

**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 2018-2019 up to 30.09.2018 )          | 147,03,024 Ton           |
| 3      | Lease Period (After promulgation of Govt. ordinance dt. 12.01.2015) | 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 : 28.11.2018**

| Parameters                          | Unit  | Mines Sump<br>Block-1 (S-1 ) | Mines Sump<br>Block-2 (S-2 ) | Piezometer<br>(PZ-1) | Piezometer<br>(PZ-3) |
|-------------------------------------|-------|------------------------------|------------------------------|----------------------|----------------------|
| pH                                  |       | 7.49                         | 7.45                         | 7.56                 | 7.61                 |
| Total Hardness as CaCO <sub>3</sub> | Mg/Li | 90                           | 94                           | 98                   | 100                  |
| Total Alkalinity                    | Mg/Li | 60                           | 76                           | 74                   | 80                   |
| Total Dissolved Solids              | Mg/Li | 204                          | 208                          | 200                  | 216                  |
| Iron ( as Fe )                      | Mg/Li | NA                           | NA                           | NA                   | NA                   |
| Sulphates as SO <sub>4</sub>        | Mg/Li | 16.60                        | 17.20                        | 16.0                 | 17.0                 |
| Nitrates as NO <sub>3</sub>         | Mg/Li | 0.65                         | 0.63                         | 0.75                 | 0.70                 |
| Chloride ( as Cl )                  | Mg/Li | 27.0                         | 20.0                         | 18.0                 | 19.0                 |

**Ground Vibration observed (At distance of 110 Mtr ) for the event of Blasting at  
Morak Limestone Mines (Pit No.-2 ,block-II ) 14.09.2018 at 13.35 pm.**

| Axis       | Dominant Frequency (In Hz) | Pea k Particle Velocity( In mm/s ) |
|------------|----------------------------|------------------------------------|
| Radial     | 30.1                       | 2.413                              |
| Transverse | 24.3                       | 3.556                              |
| Vertical   | 36.50                      | 2.540                              |

**Ambient Air Quality Report with in Core and Buffer Zone of Morak Limestone  
Mines, Morak Date of Monitoring :27.11.2018 - 30.11.2018**

| Location of Monitoring Station | SPM µg/m <sup>3</sup> | PM <sub>2.5</sub> µg/m <sup>3</sup> | PM <sub>10</sub> µg/m <sup>3</sup> | SO <sub>2</sub> µg/m <sup>3</sup> | NO <sub>X</sub> µg/m <sup>3</sup> |
|--------------------------------|-----------------------|-------------------------------------|------------------------------------|-----------------------------------|-----------------------------------|
| <b>Core Zone :</b>             |                       |                                     |                                    |                                   |                                   |
| Near Nala Pit-1 Block-I        | 348.38                | 50.56                               | 87.43                              | 11.06                             | 14.73                             |
| Mines Work shop Block-I        | 398.75                | 44.88                               | 85.51                              | 9.20                              | 13.57                             |
| Near Nala Pit-3 Block-II       | 423.18                | 44.17                               | 83.69                              | 10.31                             | 14.41                             |
| Near Explosive Magazine        | 389.79                | 41.89                               | 77.83                              | 9.18                              | 15.33                             |
| <b>Buffer Zone :</b>           |                       |                                     |                                    |                                   |                                   |
| GSS RSEB , Gumanpura           | 447.83                | 47.48                               | 78.71                              | 10.57                             | 15.20                             |
| GSS RSEB, Chechat              | 439.75                | 46.45                               | 75.55                              | 11.17                             | 15.68                             |
| Railway Yard, Morak            | 456.47                | 46.29                               | 80.92                              | 10.49                             | 14.29                             |
| Fatehpur Village Chouraha      | 458.34                | 42.54                               | 71.21                              | 11.02                             | 15.07                             |

**Details of Plantation of last 5-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, PaltForm, Peepal   |
| 2016-17 | 5688                   | 92                 | ,Bad, Gulmohar,Jamphal,     |
| 2017-18 | 6025                   | 83                 | Nimbu, Amwala, Bgaun Belia, |
| 2018-19 | 5774 (up to 1.10.2018) | Under Progress     | Seerus , Shhesham etc.      |

Dec-2018