

# ECO CEMENTS LTD.



**ENVIRONMENTAL MONITORING  
RESULTS OCTOBER 2017 TO  
MARCH 2018**

To,  
The Chairman,  
Bihar State Pollution Control Board,  
Parivesh Bhavan, N.S.B.-2,  
Patliputra Industrial Area, Patliputra,  
Patna, Bihar – 800010

DATED 25.06.2018

**Our Ref.: ECO/BIHAR/EMR/25062018/13**

Sub.: Revised Environmental Monitoring Results of M/s. Eco Cements Limited, Bhabhua for the period of OCT 2017 TO MARCH 2018

Dear Sir,

This refers to above mentioned subject. In this matter, please find attached Environmental Monitoring results of Ambient Air Quality, Stack Emission and Fugitive Emission of M/s. Eco Cements Limited, Bhabhua for the period of OCT 2017 TO MARCH 2018

Kindly acknowledge the receipt and oblige.

Thanking you in anticipation,  
For Eco Cements Limited

  
K.C. Jha **Auth. Signatory**  
Authorized Sign

Encl.

1. **Environmental Monitoring results of M/s. Eco Cements Limited, Bhabhua for the period of OCT 2017 TO MARCH 2018**

Copy to.

1. **Ministry of Environment and Forests,  
BANGLOW NO. A-2, SHYAMLI CALONY,  
RANCHI-834002, JHARKHAND  
PH. 0651-2410007, 2410002**
2. **Scientist 'E' & Incharge,  
Central Pollution Control Board,  
Southernd Conclave, Block 502, 5TH & 6TH Floors,  
1582 Rajdanga Main Road,  
Kolkata – 700107 (W.B.)**

### Ambient Air Quality Monitoring Report (All Values in $\mu\text{g}/\text{m}^3$ )

Year: 2017 - 2018 (OCT 2017 TO MARCH 2018)

S. No	Location	Near Main Gate				Near CCR				Near Canteen				Near Gypsum & Clinker Storage			
		PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>2</sub>
1	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
2	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
3	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
4	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
5	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
6	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
<b>Average</b>		<b>55.12</b>	<b>32.00</b>	<b>12.28</b>	<b>24.05</b>	<b>47.28</b>	<b>27.60</b>	<b>8.82</b>	<b>15.95</b>	<b>43.65</b>	<b>25.72</b>	<b>7.47</b>	<b>14.80</b>	<b>48.17</b>	<b>27.80</b>	<b>7.37</b>	<b>14.02</b>

Stack Emission Level Monitoring Report for the period OCT 2017 TO MARCH 2018 All Values in mg/m <sup>3</sup>							
Sr. No.	Location	Particulate Matter Emission ( mg/Nm <sup>3</sup> )					Standard Limit of Particulate Matter Emission
	Month	Stack Attached with Bag House of Cement Mill	Stack Attached with Bag House of Gypsum & Clinker feeding	Stack Attached with Bag House of Clinker & Gypsum unloader	Stack Attached with DG 500 KVA	Stack Attached with DG 125 KVA	
1	Oct-17	24.7	24.9	23.8	50.2	53.4	50 mg/Nm <sup>3</sup>
2	Nov-17	25.9	23.0	22.1	41.5	44.1	
3	Dec-17	22.4	25.2	20.0	44.6	47.4	
4	Jan-18	23.9	24.0	21.4	53.8	57.2	
5	Feb-18	32.0	25.9	19.1	45.3	48.2	
6	Mar-18	33.9	20.9	20.6	48.6	51.7	
<b>Average Values</b>		27.1	24.0	21.2	47.3	50.3	

Ambient Noise level Monitoring Report From OCT 2017 TO MARCH 2018 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	Oct-17	69.8	67.8	68.3	62.9	63.1	75dB(A) in day & 70 dB(A) in night
2	Nov-17	71.3	69.4	67.5	63.2	66.8	
3	Dec-17	68.4	66.2	63.8	64.9	62.8	
4	Jan-18	70.2	67.1	66.2	62.8	63.7	
5	Feb-18	72.4	69.3	64.1	65.7	67.2	
6	Mar-18	69.1	66.2	61.2	67.1	64.8	
Average Values		70.2	67.7	65.2	64.4	64.7	

<b>Fugitive Dust Emission Level Monitoring Report for the period OCT 2017 TO MARCH 2018</b>						
<b>Concentration of Total Dust (All Values in mg/m<sup>3</sup>)</b>						
<b>Sl. No.</b>	<b>Location</b> →	<b>Mill Section Ground Floor</b>	<b>Mill Section 1st Floor</b>	<b>Mill Section 2nd Floor</b>	<b>South Side of Mill Section</b>	<b>North side of Mill Section</b>
	Month ↓					
<b>1</b>	Oct-17	6.44	5.87	7.38	6.18	5.43
<b>2</b>	Nov-17	8.77	4.38	6.19	5.76	6.22
<b>3</b>	Dec-17	7.36	5.16	4.78	6.17	5.44
<b>4</b>	Jan-18	7.52	5.14	6.55	6.10	5.70
<b>5</b>	Feb-18	6.89	5.76	5.43	4.18	6.14
<b>6</b>	Mar-18	7.40	5.26	6.07	5.68	5.79
<b>Average Values</b>		7.40	5.26	6.07	5.68	5.79

Regd. Office :  
6D Extn. ; (Chatterjee Lane)  
Gardanibagh  
PATNA – 800 001 (Bihar)



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



# SHIVA TEST HOUSE

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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/17-18/371(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 08/09.10.17				
[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	09.10.17				
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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	76.8	62.1	61.9	66.1	100 µg / m <sup>3</sup>
		67.3	57.6	57.6	78.2	
		54.2	64.4	53.2	51.2	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	45.2	36.9	36.5	37.2	60 µg / m <sup>3</sup>
		39.1	33.1	34.2	43.8	
		31.8	36.1	30.8	29.6	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	11.4	7.4	10.3	6.8	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	20.1	13.0	24.6	11.8	80 µg / m <sup>3</sup>
		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	
24 Hrs. Average Value						
	PM <sub>10</sub>	66.1	61.4	57.6	65.2	
	PM <sub>2.5</sub>	38.7	35.4	33.8	36.9	
	SO <sub>2</sub>	12.1	8.4	7.4	6.2	
	NO <sub>2</sub>	21.3	14.7	15.8	12.8	



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

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## 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./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	<b>Monitoring of Ambient Air Quality</b>				
[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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	72.2	58.4	58.2	62.1	100 µg / m <sup>3</sup>
		63.3	54.1	54.1	73.5	
		50.9	60.5	50.0	48.1	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	42.5	34.7	34.3	35.0	60 µg / m <sup>3</sup>
		36.8	31.1	32.2	41.2	
		29.9	33.9	29.0	27.8	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	16.4	11.8	9.7	6.4	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	24.6	20.1	18.1	15.6	80 µg / m <sup>3</sup>
		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 <sub>10</sub>	62.1	57.7	54.1	61.3	
	PM <sub>2.5</sub>	36.4	33.2	31.8	34.7	
	SO <sub>2</sub>	14.6	9.6	7.0	5.8	
	NO <sub>2</sub>	27.1	15.1	12.6	11.5	



*[Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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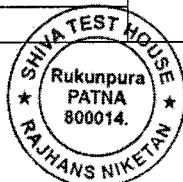



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## TEST REPORT

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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	64.6	60.1	58.4	56.1	100 µg / m <sup>3</sup>
		89.4	72.6	66.1	60.4	
		78.3	63.7	59.7	68.7	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	38.4	35.8	34.7	33.4	60 µg / m <sup>3</sup>
		53.2	43.2	39.3	35.9	
		46.6	37.9	35.5	40.9	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	10.8	7.2	9.1	9.6	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	22.6	16.2	17.7	14.5	80 µg / m <sup>3</sup>
		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 <sub>10</sub>	77.4	65.5	61.4	61.7	
	PM <sub>2.5</sub>	46.1	39.0	36.5	36.7	
	SO <sub>2</sub>	10.3	7.4	6.8	8.1	
	NO <sub>2</sub>	22.3	14.3	13.2	12.6	



  
Authorized Signatory  
Quality Manager / Dy. Quality Manager

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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	<b>Monitoring of Ambient Air Quality</b>				
[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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	70.7	57.0	52.1	58.6	100 µg / m <sup>3</sup>
		78.1	61.9	63.6	67.2	
		60.2	54.6	54.8	51.7	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	41.8	33.9	30.2	33.8	60 µg / m <sup>3</sup>
		44.3	36.3	35.9	38.6	
		35.6	31.2	32.1	29.9	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	11.6	8.8	10.5	9.6	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	9.4	9.7	6.1	5.2	80 µg / m <sup>3</sup>
		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						
		69.7	57.9	56.8	59.2	
PM <sub>10</sub>		40.6	33.8	32.7	34.1	
PM <sub>2.5</sub>		11.4	8.3	7.4	7.8	
SO <sub>2</sub>		21.2	16.6	14.1	15.6	
NO <sub>2</sub>						



*[Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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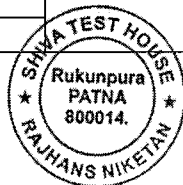


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## TEST REPORT

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./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	<b>Monitoring of Ambient Air Quality</b>				
[d]	Sample Collected by	SHIVA TEST HOUSE on <i>21/22.02.2018</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>22.02.2018</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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	82.0	62.7	49.5	65.7	100 µg / m <sup>3</sup>
		90.6	68.1	60.4	75.3	
		69.9	60.1	52.0	57.9	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	48.5	37.3	28.7	37.9	60 µg / m <sup>3</sup>
		51.4	39.9	34.1	43.3	
		41.3	34.3	30.5	33.5	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	13.5	10.3	12.1	11.2	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	25.6	18.8	20.6	24.1	80 µg / m <sup>3</sup>
		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 <sub>10</sub>	80.8	63.6	54.0	66.3	
	PM <sub>2.5</sub>	47.0	37.2	31.1	38.2	
	SO <sub>2</sub>	13.3	9.6	8.6	9.0	
	NO <sub>2</sub>	24.5	19.2	16.3	18.1	



*[Signature]*  
Authorized Signatory

Quality Manager / Dy. Quality Manager

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01<sup>ST</sup> FLOOR, RAJHANS NIKETAN,  
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# SHIVA TEST HOUSE

Tel. : 0612 – 2247538/ 2240752 ; TeleFax : 0612 - 2590705  
E.mail.: [sthatna1@yahoo.co.in](mailto:sthatna1@yahoo.co.in)


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## TEST REPORT

Ref.No. <i>ECL/TR/18-19/03(f)</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 : 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 <sub>10</sub> ), µg / m <sup>3</sup>	IS 5182 (Part-23)	72.4	59.9	53.3	60.1	100 µg / m <sup>3</sup>
		86.0	67.6	63.4	67.6	
		67.4	59.5	55.5	59.4	
2. Particulate Matter (PM <sub>2.5</sub> ), µg / m <sup>3</sup>	CPCB	42.9	35.6	31.2	35.0	60 µg / m <sup>3</sup>
		49.6	39.8	36.4	39.3	
		39.6	34.5	32.7	34.8	
3. Sulphur Dioxide as SO <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-2)	12.0	10.6	8.4	7.6	80 µg / m <sup>3</sup>
		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 <sub>2</sub> , µg / m <sup>3</sup>	IS 5182 (Part-6)	23.4	17.1	21.6	19.8	80 µg / m <sup>3</sup>
		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	
		20.8	11.2	12.9	9.6	
24 Hrs. Average Value						
PM <sub>10</sub>		75.3	62.3	57.4	62.4	
PM <sub>2.5</sub>		44.0	36.6	33.5	36.4	
SO <sub>2</sub>		12.0	9.6	7.6	7.3	
NO <sub>2</sub>		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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[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>08.10.17</i>
[f] Whether any specific Method of Test has been suggested by the party	No
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
1. Near Main Gate	<b>69.8</b>
2. Near CCR	<b>67.8</b>
3. Near Canteen	<b>68.3</b>
4. Near Gypsum Storage Area	<b>62.9</b>
5. Near Clinker Storage Area	<b>63.1</b>
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) &amp; 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&amp;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/17-18/413(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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[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>05.11.17</i>
[f] Whether any specific Method of Test has been suggested by the party	No
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
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.:	<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) &amp; 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&amp;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/17-18/525(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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[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
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
1. Near Main Gate	<b>68.4</b>
2. Near CCR	<b>66.2</b>
3. Near Canteen	<b>63.8</b>
4. Near Gypsum Storage Area	<b>64.9</b>
5. Near Clinker Storage Area	<b>62.8</b>
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) &amp; 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&amp;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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[b] Report to be submitted to	<i>Director</i>
[c] Details of Sample	<i>Monitoring of Ambient Noise Level</i>
[d] Monitored by	<b>SHIVA TEST HOUSE on 18.01.2018</b>
[f] Whether any specific Method of Test has been suggested by the party	No
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
1. Near Main Gate	<b>70.2</b>
2. Near CCR	<b>67.1</b>
3. Near Canteen	<b>66.2</b>
4. Near Gypsum Storage Area	<b>62.8</b>
5. Near Clinker Storage Area	<b>63.7</b>
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) &amp; 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&amp;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/17-18/639(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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[b] Report to be submitted to	<i>Director</i>
[c] Details of Sample	<i>Monitoring of Ambient Noise Level</i>
[d] Monitored by	<b>SHIVA TEST HOUSE on 21.02.2018</b>
[f] Whether any specific Method of Test has been suggested by the party	No
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
1. Near Main Gate	<b>72.4</b>
2. Near CCR	<b>69.3</b>
3. Near Canteen	<b>64.1</b>
4. Near Gypsum Storage Area	<b>65.7</b>
5. Near Clinker Storage Area	<b>67.2</b>
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) &amp; 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&amp;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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>
[b] Report to be submitted to	<i>Director</i>
[c] Details of Sample	<i>Monitoring of Ambient Noise Level</i>
[d] Monitored by	<b>SHIVA TEST HOUSE on 10.03.18</b>
[f] Whether any specific Method of Test has been suggested by the party	No
<b>Sampling Location</b>	<b>Time Weighted Average (TWA) of Day Time Noise Level in dB(A)</b>
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.:	<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) &amp; 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&amp;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/17-18/371(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 T W A Conc <sup>n</sup> *	Concentration of Respirable Dust	Permissible T W A Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	6.44	10.00	3.34	5.00
2	Mill Section 01 <sup>st</sup> Floor	5.87	10.00	2.92	5.00
3	Mill Section 02 <sup>nd</sup> 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 (T W A) Conc <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



*[Handwritten Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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01<sup>ST</sup> FLOOR, RAJHANS NIKETAN,  
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# SHIVA TEST HOUSE

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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 : Kuhlaria 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 <sup>n</sup> *	Concentration of Respirable Dust	Permissible TWA Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	8.77	10.00	4.12	5.00
2	Mill Section 01 <sup>st</sup> Floor	4.38	10.00	2.42	5.00
3	Mill Section 02 <sup>nd</sup> 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 <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



Authorized Signatory  
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 <sup>n</sup> *	Concentration of Respirable Dust	Permissible T W A Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	7.36	10.00	3.78	5.00
2	Mill Section 01 <sup>st</sup> Floor	5.16	10.00	2.54	5.00
3	Mill Section 02 <sup>nd</sup> 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 <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



*[Handwritten Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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## TEST REPORT

Ref.No. <i>ECL/TR/17-18/585(g)</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 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 <sup>n</sup> *	Concentration of Respirable Dust	Permissible TWA Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	7.52	10.00	3.75	5.00
2	Mill Section 01 <sup>st</sup> Floor	5.14	10.00	2.63	5.00
3	Mill Section 02 <sup>nd</sup> 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 <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



*[Signature]*

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Quality Manager / Dy. Quality Manager

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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 <sup>n</sup> *	Concentration of Respirable Dust	Permissible T W A Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	6.89	10.00	3.44	5.00
2	Mill Section 01 <sup>st</sup> Floor	5.76	10.00	2.97	5.00
3	Mill Section 02 <sup>nd</sup> 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 <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



Authorized Signatory  
Quality Manager / Dy. Quality Manager

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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 <sup>n</sup> *	Concentration of Respirable Dust	Permissible T W A Conc <sup>n</sup> *
		(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )	(mg/M <sup>3</sup> )
1	Mill Section Ground Floor	7.40	10.00	3.68	5.00
2	Mill Section 01 <sup>st</sup> Floor	5.26	10.00	2.70	5.00
3	Mill Section 02 <sup>nd</sup> 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 <sup>n</sup> based on Silica Content as per Factories Act'1948 Second Schedule					



*[Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		27928.6
	10. Sampling Point		21 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>24.7</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>13.2</b> Not Specified



*[Signature]*

Authorized Signatory  
Quality Manager / Dy. Quality Manager

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		25934.1
	10. Sampling Point		21 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>25.9</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>16.3</b> Not Specified



*[Signature]*

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Quality Manager / Dy. Quality Manager

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		30039.1
	10. Sampling Point		21 m.
			<i>Concentration ( mg / NM<sup>3</sup> )</i>
			<i>Limit as per E (P) Rules</i>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>22.4</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>18.2</b> Not Specified



*[Signature]*

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		27492.7
	10. Sampling Point		21 m.
			<b>Concentration ( mg / NM<sup>3</sup> )</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>23.9</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>12.7</b> Not Specified



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/17-18/639(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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		30225.1
	10. Sampling Point		21 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>32.0</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>16.1</b> Not Specified



Authorized Signatory  
Quality Manager / Dy. Quality Manager

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## TEST REPORT

Ref.No. <i>ECL/TR/18-19/03(e)</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 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 <sup>3</sup> /hr.		32607.2	
10. Sampling Point		21 m.	
		Concentration (mg / NM <sup>3</sup> )	Limit as per E (P) Rules
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	33.9	30.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	Not Detectable	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	14.6	Not Specified



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## TEST REPORT

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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		10673.1
	10. Sampling Point		11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>23.8</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>13.6</b> Not Specified



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## 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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		10988.8
	10. Sampling Point		11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>22.1</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>10.3</b> Not Specified



*[Signature]*

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		10043.8
	10. Sampling Point		11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	20.0
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	Not Detectable
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	8.0
			30.0 mg / NM <sup>3</sup>
			Not Specified
			Not Specified



*[Signature]*

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		10278.6
	10. Sampling Point		11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	21.4
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	Not Detectable
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	11.0



*[Signature]*

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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		
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
	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 <sup>3</sup> /hr.			11207.6
	10. Sampling Point			11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>	
			<b>Limit as per E (P) Rules</b>	
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>19.1</b> 30.0 mg / NM <sup>3</sup>	
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified	
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>8.7</b> Not Specified	



*[Signature]*

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		9655.2
	10. Sampling Point		11 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>20.6</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>11.5</b> Not Specified



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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/17-18/371(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	<b>ECO Cement Ltd.</b> Vill.: <b>Mahmoodganj</b> At : <b>Kulharia</b> Durgawati Dist.: <b>Bhabua (Kaimur)</b>		
[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 &amp; 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>		
<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
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 <sup>3</sup> /hr.		6634.8	
10. Sampling Point		9 m.	
		<b>Concentration (mg / NM<sup>3</sup>)</b>	<b>Limit as per E (P) Rules</b>
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>24.9</b>	30.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>12.3</b>	Not Specified



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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	<i>06.11.17</i>	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		6768.1
	10. Sampling Point		9 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>23.0</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>11.1</b> Not Specified



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Quality Manager / Dy. Quality Manager

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		6516.8
	10. Sampling Point		9 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>25.2</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>9.6</b> Not Specified



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## TEST REPORT

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 <sup>3</sup> /hr.		7508.9	
10. Sampling Point		9 m.	
		Concentration (mg / NM <sup>3</sup> )	Limit as per E (P) Rules
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	24.0	30.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	Not Detectable	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	9.2	Not Specified



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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 <i>21.02.2018</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>22.02.2018</i>	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		7083.4
	10. Sampling Point		9 m.
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>25.9</b> 30.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>11.7</b> Not Specified



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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	<b>ECO Cement Ltd.</b> Vill.: <b>Mahmoodganj</b> At : <b>Kulharia</b> Durgawati Dist.: <b>Bhabua (Kaimur)</b>		
[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>10.03.18</i>		
[e] No. & Type of Container	<i>Thimble &amp; 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>11.03.18</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 <sup>3</sup> /hr.		6550.0	
10. Sampling Point		9 m.	
		Concentration (mg / NM <sup>3</sup> )	Limit as per E (P) Rules
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>20.9</b>	30.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>Not Detectable</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>7.9</b>	Not Specified



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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	<b>ECO Cement Ltd.</b> Vill.: <b>Mahmoodganj</b> At : <b>Kulharia</b> Durgawati Dist.: <b>Bhabua (Kaimur)</b>		
[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>08.10.17</i>		
[e] No. & Type of Container	<i>Thimble &amp; 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>		
<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
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 <sup>3</sup> /hr.		517.5	
10. Sampling Point		Top of Exhaust	
		<b>Concentration (mg / NM<sup>3</sup>)</b>	<b>Limit as per E (P) Rules</b>
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>50.2</b>	75.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>41.9</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>182.5</b>	710.0 mg / NM <sup>3</sup>
<b>N.B.:</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

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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		496.6
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>41.5</b> 75.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>36.4</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>150.8</b> 710.0 mg / NM <sup>3</sup>
<b>N.B.:</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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# SHIVA TEST HOUSE

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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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>		
[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 22.12.17		
[e] No. & Type of Container	<i>Thimble &amp; 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	23.12.17		
<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
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 <sup>3</sup> /hr.		569.5	
10. Sampling Point		Top of Exhaust	
		<b>Concentration (mg / NM<sup>3</sup>)</b>	<b>Limit as per E (P) Rules</b>
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>44.6</b>	75.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>38.7</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>161.2</b>	710.0 mg / NM <sup>3</sup>
<b>N.B.:</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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## 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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		609.4
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>53.8</b> 75.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>43.3</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>205.5</b> 710.0 mg / NM <sup>3</sup>
<b>N.B.:</b>	There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust		



*[Signature]*

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Quality Manager / Dy. Quality Manager

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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	<b>ECO Cement Ltd.</b> <b>Vill.: Mahmoodganj</b> <b>At : Kulharia</b> <b>Durgawati</b> <b>Dist.: Bhabua (Kaimur)</b>		
[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>21.02.2018</i>		
[e] No. & Type of Container	<i>Thimble &amp; 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>22.02.2018</i>		
<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
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 <sup>3</sup> /hr.			544.6
10. Sampling Point			Top of Exhaust
		<b>Concentration (mg / NM<sup>3</sup>)</b>	<b>Limit as per E (P) Rules</b>
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>45.3</b>	75.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>40.8</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>189.5</b>	710.0 mg / NM <sup>3</sup>
<b>N.B.:</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

Ref.No. <i>ECL/TR/18-19/03(b)</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	<b>ECO Cement Ltd.</b> Vill.: <b>Mahmoodganj</b> At : <b>Kulharia</b> Durgawati Dist.: <b>Bhabua (Kaimur)</b>		
[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>10.03.18</i>		
[e] No. & Type of Container	<i>Thimble &amp; 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>11.03.18</i>		
<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>	
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 <sup>3</sup> /hr.		679.2	
10. Sampling Point		Top of Exhaust	
		<b>Concentration (mg / NM<sup>3</sup>)</b>	<b>Limit as per E (P) Rules</b>
11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>48.6</b>	75.0 mg / NM <sup>3</sup>
12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>40.2</b>	Not Specified
13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>168.0</b>	710.0 mg / NM <sup>3</sup>
<b>N.B.:</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

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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		317.0
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	53.4
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	44.6
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	194.2
			75.0 mg / NM <sup>3</sup>
			Not Specified
			710.0 mg / NM <sup>3</sup>
<b>N.B.:</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/17-18/413(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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		241.6
	10. Sampling Point		Top of Exhaust
			<b>Concentration ( mg / NM<sup>3</sup> )</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>44.1</b>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>38.7</b>
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>160.4</b>
	<b>N.B.:</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/17-18/525(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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		290.1
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>47.4</b> 75.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>41.2</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>171.5</b> 710.0 mg / NM <sup>3</sup>
<b>N.B.:</b>	There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust		



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Laboratory Address :-  
01<sup>ST</sup> FLOOR, RAJHANS NIKETAN,  
NEAR CANAL, RUKUNPURA,  
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# SHIVA TEST HOUSE

Tel. : 0612 – 2247538/ 2240752 ; TeleFax : 0612 - 2590705  
E.mail.: [sthpatna1@yahoo.co.in](mailto:sthpatna1@yahoo.co.in)

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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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		328.8
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>57.2</b> 75.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>46.1</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>218.6</b> 710.0 mg / NM <sup>3</sup>
<b>N.B.:</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/17-18/639(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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		276.9
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	<b>48.2</b> 75.0 mg / NM <sup>3</sup>
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	<b>43.4</b> Not Specified
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	<b>201.6</b> 710.0 mg / NM <sup>3</sup>
<b>N.B.:</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/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	
	<b>Parameters</b>	<b>Method of Test</b>	<b>Results</b>
	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 <sup>3</sup> /hr.		312.1
	10. Sampling Point		Top of Exhaust
			<b>Concentration (mg / NM<sup>3</sup>)</b>
			<b>Limit as per E (P) Rules</b>
	11. Particulate Matter (P.M.)	IS 11255 (Part-1)	51.7
	12. Sulphur Dioxide (SO <sub>2</sub> )	IS 11255 (Part-2)	42.8
	13. Oxides of Nitrogen (NO <sub>2</sub> )	IS 11255 (Part-7)	178.7
	<b>N.B.:</b> There is no provision of Sampling Porthole as per CPCB guidelines in the DG Set Exhaust		



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