

# Mangrol Limestone Mines - Report

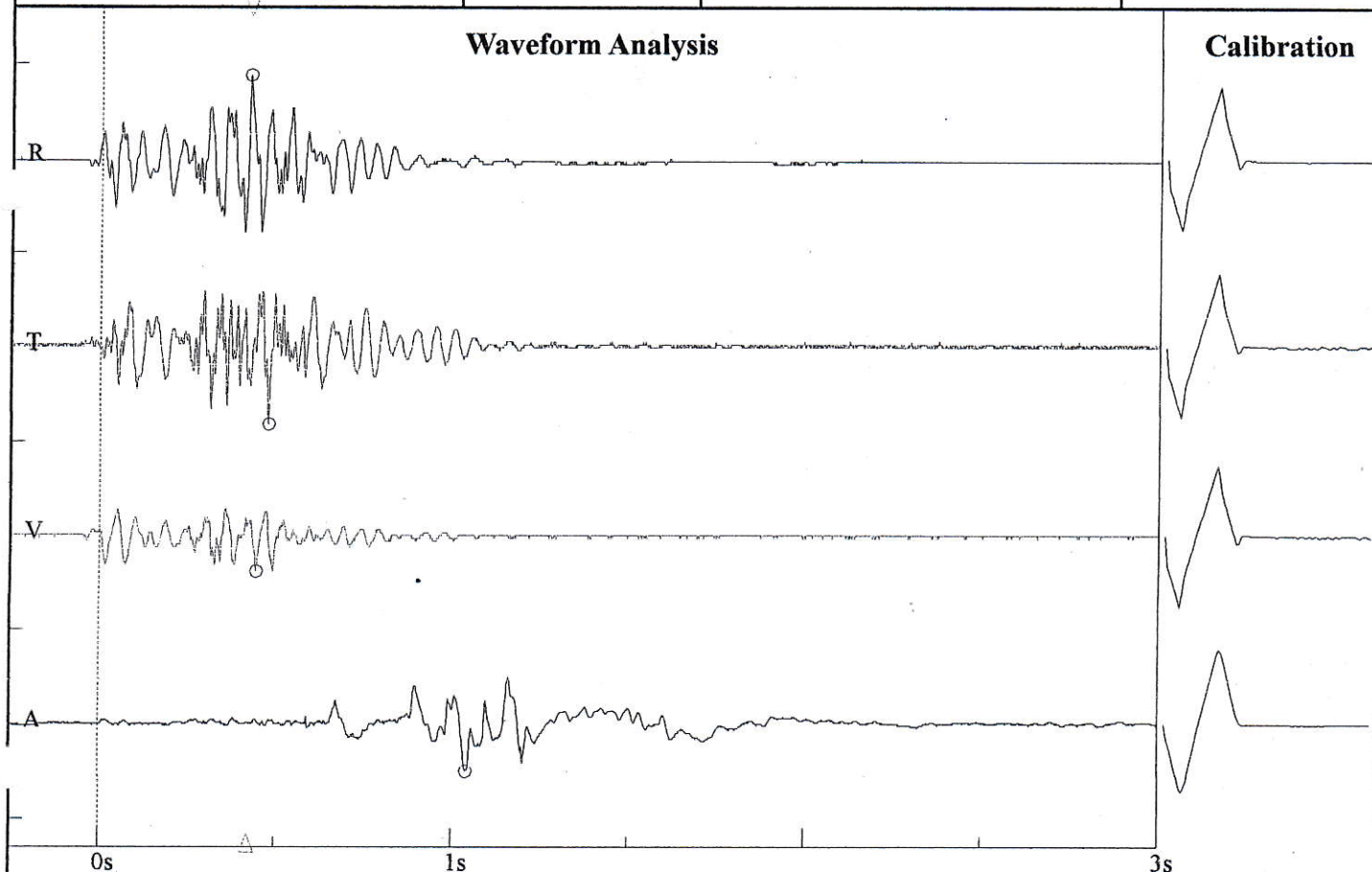
Telephone: 0

**Company: J K Cement Works**  
**Location: Bench -I BId 3-4**  
**Operator: Rajesh kumar joshi**  
**Notes: No. of holes-13**

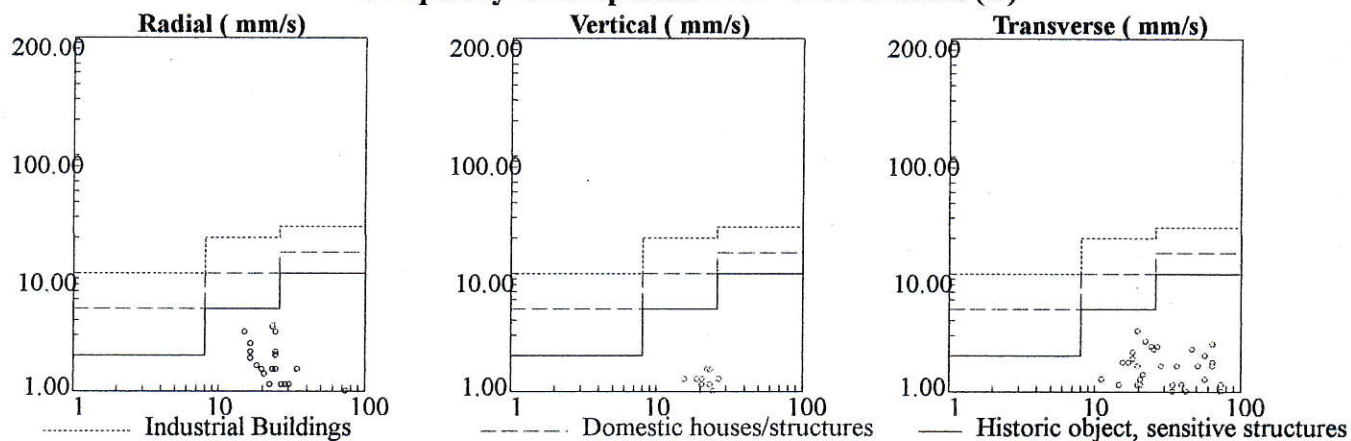
**4/9/2016 at 13:29:49 Event # 53**

Graph: 13726  
Last Calibration: 02Sep15  
Record Duration: 3 sec  
Sample Rate: 1024/sec

| Amplitudes / Frequencies           | Trigger >>> Peak | Scales / Triggers             | Charge / Distance     |
|------------------------------------|------------------|-------------------------------|-----------------------|
| ○ Radial: 3.556 mm/s @ 23.2 Hz     | 422.9 ms         | Air Scale: .01585 kPa/div.    | Wgt. Per Delay: 34 kg |
| ○ Transverse: 3.302 mm/s @ 19.6 Hz | 478.5 ms         | Seismic Scale: 4.06 mm/s/div. | Distance: 275 m       |
| ○ Vertical: 1.524 mm/s @ 23.2 Hz   | 445.3 ms         | Air Trigger: N                | Scaled Distance: 47.1 |
| ○ Air: 112.0 dBL @ 7.5Hz / .008kPa | 1043.0 ms        | Seismic Trigger: .508 mm/s    |                       |
| ▽ Vector Sum: 3.77 mm/s @ 23.3 Hz  | 423.8 ms         |                               |                       |



**Frequency vs. Amplitude Plot - DGMS India (A)**



*Handwritten signature and date: 9/11/2016*

# Mangrol Limestone Mines - Report

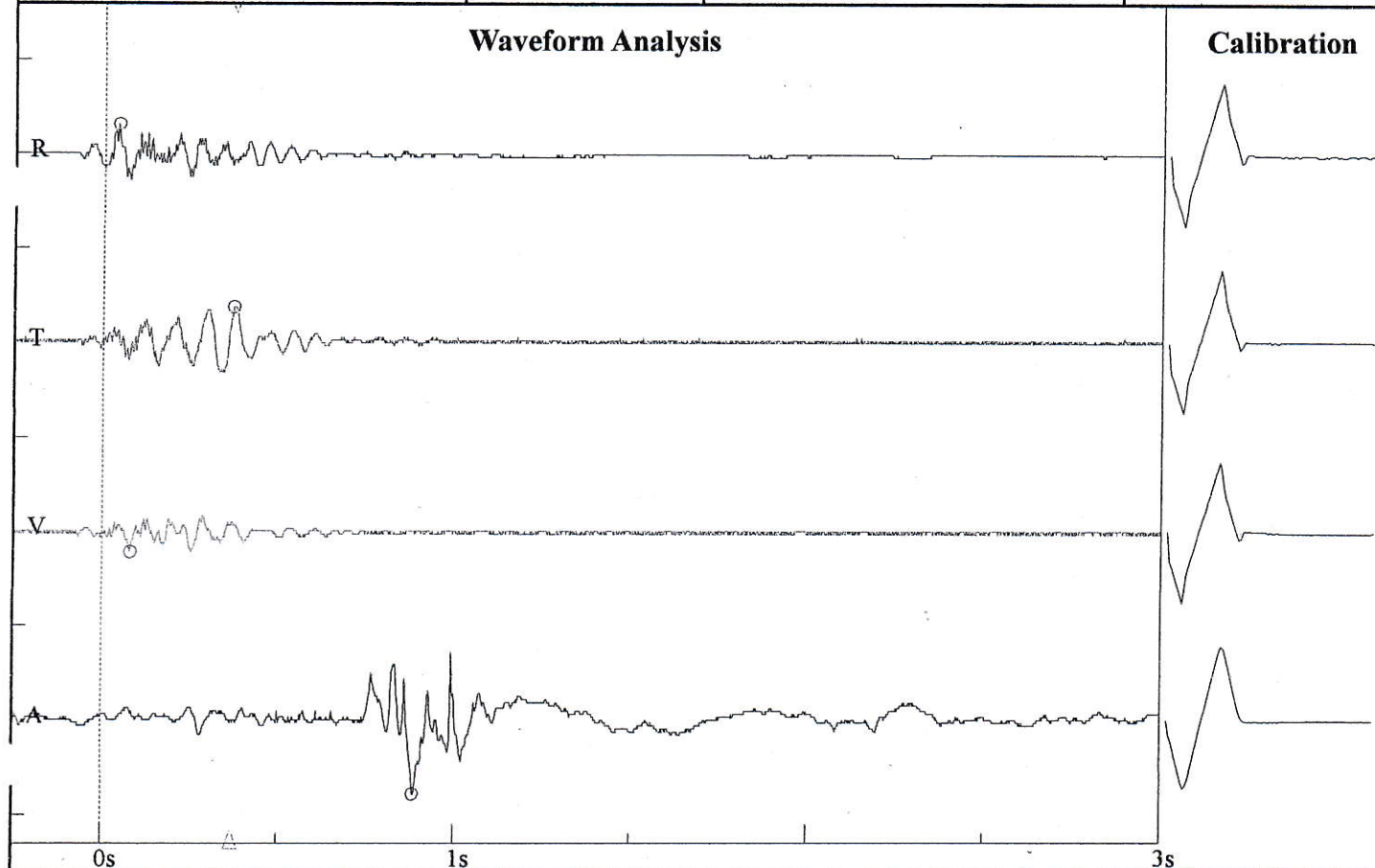
Telephone: 0

**Company:** J K Cement Works  
**Location:** Bench -I Bld 6-5  
**Operator:** Rajesh kumar joshi  
**Notes:** No. of holes-13

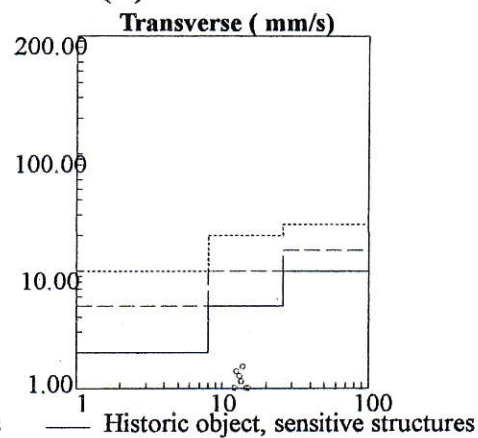
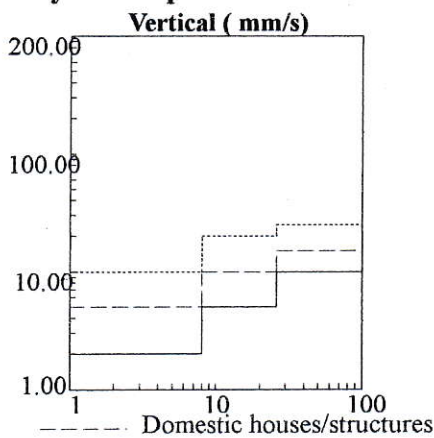
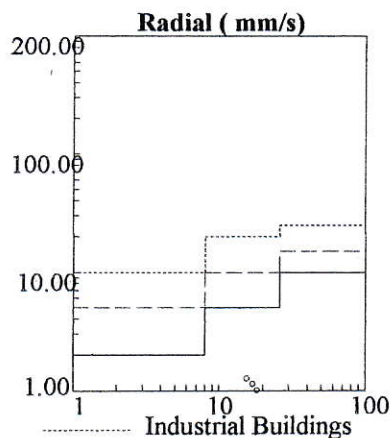
**5/10/2016 at 13:44:36 Event # 68**

Graph: 13726  
Last Calibration: 02Sep15  
Record Duration: 3 sec  
Sample Rate: 1024/sec

| Amplitudes / Frequencies            | Trigger >>> Peak | Scales / Triggers             | Charge / Distance     |
|-------------------------------------|------------------|-------------------------------|-----------------------|
| ○ Radial: 1.270 mm/s @ 15.5 Hz      | 41.0 ms          | Air Scale: .00799 kPa/div.    | Wgt. Per Delay: 34 kg |
| ○ Transverse: 1.524 mm/s @ 13.8 Hz  | 371.1 ms         | Seismic Scale: 4.06 mm/s/div. | Distance: 300 m       |
| ○ Vertical: 0.889 mm/s @ 18.2 Hz    | 80.1 ms          | Air Trigger: N                | Scaled Distance: 51.1 |
| ○ Air: 109.9 dBL @ 8.8Hz / .0062kPa | 884.8 ms         | Seismic Trigger: .508 mm/s    |                       |
| ▽ Vector Sum: 1.59 mm/s @ 13.8 Hz   | 371.1 ms         |                               |                       |



## Frequency vs. Amplitude Plot - DGMS India (A)



Yes  
10/5/2016



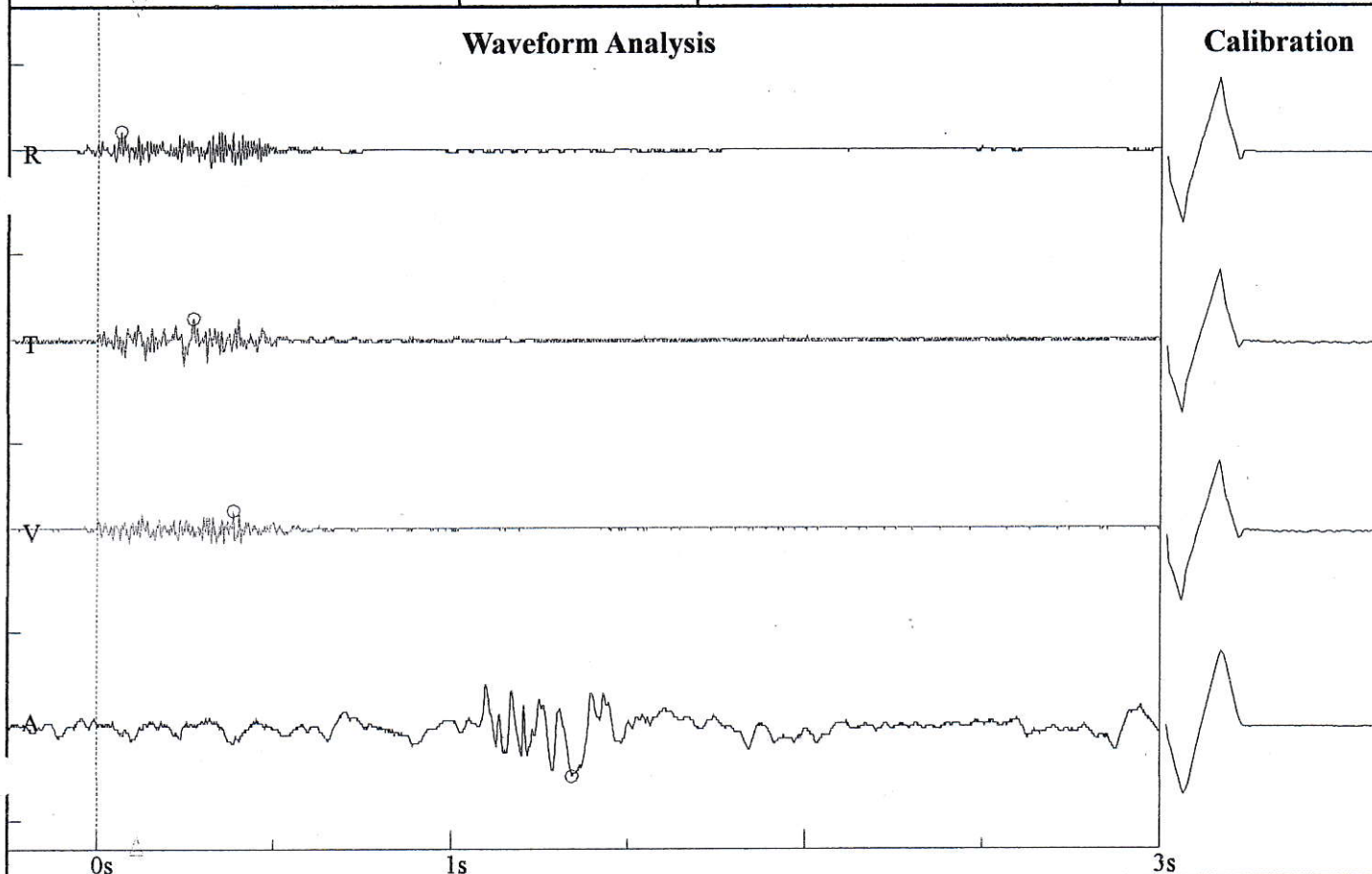
# Mangrol Limestone Mines - Report

Telephone: 0

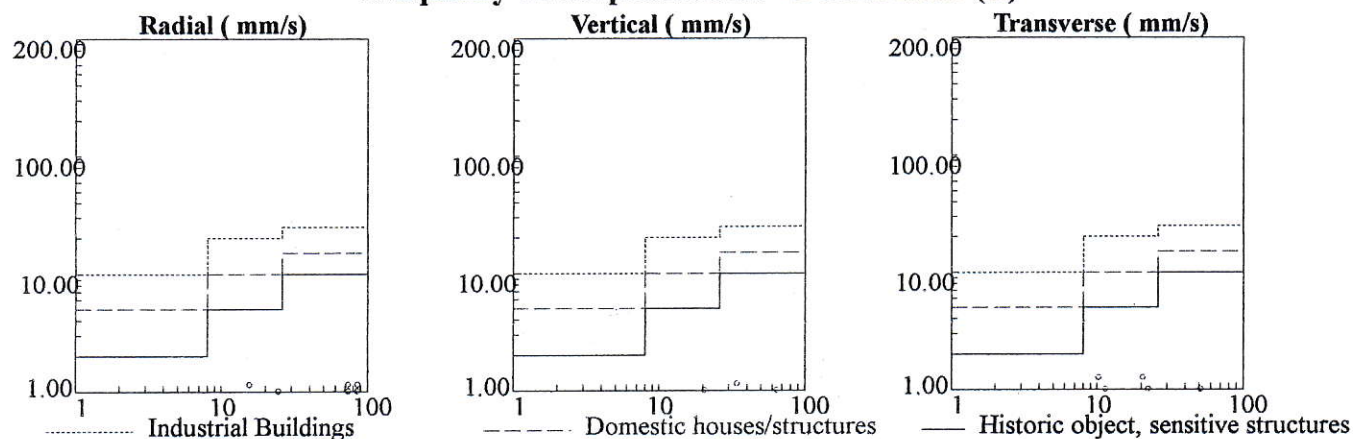
**Company: J K Cement Works**  
**Location: Bench-I Bld- 3-14**  
**Operator: Rajesh kumar joshi**  
**Notes: No. of holes-17**

**6/14/2016 at 14:22:24 Event # 104**  
Graph: 13726  
Last Calibration: 02Sep15  
Record Duration: 3 sec  
Sample Rate: 1024/sec

| Amplitudes / Frequencies            | Trigger >>> Peak | Scales / Triggers             | Charge / Distance     |
|-------------------------------------|------------------|-------------------------------|-----------------------|
| ○ Radial: 1.143 mm/s @ 15.5 Hz      | 65.4 ms          | Air Scale: .00799 kPa/div.    | Wgt. Per Delay: 35 kg |
| ○ Transverse: 1.270 mm/s @ 10.2 Hz  | 271.5 ms         | Seismic Scale: 4.06 mm/s/div. | Distance: 275 m       |
| ○ Vertical: 1.143 mm/s @ 34.1 Hz    | 385.7 ms         | Air Trigger: N                | Scaled Distance: 46.5 |
| ○ Air: 106.5 dBL @ 7.6Hz / .0042kPa | 1343.8 ms        | Seismic Trigger: .508 mm/s    |                       |
| ▽ Vector Sum: 1.44 mm/s @ 9.7 Hz    | 114.3 ms         |                               |                       |



**Frequency vs. Amplitude Plot - DGMS India (A)**



14/6/2016

*[Signature]*

# Mangrol Limestone Mines - Report

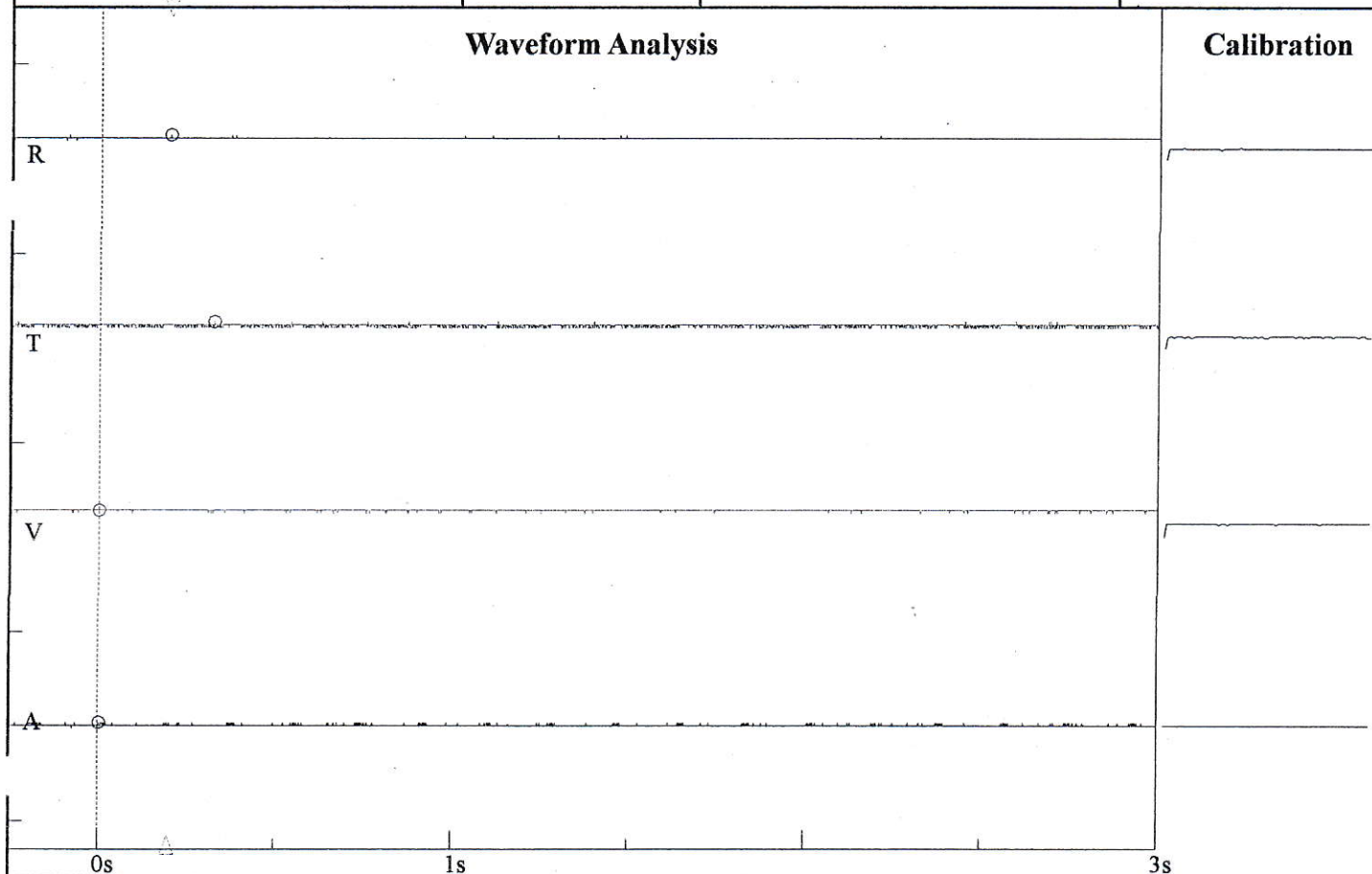
Telephone: 0

**Company: J K Cement Works**  
**Location: Bench-II, Bld 6-11**  
**Operator: Rajesh kumar joshi**  
**Notes: No. of holes-17**

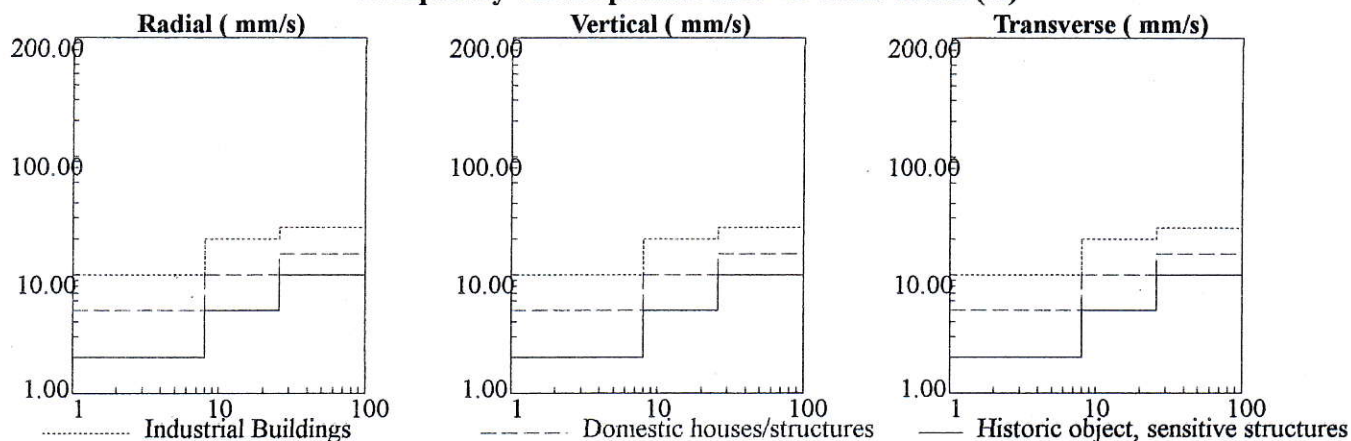
**7/22/2016 at 15:48:32 Event # 144**

Graph: 13726  
 Last Calibration: 02Sep15  
 Record Duration: 3 sec  
 Sample Rate: 1024/sec

| Amplitudes / Frequencies          | Trigger >>> Peak | Scales / Triggers             | Charge / Distance     |
|-----------------------------------|------------------|-------------------------------|-----------------------|
| ○ Radial: 1.016 mm/s @ 0.1 Hz     | 198.2 ms         | Air Scale: .00799 kPa/div.    | Wgt. Per Delay: 37 kg |
| ○ Transverse: 1.143 mm/s @ 0.1 Hz | 325.2 ms         | Seismic Scale: 4.06 mm/s/div. | Distance: 300 m       |
| ○ Vertical: 1.143 mm/s @ 0.1 Hz   | 1.0 ms           | Air Trigger: N                | Scaled Distance: 49.2 |
| ○ Air: 81.9 dBL @ 0Hz / .0002kPa  | 3.9 ms           | Seismic Trigger: .508 mm/s    |                       |
| ▽ Vector Sum: 1.84 mm/s @ .2 Hz   | 198.2 ms         |                               |                       |



**Frequency vs. Amplitude Plot - DGMS India (A)**



*per*

*[Signature]*

# Mangrol Limestone Mines - Report

Telephone: 0

**Company: J K Cement Works**  
**Location: Bench-I, Bld 2-21**  
**Operator: Rajesh kumar joshi**  
**Notes: No. of holes 14 Using DTH&TLD**

**9/17/2016 at 15:06:00 Event # 157**

Graph: 13726

Last Calibration: 02Sep15

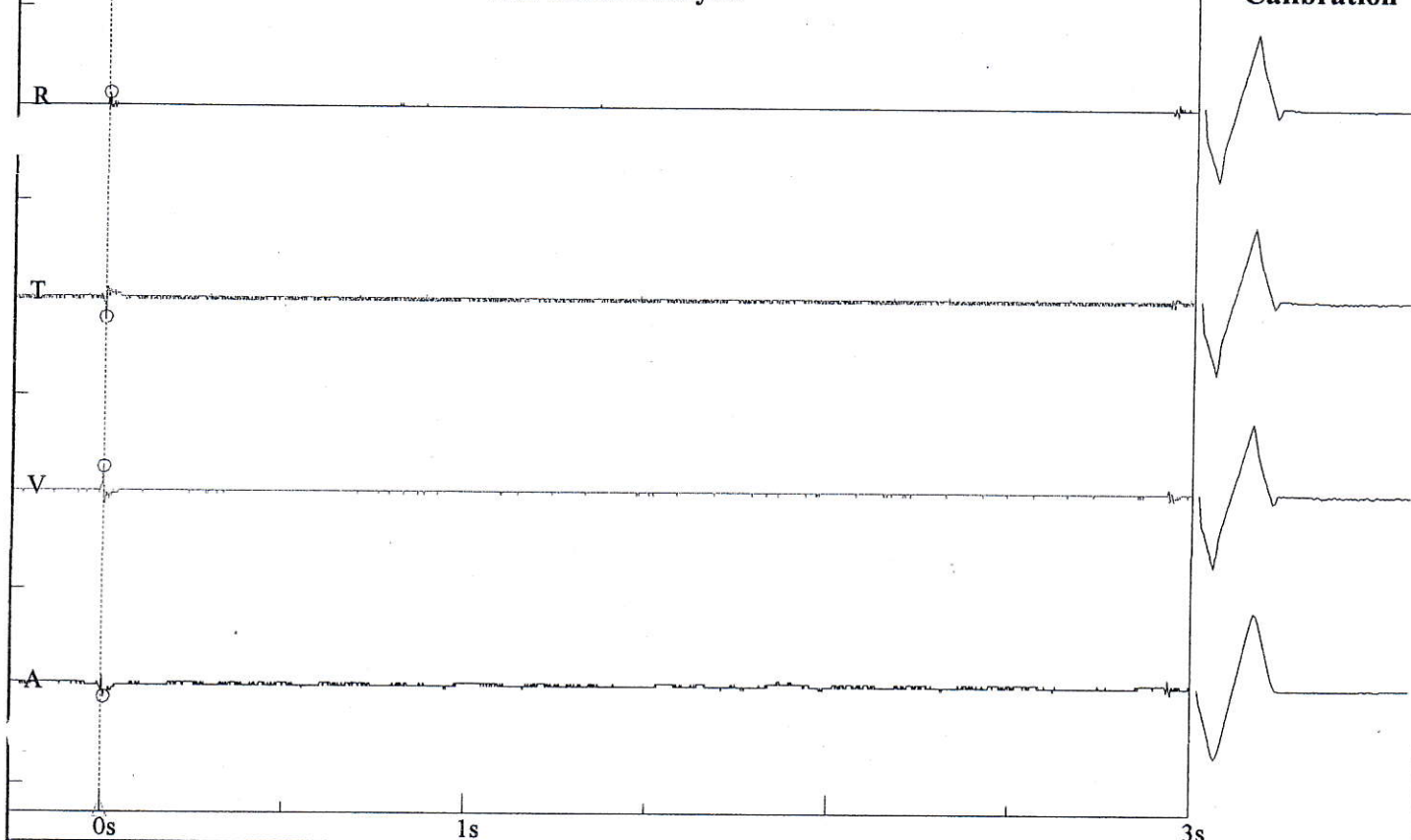
Record Duration: 3 sec

Sample Rate: 1024/sec

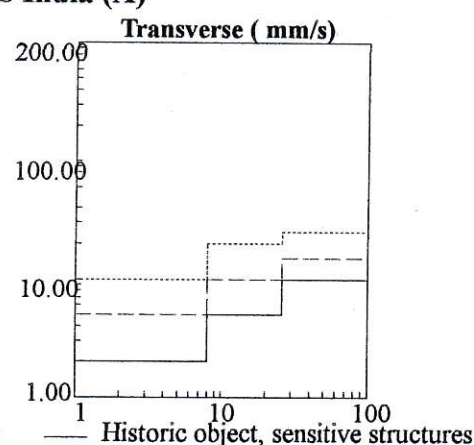
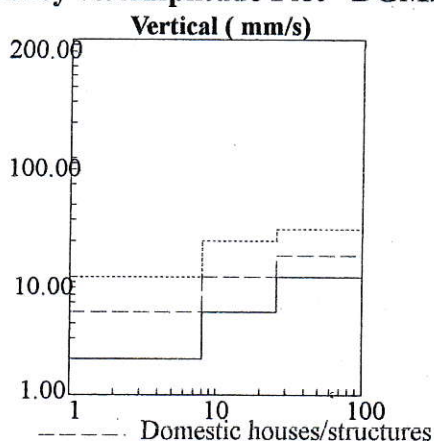
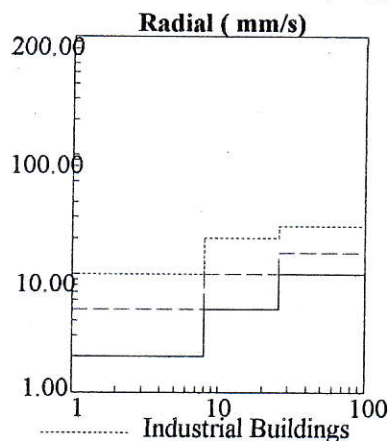
| Amplitudes / Frequencies           | Trigger >>> Peak | Scales / Triggers             | Charge / Distance     |
|------------------------------------|------------------|-------------------------------|-----------------------|
| ○ Radial: 0.381 mm/s @ 0 Hz        | 4.9 ms           | Air Scale: .00799 kPa/div.    | Wgt. Per Delay: 36 kg |
| ○ Transverse: 0.889 mm/s @ 56.8 Hz | 1.0 ms           | Seismic Scale: 4.06 mm/s/div. | Distance: 350 m       |
| ○ Vertical: 1.016 mm/s @ 64 Hz     | 1.0 ms           | Air Trigger: N                | Scaled Distance: 58.5 |
| ○ Air: 94.0 dBL @ 16.5Hz / .001kPa | 6.8 ms           | Seismic Trigger: .508 mm/s    |                       |
| ▽ Vector Sum: 1.35 mm/s @ 51.2 Hz  | 1.0 ms           |                               |                       |

## Waveform Analysis

## Calibration



## Frequency vs. Amplitude Plot - DGMS India (A)



*Yash*  
*(RCMA)*