendment Rules, 2010, we have purchased following new batteries of different categories.

Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency.	During Current Financial Year April,2018 to March,2019	
Category:	No of Batteries	Approximate Weight (In Tons)
(i) Automotive		
a) Four wheeler	63	2.94

b) Two wheeler	Nil	Nil
(ii) Industrial		
a) UPS ( Vrla Type)	53	1.07
b) Motive Power	Nil	Nil
c) Stand –by	Nil	Nil
(iii) Others	Nil	Nil
<b>Total</b>	<b>116</b>	<b>4.01</b>

Number of used batteries of different categories sent to manufacturer/dealer/importer/registered recycler/or any other agency	During Current Financial Year April,2018 to March,2019	
Category:	No of Batteries	Approximate Weight (In Tons)
(i) Automotive		
a) Four wheeler	Nil	Nil
b) Two wheeler	Nil	Nil
(ii) Industrial		
a) UPS	Nil	Nil
b) Motive Power	Nil	Nil
c) Stand –by	Nil	Nil
(iii) Others	Nil	Nil
<b>Total</b>	<b>Nil</b>	<b>Nil</b>

Used battery scrap will be sent to authorized recycler

### **Hazardous Wastes**

No Hazardous waste is generated from the process except used oil which is drained from HEMM / Equipment's. The used oil & Acid Lead will be sold to CPCB authorized recyclers.

### **E-WASTE**

	Total Quantity (MT)	
	During Previous Financial (2017-18)	During Current Financial Year (2018-19)
April, 2017 to March,2018	Nil	Nil

Note- E-Waste Will be sold to approved E- Waste Recycler





## **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 Mineral as well as increase of reserves.
2. Bag filter has been installed at crusher I & II
3. Wet drilling is being done by Wet drilling Machine.
4. Blasting is being done by as per working permission of DGMS under regulation 106 of MMR1961.
5. Controlled Blasting is being done by latest technology by using shock tube detonators of down the hole delay (in millisecond) as well as trunk line delay (in millisecond) to control noise level, vibration and fly rock. Which is regularly monitored by latest series of Seismograph Micro mate.
6. Two Mobile Water Tankers with capacity 20 KL & 18 KL each engaged for Water spraying arrangement is provided on haul road.
7. Water spraying arrangement / Dust suppression system has been provided at the unloading point of limestone crusher hopper & Discharge end of belt conveyor
8. Fugitive dust at loading point is controlled by pressurized water mist spray arrangement of water tanker.
9. Installed 1.5 km pipe conveyor system in Crusher-I for transportation of mineral from mines to plant so there are no fugitive emissions as there is no transfer point.
10. Installed 3.3 KM length closed conveyor from crusher-II to plant for transportation of mineral. Bag filters has installed at transfer point to reduce fugitive emission.
11. Constructed permanent CC road having length of 1.8 Km from mine crusher-I to plant for compliance of CECB so that there is no dust formation along permanent road.
12. All HEMM being provided with AC operator's cabin to overcome noise & dust pollution as well as to improve operator efficiency.
13. All HEMM machines are Komatsu Japan having certification of American standards EPA (Env. Protection agency) Tier – 2 & Tier-3 as producing low NOx & SOx within permissible limit.



**PART – H**

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

1. Garland drains all around the waste dump yard have been made for stability of dumps.
2. Over burden dumps has been stabilized by proper benching as per approved mining plan. It is also stabilized by plantation with suitable native species.
3. Waste is dumped in non-mineralized zone/area as per approved mining plan.
4. At present there is no Inter burden generated.
5. 157186 plants have been planted to improve greenery.
6. Under Hariyar Chhattisgarh project we have planted 15000 trees near School of Bharuwadih, Semradih, Khapradih, Chandi, Karahi & Parkidih villages with about 10 KM of both side of road plantation from Bharuwadih to Chandi village and this year, we have also planted about 15050 trees at Bhatapara. Apart from that, 5000 tree sapling have been also planted in Railway siding, 4600 trees has been planted in colony area. Hariyar Plantation near villages 14524.
7. stack monitoring at crusher no.1 & 2 being carried out for compliance of CECB on regular basis. (report enclosed)
8. Developed 2 nos. of water harvesting pond having capacity of 2.5 lacs KL outside of pit area and 3 KL at lower benches of our active pit for conservation as well to improve water table of area.

**PART – I**

**ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.**

1. All the operators having provided PPE & Earplug & Ear muff to meet out noise pollution and regular noise survey being done at all HEMM.
2. Regular dust survey being carried out as per DGMS Norms
3. Two Rock breaker machines being used 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.
4. Wet drilling system with water injection system being used while drilling so that dust is suppressed immediately.





5. Blasting is being done by using slurry explosive and ANFO, having low velocity of detonation therefore it will air pollution as well as ground vibration. NONEL blasting system is used to reduce ground vibration.
6. Construction of grease and oil chambers at washing ramp to avoid pollution. Separated oil and grease from water by gravity separation system. It also helps to recirculate water for dust suppression.
7. Installed 4 numbers of online Ambient Air Quality Monitoring Stations.
8. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.

On support of above, we are enclosing herewith following:-

Annexure-1 : Stack Emission monitoring report.

Annexure-2 : Ambient Air Quality Monitoring Station Report.

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**Annexure-1****Shree Lime Stone Mine  
Stack Emission Report (PM All values in mg/Nm<sup>3</sup>)**

S. No.	Month	Mines Crusher- I	Mines Crusher- II
1	Apr-18	12.13	13.05
2	May-18	14.64	16.76
3	Jun-18	15.03	9.71
4	Jul-18	16.71	12.26
5	Aug-18	11.89	17.07
6	Sep-18	13.19	14.94
7	Oct-18	15.41	21.29
8	Nov-18	13.44	11.77
9	Dec-18	18.69	14.87
10	Jan-19	10.05	11.73
11	Feb-19	16.62	14.79
12	Mar-19	12.08	13.17



**Shree Raipur Cement Plant  
(A Unit of Shree Cement Ltd)**

**AMBIENT AIR QUALITY MONITORING STATION DATA**

Location	Parameters	Unit	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
AAQMS 1 (Mines boundary towards village Bharuwadih)	PM 10	$\mu\text{g}/\text{m}^3$	40.69	47.45	41.92	36.31	35.23	55.93	70.15	54.64	51.11	45.6	58.25	61.22
	PM 2.5		19.29	24.03	17.7	17.09	12.77	19.77	21.51	22.72	25.01	24.48	32.32	38.33
	SO <sub>2</sub>		2.76	2.96	2.91	2.71	7.29	5.35	3.22	3.83	3.19	5.13	4.65	4.53
	NO <sub>x</sub>		3.01	2.3	2.33	2.33	2.99	1.87	2.15	3.06	4.85	3.08	2.79	2.72
AAQMS 2 (Mines boundary towards village Semradih)	PM 10		47.62	55.91	43.44	35.42	41.9	49.56	44.24	47.54	55.09	48.57	65.54	65.27
	PM 2.5		21.86	21.99	16.47	12.7	13.88	22.48	21.59	22.69	28.46	22.66	30.28	33.76
	SO <sub>2</sub>		3.23	3.67	4.07	3.8	3.8	4.75	4.84	5.05	6.84	9.97	8.05	8.47
	NO <sub>x</sub>		4.4	4.58	4.61	4.63	4.63	2.37	3.02	3.54	9.77	7.54	6.9	4.24
AAQMS 3 (Plant Boundary towards South Diction)	PM 10		49.27	47.67	43.24	47.74	35.92	46.45	46.61	50.58	56.63	45.31	68.55	79.65
	PM 2.5		27.07	23.97	21.9	22.35	17.64	20.49	22.29	28.08	30.5	22.87	55.22	32.76
	SO <sub>2</sub>		4.15	3.42	8.06	12.54	13.82	11.55	9.03	7.1	4.97	14.34	9.4	10.28
	NO <sub>x</sub>		5.6	4.04	5.7	5.39	4.1	4.12	4.34	4.43	8.79	6.44	7.52	8.22
AAQMS 4 (Plant Boundary towards village Khapradih)	PM 10		45.89	50.54	42.7	39.93	31.17	41.02	54.86	49.12	59.28	46.85	62.9	67.52
	PM 2.5		18.57	21.24	16.99	16.77	15.09	28.67	24.79	26.27	31.97	24.08	30.21	30.49
	SO <sub>2</sub>		6.28	6.32	6.91	6.35	5.41	5.27	5.62	8.02	8.02	8.84	7.51	18.32
	NO <sub>x</sub>		7.13	6.88	6.8	7.42	8.15	8.05	8.01	8.08	11.65	5.68	5.59	5.5

*Abhinav*