

Environment Management Plan

For Stone mining

1. Name and Address of Quarry Lease Holder.

a. Name of applicant	M/s Combined Stone Crusher		
b. Designation of applicant	Partnership Firm		
c. Name of Local Body for which application is being submitted.	Village – Tummadar, Tehsil – Bandhavgarh District Umaria (M.P.)		
d. Contact number	+917999829830		
e. E-mail (if available)	----		
f. Co-ordinates	Boundary point	Latitude	Longitude
	1	23°23'59.18"N	80°43'17.17"E
	2	23°24'1.62"N	80°43'17.20"E
	3	23°24'1.58"N	80°43'12.76"E
	4	23°23'58.23"N	80°43'12.77"E
	5	23°23'58.10"N	80°43'13.26"E
	6	23°23'59.17"N	80°43'14.32"E
	7	23°23'59.01"N	80°43'14.95"E

2. Particulars of the Area for stone mining

Date of Principal Approval	23-07-2018
Period	10 years
Area	1.0640 Hectare
Mineral	Gitti(Crusher Stone)
Khasra number	24
Patwari Halka number	16
Village	Tummadar
Gram Panchayat / Local Body	Maali

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Tehsil / Block	Bandhavgarh
District	Umariya

2. Particulars of the Machines to be used

Sr. No	Name of Machinery	Capacity	Number
1	JCB, Excavator	Bucket - 2.2 m ³ Boom height – 7060 mm	2
2	Dumper, Trucks/Tippers	9 cubic meter	As per requirement

- Drilling will be undertaken with the help of tractor mounted compressor & jack hammer drills will be deployed to drill blast holes and these will be charged with explosive Cartridges.
- Blasting will be conducted occasionally and will be carried out by licensed contractor/ Authorized person.

3. The Plan of the Area Showing Number of Pits Already, Showing All Areas within 500 Meters of the Lease Boundary with Details Thereof.

(Map should show the important surface features like bridge / culvert, anicut / stop dam / dam, water supply scheme / intake well, national highway, state highway, village road, railway track, temple / monument of historical importance, village and any other important permanent structure within 500 m of the mine boundary. Mining area, approach / exit road, both banks of river / nalla and boundary of mining area of river / nalla should be ensured)

Map of the area enclosed showing all relevant detail

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4. Details of Quarrying Operations to be undertaken.

a. A brief description of the site including topography, geology, section, estimation of reserve present, land use etc.	The topography of the lease area is almost flat. The maximum elevation is about 559m from MSL and Lowest is 558m. The estimated geological reserve in the area is 63840 m³ Mineable reserve – 39598.98 m³ .
b. A brief description of Proposed mining method	Opencast, semi mechanized method of quarrying.
c. Production (year wise)	Maximum rate of production of 4000 m ³ .
d. Bench height	3.0 m
e. Bench width	5.0 m
f. Slope	Gentle Slope
g. Ultimate depth of the mining	6 meter from surface
h. Drilling	Drilling is not required but jack hammer drilling may be used for blasting purpose.
i. Blasting (give broad blast parameters like Diameters, spacing. Burden, Depth of hole, Explosive type, Max Charge/delay, Detonators type/DF etc, powder factor etc)	Limited blasting will be taken up by licensed contractor with due care and safety under the strictly compliance of rules. Magazine is not required for storage of blasting material at the mine site as it will be dealt by the licensed blaster / contractor.

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j. Blast practice specifying precautions against Environments Impacts (noise, ground vibration, fly rock etc)	Controlled blasting will be followed strictly to minimize air pollution and transport vehicle also generate dust during hauling but as there frequency of movement is less, the effects are localized, transitory and intermittent in nature. The dust will settles down automatically. Even than due care will be taken for dust emanation by moving the vehicles at slow speed and also water sprinkling system will be deployed, if required.
k. Brief description of loading operation	Wheel loaders, JCB used for loading operation.
l. Brief description of transportation operation	Tractors/Trucks used for transportation
m. Brief description of Crushing/Cutting polishing or any other processing proposed to be carried out in the lease area its likely environment impact and mitigation measures	Stone Crusher machine. Retention wall will be prepared along the soil dump for prevention and contamination of agriculture land and surface water, if required.

6. Scheme for Plantation of Trees.

Sr. no	Particulars	Details
a.	Number of existing trees in the mining area and approach road	There is no tree exist in the mining area.
b.	Number of trees likely to be uprooted in the mining area and approach road	No trees will be uprooted in the mining area

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c.	Trees to be grown year wise in the mining area.	About 1000 saplings of the local species will be planted along lease boundary in the proposed area during this plan period.
Species of plants	Numbers of plants	Location
Neem	150	Barrier zone
Karanj	150	Barrier zone
Mango	100	Barrier zone
Jamun	100	Approach road
	100	Nearby village
Sissoo	200	Approach road
	200	Nearby village
Total	1000	

7. Scheme for Progressive Reclamation and Rehabilitation of the Land Disturbed.

a.	Depth of the top soil	There is no top soil.
b.	Expected quantity of top soil(year wise break up)	-
c.	Details of place for stacking the top soil	-
d.	Detail of re use of top soil (top soil management)	-
e.	Depth of the overburden	There is no overburden.
f.	Expected quantity of OB (year wise)	-
g.	Expected quantity of rejects	About 5 % waste material will be generated.
h.	Details of dumping site for OB /rejects	This sub grade material is nothing but the crushed and breakage part of stone

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i.	Effect of dumping on mineral zone/and natural water channel	Dump will be kept separately
j.	Back filling of land and leveling of surface(year wise)	Not applicable
k.	Rehabilitation of dump	Not required as the area is away from village and free from rehabilitation but the reclamation work will be taken up as per the approved quarry plan.
l.	Maintenances of dump	The mine solid waste so generated will be kept separately within the lease area and will be used in reclamation purpose.

8. Scheme for Prevention and Control of Air and Water Pollution.

a	Sources of air pollution	Crushing, Blasting and transport vehicles may cause moderate emissions, within the permissible norm of limit. Haulage road also generate dust due to movement of transport vehicles.
b	Mitigation measures for air pollution	Controlled blasting will be followed strictly to minimize air pollution. Transport vehicle also generate dust during hauling but as there frequency of movement is less, the effects are localized, transitory and intermittent in nature. The dust will settles down automatically. Even than due care will be taken for dust emanation by moving the vehicles at slow speed and also water sprinkling system will be deployed, if required.

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c	Water table level in the area/Water table level in the river / nalla from surface of sand (In case of sand mining)	Not Applicable as this not sand quarry.
d	Likely impact of mining on water table	Ground water table is at a depth of much below and the mining activities are confined only up to a depth of 18 meters from the surface during this mining tenure. Hence there is no chance of intersection of water table during the mining activities.
e	Details of modification/diversion of natural drainage system /Obstruction of water channels and measures taken	No modification / diversion are required.
f	Measures taken for minimizing silting and contamination of water	Not required.
g	Requirement of water for mining operations	As much as about 10 KLPD water will be required for mining operations including dust suppression along haul road / mine faces, cleaning, washing, drinking as well as plantation.
h	Source of water	No surface water source such as rivers, stream & dam exists in the quarry lease area.
i	Waste water likely to be discharged into water body, streams, river / nalla etc.	Not required.
j	Sewage system / sanitation	Mobile toilet, sewerage system will be made available. Clean drinking water and emergency medical facilities will also be made available at the site.

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EMP COST

Sr. No	Particular	Capital Cost in Rupees	Recurring Cost in Rupees
1.	Water Sprinkling through overhead sprinkler system (OHS) and solar pump for both haul road and transportation road, all the incoming and outgoing trucks will be through the OHS system. (Length Approx. 180m & width Approx. 3m)	35,000	5,000
2.	Approach Road Maintenance (Length Approx. 180m & width Approx. 3m)	35,000	5,000
3.	Plantation	5,00,000	10,000
4.	Wire Fencing(along lease boundary) including pillar	1,00,000	5000
5.	Garland Drain	30000	5,000
6.	Monitoring (AAQM & Water twice in a year)	Nil	40,000
7.	Drinking Water Facility for labour and staff	Nil	60,000
8.	Separate toilets for Male and Female @ 15000*2	30,000	5000
9.	Regular Medical Check-up of workers@500*10*2(Twice in a year)	Nil	10000
10.	Settling tank preparation in SS pattern (5m wide, 3m depth & 20m long)	30,000	10,000
11.	PPES – 10 workers @ 1500 per person	15,000	5,000
12.	First Aid & Fire fighting equipments @ 25000*2	50,000	10,000
13.	Shelter rooms for labours (20*20) = 400 square feet	30,000	10,000
14.	Two dustbins & solid waste managements	10,000	5,000
	Total	865,000	1,85,000

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PROPOSED CSR BUDGET PER YEAR

Sr. No.	Description	Cost to be incurred (Rs./Yr)
1.	Contribution for Infrastructure development & play ground of school nearby. Also contribute in sports kit for school childrens.	40,000
		40,000

- **These CSR activities will be carried out in nearby villages with the help of Gram Panchayat.**
- **Apart from above, the suggestion recommended by respected SEAC/SEIAA members and local authorities will be followed accordingly.**

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9. Any other Matter, which the Lessee Desires to State.

Place :

Signature

Date :

Name in full