



## AMBIENT AIR QUALITY TEST RESULTS

M/s HILLS CEMENT COMPANY LIMITED

Vill: Mynkree, 116 KM Stone, NH- 44

Sub Division: Khliehriat; Dist: Jaintia Hills

Meghalaya

(February - 2016)

| <b>LOCATIONS</b> ↓                             | <b>Date of Sampling</b> | <b>PM 2.5</b><br><b>(<math>\mu\text{g}/\text{m}^3</math>)</b> | <b>PM 10</b><br><b>(<math>\mu\text{g}/\text{m}^3</math>)</b> | <b>NO<sub>2</sub></b><br><b>(<math>\mu\text{g}/\text{m}^3</math>)</b> | <b>SO<sub>2</sub></b><br><b>(<math>\mu\text{g}/\text{m}^3</math>)</b> |
|--|-------------------------|---|--|---|---|
| <b>LIMITS</b> →                                | --                      | <b>60</b><br>(24 hrs. Average)                                | <b>100</b><br>(24 hrs. Average)                              | <b>80</b><br>(24 hrs. Average)  | <b>80</b><br>(24 hrs. Average)  |
| In- Front of Guest House                       | 22.02.2016              | 36.2  | 68.3   | 8.2   | ND  |
| Near Crusher Area                              | 22.02.2016              | 52.4  | 82.4   | 16.4  | 6.2   |
| In- Front of Compressor House<br>(Cement Mill) | 23.02.2016              | 48.7  | 74.7   | 18.2  | 7.1   |

Analysis Protocol: **IS 5182**

**ND:** Not Detected

Checked By: Pankaj Baroi; ENVIROCON

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## STACK EMISSION TEST RESULTS

M/s HILLS CEMENT COMPANY LIMITED

Vill: Mynkree, 116 KM Stone, NH- 44

Sub Division: Khliehriat; Dist: Jaintia Hills

Meghalaya

(FEBRUARY- 2016)

|    |   |                      |
|----|---|----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCL/01/Feb/2016 |
| 02 | Date of Sampling                            | 22.02.2016           |
| 03 | Material of Construction                    | M.S.                 |
| 04 | Stack Attached To                           | B.F. of Crusher      |
| 05 | Flue Gas Temperature (°C)                   | 34                   |
| 06 | Exit Velocity of Gas (m/sec)                | 4.7                  |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 12,901               |
| 08 | Type of Fuel Used                           | NA                   |
| 09 | Analysis Result of Flue Gas                 |                      |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 34.8                 |



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## STACK EMISSION TEST RESULTS

M/s HILLS CEMENT COMPANY LIMITED

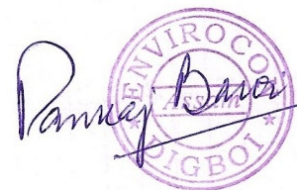
Vill: Mynkree, 116 KM Stone, NH- 44

Sub Division: Khliehriat; Dist: Jaintia Hills

Meghalaya

(FEBRUARY- 2016)

|    |   |                      |
|----|---|----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCL/02/Feb/2016 |
| 02 | Date of Sampling                            | 22.02.2016           |
| 03 | Material of Construction                    | M.S.                 |
| 04 | Stack Attached To                           | R.A.B.H              |
| 05 | Flue Gas Temperature (°C)                   | 186                  |
| 06 | Exit Velocity of Gas (m/sec)                | 13.2                 |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 2,18,107             |
| 08 | Type of Fuel Used                           | NA                   |
| 09 | Analysis Result of Flue Gas                 |                      |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 28.9                 |



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## STACK EMISSION TEST RESULTS

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Vill: Mynkree, 116 KM Stone, NH- 44

Sub Division: Khliehriat; Dist: Jaintia Hills

Meghalaya

(FEBRUARY- 2016)

|    |   |                      |
|----|---|----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCL/04/Feb/2016 |
| 02 | Date of Sampling                            | 23.02.2016           |
| 03 | Material of Construction                    | M.S                  |
| 04 | Stack Attached To                           | Coal Mill            |
| 05 | Flue Gas Temperature (°C)                   | 62                   |
| 06 | Exit Velocity of Gas (m/sec)                | 7.6                  |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 27,529               |
| 08 | Type of Fuel Used                           | Coal                 |
| 09 | Analysis Result of Flue Gas                 |                      |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 36.4                 |



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(FEBRUARY- 2016)

|    |   |                      |
|----|---|----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCL/03/Feb/2016 |
| 02 | Date of Sampling                            | 22.02.2016           |
| 03 | Material of Construction                    | M.S                  |
| 04 | Stack Attached To                           | Cooler E.S.P         |
| 05 | Flue Gas Temperature (°C)                   | 223                  |
| 06 | Exit Velocity of Gas (m/sec)                | 14.7                 |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 1,95,802             |
| 08 | Type of Fuel Used                           | Coal                 |
| 09 | Analysis Result of Flue Gas                 |                      |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 27.4                 |



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(FEBRUARY- 2016)

|    |   |                      |
|----|---|----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCL/05/Feb/2016 |
| 02 | Date of Sampling                            | 23.02.2016           |
| 03 | Material of Construction                    | M.S                  |
| 04 | Stack Attached To                           | Cement Mill          |
| 05 | Flue Gas Temperature (°C)                   | 64                   |
| 06 | Exit Velocity of Gas (m/sec)                | 8.4                  |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 30,247               |
| 08 | Type of Fuel Used                           | NA                   |
| 09 | Analysis Result of Flue Gas                 |                      |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 31.6                 |



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Meghalaya

(FEBRUARY- 2016)

|    |   |                       |
|----|---|-----------------------|
| 01 | Stack Emission Ref. No.                     | ENV/HCCCL/06/Feb/2016 |
| 02 | Date of Sampling                            | 23.02.2016            |
| 03 | Material of Construction                    | M.S                   |
| 04 | Stack Attached To                           | Cement Packing House  |
| 05 | Flue Gas Temperature (°C)                   | 31                    |
| 06 | Exit Velocity of Gas (m/sec)                | 4.5                   |
| 07 | Flow Rate (Nm <sup>3</sup> /hr)             | 7,983                 |
| 08 | Type of Fuel Used                           | NA                    |
| 09 | Analysis Result of Flue Gas                 |                       |
|    | 1. Particulate Matter (mg/Nm <sup>3</sup> ) | 35.2                  |



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## NOISE LEVEL MEASUREMENT RESULTS

M/s HILLS CEMENT COMPANY LIMITED

Vill: Mynkree, 116 KM Stone, NH- 44

Sub Division: Khliehriat; Dist: Jaintia Hills

Meghalaya

(FEBRUARY- 2016)

Measurement Date: **22.02.2016**

(Day Time)

| Sl. No. | Location           | Maximum (dB-A) | Minimum (dB-A) | Leq (dB-A) |
|---------|--------------------|----------------|----------------|------------|
| 1       | Near Kiln Area     | 76             | 71             | 74         |
| 2       | Near CCR Building  | 72             | 67             | 69         |
| 3       | Main Gate          | 68             | 62             | 66         |
| 4       | Near Main Building | 65             | 59             | 62         |

(Night Time)

| Sl. No. | Location           | Maximum (dB-A) | Minimum (dB-A) | Leq (dB-A) |
|---------|--------------------|----------------|----------------|------------|
| 1       | Near Kiln Area     | 69             | 62             | 64         |
| 2       | Near CCR Building  | 62             | 54             | 59         |
| 3       | Main Gate          | 59             | 51             | 54         |
| 4       | Near Main Building | 53             | 46             | 49         |



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## AMBIENT NOISE LEVEL STANDARDS

### SCHEDULE

[Rule 3(1) and 4(1) of Noise Pollution (Regulation & Control) Rules, 2000]

| Area Code | Category of Area/ Zone | Limit in dB (A) in $L_{eq}$ |            |
|-----------|------------------------|-----------------------------|------------|
|           |                        | Day Time                    | Night Time |
| A         | Industrial Area        | 75                          | 70         |
| B         | Commercial Area        | 65                          | 55         |
| C         | Residential Area       | 55                          | 45         |
| D         | Silence Zone           | 50                          | 40         |

**NB:**

Silence Zone is an area comprising an area not less than 100 m around Hospitals, Educational Institutions, Courts, Religious Places or any other area which is declared as such by the competent authority.

### Specific SHE Standard: Workplace Noise

| Ambient Noise Level                | Personal Noise Exposure<br>< 85 dB (A) Leq (8h) | Personal Noise Exposure<br>=> 85 dB (A) Leq (8h) |
|------------------------------------|---|--|
| < 85 dB (A) Leq                    | No action required                              | PPE Mandatory                                    |
| => 85dB (A) Leq<br>< 90 dB (A) Leq | Hearing protection zone.<br>PPE Advisory.       | Hearing protection zone.<br>PPE Mandatory.       |
| => 90 dB (A) Leq                   | Hearing protection zone.<br>PPE Mandatory.      | Hearing protection zone.<br>PPE Mandatory.       |

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