

**Physical Data of Morak LimeStone Mines, of M/s Mangalam Cement Ltd. Morak ,
Tehsil -Ramganjmandi ,Distt Kota (Raj)**

| S. No. | Item | Description |
|--------|---|--------------------------|
| 1 | Mining lease Area | 895.42 Hectors |
| 2 | Limestone Production (During 2017-2018) | 28,57,452 Ton |
| 3 | Lease Duration (After promulgation of Govt. ordinance dt. 12.012015) | 21.02.1977 to 31.03.2030 |
| 4 | Date of commencement of Work | 1st January ,1980 |

**Quality of stored rain water in mined out pits sump & Piezometers within Morak
Limestone Mines. Date of Monitoring : 28.05.2018**

| Parameters | Unit | Mines Sump Block-1 (S-1) | Mines Sump Block-2 (S-2) | Piezometer (PZ-1) | Piezometer (PZ-3) |
|-------------------------|-------|------------------------------|------------------------------|----------------------|----------------------|
| pH | | 7.26 | 7.56 | 7.42 | 7.62 |
| Total Hardness as CaCO3 | Mg/Li | 98 | 100 | 112 | 104 |
| Total Alkalinity | Mg/Li | 48 | 86 | 92 | 86 |
| Total Dissolved Solids | Mg/Li | 224 | 216 | 208 | 228 |
| Iron (as Fe) | Mg/Li | NA | NA | NA | NA |
| Sulphates as SO4 | Mg/Li | 18.75 | 19.79 | 16.67 | 18.75 |
| Nitrates as NO3 | Mg/Li | 0.71 | 0.74 | 0.84 | 0.80 |
| Chloride (as Cl) | Mg/Li | 32.0 | 23.0 | 21.0 | 23.0 |

**Ground Vibration observed (At distance of 110 Mtr) for the event of Blasting at
Morak Limestone Mines (Pit No.-2 ,block-I) on dt 31.05.2018 at 14.29 PM**

| Axis | Dominant Frequency (In Hz) | Peak Particle Velocity(In mm/s) |
|------------|-------------------------------|-----------------------------------|
| Radial | 128 | 1.778 |
| Transverse | 85.3 | 2.159 |
| Vertical | 128 | 2.032 |

**Ambient Air Quality Report with in Core and Buffer Zone of Morak Limestone
Mines, Morak Date of Monitoring :28.05.2018 - 31.05.2018**

| Location of Monitoring Station | SPM µg/m3 | PM2.5 µg/m3 | PM10 µg/m3 | SO2 µg/m3 | NOX µg/m3 |
|-----------------------------------|-----------|----------------|------------|-----------|-----------|
| Core Zone : | | | | | |
| Near Nala Pit-1 Block-I | 338.51 | 39.68 | 85.66 | 8.47 | 13.10 |
| Mines Work shop Block-I | 304.03 | 46.54 | 83.34 | 9.57 | 14.11 |
| Near Nala Pit-3 Block-II | 477.80 | 44.45 | 84.86 | 7.23 | 12.45 |
| Near Explosive Magazine | 311.14 | 38.12 | 83.88 | 9.61 | 16.83 |
| Buffer Zone : | | | | | |
| GSS RSEB , Gumanpura | 370.39 | 41.64 | 76.98 | 7.57 | 13.53 |
| GSS RSEB, Chechat | 280.99 | 38.44 | 82.66 | 8.47 | 14.29 |
| Railway Yard, Morak | 400.38 | 39.19 | 85.34 | 7.57 | 12.35 |
| Fatehpur Village Chouraha | 375.29 | 40.41 | 77.68 | 8.37 | 13.53 |

Details of Plantation of last 4-year within Mining Lease area

| Year | No. of sapling Planted | Rate of Survival % | species |
|---------|------------------------|--------------------|---|
| 2014-15 | 9055 | 82 | Neem, Karanj, Subabool, |
| 2015-16 | 5070 | 85 | Kachnar, PaltaForm, Peepal |
| 2016-17 | 5688 | 92 | ,Bad, Gulmohar,Jamphal, |
| 2017-18 | 6025 | 83 | Nimbu, Amwala, Bgaun Belia, Seerus , Shhesham etc. |

June-2018