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SHREE CEMENT LTD.

Regd. Office:

BANGUR NAGAR, POST BOX NO.33, BEAWAR 305 901, RAJASTHAN, INDIA



SCL/Ras/RNCU/Env. Statement/2017-18

6000 Date: 20/09/2017

To,

File No. C-144

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

Sub: - Environmental Statement for the period from April 2016 to March 2017 for Cement Plant Unit- Ras New Cement Unit of M/s Shree Cement Limited situated at Village- Ras Bhingarh, Tehsil- Jaitaran, Dist- Pali (Raj).

Ref: -CTO No.- F (CPM)/ Pali (Jaitaran)/1024 (1)/ 2013-2014/7634-7636 dated 08/01/2014.

Sir,

We are submitting herewith Environmental Statement for the period from April, 2016 to March, 2017 for Cement Plant Unit- Ras New Cement Unit (Cement grinding) of M/s Shree Cement Limited situated at Village- Ras Bhingarh, Tehsil- Jaitaran, Dist- Pali (Raj).

This is for your kind information please.

Thanking you,
Yours faithfully,

For Shree Cement Ltd;

(Rakesh Bhargava)
Vice President (Environment)

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.)

o/c Environment department, Raj.

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ENVIRONMENTAL STATEMENT
M/s Shree Cement Limited: Unit- Ras New Cement Unit
Period from : April 2016 to : March 2017

FORM – V

PART – A

| | | |
|----|---|--|
| 1. | Name and address of the Owner / Occupier of the Industry operation or process | Cement Plant Unit-Ras New CementUnit M/s Shree Cement Ltd. Village: Ras/Bhimgarh, Tehsil: Jaitaran, Dist:Pali - 306107 (Rajasthan) |
| 2. | Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code) | Red Category |
| 3. | Production Capacity | 4.40 Million TPA Cement |
| 4. | Year of Establishment | 2014 |
| 5. | Date of the last Environmental Statement Submitted | 20.09.2016 |

PART – B

WATER AND RAW MATERIAL CONSUMPTION

(I) WATER CONSUMPTION:

| | | |
|------------------------------|---|--|
| Process | : | N.A. (As plant is based on dry Process technology) |
| Cooling and dust Suppression | : | 55281 KL |
| Domestic | : | 70209 KL (Common for Cement Plant & Power Plant) |

| Name of Product | Process Water Consumption per Unit of Product Output | |
|-----------------|--|---|
| | During Previous Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
| Cement | 0.0167 KL/MT of Cement | 0.0054 KL/MT of Cement |

(II) RAW MATERIAL CONSUMPTION:

| Name of Raw Material | Name of Product | Consumption of Raw Material Per Unit of Output (Cement) | |
|-------------------------|-----------------|---|---|
| | | During Current Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
| 1. Clinker | Cement | 0.770 | 0.771 |
| 2. Gypsum | | 0.053 | 0.051 |
| 3. Fly Ash | | 0.146 | 0.148 |
| 4. Performance Improver | | 0.025 | 0.026 |
| 5. Bed Ash (in Cement) | | 0.005 | 0.0015 |

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

| During Previous Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
|--|---|
| 35.93 KWH/T | 36.19 KWH/T |

(IV) TOTAL CEMENT PRODUCTION (MT):

| During Previous Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
|--|---|
| 3047679 | 3077408 |

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 the cement plant. The waste water generated from the office toilet and mess is treated in STP and treated water is used in plantation. Analysis Report of STP treated water is attached as Annexure-3 | |
| (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 (2015-2016) | During Current Financial Year (2016-2017) |
| 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, D.G.Set and Nimbeti Limestone Mines. Total Quantity generated from April-2015 to March-2016 = 22470 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 22470 Ltrs. Sold-out to registered recycler = 22470 Ltrs. Balance Quantity= 0 Ltrs | Common authorization for Hazardous Waste Management & Handling for Cement Plant, Power Plant, D.G.Set and Nimbeti Limestone Mines. Total Quantity generated from April-2016 to March-2017 = 6720 Ltrs. Old Stock = 0 Ltrs. Total Used oil = 6720 Ltrs. Sold-out to registered recycler = 6720 Ltrs. Balance Quantity= 0 Ltrs |
| (b) From Pollution Control Facilities | N.A. | N.A. |

PART – E
SOLID WASTE

| | | Total Quantity | |
|-----|---|---|---|
| | | During Previous Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
| (a) | From Process | NA | Nil |
| (b) | From Pollution Control Facility | NA | Dust collected in the Bag Houses and Bag Filters are recycled to the system |
| (c) | 1. Quantity rejected or re-utilized within the unit | 100% | 100% |
| | 2. Sold | NA | Nil |
| | 3. Disposed | NA | Nil |

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

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 & Lead acid batteries are sold to CPCB authorized recyclers.

Bio-Medical Wastes:

Bio-medical waste generated is common for cement plant, power plant and mines during current financial year April 2016 to March 2017 under the Bio-Medical Waste (Management & Handling) Rules 2016, are as follows.

| | Bio-Medical Waste Quantity (Kg) as per Colour Coding | | | |
|---------------------------------|---|-------------------|---------------|--------------|
| | Red | Blue/White | Yellow | Black |
| April 2016 to March 2017 | 39.44 | 39.19 | 40.31 | 39.96 |

Above mentioned waste has been sent to Sales Promoter, CBWTF Bio Medical Treatment Facility, Jaipur Bye Pass Road, Ajmer (Raj.) for disposal.

E- Wastes:

| | Total Quantity | |
|---------------------------------|---|--|
| | During Previous Financial Year (2015-2016) | During Current Financial Year (2016-2017) |
| From Process | Nil | 1370 Kg. |
| From Pollution Control Facility | Nil | Nil |

Solid Wastes: - N.A.

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 and mines -

| | | | |
|-------|---|--|----------------------|
| 1 | Number of new batteries of different categories purchased from the manufacturer / importer / dealer or any other agency | During 1 st Apr 2016 to 31 st Mar 2017 | |
| | Category: | (i) No. of Batteries | (i) No. of Batteries |
| | (i) Automotive | | |
| | a) Four wheeler | 163 | 6.41 |
| | b) Two wheeler | Nil | Nil |
| | (ii) Industrial | | |
| | a) UPS | 66 | 0.536 |
| | b) Motive Power | Nil | Nil |
| | c) Stand –by | Nil | Nil |
| | (iii) Others | Nil | Nil |
| Total | 229 Nos | 6.946 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 | During 1 st Apr 2016 to 31 st Mar 2017 | |
| | Category: | (i) No. of Batteries | (i) No. of Batteries |
| | (i) Automotive | | |
| | a) Four wheeler | 140 | 4.952 |
| | b) Two wheeler | Nil | Nil |
| | (ii) Industrial | Nil | Nil |
| | a) UPS | 291 | 2.328 |
| | b) Motive Power | Nil | Nil |
| | c) Stand –by | Nil | Nil |
| | (iii) Others | Nil | Nil |
| Total | 431 Nos. | 7.28 MT | |

Used battery scrap was sent to CPCB authorized recycler

PART – G

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

M/s Shree Cement Limited 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 Bag Houses 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. Plantation has been carried out in an area of around 63.8 hectare with (Total land: 187.56 hc.)165311 trees, which is ~34 % of the total land of plant area.

PART – I

ANY OTHER PARTICULATES FOR IMPROVING THE QUALITY OF ENVIRONMENT.

1. We have full-fledged Environment Department with three separate cells, for monitoring, maintenance of pollution control equipment and Green Belt development.
2. Monitoring of stack emission and ambient air and water quality is being done regularly.
3. Maintenance department is doing regular checking and scheduled maintenance of all the pollution control devices.
4. Civil deptt. taking care of House keeping.
5. Horticulture Department is taking care of tree plantation and green belt development. Every year we are doing tree plantation.

We are enclosing herewith following documents:-

- Annexure-1 : Stack Emission monitoring report.
- Annexure-2 : Ambient Air Quality (PM10, PM2.5, SO₂ and NO₂) & Ambient Noise Level monitoring report

Shree Cement Ltd, Ras
Unit-Ras New Cement Unit
Stack Emission Report (PM All values in mg/Nm³)
Year: 2016-17

| S. No. | Month | VRM(Cement Mill) | Ball Mill(Cement Mill) |
|----------------|--------------|-------------------------|-------------------------------|
| 1 | Apr-16 | 20 | 13 |
| 2 | May-16 | 13 | 11 |
| 3 | Jun-16 | 12 | 18 |
| 4 | Jul-16 | 15 | 14 |
| 5 | Aug-16 | 20 | 15 |
| 6 | Sep-16 | 15 | 17 |
| 7 | Oct-16 | 18 | 10 |
| 8 | Nov-16 | 20 | 13 |
| 9 | Dec-16 | 23 | 18 |
| 10 | Jan-17 | 15 | 13 |
| 11 | Feb-17 | 18 | 11 |
| 12 | Mar-17 | 14 | 9 |
| Average | | 17 | 13 |

NR*-Not Running

Annexure: 2

| Shree Cement Ltd, Ras | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------------------|-------------|-----------------|-----------------|----------------------|-------------|---------------------------------|-------------|-----------------|-----------------|----------------------|-------------|--|-------------|-----------------|-----------------|----------------------|-------------|--|-------------|-----------------|-----------------|----------------------|-------------|
| Ambient Air Quality ($\mu\text{g}/\text{M}^3$) & Noise Level Monitoring Report For The Period Of April 2016 To Mar 2017 | | | | | | | | | | | | | | | | | | | | | | | | |
| Common for Cement plant & Power plant | | | | | | | | | | | | | | | | | | | | | | | | |
| Year:-2016-2017 | | | | | | | | | | | | | | | | | | | | | | | | |
| Location | Plant Boundary Near Main Gate | | | | | | Plant Boundary Near Mess | | | | | | Plant Boundary towards Stack & Reclaimer | | | | | | Plant boundary towards village Khera & Jawangarh | | | | | |
| | AAQ in $\mu\text{g}/\text{M}^3$ | | | | Noise Level in dB(A) | | AAQ in $\mu\text{g}/\text{M}^3$ | | | | Noise Level in dB(A) | | AAQ in $\mu\text{g}/\text{M}^3$ | | | | Noise Level in dB(A) | | AAQ in $\mu\text{g}/\text{M}^3$ | | | | Noise Level in dB(A) | |
| Parameter | PM 2.5 | PM 10 | SO ₂ | NO ₂ | Day time | Night time | PM 2.5 | PM 10 | SO ₂ | NO ₂ | Day time | Night time | PM 2.5 | PM 10 | SO ₂ | NO ₂ | Day time | Night time | PM 2.5 | PM 10 | SO ₂ | NO ₂ | Day time | Night time |
| Apr-16 | 20. | 38.7 | 8.6 | 10.7 | 59.6 | 50.7 | 21.8 | 40.9 | 9.2 | 11.2 | 62.1 | 53.6 | 27.6 | 39.3 | 8.5 | 10.5 | 61.3 | 52.2 | 23.3 | 39.2 | 8.8 | 10.8 | 62.8 | 51.6 |
| May-16 | 31. | 51.4 | 8.4 | 9.8 | 60.1 | 49.6 | 34.5 | 49.9 | 8.5 | 10.3 | 65.3 | 52.3 | 36.0 | 50.8 | 8.1 | 9.7 | 60.0 | 51.6 | 32.0 | 49.3 | 8.6 | 10.0 | 67.5 | 52.2 |
| Jun-16 | 33. | 56.5 | 11.3 | 10.9 | 71.1 | 61.2 | 40.4 | 55.0 | 9.5 | 11.4 | 69.5 | 55.2 | 41.4 | 51.8 | 9.9 | 11.0 | 72.2 | 54.2 | 32.1 | 53.9 | 10.4 | 11.1 | 65.3 | 55.3 |
| Jul-16 | 33. | 51.6 | 11.2 | 11.0 | 72.1 | 60.8 | 39.1 | 51.5 | 10.4 | 11.5 | 70.4 | 56.4 | 40.4 | 49.1 | 10.4 | 11.1 | 73.1 | 55.2 | 33.8 | 50.3 | 10.4 | 11.1 | 66.4 | 55.4 |
| Aug-16 | 27. | 46.0 | 9.3 | 10.9 | 72.1 | 59.4 | 26.4 | 45.0 | 9.9 | 11.4 | 70.5 | 58.4 | 27.4 | 46.0 | 9.4 | 10.9 | 71.5 | 55.4 | 25.8 | 43.9 | 9.5 | 11.0 | 70.9 | 56.1 |
| Sep-16 | 28. | 47.0 | 10.3 | 10.5 | 73.1 | 61.1 | 27.0 | 45.9 | 11.2 | 11.3 | 71.1 | 57.1 | 27.8 | 46.6 | 10.5 | 10.8 | 72.4 | 54.4 | 25.4 | 44.4 | 10.6 | 10.8 | 67.2 | 55 |
| Oct-16 | 34. | 55.5 | 10.7 | 12.7 | 72.4 | 62.4 | 34.1 | 53.8 | 11.3 | 12.1 | 71.9 | 59.1 | 31.1 | 50.6 | 10.7 | 11.9 | 72.1 | 59.4 | 30.3 | 49.8 | 10.8 | 11.8 | 68.5 | 58.1 |
| Nov-16 | 35. | 56.1 | 12.3 | 11.6 | 71.5 | 64.8 | 33.4 | 51.3 | 12.1 | 11.8 | 70.6 | 60.1 | 30.3 | 47.8 | 11.8 | 11.3 | 71.9 | 61.4 | 29.5 | 46.5 | 11.6 | 11.4 | 67.6 | 57.3 |
| Dec-16 | 36. | 53.9 | 11.6 | 12.3 | 70.2 | 65.4 | 31.6 | 50.3 | 12.1 | 12.2 | 68.1 | 61.7 | 30.6 | 48.4 | 11.4 | 11.1 | 72.6 | 63.1 | 29.5 | 47.0 | 11.3 | 11.2 | 66.1 | 58.4 |
| Jan-17 | 37. | 58.5 | 11.8 | 13.1 | 71.2 | 67.5 | 33.5 | 53.5 | 11.4 | 12.6 | 67.8 | 62.6 | 31.5 | 51.8 | 10.5 | 11.7 | 71.5 | 62.4 | 30.0 | 49.1 | 10.7 | 11.5 | 67.5 | 57.8 |
| Feb-17 | 38. | 59.3 | 11.1 | 12.7 | 72.5 | 68.1 | 35.1 | 54.5 | 10.7 | 12.0 | 68.9 | 63.4 | 31.9 | 51.0 | 9.8 | 11.1 | 72.3 | 61.6 | 29.6 | 47.8 | 9.5 | 10.8 | 69.1 | 58.6 |
| Mar-17 | 37. | 56.5 | 10.9 | 12.5 | 71.2 | 65.3 | 34.8 | 54.0 | 10.4 | 11.8 | 69 | 62.2 | 31.4 | 49.9 | 9.6 | 10.9 | 71.2 | 60.6 | 29.0 | 46.1 | 9.3 | 10.6 | 70.2 | 59.3 |
| Average | 32.9 | 52.6 | 10.6 | 11.6 | 69.8 | 61.4 | 32.6 | 50.5 | 10.6 | 11.6 | 68.8 | 58.5 | 32.3 | 48.6 | 10.1 | 11.0 | 70.2 | 57.6 | 29.2 | 47.3 | 10.1 | 11.0 | 67.4 | 56.3 |

Annexure: 3

| (STP Treated Water Quality, Year 2016-2017) | | | | | | | | | | | | | | |
|---|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| S. No. | Parameter | Apr-16 | May-16 | Jun-16 | Jul-16 | Aug-16 | Sep-16 | Oct-16 | Nov-16 | Dec-16 | Jan-17 | Feb-17 | Mar-17 | Avg |
| 1 | pH | 7.2 | 7.1 | 6.9 | 6.9 | 7.0 | 7.2 | 7.3 | 7.2 | 7.5 | 7.3 | 7.2 | 7.2 | 7.2 |
| 2 | Suspended Solids | 60.1 | 58.3 | 56.5 | 57.8 | 55.4 | 56.8 | 60.4 | 58.4 | 60.1 | 55.8 | 68.4 | 75.9 | 60.3 |
| 3 | Oil and Grease | 0.1 | 0.1 | 0.1 | 0.7 | 0.9 | 0.8 | 0.7 | 1.2 | 1.1 | 0.9 | 1.1 | 1.5 | 0.8 |
| 4 | BOD 3days 27°C | 10.3 | 10.2 | 9.5 | 10.1 | 10.5 | 11.8 | 18.1 | 17.3 | 20.1 | 18.2 | 17.6 | 19.1 | 14.4 |
| 5 | COD | 80.5 | 79.5 | 77.5 | 81.2 | 78.4 | 70.4 | 64.2 | 61.5 | 68.4 | 57.1 | 61.5 | 57.4 | 69.8 |