OIC

SHREE CEMENT LIMITED

(UNIT-SHREE RAIPUR CEMENT PLANT)

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

SRCP /BB//2016-17/59

Date: 10.09.16

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

Sub: - Submission of Environment Statement of Cement Plant for the year 2015-16 by Shree Raipur Cement Plant (A unit of Shree Cement Ltd.) Plant located near Village Khapradih in Baloda Bazar - Bhatapara District (Chhattisgarh).

Ref: 1. Renewal Consent to Operate(Water)letter No.- 1276/TS/CECB/2016, dated 30/05/2016
2. Renewal Consent to Operate (Air) letter No.- 1278/TS/CECB/2016, dated 30/05/2016

Dear Sir,

Kindly referred to above subject matter and reference letter. In this regards, we are submitting herewith the Environmental Statement for the year 2015-16 of Shree Raipur Cement Plant.

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
AVP (Operations)

14/9/16

R. O. C. B.
L. R. No. 9
DATE
RAIPUR

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)
Period from: April 2015 to March 2016

PART – A

1.	Name and address of the Owner / Occupier of the Industry operation or process	M/s Shree Raipur Cement Plant (A Unit of Shree Cement Ltd) Village – Khapradih, Tahsil – Simga, Distt – Baloda Bazar (Bhatapara) Chhattisgarh – 493196
2.	Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code)	Red Category
3.	Production Capacity	2.6 Million TPA Cement 1.5 Million TPA Clinker 15 MW Waste Heat Recovery Power Generation 15 MW Captive Power
4.	Year of Establishment	2015
5.	Date of the last Environmental Statement Submitted	30/09/2015

PART – B
WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

Process	:	57 KLD (Boiler Feed in WHRS)
Cooling and dust Suppression	:	331.47 KLD (Cement plant, GPP,)
Domestic	:	193.13 KLD (Common for Cement plant, Mines)

Name of Product	Process Water Consumption per Unit of Product Output	
	During Previous Financial Year (2014-15)	During Current Financial Year (2015-16)
Cement	0.328 KL/MT of cement	0.017 KL/MT of cement
Clinker	N.A.	0.022 KL/MT of clinker
WHRB Power	N.A.	0.323 KL/ MW of WHRB power generation

(II) RAW MATERIAL CONSUMPTION:

Name of Raw Material	Name of Product	Consumption of Raw Material Per Unit of Output (Cement)/Clinker	
		During Current Financial Year (2014-15)	During Current Financial Year (2015-16)
Gypsum	Cement	0.0439	0.0543
Fly Ash		0.3119	0.3163
GBFS Slag		0.300	0.0657
Clinker		0.6442	0.6263
Limestone	Clinker	N.A.	1.5030
Pet Coke			0.0998
Additives (Iron Ore, Red Mud)			0.0195

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

Product Name	During Previous Financial Year (2014-15)	During Current Financial Year (2015-16)
Cement	47.25	69.89
Clinker	N A	66.31
WHRB Power (KWH / KWH of power)	N A	N A

(IV) TOTAL PRODUCTION (MT):

Product Name	During Previous Financial Year (2014-15)	During Current Financial Year (2015-16)
Cement	40277	949213
Clinker	N A	1177513
WHRB Power	N A	34817013 KWH

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	As the plant is being operated on dry process technology, no liquid effluent is generated from cement plant. The Domestic waste water generated from the office toilet and canteen being treated with STP and treated water used in greenery development in the plant premises.	
(b)	Air	Please refer Annexure – 1 & 2	

PART – D

HAZARDOUS WASTE

(As specified under Hazardous Wastes (Management, Handling & Trans boundary Movement Rule, 2010)

Hazardous Waste	Total Quantity (Ltrs.)	
	During Current Financial Year (2014-15)	**During Current Financial Year (2015-16)**
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)	We have already applied to Chhattisgarh Environment Conservation Board on dated 10/07/2015 for obtaining of Hazardous waste authorization permission. Inspection has been also done. HW authorization awaited	We have already applied to Chhattisgarh Environment Conservation Board on dated 10/07/2015 for obtaining of Hazardous waste authorization permission. Inspection has been also done. Waiting for authorization. HW authorization awaited
(b) From Pollution Control Facilities	N.A.	N.A.

PART – E
SOLID WASTE

		Total Quantity	
		During Previous Financial Year (2014-15) (MT/Year)	**During Current Financial Year (2015-16) (MT/Year)**
(a)	From Process	Nil	Nil
(b)	From Pollution Control Facility	Dust collected in the ESPs, Bag House and Bag Filters are recycled to the system	Dust collected in the ESPs, Bag House and Bag Filters are recycled to the system
(c)	1. Quantity rejected or re-utilized within the unit	100%	100%

	2. Sold (Metal / nonmetal / electrical / plastic scrap / Other)	NA	1021.43
	3. Disposed	NA	NA

Note: - Scraps sold to scrap dealers / recyclers

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,2015 to March,2016	
Category:	No of Batteries	Approximate Weight (In Tons)
(i) Automotive		
a) Four wheeler	Nil	Nil
b) Two wheeler	Nil	Nil
(ii) Industrial		
a) UPS (Vrla Type)	78	1.342
b) Motive Power	0	0
c) Stand –by	0	0
(iii) Others	Nil	Nil
Total	78 Nos.	1.342 MT

Number of used batteries of different categories sent to manufacturer/dealer/importer/registered recycler/or any other agency	During Current Financial Year April,2015 to March,2016	
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

Used battery scrap will be sent to CPCB authorized recycler

Hazardous Wastes

Cement manufacturing is based on "Dry Process". No Hazardous waste is generated from the process except used oil which is drained from Machineries / Equipments. The used oil & Acid Lead will be sold to CPCB authorized recyclers.

E-WASTE

	Total Quantity (MT)	
	During Previous Financial (2014-15)	During Current Financial Year (2015-16)
April, 2015 to March,2016	Nil	0.064

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

Bio-Medical Wastes:

Bio-medical waste generated during current financial year April, 2015 to March, 2016 under the Bio-Medical Waste (Management & Handling) Rules 1998, are as follows.

	Bio-Medical Waste Quantity (Kg)		
	(Cat 4)	(Cat 6)	(Cat 7)
April, 2015 to March,2016	1.59	4.40	0.25

PART – G

IMPACT OF THE POLLUTION CONTROL MEASURES ON CONSERVATION OF NATURAL RESOURCES AND CONSEQUENTLY ON THE COST OF PRODUCTION

M/s Shree Raipur Cement Plant (A Unit of Shree Cement Ltd.) 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 equipment like ESPs, Bag House and 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 in process and neutralizing the cost of operation of pollution control equipments and hence no cost impact on the production cost.

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

Green belt development and tree plantation is our ongoing process. So far 23,704 plants have been are planted at various locations up to March 2016. We have developed Green House / Nursery about 2 acre area & 200 numbers of fruits plant has been also planted in nursery area. We have planted about 2, 00,000 numbers of hedging within plant area in 1.92 ha area.

Apart from this, 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 Bharuuwadih to chandi village under Hariyar Chhattisgarh project.

PART – I
ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.

1. Installed 4 numbers of online Ambient Air Quality Monitoring Stations and Installed Continuous Emission Monitoring System at raw mill, kiln stack. Cooler stack, Cement mill stack.

2. Monitoring of stack emission and ambient air and water quality is being done regularly.

3. Opacity meters have been installed at the stack of Kiln, Coal mill, clinker cooler and cement mill for continuous online stack emission monitoring.

4. On line SO2 & NOx Analyzer have been installed at Kiln stack to measure SO2 & NOx on continuous basis.

5. On line CEMS monitoring system has been installed in Raw Mill & Kiln stack.

6. On line SO2 & NOx, O2. Gas emission is being measured through Flue gas Portable analyzer on regularly basis.

7. Cement being manufacturing in dry process and there is no any effluent generated from the process hence maintaining Zero Effluent Discharge Plant.

8. Real time on line CEMS data for AAQMS & stacks, are transmitting to State Pollution Control Board or Pollution Control Committees and Central Pollution Control Board on continuous basis.

9. Emission level well within the prescribed norms.

10. Waste heat recovery system has been installed.

11. Concreting near Raw mill, coal mill, cooler, cement mill, packing plant and TG building has been done.

12. Fly ash is being transported in the closed containers and bulkers.

13. Constructed two Clinker silo with fully covered tin shed cover shed where stored clinker to avoid dust emission.

14. Installed bag filter with fully enclosed tin sheet at all material transfer points to avoid fugitive dust emission

15. All Storage Silo installed with Bag filter for controlling dust emission

16. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.

17. Civil department taking care for of House keeping with the help of two raod sweeping machines.

18. Domestic waste water generated by unit being treated in Movable Bed Bio reactor (MBBR) based sewage treatment plant (STP). Treated STP water being used for plantation/ greenery development.

19. Horticulture Department is taking care of tree plantation and green belt development.

20. Applicable best available control measures has been adopted to minimize the fugitive dust emission from each fugitive dust source type within active operation

21. All Belt Conveyor belt fully covered with tin sheet & also installed Bag filter at all material transfer points.

22. Constructed cover shed where we stored our all raw material including Coal to avoid dust emission.

23. Developed 1 Lac KL capacity Rain water harvesting Pond with recharge pit at Plant premises where mostly rain water from the within the plant premises is being stored & recharging ground water thru recharge pit.

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

Annexure-1 : Stack Emission monitoring report.
Annexure-2 : Ambient Air Quality Monitoring Station Report.

Annexure: 1

Shree Raipur Cement Plant
(A Unit of Shree Cement Ltd)
Stack Emission Report (PM All values in mg/Nm3)

S. No.	Month	Cement Mill	Raw Mill & Kiln Stack	Coal Mill Stack	Clinker Cooler Stack
1	Apr-15	10	NR	NR	NR
2	May-15	11	12	8	9
3	Jun-15	15	20	17	16
4	Jul-15	32	19	20	23
5	Aug-15	28	20	25	20
6	Sep-15	30	25	30	22
7	Oct-15	21	30	20	13
8	Nov-15	19	14	15	11
9	Dec-15	15	10	20	16
10	Jan-16	14	17	22	10
11	Feb-16	19	10	14	25
12	Mar-16	21	8	13	27

NR*- Pyro section Commissioned on 20.05.2015

Annexure: 2

Shree Raipur Cement Plant

(A Unit of Shree Cement ltd)

AMBIENT AIR QUALITY MONITORING STATION DATA

Location	Parameters	Unit	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16
AAQMS 1 (Mines boundary towards village Bharuwadih)	PM 10	µg/m3	67.0	65.0	68.0	54.3	42.2	51.0	59.0	64.1	59.3	59.3	58.3	52.2
	PM 2.5		29.5	30.0	32.0	15.3	11.9	24.5	52.6	54.6	38.0	34.5	23.9	29.2
	SO2		4.0	4.5	5.0	8.4	9.6	11.2	12.7	12.1	3.3	11.4	13.8	13.1
	NO2		17.5	17.0	15.0	6.9	6.2	6.0	10.4	12.8	20.6	26.0	29.6	15.4
AAQMS 2 (Mines boundary towards village Semradih)	PM 10		61.0	62.0	58.0	57.5	36.0	42.0	64.7	65.2	59.8	34.7	67.9	65.1
	PM 2.5		27.0	26.0	26.0	20.3	15.2	28.9	54.9	49.5	47.0	34.5	56.0	28.9
	SO2		5.2	5.0	4.0	4.8	5.9	7.2	8.1	6.9	4.5	2.9	5.9	6.5
	NO2		15.0	14.0	11.0	7.2	5.4	4.3	10.2	14.5	26.5	31.4	28.3	21.0
AAQMS 3 (Plant Boundary towards South Diection)	PM 10		71.0	70.0	60.0	58.9	43.0	54.7	62.7	57.7	65.0	69.2	58.2	34.9
	PM 2.5		35.0	34.0	35.0	18.1	15.6	24.0	47.2	61.5	41.0	40.6	31.9	26.1
	SO2		7.0	6.0	5.0	5.4	6.7	14.3	16.9	14.1	2.0	5.4	4.2	4.7
	NO2		12.0	11.0	10.0	5.7	4.9	3.0	7.9	7.1	12.0	17.0	13.8	13.7
AAQMS 4 (Plant Boundary towards village Khapradih)	PM 10		64.0	63.0	64.0	55.2	39.0	43.9	71.5	65.8	68.0	44.6	48.9	41.8
	PM 2.5		32.0	31.0	30.0	13.6	10.8	25.0	49.2	49.8	47.0	35.3	24.6	26.8
	SO2		4.8	4.0	5.0	6.2	5.8	24.3	1.9	3.0	1.8	3.1	5.7	9.3
	NO2		14.0	15.0	13.0	5.2	3.4	4.9	7.4	7.8	14.4	18.7	15.7	14.4