



SHREE RAIPUR CEMENT PLANT

(A UNIT OF SHREE CEMENT LIMITED)

Village : Khaparadih, Tehsil : Simga

Distt. : Baloda Bazar-Bhatapara (C.G.) Pin : 493 332, Ph. : 07727-203101

CIN No. : L26943RJ1979PLC001935



SRCP/ENV/2020-21/357

Date: 15/07/2020

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 2019-20 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.- 7892/TS/CECB/2019, dated 05/12/2019.

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 **2019-20** 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 2019 to March 2020

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	04/09/2019

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

Process : N.A.

Cooling and dust
Suppression : 145.65 KLD

Domestic : 1.0 KLD

Name of Product	Process Water Consumption per Unit of Product Output (KL/MT of Lime stone)	
	During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
Limestone mine	0.0045	0.0084

(II) RAW MATERIAL CONSUMPTION:

Name of Raw Materials	Name of Products	Consumption of raw material per unit of output	
Lime Stone	Crushed cement grade Limestone	During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
		6572418 MT	5755055 MT

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

During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
1.54	1.45

(IV) TOTAL LIMESTONE PRODUCTION (MT):

During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
6572418 MT	5755055 MT

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
(a)	Water	Waste water generated from office toilets is treated with septic tank followed by soak pit. Waste water generated from workshop has some traces of oil and grease which is separated in oil and grease separator and filtered water is reused for washing purpose.	
(b)	Air	Please refer Annexure – 1 & 2	

PART – D

HAZARDOUS WASTE

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

Hazardous Waste	Total Quantity (Ltrs.)	
	During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
Common for Cement plant & Mines		
a) From Process	Used Oil (Cat. 5.1) : 15.20 KL	Used Oil (Cat. 5.1): 29.25 KL
(b) From Pollution Control Facilities	Nil	Nil

PART – E
SOLID WASTE

		Total Quantity (MT)	
		During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
(a)	From Process	Not Applicable	
(b)	From Pollution Control Facility	Nil	
(c)	1. Quantity rejected or re- utilized within the unit	Not Applicable	
	2. Sold	Not Applicable	
	3. Disposed (During mining of limestone disposed of overburden)		
	a. Top soil for reclamation (MT)	Nil	1,34,136
	a. Over burden (MT)	18,76,968	12,82,729
	b. Total Qty (MT)	1876968	2186865

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:

Hazardous Wastes

No Hazardous waste is generated from the process except used oil which is drained from HEMM / Equipment's. The used oil, Lead acid batteries waste, E-waste & Bio medical waste are sold to SPCB/CPCB authorized recyclers.

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, 2019 to March, 2020	
Common for Cement plant & Mines		
Category:	No of Batteries	Approximate Weight (In Tons)
(i) Automotive		
a) Four wheeler	08	0.018
b) Two wheeler	Nil	Nil
(ii) Industrial		
a) UPS	26	0.74
b) Motive Power	Nil	Nil
c) Stand –by	Nil	Nil
(iii) Others	Nil	Nil
Total	34	0.758

Number of used batteries of different categories sent to manufacturer/dealer/importer/registered recycler/or any other agency	During Current Financial Year April, 2019 to March, 2020	
Common for Cement plant & Mines		
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
Total	Nil	Nil

Note - Used battery scrap sold to authorized recycler

E-WASTE

April, 2019 to March, 2020	Total Quantity (MT) (Common for Cement plant & Mines)	
	During Previous Financial Year (2018-19)	During Current Financial Year (2019-20)
	Nil	7.480

Note- E-Waste sold to authorized recycler

Bio-Medical Wastes:

Bio-medical waste generated during current financial year April, 2019 to March, 2020 under the Bio-Medical Waste Management Rules, 2016, are as follows.

April, 2019 to March, 2020	Bio-Medical Waste Quantity (Kg) (Common for Cement plant & Mines)			
	(Cat. -Yellow)	(Cat. - Red)	(Cat. -White)	(Cat.-Blue)
	9.72	15.88	9.49	10.75

Note- Above mentioned waste has been sent to M/s SMS Watergrace Enviroprotect Pvt. Ltd., CBWTF Bio Medical Treatment Facility, Raipur (C.G.) for disposal.

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. Mine pit to accumulate rain water during rainfall. This accumulated water utilized for Cement plant, dust suppression purposes & plantation purpose.
3. Developed one number of water harvesting pond having capacity of 2,50,000 KL outside of pit area and 2,50,000 KL at lower benches of our active pit for conservation as well to improve water table of area.
4. Topsoil is separately & utilized for plantation purpose at OB dump.
5. Plantation is being done regularly on OB Dumps, along haulage roads & gap filling within the mines lease area etc.

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. Bag filter installed at crusher I & II.
5. Drilling is being done by Wet Drilling Machine equipped with dust extraction system.
6. Blasting is being done by as per working permission of DGMS under regulation 106 of MMR1961.
7. 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.
8. Provided Two Mobile Water Tankers with capacity of 20 KL & 18 KL engaged for Water spraying on haul road.
9. Water spraying arrangement / Dust suppression system has been provided at the unloading point of limestone crusher hopper & Discharge end of belt conveyor.
10. Fugitive dust at loading point is controlled by pressurized water mist spray arrangement of water tanker.
11. Installed 1.5 km pipe conveyor system from Crusher-I to Cement plant for transportation of limestone so there are no fugitive emissions as there is no transfer point.
12. Installed 3.3 KM length closed conveyor from crusher-II to plant for transportation of limestone. Bag filters has installed at transfer point to reduce fugitive emission.
13. Constructed permanent CC road having length of 1.8 Km from mine Crusher-I to plant, so that there is no dust formation along the permanent road.
14. All HEMMs are provided with AC operator's cabin to overcome noise & dust pollution as well as fatigue sensor to improve operator efficiency.
15. 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.

16. At present there is no Inter burden generated from our current mines operation.
17. At present 1,75,686 plant sapling has been planted in mining area.
18. 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 have been planted in colony area. Hariyar Plantation near villages 14524.

PART – I

ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.

1. All the operators having provided PPE including 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 reduce air pollution as well as ground vibration. NONEL blasting system is used to reduce ground vibration.
6. Constructed grease and oil separation chambers at washing ramp to avoid water pollution. Oil and grease is separated from water by gravity action & filtered water is reused for washing purpose.
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 Report.

Shree Raipur Cement Plant
(A Unit of Shree Cement Ltd)
Crusher Stack Emission Monitoring Report (2019-20)

Name of stack Month	Primary crusher – I (PM – 30 mg/Nm³)	Primary crusher – II (PM – 30 mg/Nm³)
Apr-19	16.13	13.05
May-19	14.64	16.76
Jun-19	15.03	9.71
Jul-19	16.71	12.26
Aug-19	18.5	17.07
Sep-19	13.19	14.94
Oct-19	15.41	21.29
Nov-19	13.44	11.77
Dec-19	18.69	14.87
Jan-20	10.05	11.73
Feb-20	16.62	14.79
Mar-20	12.08	13.17
Average	15.04	14.28



Ambient Air Quality Monitoring Report
(All value in $\mu\text{g}/\text{m}^3$)
For The Period of April 2019 To March 2020

Location	Parameters	Norms	Apr-19	May-19	June-19	July-19	Aug-19	Sept-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Avg.
AAQMS 1 (Mines boundary towards village Bharuwadih)	PM ₁₀	100	92.6	75.8	60.3	30.8	20.8	13.4	53.3	66.6	65.3	57.7	53.5	46.4	53.0
	PM _{2.5}	60	47.5	37.9	26.4	16.9	16.2	13.2	35.8	40.9	31.8	34.7	30.2	25.9	29.8
	SO ₂	80	3.8	2.9	4.4	10.0	10.7	12.0	13.4	14.0	11.4	12.8	12.9	12.0	10.0
	NO ₂	80	4.2	3.1	4.8	11.0	11.7	13.2	11.9	15.7	11.0	11.8	11.9	11.1	10.1
AAQMS 2 (Mines boundary towards village Semradhih)	PM ₁₀	100	75.8	73.8	46.6	31.5	25.1	24.0	55.7	70.1	61.4	55.0	55.8	37.2	51.0
	PM _{2.5}	60	38.8	35.8	25.5	16.1	15.0	10.9	35.1	41.4	37.5	33.5	27.6	20.3	28.1
	SO ₂	80	7.5	6.5	7.0	7.8	8.1	7.4	8.1	8.8	7.5	8.6	8.7	19.7	8.8
	NO ₂	80	8.0	6.9	7.5	6.7	8.6	7.9	6.9	9.5	8.9	8.3	8.4	18.7	8.9
AAQMS 3 (Plant Boundary towards South Direction)	PM ₁₀	100	93.0	76.1	62.8	27.1	23.6	20.2	49.0	71.4	64.9	59.3	46.2	45.7	53.3
	PM _{2.5}	60	37.9	52.0	26.5	18.3	15.3	9.9	30.3	40.4	37.8	33.8	25.9	26.4	29.5
	SO ₂	80	8.1	5.7	7.2	6.6	6.9	8.2	7.0	11.2	10.4	11.8	12.0	12.2	8.9
	NO ₂	80	8.1	5.6	6.0	5.5	5.8	6.9	4.7	9.3	10.1	8.8	9.0	9.1	7.4
AAQMS 4 (Plant Boundary towards village Khapradih)	PM ₁₀	100	75.6	78.3	56.4	40.6	45.7	20.7	53.4	69.0	61.7	63.9	51.3	46.8	55.3
	PM _{2.5}	60	38.7	46.9	22.7	20.0	19.5	14.7	37.7	35.8	33.6	35.0	30.5	28.7	30.3
	SO ₂	80	20.4	13.4	12.9	8.7	6.7	6.5	6.5	6.4	7.5	10.4	10.2	10.1	10.0
	NO ₂	80	7.8	6.8	6.8	6.9	6.7	6.7	4.9	6.7	7.4	6.2	6.3	6.5	6.6

