

ECO CEMENTS LTD.



ENVIRONMENTAL STATEMENT REPORT FORM-V 2017 - 2018

ECL/ BIHAR/ESR/MOEF/FORM-V/KCJ-7

DATED- 25.06.2018

To,
Scientist 'E' & In-charge,
Central Pollution Control Board,
Southern Conclave, Block 502, 5TH & 6TH Floors,
1582 Rajdanga Main Road,
Kolkata – 700107 (W.B.)

Sub.: Revised Environmental Statement Report (FORM-V) of M/s. ECO CEMENTS LTD for the period of April 2017 to March 2018.

Ref.: Consent to operate letter No. T-7001 & T-7002, DATED -27/12/2017

Dear Sir,

We are submitting herewith the yearly Environmental Statement Report of **Eco Cements Limited**, Plot No. 1644, Bheriya More, Kulharia, Durgauti, Bhabua, Bihar, Pin code- 821105 for the period of April 2017 to March, 2018

Kindly acknowledge the receipt and oblige.

Thanking you.

Yours Faithfully,

For Eco Cements Ltd.

ECO CEMENTS LTD.

Auth. Signatory

(Authorized Sign)

Copy to.

1. **The Chairman,**
Bihar State Pollution Control Board,
Parivesh Bhavan, N.S.B.-2,
Patliputra Industrial Area, Patliputra,
Patna, Bihar – 800010
2. **Ministry of Environment and Forests,**
BANGLOW NO. A-2, SHYAMLI CALONY,
RANCHI-834002, JHARKHAND
PH. 0651-2410007, 2410002

ENVIRONMENTAL STATEMENTS

FORM-V

(See Rule-14)

The Ministry of Environment & Forest its vide its notification dated 13th March,1992 directed all industries which need to have consent under Water (Prevention & Control of Pollution) Act,1974 and Air (Prevention & Control of Pollution) Act,1981 to file the environmental statement under Environmental Protection Act.1986 every year. This is to be filed for the period ending of March by September every year The format for the same is as follows:-

PART—A

| | | |
|----------|---|--|
| 1 | Name and address of the Owner / Occupier of the Industry operation or process | Eco Cements Limited, Plot No. 1644, Bheriya More, Kulharia, Durgauti, Bhabua, Bihar, Pin code- 821105 |
| 2 | Industry Category Primary (S.T.C. Code) Secondary (S.T.C. Code) | Red Category |
| 3 | Production Capacity Cement : D. G. Set | 1.00 MTPA 500 KVA&125 KVA |
| 4 | Year of Establishment | 2012 |
| 5 | Date of the last Environmental Statement submitted. | 25.06.2017 |

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 | 563.995 KL |
| Domestic | 310.25KL |

| Name of Product | Process water consumption per unit of product Output | |
|-----------------|--|---|
| | During Previous Financial Year (2016-17) | During Current Financial Year (2017-18) |
| PPC Cement | .00119 KL/ MT OF CEMENT PRODUCTION | .00127 KL/ MT OF CEMENT PRODUCTION |

(II) RAW MATERIAL CONSUMPTION: (CEMENT PLANT)

| Name of Raw Material | Name or Product | Consumption of Raw Material per unit of Output (Cement) | |
|----------------------|-----------------|--|---------------------------------------|
| | | During Previous Financial year (16-17) | During Current Financial year (17-18) |
| Clinker | PPC Cement | 0.741 | 0.756 |
| Gypsum | | 0.036 | 0.057 |
| Fly Ash | | 0.252 | 0.212 |

RAW MATERIAL CONSUMPTION: (D.G. SET)

| Name of Raw Material | Name of Product | Consumption of Raw Material per unit of Output(Cement) | |
|----------------------|-----------------|---|-------------------------------------|
| | | During Previous Financial Year 16-17 | During Current Financial Year 17-18 |
| Fuel/ Diesel | Power | 0.299 | 0.123 |

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

| During Previous Financial Year 16-17 | During Current Financial Year 17-18 |
|--------------------------------------|-------------------------------------|
| 41.71 KWH/T | 41.85 KWH/T |

(IV) TOTAL CEMENT PRODUCTION (MT):

| During Previous Financial Year (2016-2017) | During Current Financial Year (2017-2018) |
|--|---|
| 260414.338 MT | 444090.555 MT |

PART-C

DISCHARGED TO ENVIRONMENTAL / UNIT OF OUTPUT

| Pollutants | Quantity of Pollutants Discharged (Mass/Day) | Concentration of Pollutants in Discharges (Mass/ day) | Percentage of variation from prescribed standards with reasons |
|------------|---|--|--|
| (a) | Water | As the plant is being operated on dry process technology, no liquid effluent is generated from the plant, Waste water generated from office toilet and mess is disposed-off in a soak pit via septic tank | |
| (b) | Air | Please refer Annexure - I, II & III | |

PART—D

HAZARDOUS WASTE

(As specified under Hazardous Waste (Management, Handling and Trans boundary Movement) Rules, 2008

| Hazardous Waste | Total Quantity (Ltrs) | |
|--|---|--|
| | During Previous Financial Year (April 2016- March 2017) | During Current Financial Year (April 2017-March 2018) |
| | We are having common authorization for Hazardous Waste Management & Handling for Clinker Grinding Unit (Cement 1.0 MTPA & 125 KVA& 500 KVA D. G. Set) | |
| a) From Process, Cement manufacturing (Grinding) is based on "Dry Process" No Hazardous waste is generated from the process except used oil which is drained from Machinery / Equipments | Total Quantity Generated in 2016-17: 110Ltrs Old Stock : 865Ltrs Sale out : NIL Ltrs Balance : 975Ltrs | Total Quantity Generated in 2017-18: 115 Ltrs Old Stock : 975Ltrs Sale out : NIL Ltrs Balance : 1090 Ltrs |
| (b) From Pollution Control Facilities | N.A | N.A |

PART—E
SOLID WASTE

| | | Total Quantity | |
|-----|-------------------------------------|---|-------------------------------|
| | | During Previous Financial Year | During Current Financial Year |
| (a) | From Process | Nil | Nil |
| (b) | From Pollution Control Facility | Dust collected in the Bag Houses and Bag Filters is recycled/reused in process. | |
| (c) | 1) Quantity rejected or re-utilized | 100% | 100% |
| | 2) Sold | Nil | Nil |
| | 3) Disposed | Nil | 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. Used oil is **sold to the** authorized recyclers/self-used for lubrication.

Solid Wastes: - N.A.

PART—G

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

Clinker grinding unit is being operated on dry process technology, which is cost effective and environmentally clean technology. 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 / reused 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. Every year we are doing new tree plantation to increase the bio-diversity of the area. Up to March, 2018, we have covered 3.08 hectare, around 4580 trees with the survival rate of 92.58% , this is around 33.13 % green area of the total plant area (9.3 hect.). Additional to this we have planted 1500 tree saplings at Nearby schools, outside plant area, both side of Bheria road to enhance the greenery and prosperity of the area.

PART — I

ANY OTHER PARTICULARS FOR IMPROVING THE QUALITY OF ENVIRONMENT.

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

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

Annexure-1 : Ambient Air Quality Monitoring Report for the year 2017-18

Annexure-II : Stack Emission Level Monitoring Report for the year 2017-18

Annexure-III : Ambient Noise level Monitoring Report for the year 2017-18

Annexure-I

Ambient Air Quality Monitoring Report for the year 2017-18

| Ambient Air Quality Monitoring Report (All Values in µg/m ³) | | | | | | | | | | | | | | | | | |
|--|----------|------------------|-------------------|-----------------|-----------------|------------------|-------------------|-----------------|-----------------|------------------|-------------------|-----------------|-----------------|-------------------------------|-------------------|-----------------|-----------------|
| Year: 2017 - 2018 (APR 2017 TO MARCH 2018) | | | | | | | | | | | | | | | | | |
| S. No. | Location | Near Main Gate | | | | Near CCR | | | | Near Canteen | | | | Near Gypsum & Clinker Storage | | | |
| | Month | PM ₁₀ | PM _{2.5} | SO ₂ | NO ₂ | PM ₁₀ | PM _{2.5} | SO ₂ | NO ₂ | PM ₁₀ | PM _{2.5} | SO ₂ | NO ₂ | PM ₁₀ | PM _{2.5} | SO ₂ | NO ₂ |
| 1 | Apr-17 | 51.5 | 40.5 | 17.1 | 32.6 | 68.6 | 44.2 | 13.7 | 17.5 | 53.2 | 36.9 | 14.2 | 18.8 | 56.4 | 44.3 | 11.7 | 15.4 |
| 2 | May-17 | 83.3 | 43.5 | 10.3 | 26.1 | 75.2 | 39.3 | 8.2 | 14.0 | 72.4 | 37.8 | 8.5 | 15.1 | 74.1 | 38.7 | 6.6 | 9.2 |
| 3 | Jun-17 | 62.5 | 32.7 | 14.3 | 22.7 | 56.4 | 29.5 | 9.5 | 10.6 | 54.3 | 28.4 | 11.6 | 17.3 | 55.6 | 29.1 | 10.4 | 16.1 |
| 4 | Jul-17 | 55.0 | 28.8 | 16.4 | 19.3 | 49.7 | 25.9 | 10.9 | 12.2 | 47.8 | 24.9 | 13.4 | 19.9 | 48.9 | 25.6 | 12.0 | 18.5 |
| 5 | Aug-17 | 56.1 | 33.3 | 14.0 | 18.3 | 60.5 | 35.9 | 9.3 | 11.6 | 55.1 | 32.7 | 11.4 | 14.9 | 66.1 | 39.2 | 18.2 | 17.6 |
| 6 | Sep-17 | 62.8 | 37.2 | 8.7 | 13.9 | 57.5 | 34.1 | 7.9 | 12.9 | 52.4 | 31.1 | 9.7 | 11.2 | 53.3 | 31.6 | 11.9 | 17.4 |
| 7 | Oct-17 | 53.4 | 31.3 | 12.1 | 21.3 | 49.6 | 28.6 | 8.4 | 14.7 | 44.7 | 27.3 | 7.4 | 15.8 | 52.6 | 29.8 | 6.2 | 12.8 |
| 8 | Nov-17 | 58.0 | 34.4 | 14.6 | 27.1 | 49.3 | 28.4 | 9.6 | 15.1 | 46.3 | 27.2 | 7.0 | 12.6 | 52.4 | 29.6 | 5.8 | 11.5 |
| 9 | Dec-17 | 65.2 | 36.5 | 10.3 | 22.3 | 60.2 | 35.8 | 7.4 | 14.3 | 56.5 | 33.6 | 6.8 | 13.2 | 56.8 | 33.8 | 8.1 | 12.6 |
| 10 | Jan-18 | 50.2 | 29.2 | 11.4 | 21.2 | 41.7 | 24.3 | 8.3 | 16.6 | 40.9 | 23.6 | 7.4 | 14.1 | 42.6 | 24.6 | 7.8 | 15.6 |
| 11 | Feb-18 | 48.4 | 28.2 | 13.3 | 24.5 | 38.1 | 22.2 | 9.6 | 19.2 | 32.3 | 18.6 | 8.6 | 16.3 | 39.7 | 22.9 | 9.0 | 18.1 |
| 12 | Mar-18 | 55.5 | 32.4 | 12.0 | 27.9 | 44.8 | 26.3 | 9.6 | 15.8 | 41.2 | 24.0 | 7.6 | 16.8 | 44.9 | 26.1 | 7.3 | 13.5 |
| Average | | 58.49 | 34.00 | 12.88 | 23.10 | 54.30 | 31.21 | 9.37 | 14.54 | 49.76 | 28.84 | 9.47 | 15.50 | 53.62 | 31.28 | 9.58 | 14.86 |

Annexure-II

Stack Emission Level Monitoring Report for the period APRIL 2017 TO MARCH 2018

| Stack Emission Level Monitoring Report for the period APRIL 2017 TO MARCH 2018 | | | | | | | | |
|--|----------|--|--|--|---|--------------------------------|--------------------------------|---|
| All Values in mg/m ³ | | | | | | | | |
| Sr. No. | Location | Particulate Matter Emission (mg/Nm ³) | | | | | | Standard Limit of Particulate Matter Emission |
| | Month | Stack Attached with Bag House of Cement Mill | Stack Attached with Bag House of flyash unloader | Stack Attached with Bag House of Clinker & gypsum unloader | Stack Attached with Bag House of gypsum & clinker feeding | Stack Attached with DG 500 KVA | Stack Attached with DG 125 KVA | |
| 1 | Apr-17 | 25.6 | 24.8 | 25.1 | 26.5 | 39.1 | 44.6 | 50 mg/Nm ³ |
| 2 | May-17 | 28.1 | 26.8 | 23.3 | 24.5 | 46.3 | 45.2 | |
| 3 | Jun-17 | 26.6 | 23.9 | 21.1 | 26.8 | 53.4 | 42.6 | |
| 4 | Jul-17 | 23.5 | 22.3 | 22.5 | 25.5 | 46.1 | 48.7 | |
| 5 | Aug-17 | 25.6 | 20.2 | 20.1 | 27.6 | 50.3 | 51.6 | |
| 6 | Sep-17 | 22.7 | 24.1 | 21.6 | 22.2 | 43.8 | 46.3 | |
| 7 | Oct-17 | 24.7 | - | 24.9 | 23.8 | 50.2 | 53.4 | |
| 8 | Nov-17 | 25.9 | - | 23.0 | 22.1 | 41.5 | 44.1 | |
| 9 | Dec-17 | 22.4 | - | 25.2 | 20.0 | 44.6 | 47.4 | |
| 10 | Jan-18 | 23.9 | - | 24.0 | 21.4 | 53.8 | 57.2 | |
| 11 | Feb-18 | 32.0 | - | 25.9 | 19.1 | 45.3 | 48.2 | |
| 12 | Mar-18 | 33.9 | - | 20.9 | 20.6 | 48.6 | 51.7 | |
| Average Values | | 26.24 | 11.84 | 23.13 | 23.34 | 46.92 | 48.42 | |

Annexure-III

Ambient Noise level Monitoring Report for the year 2017-18 (dB(A))

TIME WEIGHTED AVERAGE (TWA) OF NOISE LEVEL IN dB(A)

| Ambient Noise level Monitoring Report From APRIL 2016 TO MARCH 2017 dB(A) TIME WEIGHTED AVERAGE (TWA) OF NOISE LEVEL IN dB(A) | | | | | | | |
|---|----------|-------------------------------|-------------------------|-----------------------------|------------------------------------|-------------------------------------|------------------------------------|
| S. No. | Location | Plant boundary near Main gate | Plant boundary near CCR | Plant boundary near Canteen | Plant boundary near Gypsum storage | Plant boundary near clinker storage | Prescribed Standard Limit dB(A) |
| | Month | | | | | | |
| 1 | Apr-17 | 72.1 | 69.2 | 70.9 | 65.2 | 67.3 | 75dB(A) in day & 70 dB(A) in night |
| 2 | May-17 | 68.9 | 70.8 | 66.4 | 64.2 | 68.3 | |
| 3 | Jun-17 | 73.2 | 72.3 | 69.7 | 63.3 | 64.4 | |
| 4 | Jul-17 | 70.5 | 69.5 | 64.8 | 68.6 | 66.1 | |
| 5 | Aug-17 | 69.4 | 71.6 | 67.1 | 64.9 | 65.1 | |
| 6 | Sep-17 | 71.6 | 68.3 | 66.8 | 65.5 | 67.1 | |
| 7 | Oct-17 | 69.8 | 67.8 | 68.3 | 62.9 | 63.1 | |
| 8 | Nov-17 | 71.3 | 69.4 | 67.5 | 63.2 | 66.8 | |
| 9 | Dec-17 | 68.4 | 66.2 | 63.8 | 64.9 | 62.8 | |
| 10 | Jan-18 | 70.2 | 67.1 | 66.2 | 62.8 | 63.7 | |
| 11 | Feb-18 | 72.4 | 69.3 | 64.1 | 65.7 | 67.2 | |
| 12 | Mar-18 | 69.1 | 66.2 | 61.2 | 67.1 | 64.8 | |
| Average Values | | 70.6 | 69.0 | 66.4 | 64.9 | 65.6 | |

* Day time reckoned from 06 00AM to 10:00 PM

** Night time reckoned from 10:00 PM to 06:00 AM



SHIVA TEST HOUSE

Tel: 0612-2247938, 2240752; Fax: 0612-2890703
 E-mail: shivapatna@yahoo.co.in

ISO 19001:2007
 OHSAS Certified

RECOGNISED AS ENVIRONMENTAL LABORATORY BY CENTRAL GOVT. UNDER ENVIRONMENT (PROTECTION) ACT 1986,
 BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECL/TR/17-18/70(g)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE W.O./RS/2017 Dt: 10.04.17</i> | | | | | | | |
|---|---|--|-------------|--------------|------------------------------------|--------------------------|--|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | | |
| [b] | Report to be submitted to | <i>Director</i> | | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>16/17.04.17</i> | | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | | |
| [f] | Items required to be tested | As per request | | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | | |
| [h] | Date of receiving the sample | <i>17.04.17</i> | | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. 2009 | |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 45.1 | 82.3 | 53.2 | 52.8 | 100 µg / m ³ | |
| | | 55.2 | 60.4 | 47.4 | 57.7 | | |
| | | 54.2 | 63.0 | 59.0 | 58.6 | | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 41.0 | 33.3 | 36.4 | 42.8 | 60 µg / m ³ | |
| | | 38.4 | 43.6 | 43.5 | 36.9 | | |
| | | 41.9 | 55.6 | 30.9 | 53.3 | | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 14.9 | 13.6 | 15.7 | 12.4 | 80 µg / m ³ | |
| | | 14.0 | 15.7 | 14.7 | 11.4 | | |
| | | 19.8 | 14.1 | 12.7 | 12.1 | | |
| | | 19.7 | 13.5 | 13.1 | 11.9 | | |
| | | 18.2 | 13.2 | 15.2 | 10.3 | | |
| | | 16.2 | 12.1 | 13.9 | 12.2 | | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 30.9 | 15.2 | 17.6 | 12.6 | 80 µg / m ³ | |
| | | 29.8 | 14.2 | 16.3 | 14.7 | | |
| | | 39.0 | 25.7 | 21.4 | 15.1 | | |
| | | 25.7 | 17.3 | 19.0 | 20.2 | | |
| | | 32.7 | 16.5 | 18.0 | 15.6 | | |
| | | 37.4 | 16.0 | 20.6 | 14.1 | | |
| 24 Hrs. Average Value | | | | | | | |
| | PM ₁₀ | | 51.5 | 68.6 | 53.2 | 56.4 | |
| | PM _{2.5} | | 40.4 | 44.2 | 36.9 | 44.3 | |
| | SO ₂ | | 17.1 | 13.7 | 14.2 | 11.7 | |
| | NO ₂ | | 32.6 | 17.5 | 18.8 | 15.4 | |



[Signature]
 Authorized Signatory
 Quality Manager / Dy. Quality Manager

1. This report applies only to sample tested as above.
2. Total Liability of our Laboratory is limited to invoiced amount.
3. Test Report endorsed only the tests and not the product certificate.
4. Test Report can not be reproduced partially or full for legal/court purpose without written permission of the Laboratory



SHIVA TEST HOUSE

Tel. 0612 - 2247833, 2240752, Te/Fax: 0612 - 2590705
E mail: shivapatna@yahoo.co.in

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BY DEPT. OF INDUSTRY, FORESTS & ENVIRONMENT GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECLTR/17-18/127(g)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|--|---|--|----------|--------------|------------------------------------|------------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | <i>Director</i> | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>10/11.05.17</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>11.05.17</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), $\mu\text{g}/\text{m}^3$ | IS 5182 (Part-23) | 96.8 | 87.5 | 70.8 | 81.5 | 100 $\mu\text{g}/\text{m}^3$ |
| | | 81.3 | 67.6 | 80.2 | 75.2 | |
| | | 71.9 | 70.6 | 66.1 | 65.6 | |
| 2. Particulate Matter (PM _{2.5}), $\mu\text{g}/\text{m}^3$ | CPCB | 50.6 | 45.7 | 37.0 | 42.6 | 60 $\mu\text{g}/\text{m}^3$ |
| | | 42.5 | 35.3 | 41.9 | 39.3 | |
| | | 37.6 | 36.9 | 34.5 | 34.3 | |
| 3. Sulphur Dioxide as SO ₂ , $\mu\text{g}/\text{m}^3$ | IS 5182 (Part-2) | 8.9 | 8.2 | 9.4 | 6.9 | 80 $\mu\text{g}/\text{m}^3$ |
| | | 8.4 | 9.4 | 8.8 | 8.2 | |
| | | 11.9 | 8.5 | 7.6 | 7.3 | |
| | | 11.8 | 8.1 | 7.9 | 6.1 | |
| | | 10.9 | 7.9 | 9.1 | 5.9 | |
| 4. Nitrogen Dioxide as NO ₂ , $\mu\text{g}/\text{m}^3$ | IS 5182 (Part-6) | 24.7 | 12.2 | 14.1 | 7.6 | 80 $\mu\text{g}/\text{m}^3$ |
| | | 23.8 | 11.4 | 13.0 | 8.8 | |
| | | 31.2 | 20.6 | 17.1 | 9.1 | |
| | | 20.6 | 13.8 | 15.2 | 12.1 | |
| | | 26.2 | 13.2 | 14.4 | 9.4 | |
| 29.9 | 12.8 | 16.5 | 8.5 | | | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 83.3 | 75.2 | 72.4 | 74.1 | |
| | PM _{2.5} | 43.5 | 39.3 | 37.8 | 38.7 | |
| | SO ₂ | 10.3 | 8.2 | 8.5 | 6.6 | |
| | NO ₂ | 26.1 | 14.0 | 15.1 | 9.2 | |



[Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

1. This report applies only to sample tested as above.
2. Total Liability of our Laboratory is limited to invoiced amount.
3. Test Report endorsed only the tests and not the product certificate.
4. Test Report can not be reproduced partially or full for legal/court purpose without written permission of the Laboratory.



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 E-mail: sthpatna1@yahoo.co.in

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 BY DEPTT OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECL/TR/17-18/158(g)</i> Dt: <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|---|---|---|----------|--------------|------------------------------------|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>04/05.06.17</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>05.06.17</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 72.6 | 65.6 | 53.1 | 61.1 | 100 µg / m ³ |
| | | 61.0 | 50.7 | 60.2 | 56.4 | |
| | | 53.9 | 53.0 | 49.6 | 49.2 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 38.0 | 34.3 | 27.8 | 32.0 | 60 µg / m ³ |
| | | 31.9 | 26.5 | 31.4 | 29.5 | |
| | | 28.2 | 27.7 | 25.9 | 25.7 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 18.9 | 10.8 | 15.4 | 9.4 | 80 µg / m ³ |
| | | 15.2 | 9.4 | 11.7 | 10.8 | |
| | | 14.5 | 8.4 | 13.6 | 12.2 | |
| | | 13.6 | 7.6 | 10.7 | 11.7 | |
| | | 12.5 | 9.0 | 9.9 | 10.0 | |
| 4 Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 21.0 | 8.7 | 16.2 | 14.0 | 80 µg / m ³ |
| | | 25.0 | 10.1 | 15.0 | 13.1 | |
| | | 23.9 | 10.5 | 19.7 | 23.7 | |
| | | 18.4 | 13.9 | 17.5 | 15.9 | |
| | | 22.3 | 10.8 | 16.6 | 15.2 | |
| | | 25.4 | 9.8 | 19.0 | 14.7 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 62.5 | 56.4 | 54.3 | 55.6 | |
| | PM _{2.5} | 32.7 | 29.5 | 28.4 | 29.1 | |
| | SO ₂ | 14.3 | 9.5 | 11.6 | 10.4 | |
| | NO ₂ | 22.7 | 10.6 | 17.3 | 16.1 | |



[Signature]

Authorized Signatory
 Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

Te : 061-2660111-2660112 Fax : 0612-2590705
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 BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

Ref.No. *ECL/TR/17-18/202(g)* Dt : *14.07.2017* Your PO No. *ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017* Dt : *10.04.17*

| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
|--|---|--|----------|--------------|------------------------------------|--------------------------------|
| [b] | Report to be submitted to | <i>Director</i> | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>08/09.07.17</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>09.07.17</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. 2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), $\mu\text{g} / \text{m}^3$ | IS 5182 (Part-23) | 63.9 | 57.8 | 46.7 | 53.8 | 100 $\mu\text{g} / \text{m}^3$ |
| | | 53.7 | 44.6 | 52.9 | 49.6 | |
| | | 47.5 | 46.6 | 43.6 | 43.3 | |
| 2. Particulate Matter (PM _{2.5}), $\mu\text{g} / \text{m}^3$ | CPCB | 33.4 | 30.2 | 24.4 | 28.1 | 60 $\mu\text{g} / \text{m}^3$ |
| | | 28.1 | 23.3 | 27.7 | 25.9 | |
| | | 24.8 | 24.4 | 22.8 | 22.6 | |
| 3. Sulphur Dioxide as SO ₂ , $\mu\text{g} / \text{m}^3$ | IS 5182 (Part-2) | 21.7 | 12.4 | 17.7 | 10.8 | 80 $\mu\text{g} / \text{m}^3$ |
| | | 17.5 | 10.8 | 13.5 | 12.4 | |
| | | 16.7 | 9.7 | 15.6 | 14.0 | |
| | | 15.6 | 8.7 | 12.3 | 13.5 | |
| | | 14.4 | 10.3 | 11.4 | 11.5 | |
| 4. Nitrogen Dioxide as NO ₂ , $\mu\text{g} / \text{m}^3$ | IS 5182 (Part-6) | 17.8 | 10.1 | 18.6 | 16.1 | 80 $\mu\text{g} / \text{m}^3$ |
| | | 21.2 | 11.6 | 17.2 | 15.1 | |
| | | 20.3 | 12.0 | 22.6 | 27.2 | |
| | | 15.7 | 16.0 | 20.1 | 18.3 | |
| | | 18.9 | 12.4 | 19.0 | 17.5 | |
| | | 21.6 | 11.2 | 21.8 | 16.9 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 55.0 | 49.7 | 47.8 | 48.9 | |
| | PM _{2.5} | 28.8 | 25.9 | 24.9 | 25.6 | |
| | SO ₂ | 16.4 | 10.9 | 13.4 | 12.0 | |
| | NO ₂ | 19.3 | 12.2 | 19.9 | 18.5 | |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

Ref.No. *ECL/TR/17-18/285(g)* Dt : *01.09.2017* Your PO No. *ECO/BHR/SHIVA TEST HOUSE AV.O./RS/2017* Dt : *10.04.17*

| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | | |
|---|---|--|----------|--------------|------------------------------------|---------------------------|--|
| [b] | Report to be submitted to | <i>Director</i> | | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>22/23.08.17</i> | | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | | |
| [f] | Items required to be tested | As per request | | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | | |
| [h] | Date of receiving the sample | <i>23.08.17</i> | | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 | |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 52.9 | 50.0 | 51.9 | 72.7 | 100 µg / m ³ | |
| | | 59.8 | 66.8 | 54.5 | 65.0 | | |
| | | 55.7 | 64.7 | 59.0 | 60.5 | | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 31.4 | 29.6 | 30.8 | 43.1 | 60 µg / m ³ | |
| | | 35.5 | 39.6 | 32.3 | 38.6 | | |
| | | 33.0 | 38.4 | 35.0 | 35.9 | | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 18.4 | 10.6 | 15.1 | 9.2 | 80 µg / m ³ | |
| | | 14.8 | 9.2 | 11.5 | 10.6 | | |
| | | 14.2 | 8.2 | 13.3 | 11.9 | | |
| | | 13.3 | 7.4 | 10.5 | 11.5 | | |
| | | 12.3 | 8.8 | 9.7 | 9.8 | | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 17.0 | 9.5 | 14.0 | 15.3 | 80 µg / m ³ | |
| | | 20.2 | 11.1 | 12.9 | 14.3 | | |
| | | 19.3 | 11.4 | 17.0 | 25.9 | | |
| | | 14.9 | 15.2 | 15.1 | 17.3 | | |
| | | 18.0 | 11.8 | 14.3 | 16.6 | | |
| | | 20.5 | 10.7 | 16.4 | 16.1 | | |
| 24 Hrs. Average Value | | | | | | | |
| | PM ₁₀ | | 56.1 | 60.5 | 55.1 | 66.1 | |
| | PM _{2.5} | | 33.3 | 35.9 | 32.7 | 39.2 | |
| | SO ₂ | | 14.0 | 9.3 | 11.4 | 10.2 | |
| | NO ₂ | | 18.3 | 11.6 | 14.9 | 17.6 | |



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 BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECL/TR/17-18/333(g)</i> Dt : <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|---|---|---|----------|--------------|------------------------------------|--------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>18/19 09 17</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>19.09.17</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. 2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 69.1 | 47.5 | 49.3 | 50.3 | 100 µg / m ³ |
| | | 61.8 | 63.4 | 51.8 | 56.8 | |
| | | 57.5 | 61.5 | 56.1 | 52.9 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 40.9 | 28.1 | 29.3 | 29.8 | 60 µg / m ³ |
| | | 36.6 | 37.6 | 30.7 | 33.7 | |
| | | 34.1 | 36.5 | 33.3 | 31.4 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 7.8 | 9.0 | 12.8 | 15.7 | 80 µg / m ³ |
| | | 9.0 | 7.8 | 9.7 | 12.6 | |
| | | 10.1 | 7.0 | 11.3 | 12.0 | |
| | | 9.7 | 6.3 | 8.9 | 11.3 | |
| | | 8.3 | 7.5 | 8.2 | 10.4 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 21.0 | 15.6 | 10.5 | 16.1 | 80 µg / m ³ |
| | | 16.0 | 13.9 | 9.7 | 19.2 | |
| | | 13.9 | 12.2 | 12.7 | 18.3 | |
| | | 12.2 | 14.4 | 11.3 | 14.1 | |
| | | 10.8 | 11.2 | 10.7 | 17.1 | |
| | | 9.7 | 10.1 | 12.3 | 19.5 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | | 62.8 | 57.5 | 52.4 | 53.3 |
| | PM _{2.5} | | 37.2 | 34.1 | 31.1 | 31.6 |
| | SO ₂ | | 8.7 | 7.9 | 9.7 | 11.9 |
| | NO ₂ | | 13.9 | 12.9 | 11.2 | 17.4 |



Kresan

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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| | |
|--|--|
| Ref.No. <i>ECL/TR/17-18/70(i)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Du: <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on <i>16.04.17</i> |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 72.1 |
| 2. Near CCR | 69.2 |
| 3. Near Canteen | 70.9 |
| 4. Near Gypsum Storage Area | 65.2 |
| 5. Near Clinker Storage Area | 67.3 |
| N.B.: | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone</i> |



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Quality Manager / Dy. Quality Manager

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Regd. Office :

SHIVA TEST HOUSE
RAJHANS NIKETAN,
PATNA - 800 014 (BIHAR)



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PATNA - 800 014 (BIHAR)

SHIVA TEST HOUSE

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TEST REPORT

Ref.No. *ECL/TR/17-18/127(i)* Dt : *22.05.2017* Your PO No. *ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017 Dt : 10.04.17*

| | |
|---|--|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on <i>10.05.17</i> |
| [f] Whether any specific Method of Test has been suggested by the party | No |

| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
|------------------------------|---|
| 1. Near Main Gate | 68.9 |
| 2. Near CCR | 70.8 |
| 3. Near Canteen | 66.4 |
| 4. Near Gypsum Storage Area | 64.2 |
| 5. Near Clinker Storage Area | 68.3 |

N.B. The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.



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Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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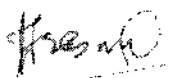
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TEST REPORT

| | |
|---|---|
| Ref.No. <i>ECL/TR/17-18/158(i)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BIHAR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on <i>04.06.17</i> |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 73.2 |
| 2. Near CCR | 72.3 |
| 3. Near Canteen | 69.7 |
| 4. Near Gypsum Storage Area | 63.3 |
| 5. Near Clinker Storage Area | 64.4 |
| N.B. | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.</i> |




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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | |
|--|---|
| Ref.No. ECL/TR/17-18/202(i) Dt : 14.07.2017 Your PO No. ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017 Dt : 10.04.17 | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | Director |
| [c] Details of Sample | Monitoring of Ambient Noise Level |
| [d] Monitored by | SHIVA TEST HOUSE on 08.07.17 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 70.5 |
| 2. Near CCR | 69.5 |
| 3. Near Canteen | 64.8 |
| 4. Near Gypsum Storage Area | 68.6 |
| 5. Near Clinker Storage Area | 66.1 |
| N.B.: | The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone |



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TEST REPORT

| | |
|---|---|
| Ref.No. <i>ECL/TR/17-18/285(i)</i> Dt: <i>01.09.2017</i> Your PO No. <i>ECO/BIH/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on 22.08.17 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 69.4 |
| 2. Near CCR | 71.6 |
| 3. Near Canteen | 67.1 |
| 4. Near Gypsum Storage Area | 64.9 |
| 5. Near Clinker Storage Area | 65.1 |
| N.B. | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.</i> |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | |
|---|--|
| Ref.No. <i>ECL/TR/17-18/333(i)</i> Dt : <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on <i>18.09.17</i> |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 71.6 |
| 2. Near CCR | 68.3 |
| 3. Near Canteen | 66.8 |
| 4. Near Gypsum Storage Area | 65.5 |
| 5. Near Clinker Storage Area | 67.1 |
| N.B.: | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e 6.00 am to 9.0 p m As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone</i> |




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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/70(h)</i> Dt : <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | |
|---|---|---|--|--|---|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | <i>Director</i> | | |
| [c] | Details of Sample | | <i>Monitoring of Fugitive Emissions in Work Zone Area</i> | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on <i>16.04.17</i> | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | <i>17.04.17</i> | | |
| S. N. | Sampling Point | Concentration of Total Dust (mg/M ³) | Permissible TWA Conc ⁿ (mg/M ³) | Concentration of Respirable Dust (mg/M ³) | Permissible TWA Conc ⁿ (mg/M ³) |
| 1 | Mill Section Ground Floor | 5.91 | 10.00 | 3.58 | 5.00 |
| 2 | Mill Section 01 st Floor | 7.81 | 10.00 | 4.11 | 5.00 |
| 3 | Mill Section 02 nd Floor | 6.46 | 10.00 | 1.94 | 5.00 |
| 4 | South side of Mill Section | 7.22 | 10.00 | 2.83 | 5.00 |
| 5 | North side of Mill Section | 5.53 | 10.00 | 1.85 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/127(h)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | |
|---|---|---|-----------------------------------|----------------------------------|-----------------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] | Report to be submitted to | Director | | | |
| [c] | Details of Sample | Monitoring of Fugitive Emissions in Work Zone Area | | | |
| [d] | Monitored by | SHIVA TEST HOUSE on 10.05.17 | | | |
| [e] | No. and Type of Container | Filter Paper | | | |
| [f] | Items required to be tested | As per request | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] | Date of receiving the sample | 11.05.17 | | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ⁿ | Concentration of Respirable Dust | Permissible TWA Conc ⁿ |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.75 | 10.00 | 3.72 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.15 | 10.00 | 4.22 | 5.00 |
| 3 | Mill Section 02 nd Floor | 7.39 | 10.00 | 2.89 | 5.00 |
| 4 | South side of Mill Section | 6.68 | 10.00 | 4.14 | 5.00 |
| 5 | North side of Mill Section | 5.99 | 10.00 | 3.65 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁿ based on Silica Content as per Factories Act 1948 Second Schedule | | | | | |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/158(h)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017 Dt : 10.04.17</i> | | | | | |
|--|---|--|-------------------------------------|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] | Report to be submitted to | <i>Director</i> | | | |
| [c] | Details of Sample | <i>Monitoring of Fugitive Emissions in Work Zone Area</i> | | | |
| [d] | Monitored by | SHIVA TEST HOUSE on <i>04.06.17</i> | | | |
| [e] | No. and Type of Container | Filter Paper | | | |
| [f] | Items required to be tested | As per request | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] | Date of receiving the sample | <i>05.06.17</i> | | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ^d * | Concentration of Respirable Dust | Permissible TWA Conc ^d * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.11 | 10.00 | 1.99 | 5.00 |
| 2 | Mill Section 01 st Floor | 7.38 | 10.00 | 2.77 | 5.00 |
| 3 | Mill Section 02 nd Floor | 5.74 | 10.00 | 2.97 | 5.00 |
| 4 | South side of Mill Section | 6.48 | 10.00 | 1.86 | 5.00 |
| 5 | North side of Mill Section | 7.82 | 10.00 | 3.55 | 5.00 |
| <i>*Permissible Time Weighted Average (TWA) Conc^d based on Silica Content as per Factories Act 1948 Second Schedule</i> | | | | | |



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TEST REPORT

Ref.No. *ECL/TR/17-18/202(h)* Dt: *14.07.2017* Your PO No. *ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017* Dt: *10.04.17*

| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
|------|---|--|-------------------------------------|----------------------------------|-------------------------------------|
| [b] | Report to be submitted to | <i>Director</i> | | | |
| [c] | Details of Sample | <i>Monitoring of Fugitive Emissions in Work Zone Area</i> | | | |
| [d] | Monitored by | SHIVA TEST HOUSE on <i>08.07.17</i> | | | |
| [e] | No. and Type of Container | Filter Paper | | | |
| [f] | Items required to be tested | As per request | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] | Date of receiving the sample | <i>09.07.17</i> | | | |
| S. N | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ^o * | Concentration of Respirable Dust | Permissible TWA Conc ^o * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 7.17 | 10.00 | 4.13 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.87 | 10.00 | 1.79 | 5.00 |
| 3 | Mill Section 02 nd Floor | 6.94 | 10.00 | 3.3 | 5.00 |
| 4 | South side of Mill Section | 5.62 | 10.00 | 4.17 | 5.00 |
| 5 | North side of Mill Section | 7.31 | 10.00 | 2.48 | 5.00 |

**Permissible Time Weighted Average (TWA) Conc^o based on Silica Content as per Factories Act 1948 Second Schedule*



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/285(h)</i> Dt: <i>01.09.2017</i> Your PO No. <i>ECO/BIIR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | |
|--|---|-----------------------------|--|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | <i>Director</i> | | |
| [c] | Details of Sample | | <i>Monitoring of Fugitive Emissions in Work Zone Area</i> | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on <i>22.08.17</i> | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | <i>23.08.17</i> | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ^o * | Concentration of Respirable Dust | Permissible TWA Conc ^o * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.24 | 10.00 | 3.54 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.2 | 10.00 | 4.21 | 5.00 |
| 3 | Mill Section 02 nd Floor | 5.65 | 10.00 | 2.15 | 5.00 |
| 4 | South side of Mill Section | 7.21 | 10.00 | 1.31 | 5.00 |
| 5 | North side of Mill Section | 6.47 | 10.00 | 2.69 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ^o based on Silica Content as per Factories Act 1948 Second Schedule | | | | | |



[Handwritten Signature]

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/333(h)</i> Dt : <i>03.10.2017</i> Your PO No. <i>ECO/BIHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | | |
|--|---|-----------------------------|--|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | <i>Director</i> | | |
| [c] | Details of Sample | | <i>Monitoring of Fugitive Emissions in Work Zone Area</i> | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on <i>18.09.17</i> | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | <i>19.09.17</i> | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ⁶ * | Concentration of Respirable Dust | Permissible TWA Conc ⁶ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.89 | 10.00 | 3.68 | 5.00 |
| 2 | Mill Section 01 st Floor | 7.72 | 10.00 | 4.1 | 5.00 |
| 3 | Mill Section 02 nd Floor | 5.43 | 10.00 | 1.87 | 5.00 |
| 4 | South side of Mill Section | 6.12 | 10.00 | 3.36 | 5.00 |
| 5 | North side of Mill Section | 7.59 | 10.00 | 1.8 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁶ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

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|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/70(f)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/M.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 16.04.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 17.04.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 30.0 |
| | 7. Flue Gas Temperature, °C | | 46.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 31552.8 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.6 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 14.8 Not Specified |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/127(f)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | |
|---|--|---------------------------------------|---------------------------|--|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] Report to be submitted to | <i>Director</i> | | | |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> | | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>10.05.17</i> | | | |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> | | | |
| [f] Items required to be tested | As per request | | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] Date of receiving the sample | <i>11.05.17</i> | | | |
| Parameters | Method of Test | Results | | |
| 1. Stack Connected to | | Bag House attached with Cement Mill | | |
| 2. Height of Stack (as reported) | | 33 m. | | |
| 3. Dia of Stack at Top (as reported) | | 1.2 m. | | |
| 4. Draft | | ID Fan | | |
| 5. Material of Construction | | M.S. | | |
| 6. Ambient Temperature, °C | | 40.0 | | |
| 7. Flue Gas Temperature, °C | | 49.0 | | |
| 8. Velocity, m/sec. | | IS 11255 (Part-3) | 9.6 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | 36154.8 | |
| 10. Sampling Point | | | 21 m. | |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules | |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 28.1 | 30.0 mg / NM ³ | |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified | |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 12.2 | Not Specified | |



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TEST REPORT

| | | | |
|---|---|--|--|
| Ref.No. <i>ECL/TR/17-18/158(f)</i> Dt: <i>20.06.2017</i> Your PO No. <i>ECO/BIH/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>04.06.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>05.06.17</i> | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 43.0 |
| | 7. Flue Gas Temperature, °C | | 52.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.1 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 30224.0 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 26.6 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.1 Not Specified |



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 Quality Manager / Dy. Quality Manager

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 E mail : sthpatna@yahoo.co.in

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TEST REPORT

Ref.No. *ECL/TR/17-18/202(f)* Dt: *14.07.2017* Your PO No. *ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017* Dt: *10.04.17*

| | |
|---|--|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>08.07.17</i> |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> |
| [f] Items required to be tested | As per request |
| [g] Whether any specific Method of Test has been suggested by the party | No |
| [h] Date of receiving the sample | <i>09.07.17</i> |

| Parameters | Method of Test | Results | |
|---|-------------------|--|---------------------------------|
| 1. Stack Connected to | | Bag House attached with Cement Mill | |
| 2. Height of Stack (as reported) | | 33 m. | |
| 3. Dia of Stack at Top (as reported) | | 1.2 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 39.0 | |
| 7. Flue Gas Temperature, °C | | 50.0 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.3 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 27407.6 | |
| 10. Sampling Point | | 21 m. | |
| | | <i>Concentration (mg / NM³)</i> | <i>Limit as per E (P) Rules</i> |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 23.5 | 39.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | <i>Not Specified</i> |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.4 | <i>Not Specified</i> |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|--|--|
| Ref.No. <i>ECL/TR/17-18/285(f)</i> Dt : <i>01.09.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>22.08.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>23.08.17</i> | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 36.0 |
| | 7. Flue Gas Temperature, °C | | 48.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.6 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 36267.4 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.6 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable <i>Not Specified</i> |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.6 <i>Not Specified</i> |



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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/333(f)</i> Dt: <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.09.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.09.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House attached with Cement Mill |
| 2. | Height of Stack (as reported) | | 33 m. |
| 3. | Dia of Stack at Top (as reported) | | 1.2 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 33.0 |
| 7. | Flue Gas Temperature, °C | | 45.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.5 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 24787.7 |
| 10. | Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.7 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 7.8 Not Specified |



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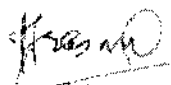
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TEST REPORT

| | | | |
|---|---|---|---------------------------------------|
| Ref.No. <i>ECL/TR/17-18/70(e)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 16.04.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 17.04.17 | |
| Parameters | | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of flyash unloader |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 1.05 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 36.0 |
| 7. | Flue Gas Temperature, °C | | 52.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 7.6 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 21711.8 |
| 10. | Sampling Point | | 14 m. |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 24.8 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.2 Not Specified |




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Laboratory Address :
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 PATNA - 800 014 (Bihar)

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TEST REPORT

| | | | |
|---|---|--|--|
| Ref.No. <i>ECL/TR/17-18/127(e)</i> Dt : <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>10.05.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>11.05.17</i> | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of flyash unloader |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.05 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 40.0 |
| | 7. Flue Gas Temperature, °C | | 53.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.9 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 25193.1 |
| | 10. Sampling Point | | 14 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 26.8 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.7 Not Specified |



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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/158(e)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 04.06.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 05.06.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of flyash unloader |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.05 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 43.0 |
| | 7. Flue Gas Temperature, °C | | 56.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 20601.2 |
| | 10. Sampling Point | | 14 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M) | IS 11255 (Part-1) | 23.9 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.3 Not Specified |



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TEST REPORT

| | | | |
|---|---|---|--|
| Ref.No. <i>ECL/TR/17-18/202(e)</i> Dt : <i>14.07.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.07.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.07.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of flyash unloader |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 1.05 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 39.0 |
| 7. | Flue Gas Temperature, °C | | 51.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.8 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 19486.3 |
| 10. | Sampling Point | | 14 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.3 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 13.7 Not Specified |



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TEST REPORT

| | | | |
|---|---|--|---|
| Ref.No. <i>ECL/TR/17-18/285(e)</i> Dt: <i>01.09.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/A.O./RS/2017</i> Du: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>22.08.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>23.08.17</i> | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of flyash unloader |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.05 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 36.0 |
| | 7. Flue Gas Temperature, °C | | 50.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 18109.4 |
| | 10. Sampling Point | | 14 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 20.2 <i>30.0 mg / NM³</i> |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable <i>Not Specified</i> |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.2 <i>Not Specified</i> |



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 BY DEPT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

Ref.No. *ECL/TR/17-18/333(e)* Dt: *03.10.2017* Your PO No. *ECO/BIH/SHIVA TEST HOUSE /W.O./RS/2017* Dt: *10.04.17*

| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
|---|--|---------------------------------------|---------------------------|--|
| [b] Report to be submitted to | <i>Director</i> | | | |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> | | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>18.09.17</i> | | | |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> | | | |
| [f] Items required to be tested | As per request | | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] Date of receiving the sample | <i>19.09.17</i> | | | |
| Parameters | Method of Test | Results | | |
| 1. Stack Connected to | | Bag House of flyash unloader | | |
| 2. Height of Stack (as reported) | | 30 m. | | |
| 3. Dia of Stack at Top (as reported) | | 1.05 m. | | |
| 4. Draft | | ID Fan | | |
| 5. Material of Construction | | M.S. | | |
| 6. Ambient Temperature, °C | | 33.0 | | |
| 7. Flue Gas Temperature, °C | | 46.0 | | |
| 8. Velocity, m/sec. | | IS 11255 (Part-3) | 7.2 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | 20956.0 | |
| 10. Sampling Point | | | 14 m. | |
| | | Concentration (mg / NM ³) | Limit as per E. (P) Rules | |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 24.1 | 30.0 mg / NM ³ | |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified | |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 9.1 | Not Specified | |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|--|--|
| Ref.No. <i>ECL/TR/17-18/70(c)</i> Dt : <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>16.04.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>17.04.17</i> | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.75 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 36.0 |
| 7. | Flue Gas Temperature, °C | | 51.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 8.3 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 12135.1 |
| 10. | Sampling Point | | 11 m. |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.1 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 14.3 Not Specified |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/127(c)</i> Dt : <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
|--|---|---|--|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | Director | | |
| [c] | Details of Sample | Monitoring of Stack Emission | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.05.17 | | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | 11.05.17 | | |
| Parameters | | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of Clinker & gypsum unloader Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.75 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 40.0 | |
| 7. | Flue Gas Temperature, °C | | 53.0 | |
| 8. | Velocity, m/sec. | | IS 11255 (Part-3) | 7.8 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 11334.2 |
| 10. | Sampling Point | | | 11 m. |
| | | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 23.3 | 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.8 | Not Specified |



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TEST REPORT

| | | | | |
|---|---|--|--|---------------------------------|
| Ref.No. <i>ECL/TR/17-18/158(c)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017 DU : 10.04.17</i> | | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | <i>Director</i> | | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>04.06.17</i> | | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | <i>05.06.17</i> | | |
| | Parameters | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of Clinker & gypsum unloader Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.75 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 43.0 | |
| 7. | Flue Gas Temperature, °C | | 56.0 | |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.8 | |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 9790.9 | |
| 10. | Sampling Point | | 11 m. | |
| | | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 21.1 | 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.4 | Not Specified |



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TEST REPORT

| | |
|--|--|
| Ref.No. <i>ECL/TR/17-18/202(c)</i> Dt : <i>14.07.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>08.07.17</i> |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> |
| [f] Items required to be tested | As per request |
| [g] Whether any specific Method of Test has been suggested by the party | No |
| [h] Date of receiving the sample | <i>09.07.17</i> |

| Parameters | Method of Test | Results | |
|---|-------------------|--|---------------------------------|
| 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section | |
| 2. Height of Stack (as reported) | | 30 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.75 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 39.0 | |
| 7. Flue Gas Temperature, °C | | 52.0 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.1 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 10348.8 | |
| 10. Sampling Point | | 11 m. | |
| | | <i>Concentration (mg / NM³)</i> | <i>Limit as per E (P) Rules</i> |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.5 | 300 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.6 | Not Specified |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/285(c)</i> Dt : <i>01.09.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE A.V.O. RS 2017</i> Dt: <i>10.04.17</i> | | | |
|--|---|--|---|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>22.08.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>23.08.17</i> | |
| <i>Parameters</i> | | <i>Method of Test</i> | |
| 1. | Stack Connected to | Bag House of Clinker & gypsum unloader Section | |
| 2. | Height of Stack (as reported) | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | 0.75 m. | |
| 4. | Draft | ID Fan | |
| 5. | Material of Construction | M.S. | |
| 6. | Ambient Temperature, °C | 36.0 | |
| 7. | Flue Gas Temperature, °C | 49.0 | |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.4 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | 9415.3 | |
| 10. | Sampling Point | 11 m. | |
| | | <i>Concentration (mg / NM³)</i> | <i>Limit as per E (P) Rules</i> |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 20.1 / 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable / Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 9.2 / Not Specified |



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TEST REPORT

| | | | |
|--|---|--|--|
| Ref.No. <i>ECL/TR/17-18/333(c)</i> Dt : <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017 Dt: 10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | <i>Director</i> | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>18.09.17</i> | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>19.09.17</i> | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.75 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 33.0 |
| 7. | Flue Gas Temperature, °C | | 45.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.6 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 9831.6 |
| 10. | Sampling Point | | 11 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 21.6 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 12.1 Not Specified |



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TEST REPORT

| | | | | |
|---|---|-----------------------|---|--------|
| Ref.No. <i>ECL/TR/17-18/70(d)</i> Dt : <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
| (a) Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| (b) Report to be submitted to | Director | | | |
| (c) Details of Sample | Monitoring of Stack Emission | | | |
| (d) Sample Collected by | SHIVA TEST HOUSE on 16.04.17 | | | |
| (e) No. & Type of Container | Thimble & Glass Impinger | | | |
| (f) Items required to be tested | As per request | | | |
| (g) Whether any specific Method of Test has been suggested by the party | No | | | |
| (h) Date of receiving the sample | 17.04.17 | | | |
| | Parameters | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 36.0 | |
| 7. | Flue Gas Temperature, °C | | 48.0 | |
| 8. | Velocity, m/sec. | | IS 11255 (Part-3) | 7.2 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 6800.1 |
| 10. | Sampling Point | | | 9 m. |
| | | | Concentration (mg / NM³) | |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 26.5 | |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 13.1 | |
| | | | Limit as per I (P) Rules | |
| | | | 30.0 mg / NM ³ | |
| | | | Not Specified | |
| | | | Not Specified | |



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 Quality Manager / Dy. Quality Manager

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Laboratory Address :
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TEST REPORT

| | | | | |
|---|---|--|---|--------|
| Ref.No. <i>ECL/TR/17-18/127(d)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | <i>Director</i> | | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission</i> | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>10.05.17</i> | | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | <i>11.05.17</i> | | |
| | Parameters | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 40.0 | |
| 7. | Flue Gas Temperature, °C | | 50.0 | |
| 8. | Velocity, m/sec. | | IS 11255 (Part-3) | 6.4 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 6007.1 |
| 10. | Sampling Point | | | 9 m. |
| | | | Concentration (mg / NM³) | |
| 11. | Particulate Matter (P.M) | IS 11255 (Part-1) | 24.5 | |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.8 | |
| | | | Limit as per E (P) Rules | |
| | | | <i>300 mg / NM³</i> | |
| | | | <i>Not Specified</i> | |
| | | | <i>Not Specified</i> | |



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ISO 18001:2007
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TEST REPORT

| | | | |
|---|--|--|--------|
| Ref.No. <i>ECL/TR/17-18/158(d)</i> Dt: <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | <i>Director</i> | | |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 04.06.17 | | |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | <i>05.06.17</i> | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section | |
| 2. Height of Stack (as reported) | | 30 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.6 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 43.0 | |
| 7. Flue Gas Temperature, °C | | 52.0 | |
| 8. Velocity, m/sec. | | IS 11255 (Part-3) | 7.9 |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | 7369.4 |
| 10. Sampling Point | | | 9 m. |
| | | Concentration (mg / NM³) Limit as per E (P) Rules | |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 26.8 30.0 mg / NM ³ | |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified | |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.2 Not Specified | |



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TEST REPORT

| | | | |
|---|---|---|---|
| Ref.No. <i>ECL/TR/17-18/202(d)</i> Dt: <i>14.07.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE A.V.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.07.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.07.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 39.0 |
| 7. | Flue Gas Temperature, °C | | 49.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.2 |
| 9. | Volumetric Flow Rate. NM ³ /hr. | | 5837.4 |
| 10. | Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.5 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 9.8 Not Specified |



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TEST REPORT

| | | | |
|---|---|---|---|
| Ref.No. <i>ECL/TR/17-18/285(d)</i> Dt : <i>01.09.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.08.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 23.08.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 36.0 |
| 7. | Flue Gas Temperature, °C | | 51.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 7.1 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 6643.6 |
| 10. | Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per I (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 27.6 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 12.4 Not Specified |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/333(d)</i> Dt : <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
|---|---|---|---|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | Director | | |
| [c] | Details of Sample | Monitoring of Stack Emission | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.09.17 | | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | 19.09.17 | | |
| Parameters | | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 33.0 | |
| 7. | Flue Gas Temperature, °C | | 49.0 | |
| 8. | Velocity, m/sec. | | IS 11255 (Part-3) | 5.8 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 5460.8 |
| 10. | Sampling Point | | | 9 m. |
| | | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.2 | 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.4 | Not Specified |



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TEST REPORT

| | | | | |
|--|--|--|---|----------------|
| Ref.No. <i>ECL/TR/17-18/70(b)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | <i>Director</i> | | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission of 500 KVA DG Set</i> | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>16.04.17</i> | | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | <i>17.04.17</i> | | |
| Parameters | | Method of Test | Results | |
| 1. Stack Connected to | | | 500 KVA DG Set | |
| 2. Height of Stack (as reported) | | | 3.0 m. | |
| 3. Dia of Stack at Top (as reported) | | | 0.2 m. | |
| 4. Draft | | | Natural | |
| 5. Material of Construction | | | M.S. | |
| 6. Ambient Temperature, °C | | | 36.0 | |
| 7. Flue Gas Temperature, °C | | | 218.0 | |
| 8. Velocity, m/sec. | | | IS 11255 (Part-3) | 7.3 |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | | 500.8 |
| 10. Sampling Point | | | | Top of Exhaust |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules | |
| 11. Particulate Matter (P.M.) | | IS 11255 (Part-1) | 44.6 <i>75.0 mg / NM³</i> | |
| 12. Sulphur Dioxide (SO ₂) | | IS 11255 (Part-2) | 70.2 <i>Not Specified</i> | |
| 13. Oxides of Nitrogen (NO ₂) | | IS 11255 (Part-7) | 214.3 <i>710.0 mg / NM³</i> | |
| N.B.: | <i>There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust</i> | | | |



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TEST REPORT

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|---|---|---|--|
| Ref.No. <i>ECL/TR/17-18/127(b)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Du: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.05.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 11.05.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | 500 KVA DG Set |
| 2. | Height of Stack (as reported) | | 3.0 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.2 m. |
| 4. | Draft | | Natural |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 40.0 |
| 7. | Flue Gas Temperature, °C | | 210.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 8.8 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 613.7 |
| 10. | Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per L (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 46.3 75.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 72.7 Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 226.1 710.0 mg / NM ³ |

N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust



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TEST REPORT

| | | | | |
|--|---|--|--|----------------|
| Ref.No. <i>ECL/TR/17-18/158(b)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017/DC : 10.04.17</i> | | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | <i>Director</i> | | |
| [c] | Details of Sample | <i>Monitoring of Stack Emission of 500 KVA DG Set</i> | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>04.06.17</i> | | |
| [e] | No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | <i>05.06.17</i> | | |
| Parameters | | Method of Test | Results | |
| 1. | Stack Connected to | | 500 KVA DG Set | |
| 2. | Height of Stack (as reported) | | 3.0 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.2 m. | |
| 4. | Draft | | Natural | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 43.0 | |
| 7. | Flue Gas Temperature, °C | | 236.0 | |
| 8. | Velocity, m/sec. | | IS 11255 (Part-3) | 10.8 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 714.7 |
| 10. | Sampling Point | | | Top of Exhaust |
| | | | Concentration (mg / NM³) · Limit as per E (P) Rules | |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 53.4 · 75.0 mg / NM ³ | |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 74.6 · Not Specified | |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 232.8 · 710.0 mg / NM ³ | |
| N.B.: · There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | | | |



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TEST REPORT

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| Ref.No. <i>ECL/TR/17-18/202(b)</i> Dt: <i>14.07.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O. RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.07.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.07.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 500 KVA DG Set |
| | 2. Height of Stack (as reported) | | 3.0 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.2 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 39.0 |
| | 7. Flue Gas Temperature, °C | | 224.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 555.7 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 46.1 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 71.9 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 220.6 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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TEST REPORT

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|---|---|---|--|
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| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.08.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 23.08.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 500 KVA DG Set |
| | 2. Height of Stack (as reported) | | 3.0 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.2 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 36.0 |
| | 7. Flue Gas Temperature, °C | | 240.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.4 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 617.2 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 50.3 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 73.6 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 228.7 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



[Signature]

Authorized Signatory
 Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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ISO 18001:2007
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 BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| | | | |
|---|--|---|--|
| Ref.No. <i>ECL/TR/17-18/333(b)</i> Dt: <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.09.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.09.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 500 KVA DG Set |
| | 2. Height of Stack (as reported) | | 3.0 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.2 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 33.0 |
| | 7. Flue Gas Temperature, °C | | 218.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.6 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 521.4 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 43.8 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 68.1 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 213.4 |
| | N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/70(a)</i> Dt: <i>27.04.2017</i> Your PO No. <i>ECO/BIH/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | |
|--|---|---|--|---------------------------------------|----------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] | Report to be submitted to | Director | | | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 16.04.17 | | | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | | | |
| [f] | Items required to be tested | As per request | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] | Date of receiving the sample | 17.04.17 | | | |
| Parameters | | Method of Test | | Results | |
| 1. | Stack Connected to | | | 125 KVA DG Set | |
| 2. | Height of Stack (as reported) | | | 2.1 m. | |
| 3. | Dia of Stack at Top (as reported) | | | 0.13 m. | |
| 4. | Draft | | | Natural | |
| 5. | Material of Construction | | | M.S. | |
| 6. | Ambient Temperature, °C | | | 36.0 | |
| 7. | Flue Gas Temperature, °C | | | 210.0 | |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | | 6.8 | |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | | 200.3 | |
| 10. | Sampling Point | | | Top of Exhaust | |
| | | | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | | 39.1 | 75.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | | 69.1 | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | | 206.7 | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | | | |



Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|---|---|
| Ref.No. <i>ECL/TR/17-18/127(a)</i> Dt: <i>22.05.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.05.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 11.05.17 | |
| Parameters | | Method of Test | Results |
| 1. Stack Connected to | | | 125 KVA DG Set |
| 2. Height of Stack (as reported) | | | 2.1 m. |
| 3. Dia of Stack at Top (as reported) | | | 0.13 m. |
| 4. Draft | | | Natural |
| 5. Material of Construction | | | M.S. |
| 6. Ambient Temperature, °C | | | 40.0 |
| 7. Flue Gas Temperature, °C | | | 194.0 |
| 8. Velocity, m/sec. | | IS 11255 (Part-3) | 9.6 |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | 292.5 |
| 10. Sampling Point | | | Top of Exhaust |
| | | Concentration (mg / NM³) | Limit as per F. (P) Rules |
| 11. Particulate Matter (P.M.) | | IS 11255 (Part-1) | 45.2 75.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | | IS 11255 (Part-2) | 76.1 Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | | IS 11255 (Part-7) | 218.4 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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TEST REPORT

| | | | |
|--|--|--|---------------------------------|
| Ref.No. <i>ECL/TR/17-18/158(a)</i> Dt : <i>20.06.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017/DU : 10.04.17</i> | | | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | <i>Director</i> | | |
| [c] Details of Sample | <i>Monitoring of Stack Emission of 125 KVA DG Set</i> | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 04.06.17 | | |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | <i>05.06.17</i> | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | 125 KVA DG Set | |
| 2. Height of Stack (as reported) | | 2.1 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.13 m. | |
| 4. Draft | | Natural | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 43.0 | |
| 7. Flue Gas Temperature, °C | | 222.0 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.7 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 250.1 | |
| 10. Sampling Point | | Top of Exhaust | |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 42.6 | 75.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 70.4 | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 210.2 | 710.0 mg / NM ³ |
| N.B.: <i>There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust</i> | | | |



Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|---|--|
| Ref.No. <i>ECL/TR/17-18/202(a)</i> Dt : <i>14.07.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.07.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.07.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 39.0 |
| | 7. Flue Gas Temperature, °C | | 216.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.4 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 273.5 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 48.7 75.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 66.8 Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 194.3 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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 Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|-----------------------|---|
| Ref.No. <i>ECL/TR/17-18/285(a)</i> Dt: <i>01.09.2017</i> Your PO No. <i>ECO/BIH/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] | Report to be submitted to | | <i>Director</i> |
| [c] | Details of Sample | | <i>Monitoring of Stack Emission of 125 KVA DG Set</i> |
| [d] | Sample Collected by | | SHIVA TEST HOUSE on <i>22.08.17</i> |
| [e] | No. & Type of Container | | <i>Thimble & Glass Impinger</i> |
| [f] | Items required to be tested | | As per request |
| [g] | Whether any specific Method of Test has been suggested by the party | | No |
| [h] | Date of receiving the sample | | <i>23.08.17</i> |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 36.0 |
| | 7. Flue Gas Temperature, °C | | 224.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 10.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 292.0 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M) | IS 11255 (Part-1) | 51.6 <i>75.0 mg / NM³</i> |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 69.4 <i>Not Specified</i> |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 204.6 <i>710.0 mg / NM³</i> |

N.B.: *There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust*



[Signature]

Authorized Signatory

Quality Manager / Dy. Quality Manager

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TEST REPORT

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|---|---|-----------------------|--|
| Ref.No. <i>ECL/TR/17-18/333(a)</i> Dt: <i>03.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE/W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] | Report to be submitted to | | <i>Director</i> |
| [c] | Details of Sample | | <i>Monitoring of Stack Emission of 125 KVA DG Set</i> |
| [d] | Sample Collected by | | SHIVA TEST HOUSE on 18.09.17 |
| [e] | No. & Type of Container | | <i>Thimble & Glass Impinger</i> |
| [f] | Items required to be tested | | As per request |
| [g] | Whether any specific Method of Test has been suggested by the party | | No |
| [h] | Date of receiving the sample | | <i>19.09.17</i> |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 33.0 |
| | 7. Flue Gas Temperature, °C | | 211.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.1 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 238.1 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 46.3 75.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 65.0 Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 190.8 710.0 mg / NM ³ |
| N.B.: <i>There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust</i> | | | |



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 Quality Manager / Dy. Quality Manager

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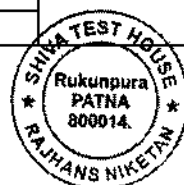


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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/371(f)</i> Dt: <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|--|---|---|----------|--------------|------------------------------------|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>08/09.10.17</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>09.10.17</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 76.8 | 62.1 | 61.9 | 66.1 | 100 µg / m ³ |
| | | 67.3 | 57.6 | 57.6 | 78.2 | |
| | | 54.2 | 64.4 | 53.2 | 51.2 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 45.2 | 36.9 | 36.5 | 37.2 | 60 µg / m ³ |
| | | 39.1 | 33.1 | 34.2 | 43.8 | |
| | | 31.8 | 36.1 | 30.8 | 29.6 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 11.4 | 7.4 | 10.3 | 6.8 | 80 µg / m ³ |
| | | 16.8 | 9.2 | 7.2 | 5.4 | |
| | | 13.4 | 11.6 | 6.6 | 6.7 | |
| | | 12.6 | 7.4 | 5.4 | 6.1 | |
| | | 9.7 | 6.1 | <5.0 | <5.0 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 20.1 | 13.0 | 24.6 | 11.8 | 80 µg / m ³ |
| | | 29.6 | 18.4 | 20.1 | 16.4 | |
| | | 23.6 | 20.4 | 16.3 | 13.2 | |
| | | 22.2 | 16.2 | 14.6 | 11.4 | |
| | | 17.1 | 10.7 | 10.8 | 13.6 | |
| | | 15.5 | 9.7 | 8.5 | 10.2 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 66.1 | 61.4 | 57.6 | 65.2 | |
| | PM _{2.5} | 38.7 | 35.4 | 33.8 | 36.9 | |
| | SO ₂ | 12.1 | 8.4 | 7.4 | 6.2 | |
| | NO ₂ | 21.3 | 14.7 | 15.8 | 12.8 | |




Authorized Signatory
Quality Manager / Dy. Quality Manager

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Gardanibagh
PATNA - 800 001 (Bihar)



Laboratory Address :-
01ST FLOOR, RAJHANS NIKETAN,
NEAR CANAL, RUKUNPURA,
BAILEY ROAD,
PATNA - 800 014 (BIHAR)



SHIVA TEST HOUSE

Tel. : 0612 - 2247538/ 2240752 ; TeleFax : 0612 - 2590705
E.mail.: sthpatna1@yahoo.co.in

ISO 18001:2007



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BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECL/TR/17-18/413(f)</i> Dt: <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O.JRS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|--|--|------------------|----------|--------------|------------------------------------|--------------------------|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | | |
| [b] Report to be submitted to | <i>Director</i> | | | | | |
| [c] Details of Sample | Monitoring of Ambient Air Quality | | | | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>05/06.11.17</i> | | | | | |
| [e] No. & Type of Container | Filter Paper ; Glass Impinger | | | | | |
| [f] Items required to be tested | As per request | | | | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | | | | |
| [h] Date of receiving the sample | <i>06.11.17</i> | | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. 2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 72.2 | 58.4 | 58.2 | 62.1 | 100 µg / m ³ |
| | | 63.3 | 54.1 | 54.1 | 73.5 | |
| | | 50.9 | 60.5 | 50.0 | 48.1 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 42.5 | 34.7 | 34.3 | 35.0 | 60 µg / m ³ |
| | | 36.8 | 31.1 | 32.2 | 41.2 | |
| | | 29.9 | 33.9 | 29.0 | 27.8 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 16.4 | 11.8 | 9.7 | 6.4 | 80 µg / m ³ |
| | | 15.8 | 8.7 | 6.8 | 5.1 | |
| | | 18.1 | 10.9 | 6.2 | 6.3 | |
| | | 14.3 | 7.0 | 7.3 | 5.7 | |
| | | 12.6 | 9.4 | 5.1 | 5.5 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 24.6 | 20.1 | 18.1 | 15.6 | 80 µg / m ³ |
| | | 32.8 | 16.3 | 15.0 | 13.8 | |
| | | 35.0 | 14.6 | 13.1 | 11.2 | |
| | | 30.4 | 12.8 | 11.4 | 10.6 | |
| | | 21.2 | 16.8 | 10.2 | 9.7 | |
| 24 Hrs. Average Value | | | | | | |
| PM ₁₀ | | 62.1 | 57.7 | 54.1 | 61.3 | |
| PM _{2.5} | | 36.4 | 33.2 | 31.8 | 34.7 | |
| SO ₂ | | 14.6 | 9.6 | 7.0 | 5.8 | |
| NO ₂ | | 27.1 | 15.1 | 12.6 | 11.5 | |



[Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/525(f)</i> Dt: <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|--|---|---|----------|--------------|------------------------------------|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22/23.12.17 | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | 23.12.17 | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 64.6 | 60.1 | 58.4 | 56.1 | 100 µg / m ³ |
| | | 89.4 | 72.6 | 66.1 | 60.4 | |
| | | 78.3 | 63.7 | 59.7 | 68.7 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 38.4 | 35.8 | 34.7 | 33.4 | 60 µg / m ³ |
| | | 53.2 | 43.2 | 39.3 | 35.9 | |
| | | 46.6 | 37.9 | 35.5 | 40.9 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 10.8 | 7.2 | 9.1 | 9.6 | 80 µg / m ³ |
| | | 11.2 | 8.6 | 7.9 | 7.7 | |
| | | 8.7 | 6.1 | 6.6 | 8.3 | |
| | | 10.4 | 6.9 | 6.1 | 7.7 | |
| | | 9.6 | 5.8 | 5.6 | 8.0 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 22.6 | 16.2 | 17.7 | 14.5 | 80 µg / m ³ |
| | | 28.4 | 16.2 | 14.9 | 13.1 | |
| | | 23.1 | 15.7 | 14.0 | 14.2 | |
| | | 24.9 | 14.5 | 12.4 | 12.0 | |
| | | 18.2 | 12.9 | 10.6 | 11.2 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 77.4 | 65.5 | 61.4 | 61.7 | |
| | PM _{2.5} | 46.1 | 39.0 | 36.5 | 36.7 | |
| | SO ₂ | 10.3 | 7.4 | 6.8 | 8.1 | |
| | NO ₂ | 22.3 | 14.3 | 13.2 | 12.6 | |




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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/585(f)</i> Dt: <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | | |
|--|---|---|----------|--------------|------------------------------------|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | <i>Monitoring of Ambient Air Quality</i> | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>18/19.01.2018</i> | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | <i>19.01.2018</i> | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 70.7 | 57.0 | 52.1 | 58.6 | 100 µg / m ³ |
| | | 78.1 | 61.9 | 63.6 | 67.2 | |
| | | 60.2 | 54.6 | 54.8 | 51.7 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 41.8 | 33.9 | 30.2 | 33.8 | 60 µg / m ³ |
| | | 44.3 | 36.3 | 35.9 | 38.6 | |
| | | 35.6 | 31.2 | 32.1 | 29.9 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 11.6 | 8.8 | 10.5 | 9.6 | 80 µg / m ³ |
| | | 13.2 | 7.3 | 7.9 | 7.7 | |
| | | 12.6 | 9.7 | 7.7 | 8.3 | |
| | | 11.8 | 6.9 | 6.9 | 7.7 | |
| | | 10.1 | 7.2 | 5.4 | 8.0 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 9.4 | 9.7 | 6.1 | 5.2 | 80 µg / m ³ |
| | | 22.1 | 16.2 | 17.7 | 20.8 | |
| | | 26.7 | 21.6 | 20.1 | 18.7 | |
| | | 23.9 | 15.7 | 14.0 | 16.1 | |
| | | 22.4 | 14.5 | 12.4 | 13.4 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 69.7 | 57.9 | 56.8 | 59.2 | |
| | PM _{2.5} | 40.6 | 33.8 | 32.7 | 34.1 | |
| | SO ₂ | 11.4 | 8.3 | 7.4 | 7.8 | |
| | NO ₂ | 21.2 | 16.6 | 14.1 | 15.6 | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/639(f)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O.JRS/2017</i> Dt : <i>10.04.17</i> | | | | | | |
|--|---|---|----------|--------------|------------------------------------|--------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | | |
| [b] | Report to be submitted to | Director | | | | |
| [c] | Details of Sample | Monitoring of Ambient Air Quality | | | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 21/22.02.2018 | | | | |
| [e] | No. & Type of Container | Filter Paper ; Glass Impinger | | | | |
| [f] | Items required to be tested | As per request | | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | | |
| [h] | Date of receiving the sample | 22.02.2018 | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. 2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 82.0 | 62.7 | 49.5 | 65.7 | 100 µg / m ³ |
| | | 90.6 | 68.1 | 60.4 | 75.3 | |
| | | 69.9 | 60.1 | 52.0 | 57.9 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 48.5 | 37.3 | 28.7 | 37.9 | 60 µg / m ³ |
| | | 51.4 | 39.9 | 34.1 | 43.3 | |
| | | 41.3 | 34.3 | 30.5 | 33.5 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 13.5 | 10.3 | 12.1 | 11.2 | 80 µg / m ³ |
| | | 15.3 | 8.5 | 9.2 | 8.9 | |
| | | 14.6 | 11.3 | 8.9 | 9.7 | |
| | | 13.6 | 8.0 | 8.0 | 8.9 | |
| | | 11.7 | 8.3 | 6.3 | 9.2 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 25.6 | 18.8 | 20.6 | 24.1 | 80 µg / m ³ |
| | | 31.0 | 25.1 | 23.3 | 21.7 | |
| | | 27.7 | 18.2 | 16.3 | 18.7 | |
| | | 26.0 | 16.8 | 14.4 | 15.5 | |
| | | 19.5 | 15.0 | 12.2 | 15.0 | |
| 24 Hrs. Average Value | | | | | | |
| | PM ₁₀ | 80.8 | 63.6 | 54.0 | 66.3 | |
| | PM _{2.5} | 47.0 | 37.2 | 31.1 | 38.2 | |
| | SO ₂ | 13.3 | 9.6 | 8.6 | 9.0 | |
| | NO ₂ | 24.5 | 19.2 | 16.3 | 18.1 | |



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Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

Ref.No. *ECL/TR/18-19/03(f)* Dt : *02.04.2018* Your PO No. *ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017* Dt : *10.04.17*

| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kuhlaria Durgawati Dist.: Bhabua (Kaimur) | | | | | |
|---|---|------------------|----------|--------------|------------------------------------|---------------------------|
| [b] Report to be submitted to | Director | | | | | |
| [c] Details of Sample | Monitoring of Ambient Air Quality | | | | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 10/11.03.18 | | | | | |
| [e] No. & Type of Container | Filter Paper ; Glass Impinger | | | | | |
| [f] Items required to be tested | As per request | | | | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | | | | |
| [h] Date of receiving the sample | 11.03.18 | | | | | |
| Parameters | Method of Test | Sampling Station | | | | Limit as NAAQS Nov. '2009 |
| | | Near Main Gate | Near CCR | Near Canteen | Near Gypsum & Clinker Storage Area | |
| 1. Particulate Matter (PM ₁₀), µg / m ³ | IS 5182 (Part-23) | 72.4 | 59.9 | 53.3 | 60.1 | 100 µg / m ³ |
| | | 86.0 | 67.6 | 63.4 | 67.6 | |
| | | 67.4 | 59.5 | 55.5 | 59.4 | |
| 2. Particulate Matter (PM _{2.5}), µg / m ³ | CPCB | 42.9 | 35.6 | 31.2 | 35.0 | 60 µg / m ³ |
| | | 49.6 | 39.8 | 36.4 | 39.3 | |
| | | 39.6 | 34.5 | 32.7 | 34.8 | |
| 3. Sulphur Dioxide as SO ₂ , µg / m ³ | IS 5182 (Part-2) | 12.0 | 10.6 | 8.4 | 7.6 | 80 µg / m ³ |
| | | 13.2 | 11.3 | 8.3 | 8.8 | |
| | | 14.6 | 9.7 | 7.7 | 6.9 | |
| | | 11.9 | 8.6 | 5.8 | 5.7 | |
| | | 10.4 | 7.9 | <5.0 | <5.0 | |
| 4. Nitrogen Dioxide as NO ₂ , µg / m ³ | IS 5182 (Part-6) | 9.7 | <5.0 | <5.0 | <5.0 | 80 µg / m ³ |
| | | 23.4 | 17.1 | 21.6 | 19.8 | |
| | | 28.7 | 20.9 | 18.7 | 17.8 | |
| | | 36.1 | 16.6 | 17.2 | 11.6 | |
| | | 30.2 | 15.3 | 14.8 | 12.1 | |
| | | 28.4 | 13.6 | 15.6 | 10.2 | |
| 24 Hrs. Average Value | | | | | | |
| PM ₁₀ | SHIVA TEST HOUSE Rukunpura PATNA 800014 RAJHANS NIKETAN | 75.3 | 62.3 | 57.4 | 62.4 | |
| PM _{2.5} | | 44.0 | 36.6 | 33.5 | 36.4 | |
| SO ₂ | | 12.0 | 9.6 | 7.6 | 7.3 | |
| NO ₂ | | 27.9 | 15.8 | 16.8 | 13.5 | |




Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

| | |
|--|---|
| Ref.No. <i>ECL/TR/17-18/371(h)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on 08.10.17 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 69.8 |
| 2. Near CCR | 67.8 |
| 3. Near Canteen | 68.3 |
| 4. Near Gypsum Storage Area | 62.9 |
| 5. Near Clinker Storage Area | 63.1 |
| N.B.: | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.</i> |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | |
|--|---|
| Ref.No. <i>ECL/TR/17-18/413(h)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | Director |
| [c] Details of Sample | Monitoring of Ambient Noise Level |
| [d] Monitored by | SHIVA TEST HOUSE on 05.11.17 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 71.3 |
| 2. Near CCR | 69.4 |
| 3. Near Canteen | 67.5 |
| 4. Near Gypsum Storage Area | 63.2 |
| 5. Near Clinker Storage Area | 66.8 |
| N.B.: | The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) .in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone. |



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Quality Manager / Dy. Quality Manager

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PATNA – 800 001 (Bihar)



Laboratory Address :-
01ST FLOOR, RAJHANS NIKETAN,
NEAR CANAL, RUKUNPURA,
BAILEY ROAD,
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SHIVA TEST HOUSE

Tel. : 0612 – 2247538/ 2240752 ; TeleFax : 0612 - 2590705
E.mail.: sthpatna1@yahoo.co.in

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TEST REPORT

| | |
|--|---|
| Ref.No. <i>ECL/TR/17-18/525(h)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on <i>22.12.17</i> |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 68.4 |
| 2. Near CCR | 66.2 |
| 3. Near Canteen | 63.8 |
| 4. Near Gypsum Storage Area | 64.9 |
| 5. Near Clinker Storage Area | 62.8 |
| N.B.: | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.</i> |



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TEST REPORT

| | |
|--|--|
| Ref.No. <i>ECL/TR/17-18/585(h)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | Director |
| [c] Details of Sample | Monitoring of Ambient Noise Level |
| [d] Monitored by | SHIVA TEST HOUSE on 18.01.2018 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 70.2 |
| 2. Near CCR | 67.1 |
| 3. Near Canteen | 66.2 |
| 4. Near Gypsum Storage Area | 62.8 |
| 5. Near Clinker Storage Area | 63.7 |
| N.B.: | The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone. |




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TEST REPORT

| | |
|--|---|
| Ref.No. <i>ECL/TR/17-18/639(h)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | <i>Director</i> |
| [c] Details of Sample | <i>Monitoring of Ambient Noise Level</i> |
| [d] Monitored by | SHIVA TEST HOUSE on 21.02.2018 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 72.4 |
| 2. Near CCR | 69.3 |
| 3. Near Canteen | 64.1 |
| 4. Near Gypsum Storage Area | 65.7 |
| 5. Near Clinker Storage Area | 67.2 |
| N.B.: | <i>The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone.</i> |



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TEST REPORT

| | |
|---|--|
| Ref.No. <i>ECL/TR/18-19/03(h)</i> Dt : <i>02.04.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) |
| [b] Report to be submitted to | Director |
| [c] Details of Sample | Monitoring of Ambient Noise Level |
| [d] Monitored by | SHIVA TEST HOUSE on 10.03.18 |
| [f] Whether any specific Method of Test has been suggested by the party | No |
| Sampling Location | Time Weighted Average (TWA) of Day Time Noise Level in dB(A) |
| 1. Near Main Gate | 69.1 |
| 2. Near CCR | 66.2 |
| 3. Near Canteen | 61.2 |
| 4. Near Gypsum Storage Area | 67.1 |
| 5. Near Clinker Storage Area | 64.8 |
| N.B.: | The Ambient Air Quality Standards in respect of Noise as per Noise Pollution (Regulation and Control) Rules 2000 for Industrial area is 75.0 dB(A), for Commercial area is 65.0 dB(A), for Residential area is 55.0 dB(A) & for Silence Zone is 50.0 dB(A) in daytime i.e. 6.00 am to 9.0 p.m. As per Rule 7(1&2) the authority shall take action against violator if the noise level exceed the ambient noise standards by 10 dB(A) or more against any area/zone. |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/371(g)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt: <i>10.04.17</i> | | | | | |
|---|---|-----------------------------|---|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | Director | | |
| [c] | Details of Sample | | Monitoring of Fugitive Emissions in Work Zone Area | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on 08.10.17 | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | 09.10.17 | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ⁿ * | Concentration of Respirable Dust | Permissible TWA Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.44 | 10.00 | 3.34 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.87 | 10.00 | 2.92 | 5.00 |
| 3 | Mill Section 02 nd Floor | 7.38 | 10.00 | 3.58 | 5.00 |
| 4 | South side of Mill Section | 6.18 | 10.00 | 3.12 | 5.00 |
| 5 | North side of Mill Section | 5.43 | 10.00 | 2.76 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/413(g)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | | |
|--|---|-----------------------------|---|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | Director | | |
| [c] | Details of Sample | | Monitoring of Fugitive Emissions in Work Zone Area | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on 05.11.17 | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | 06.11.17 | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ⁿ * | Concentration of Respirable Dust | Permissible TWA Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 8.77 | 10.00 | 4.12 | 5.00 |
| 2 | Mill Section 01 st Floor | 4.38 | 10.00 | 2.42 | 5.00 |
| 3 | Mill Section 02 nd Floor | 6.19 | 10.00 | 3.21 | 5.00 |
| 4 | South side of Mill Section | 5.76 | 10.00 | 2.84 | 5.00 |
| 5 | North side of Mill Section | 6.22 | 10.00 | 3.45 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/525(g)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | | |
|--|---|-----------------------------|---|----------------------------------|---------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | Director | | |
| [c] | Details of Sample | | Monitoring of Fugitive Emissions in Work Zone Area | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on 22.12.17 | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | 23.12.17 | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible T W A Conc ⁿ * | Concentration of Respirable Dust | Permissible T W A Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 7.36 | 10.00 | 3.78 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.16 | 10.00 | 2.54 | 5.00 |
| 3 | Mill Section 02 nd Floor | 4.78 | 10.00 | 2.21 | 5.00 |
| 4 | South side of Mill Section | 6.17 | 10.00 | 3.14 | 5.00 |
| 5 | North side of Mill Section | 5.44 | 10.00 | 2.92 | 5.00 |
| *Permissible Time Weighted Average (T W A) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

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|--|---|-----------------------------|---|----------------------------------|-------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | Director | | |
| [c] | Details of Sample | | Monitoring of Fugitive Emissions in Work Zone Area | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on 18.01.2018 | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | 19.01.2018 | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible TWA Conc ⁿ * | Concentration of Respirable Dust | Permissible TWA Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 7.52 | 10.00 | 3.75 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.14 | 10.00 | 2.63 | 5.00 |
| 3 | Mill Section 02 nd Floor | 6.55 | 10.00 | 3.27 | 5.00 |
| 4 | South side of Mill Section | 6.10 | 10.00 | 3.12 | 5.00 |
| 5 | North side of Mill Section | 5.70 | 10.00 | 3.04 | 5.00 |
| *Permissible Time Weighted Average (TWA) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/639(g)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | | |
|--|---|---|---------------------------------------|----------------------------------|---------------------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] | Report to be submitted to | Director | | | |
| [c] | Details of Sample | Monitoring of Fugitive Emissions in Work Zone Area | | | |
| [d] | Monitored by | SHIVA TEST HOUSE on 21.02.2018 | | | |
| [e] | No. and Type of Container | Filter Paper | | | |
| [f] | Items required to be tested | As per request | | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] | Date of receiving the sample | 22.02.2018 | | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible T W A Conc ⁿ * | Concentration of Respirable Dust | Permissible T W A Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 6.89 | 10.00 | 3.44 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.76 | 10.00 | 2.97 | 5.00 |
| 3 | Mill Section 02 nd Floor | 5.43 | 10.00 | 2.65 | 5.00 |
| 4 | South side of Mill Section | 4.18 | 10.00 | 2.41 | 5.00 |
| 5 | North side of Mill Section | 6.14 | 10.00 | 3.22 | 5.00 |
| *Permissible Time Weighted Average (T W A) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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Laboratory Address :-
01st FLOOR, RAJHANS NIKETAN,
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SHIVA TEST HOUSE

Tel. : 0612 – 2247538/ 2240752 ; TeleFax : 0612 - 2590705
E.mail.: sthpatna1@yahoo.co.in



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TEST REPORT

| Ref.No. <i>ECL/TR/18-19/03(g)</i> Dt : <i>02.04.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | | |
|---|---|-----------------------------|---|----------------------------------|---------------------------------------|
| [a] | Name and address of the Customer | | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | | Director | | |
| [c] | Details of Sample | | Monitoring of Fugitive Emissions in Work Zone Area | | |
| [d] | Monitored by | | SHIVA TEST HOUSE on 10.03.18 | | |
| [e] | No. and Type of Container | | Filter Paper | | |
| [f] | Items required to be tested | | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | | No | | |
| [h] | Date of receiving the sample | | 11.03.18 | | |
| S. N. | Sampling Point | Concentration of Total Dust | Permissible T W A Conc ⁿ * | Concentration of Respirable Dust | Permissible T W A Conc ⁿ * |
| | | (mg/M ³) | (mg/M ³) | (mg/M ³) | (mg/M ³) |
| 1 | Mill Section Ground Floor | 7.40 | 10.00 | 3.68 | 5.00 |
| 2 | Mill Section 01 st Floor | 5.26 | 10.00 | 2.70 | 5.00 |
| 3 | Mill Section 02 nd Floor | 6.07 | 10.00 | 2.98 | 5.00 |
| 4 | South side of Mill Section | 5.68 | 10.00 | 2.93 | 5.00 |
| 5 | North side of Mill Section | 5.79 | 10.00 | 3.08 | 5.00 |
| *Permissible Time Weighted Average (T W A) Conc ⁿ based on Silica Content as per Factories Act'1948 Second Schedule | | | | | |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/371(e)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
|--|---|--|---------------------------|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | Director | | |
| [c] Details of Sample | Monitoring of Stack Emission | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 08.10.17 | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | 09.10.17 | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | Bag House attached with Cement Mill | |
| 2. Height of Stack (as reported) | | 33 m. | |
| 3. Dia of Stack at Top (as reported) | | 1.2 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 31.0 | |
| 7. Flue Gas Temperature, °C | | 57.0 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.6 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 27928.6 | |
| 10. Sampling Point | | 21 m. | |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 24.7 | 30.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 13.2 | Not Specified |



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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/413(e)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 05.11.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 06.11.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 26.0 |
| | 7. Flue Gas Temperature, °C | | 59.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.1 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 25934.1 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.9 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 16.3 |
| | | | 30.0 mg / NM ³ |
| | | | Not Specified |
| | | | Not Specified |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/525(e)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
|--|---|---|--|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | Director | | |
| [c] | Details of Sample | Monitoring of Stack Emission | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.12.17 | | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | 23.12.17 | | |
| Parameters | | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House attached with Cement Mill | |
| 2. | Height of Stack (as reported) | | 33 m. | |
| 3. | Dia of Stack at Top (as reported) | | 1.2 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 18.0 | |
| 7. | Flue Gas Temperature, °C | | 54.0 | |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 8.1 | |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 30039.1 | |
| 10. | Sampling Point | | 21 m. | |
| | | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.4 | 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 18.2 | Not Specified |




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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/585(e)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.01.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.01.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 22.0 |
| | 7. Flue Gas Temperature, °C | | 49.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 27492.7 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 23.9 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 12.7 Not Specified |




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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/639(e)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 21.02.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 22.02.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House attached with Cement Mill |
| | 2. Height of Stack (as reported) | | 33 m. |
| | 3. Dia of Stack at Top (as reported) | | 1.2 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 24.0 |
| | 7. Flue Gas Temperature, °C | | 56.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 30225.1 |
| | 10. Sampling Point | | 21 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 32.0 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 16.1 Not Specified |



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TEST REPORT

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|---|---|---|---------------------------|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | Director | | |
| [c] Details of Sample | Monitoring of Stack Emission | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 10.03.18 | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | 11.03.18 | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | Bag House attached with Cement Mill | |
| 2. Height of Stack (as reported) | | 33 m. | |
| 3. Dia of Stack at Top (as reported) | | 1.2 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 28.0 | |
| 7. Flue Gas Temperature, °C | | 58.0 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.9 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 32607.2 | |
| 10. Sampling Point | | 21 m. | |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 33.9 | 30.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 14.6 | Not Specified |



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TEST REPORT

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|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/371(c)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.10.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.10.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.75 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 31.0 |
| | 7. Flue Gas Temperature, °C | | 51.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 10673.1 |
| | 10. Sampling Point | | 11 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 23.8 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 13.6 |



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BY DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

| Ref.No. <i>ECL/TR/17-18/413(c)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
|--|---|---|--|---------------------------|
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] | Report to be submitted to | Director | | |
| [c] | Details of Sample | Monitoring of Stack Emission | | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 05.11.17 | | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | | |
| [f] | Items required to be tested | As per request | | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | | |
| [h] | Date of receiving the sample | 06.11.17 | | |
| Parameters | | Method of Test | Results | |
| 1. | Stack Connected to | | Bag House of Clinker & gypsum unloader Section | |
| 2. | Height of Stack (as reported) | | 30 m. | |
| 3. | Dia of Stack at Top (as reported) | | 0.75 m. | |
| 4. | Draft | | ID Fan | |
| 5. | Material of Construction | | M.S. | |
| 6. | Ambient Temperature, °C | | 26.0 | |
| 7. | Flue Gas Temperature, °C | | 46.0 | |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 7.4 | |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 10988.8 | |
| 10. | Sampling Point | | 11 m. | |
| | | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 22.1 | 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 10.3 | Not Specified |



[Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/525(c)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.12.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 23.12.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.75 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 18.0 |
| | 7. Flue Gas Temperature, °C | | 43.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.7 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 10043.8 |
| | 10. Sampling Point | | 11 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 20.0 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.0 |
| | | | 30.0 mg / NM ³ |
| | | | Not Specified |
| | | | Not Specified |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/585(c)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.01.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.01.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.75 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 22.0 |
| | 7. Flue Gas Temperature, °C | | 45.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.9 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 10278.6 |
| | 10. Sampling Point | | 11 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 21.4 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.0 |



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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/639(c)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | | |
|--|---|--|---------------------------|--|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | | |
| [b] Report to be submitted to | Director | | | |
| [c] Details of Sample | Monitoring of Stack Emission | | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 21.02.2018 | | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | | |
| [f] Items required to be tested | As per request | | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | | |
| [h] Date of receiving the sample | 22.02.2018 | | | |
| Parameters | Method of Test | Results | | |
| 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section | | |
| 2. Height of Stack (as reported) | | 30 m. | | |
| 3. Dia of Stack at Top (as reported) | | 0.75 m. | | |
| 4. Draft | | ID Fan | | |
| 5. Material of Construction | | M.S. | | |
| 6. Ambient Temperature, °C | | 24.0 | | |
| 7. Flue Gas Temperature, °C | | 44.0 | | |
| 8. Velocity, m/sec. | | IS 11255 (Part-3) | 7.5 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | | 11207.6 | |
| 10. Sampling Point | | | 11 m. | |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules | |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 19.1 | 30.0 mg / NM ³ | |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified | |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 8.7 | Not Specified | |



[Handwritten Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|---|--|
| Ref.No. <i>ECL/TR/18-19/03(c)</i> Dt : <i>02.04.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.03.18 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 11.03.18 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of Clinker & gypsum unloader Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.75 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 28.0 |
| | 7. Flue Gas Temperature, °C | | 41.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.4 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 9655.2 |
| | 10. Sampling Point | | 11 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 20.6 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.5 Not Specified |



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TEST REPORT

| | | | |
|--|---|---|---------------------------------|
| Ref.No. <i>ECL/TR/17-18/371(d)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | <i>Director</i> | | |
| [c] Details of Sample | <i>Monitoring of Stack Emission</i> | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on <i>08.10.17</i> | | |
| [e] No. & Type of Container | <i>Thimble & Glass Impinger</i> | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | <i>09.10.17</i> | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section | |
| 2. Height of Stack (as reported) | | 30 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.6 m. | |
| 4. Draft | | ID Fan | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 31.0 | |
| 7. Flue Gas Temperature, °C | | 56 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.2 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 6634.8 | |
| 10. Sampling Point | | 9 m. | |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 24.9 | 30.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 12.3 | Not Specified |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|---|---|
| Ref.No. <i>ECL/TR/17-18/413(d)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>05.11.17</i> | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 06.11.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.6 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 26.0 |
| | 7. Flue Gas Temperature, °C | | 54 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 6768.1 |
| | 10. Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 23.0 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.1 Not Specified |



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TEST REPORT

| | | | |
|--|---|---|---|
| Ref.No. <i>ECL/TR/17-18/525(d)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.12.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 23.12.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.6 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 18.0 |
| | 7. Flue Gas Temperature, °C | | 48 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.9 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 6516.8 |
| | 10. Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.2 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 9.6 |
| | | | Not Specified |
| | | | Not Specified |



[Signature]

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Quality Manager / Dy. Quality Manager

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TEST REPORT

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|--|---|---|---|
| Ref.No. <i>ECL/TR/17-18/585(d)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.01.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.01.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.6 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 22.0 |
| | 7. Flue Gas Temperature, °C | | 50 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 7508.9 |
| | 10. Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 24.0 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 9.2 Not Specified |



[Signature]

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Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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TEST REPORT

| | | | |
|--|---|---|---|
| Ref.No. <i>ECL/TR/17-18/639(d)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 21.02.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 22.02.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| | 2. Height of Stack (as reported) | | 30 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.6 m. |
| | 4. Draft | | ID Fan |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 24.0 |
| | 7. Flue Gas Temperature, °C | | 48.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.5 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 7083.4 |
| | 10. Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 25.9 30.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 11.7 Not Specified |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|---|---|
| Ref.No. <i>ECL/TR/18-19/03(d)</i> Dt : <i>02.04.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on <i>10.03.18</i> | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | <i>11.03.18</i> | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | Bag House of gypsum & clinker feeding Section |
| 2. | Height of Stack (as reported) | | 30 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.6 m. |
| 4. | Draft | | ID Fan |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 28.0 |
| 7. | Flue Gas Temperature, °C | | 51.0 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 7.0 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 6550.0 |
| 10. | Sampling Point | | 9 m. |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 20.9 30.0 mg / NM ³ |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | Not Detectable Not Specified |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 7.9 Not Specified |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|--|---------------------------------|
| Ref.No. <i>ECL/TR/17-18/371(b)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | Director | | |
| [c] Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set . | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 08.10.17 | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | 09.10.17 | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | 500 KVA DG Set | |
| 2. Height of Stack (as reported) | | 3.0 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.2 m. | |
| 4. Draft | | Natural | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 31.0 | |
| 7. Flue Gas Temperature, °C | | 176.1 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 6.9 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 517.5 | |
| 10. Sampling Point | | Top of Exhaust | |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 50.2 | 75.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 41.9 | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 182.5 | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |




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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/413(b)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 05.11.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 06.11.17 | |
| | Parameters | Method of Test | Results |
| 1. | Stack Connected to | | 500 KVA DG Set |
| 2. | Height of Stack (as reported) | | 3.0 m. |
| 3. | Dia of Stack at Top (as reported) | | 0.2 m. |
| 4. | Draft | | Natural |
| 5. | Material of Construction | | M.S. |
| 6. | Ambient Temperature, °C | | 26.0 |
| 7. | Flue Gas Temperature, °C | | 181.4 |
| 8. | Velocity, m/sec. | IS 11255 (Part-3) | 6.7 |
| 9. | Volumetric Flow Rate, NM ³ /hr. | | 496.6 |
| 10. | Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| 11. | Particulate Matter (P.M.) | IS 11255 (Part-1) | 41.5 |
| 12. | Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 36.4 |
| 13. | Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 150.8 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



[Signature]

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TEST REPORT

| | | | |
|--|---|--|---------------------------------|
| Ref.No. <i>ECL/TR/17-18/525(b)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | Director | | |
| [c] Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 22.12.17 | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | 23.12.17 | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | 500 KVA DG Set | |
| 2. Height of Stack (as reported) | | 3.0 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.2 m. | |
| 4. Draft | | Natural | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 18.0 | |
| 7. Flue Gas Temperature, °C | | 188.3 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.8 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 569.5 | |
| 10. Sampling Point | | Top of Exhaust | |
| | | Concentration (mg / NM³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 44.6 | 75.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 38.7 | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 161.2 | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| Ref.No. <i>ECL/TR/17-18/585(b)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
|--|---|---------------------------------------|----------------------------|
| [a] Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | | |
| [b] Report to be submitted to | Director | | |
| [c] Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | | |
| [d] Sample Collected by | SHIVA TEST HOUSE on 18.01.2018 | | |
| [e] No. & Type of Container | Thimble & Glass Impinger | | |
| [f] Items required to be tested | As per request | | |
| [g] Whether any specific Method of Test has been suggested by the party | No | | |
| [h] Date of receiving the sample | 19.01.2018 | | |
| Parameters | Method of Test | Results | |
| 1. Stack Connected to | | 500 KVA DG Set | |
| 2. Height of Stack (as reported) | | 3.0 m. | |
| 3. Dia of Stack at Top (as reported) | | 0.2 m. | |
| 4. Draft | | Natural | |
| 5. Material of Construction | | M.S. | |
| 6. Ambient Temperature, °C | | 22.0 | |
| 7. Flue Gas Temperature, °C | | 180.2 | |
| 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.2 | |
| 9. Volumetric Flow Rate, NM ³ /hr. | | 609.4 | |
| 10. Sampling Point | | Top of Exhaust | |
| | | Concentration (mg / NM ³) | Limit as per E (P) Rules |
| 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 53.8 | 75.0 mg / NM ³ |
| 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 43.3 | Not Specified |
| 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 205.5 | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



[Signature]

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/639(b)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 21.02.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 22.02.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 500 KVA DG Set |
| | 2. Height of Stack (as reported) | | 3.0 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.2 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 24.0 |
| | 7. Flue Gas Temperature, °C | | 172.3 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 7.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 544.6 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 45.3 75.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 40.8 Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 189.5 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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TEST REPORT

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|--|--|---|--|
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| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 500 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.03.18 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 11.03.18 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 500 KVA DG Set |
| | 2. Height of Stack (as reported) | | 3.0 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.2 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 28.0 |
| | 7. Flue Gas Temperature, °C | | 178.3 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.1 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 679.2 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 48.6 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 40.2 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 168.0 |
| | N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



[Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

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Laboratory Address :-
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SHIVA TEST HOUSE

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E.mail.: sthatna1@yahoo.co.in



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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/371(a)</i> Dt : <i>30.10.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 08.10.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 09.10.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 31.0 |
| | 7. Flue Gas Temperature, °C | | 194.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 10.4 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 317.0 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 53.4 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 44.6 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 194.2 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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Quality Manager / Dy. Quality Manager

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SHIVA TEST HOUSE

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/413(a)</i> Dt : <i>23.11.2017</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 05.11.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 06.11.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 26.0 |
| | 7. Flue Gas Temperature, °C | | 210.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 8.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 241.6 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 44.1 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 38.7 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 160.4 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | | |



[Signature]

Authorized Signatory
Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|---|---|--|
| Ref.No. <i>ECL/TR/17-18/525(a)</i> Dt : <i>10.01.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 22.12.17 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 23.12.17 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 18.0 |
| | 7. Flue Gas Temperature, °C | | 198.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.6 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 290.1 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 47.4 75.0 mg / NM ³ |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 41.2 Not Specified |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 171.5 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|--|---|--|
| Ref.No. <i>ECL/TR/17-18/585(a)</i> Dt : <i>09.02.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 18.01.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 19.01.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13-m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 22.0 |
| | 7. Flue Gas Temperature, °C | | 216.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 11.3 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 328.8 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 57.2 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 46.1 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 218.6 |
| | N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|--|--|---|--|
| Ref.No. <i>ECL/TR/17-18/639(a)</i> Dt : <i>03.03.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 21.02.2018 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 22.02.2018 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 24.0 |
| | 7. Flue Gas Temperature, °C | | 210.0 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 9.4 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 276.9 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 48.2 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 43.4 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 201.6 |
| | N.B.: There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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Quality Manager / Dy. Quality Manager

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TEST REPORT

| | | | |
|---|---|---|--|
| Ref.No. <i>ECL/TR/18-19/03(a)</i> Dt : <i>02.04.2018</i> Your PO No. <i>ECO/BHR/SHIVA TEST HOUSE /W.O./RS/2017</i> Dt : <i>10.04.17</i> | | | |
| [a] | Name and address of the Customer | ECO Cement Ltd. Vill.: Mahmoodganj At : Kulharia Durgawati Dist.: Bhabua (Kaimur) | |
| [b] | Report to be submitted to | Director | |
| [c] | Details of Sample | Monitoring of Stack Emission of 125 KVA DG Set | |
| [d] | Sample Collected by | SHIVA TEST HOUSE on 10.03.18 | |
| [e] | No. & Type of Container | Thimble & Glass Impinger | |
| [f] | Items required to be tested | As per request | |
| [g] | Whether any specific Method of Test has been suggested by the party | No | |
| [h] | Date of receiving the sample | 11.03.18 | |
| | Parameters | Method of Test | Results |
| | 1. Stack Connected to | | 125 KVA DG Set |
| | 2. Height of Stack (as reported) | | 2.1 m. |
| | 3. Dia of Stack at Top (as reported) | | 0.13 m. |
| | 4. Draft | | Natural |
| | 5. Material of Construction | | M.S. |
| | 6. Ambient Temperature, °C | | 28.0 |
| | 7. Flue Gas Temperature, °C | | 192 |
| | 8. Velocity, m/sec. | IS 11255 (Part-3) | 10.2 |
| | 9. Volumetric Flow Rate, NM ³ /hr. | | 312.1 |
| | 10. Sampling Point | | Top of Exhaust |
| | | | Concentration (mg / NM³) |
| | | | Limit as per E (P) Rules |
| | 11. Particulate Matter (P.M.) | IS 11255 (Part-1) | 51.7 |
| | 12. Sulphur Dioxide (SO ₂) | IS 11255 (Part-2) | 42.8 |
| | 13. Oxides of Nitrogen (NO ₂) | IS 11255 (Part-7) | 178.7 |
| | | | 75.0 mg / NM ³ |
| | | | Not Specified |
| | | | 710.0 mg / NM ³ |
| N.B.: | There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust | | |



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