

**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 2016-2017)	25,15,416 Ton
3	Lease Duration	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 : 05.12.2017**

Parameters	Unit	Mines Sump Block-1 (S-1)	Mines Sump Block-2 (S-2)	Piezometer (PZ-1)	Piezometer (PZ-3)
pH		7.20	7.20	7.40	7.60
Total Hardness as CaCO3	Mg/Li	88	88	100	92
Total Alkalinity	Mg/Li	84	84	80	84
Total Dissolved Solids	Mg/Li	184	128	176	216
Iron (as Fe)	Mg/Li	NA	NA	NA	NA
Sulphates as SO4	Mg/Li	11.90	16.8	12.60	17.80
Nitrates as NO3	Mg/Li	0.60	0.67	0.83	0.76
Chloride (as Cl)	Mg/Li	22.0	16.0	18.0	18

**Ground Vibration observed (At distance of 110 Mtr) for the event of Blasting at
Morak Limestone Mines (Pit No.-2 ,block-II) on dt 28.12.2017 at 13.35 PM**

Axis	Dominant Frequency (In Hz)	Peak Particle Velocity(In mm/s)
Radial	85.3	1.016
Transverse	85.3	0.635
Vertical	51.2	1.143

**Ambient Air Quality Report with in Core and Buffer Zone of Morak Limestone
Mines, Morak Date of Monitoring :04.12.2014 - 05.12.2017**

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	342	51	92	8.0	10.1
Mines Work shop Block-I	310	50	88	9.2	11.40
Near Nala Pit-3 Block-II	588	45	86	7.0	11.9
Near Explosive Magazine	320	47	86	9.5	11.4
Buffer Zone :					
GSS RSEB , Gumanpura	377	42	80	7.3	9.6
GSS RSEB, Chechat	285	45	85	8.2	10.3
Railway Yard, Morak	404	48	89	7.2	9.5
Fatehpur Village Chouraha	382	43	82	8.1	12.3

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	Asses in June-2018	Nimbu, Amwala, Bgaun Belia, Seerus , Shhesham etc.