EXECUTIVE SUMMARY

INTRODUCTION

Budgahan Limestone Mineis located at village Budgahan, Tehsil- Simga, District -Baloda Bazar-Bhatapara in Chhattisgarh over an area of 2.387 ha. Shri Ashish Agrawalis the applicant of the project. The lease was granted in favor of Project Proponent for 10 years i.e, from 22/02/2012 to 21/02/2022. After that, lease was granted for 20 years i.e, 22/02/2022 to 21/02/2042. The proposed production capacity of mine will be 26,340 Tonnes/annum as per approved mining plan. The proposed project is of limestone mining and due to cluster formation with other mine and total cluster area is more than 5 ha, thus it was considered as B-1 category. The proposed project falls under category B1. Therefore, unit requires obtaining prior EC from State Level Environment Impact Assessment Authority (SEIAA), Chhattisgarh.

PROJECT DESCRIPTION

Location of the Project- Village-Budgahan, Tehsil- Simga, District-Baloda Bazar- Bhatapara, Chhattisgarh

Latitude and Longitude:

BP.No.	Latitude	Longitude
1	21˚36´06.3″N	81˚56’11.6″E
2	21˚36´13.9″N	81˚56’07.7″E
3	21˚36´13.4″N	81˚56’05.4″E
4	21˚36´05.2″N	81˚56’08.0″E

Details of Environmental Sensitivity

Particular	Details
Nearest Village	Budgahan Village, Approx. 1.3 km in SE direction
Nearest Town	Simga, approx. 23 km in W direction
Nearest National / State Highway	SH- 10 is approx. 14.3 km in NE direction NH-130 is approx. 20.3 km in NW direction
Nearest Railway Station	Hathbandh railway station, approx. 9.8 km in WNW direction
Nearest Airport	Bilaspur Airport, Approx. 47 km in NNE.
Ecological Sensitive Areas (National Park, Wild Life Sanctuaries, Biosphere Reserve etc.) within 15 km radius.	None
Reserved/Protected Forest within 15 km	No any Reserved / Protected Forest within 15 km radius.

radius	
Water bodies within 15 km radius of the mine site.	Jamuniya river, approx. 6.0 Km in NW direction. Banjari nalla, approx. 8.0 Km in South direction.

Area & production: The total ML area is 2.387 ha.Proposed production is26,340 TPA. Estimated cost of the project is Rs. 35 lakh.

Connectivity:

The project is well connected to village road, which connects to the site. SH- 10 is approx. 14.3 km in NE direction and NH-130 is approx. 20.3 km in NW direction from the mine site. The nearest railway station is Hathbandh railway station which is approx. 9.8 km in WNW direction from the project site.

Basic Requirements for theproject

S. No.	Requirements	Quantity	Source
1	Land	2.387 ha	
2	Water	4.0 KLD	Borewell/Tanker supply from Gram Panchayt after consent of Sarpanch.
3	Manpower	25	From nearby villages

Details ofMining

Method of mining	Opencast semi-mechanized method of mining
Bench Height and Width	Bench Height – 3.0 m Bench width – more than height
Ultimate pit depth	25.0 m
Ground water Depth	40m-45m
Life of the Mine	16years

Mining Method

Quarrying will be carried out by semi mechanized open-cast method with low capacity blast. Small scale drilling & blasting will be carried out. Mining will be done by forming benches of height 3.0 m. Existing OB will e removed by excavator & rest other operations like sizing,

loading etc will be done manually. Heavy hammer & hardenes chisel will be used. Manual labors are also deployed for quarrying and handling quarrying waste. Truck/ tipper will be used for loading and dumping of limestone. Limestone will be blasted, handled and loaded by excavators into truck/ tipper.

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Mineral Beneficiation

No processing of mineral will be done in the mine. Only simple sizing and sorting will be done manually.

Land Use Pattern

DESCRIPTION OF THEENVIRONMENT

The baseline environment quality was carried out over a radial distance of 10 km around the mining lease area during **15thOct, 2023 to 15thJan, 2024.**

Ambient AirQuality

Ambient AirQualityAmbient Air Quality Monitoring (AAQM) has been carried out at **10locations** for **15th Oct, 2023 to 15th Jan, 2024**.The **minimum** and **maximum concentrations of PM_{10}** for all the **10 Air Quality** monitoring stations were found to be **58.2 μg/m³** and **92.9 μg/m³** respectively, while for **$PM_{2.5}$** Varies between **34.2 μg/m³**and **55.1 μg/m³.** As far as the gaseous pollutants SO_2&NO2, are concerned, the prescribed limits under NAAQ Standards for residential and rural areas has never surpassed at any station. The **minimum** and **maximum concentrations of SO_2** were found to be **6.9 μg/m³** and **19.0 μg/m³** respectively. The **minimum** and **maximum concentrations of NO_2** were found to be **11.5 μg/m³** and **42.0 μg/m³**respectively.The prescribed limits of SO_2 and NO_2 are 80 μg/m³ residential and rural areas has never surpassed at any monitoring station.

The results thus obtained indicate that the concentrations of PM10, $SO_2$and NO2 in the ambient air are well within the National Ambient Air Quality (NAAQ) standards for Residential and Rural areas.

Noise Levels

Ambient noise levels were measured at 10 locations around the proposed mine site. The values of noise observed in some of the areas are primarily owing to vehicular traffic. **Minimum and maximum** noise levels recorded during the **day time** were from **45.3 Leq dB and 72.5 Leq dB**respectively and **minimum and maximum** level of noise during **night time** were **35.3 Leq**

dB and 60.8 Leq dB respectively within the study area.

The daytime and nighttimes noise levels in all the locations were observed to be within the permissible limits.

Water Quality

Selected water quality parameters for water resource of the study area have been used for describing the water environment and assessing the impacts **8 ground water samples** were collected in the study area to assess the water quality. Water samples were also drawn from the hand pumps and open wells and 4 **surface water** samples were drawn. For surface water quality, comparing the values of pH, DO, BOD and total coliforms with 'Use based classification of surface waters' published by Central Pollution Control Board; it can be seen that all the analyzed surface waters can be compared with class 'B' and can be used as drinking water sources after conventional treatment and disinfection.

Soil Characteristics

Physical characteristics of soil were characterized through specific parameters viz bulk density, porosity, water holding capacity, pH, electrical conductivity and texture. Soil pH plays an important role in the availability of nutrients. Soil microbial activity as well as solubility of metal ions is also dependent on pH. The analysis Interpretation show that soil is basic in nature as pH value ranges from **7.29 to 7.92** with organic matter **2.18 % to 3.02 %.**The concentration of Nitrogen, Phosphorus and Potassium has been found to be in good amount in the soil samples. Soil texture is Sandy Clay Loam.

Core Zone:-

There is no vegetation within mine lease except some seasonal grasses. General fauna was present like squirrel and field rat observed.Common local bird species were also found flying like blue rock pigeon, house crow, koel and dove.

Buffer Zone:-

There are two types of terrestrial environments found in the flora and fauna study within the buffer zone – waste land and agricultural land. The common trees in the buffer zone are neem, banyan, gulmohar, sal, Babul, Kachnar, Peepal, Aam, Ardusa etc.

The common Mammals in the buffer zone are Goat, Cow, Mouse, Gilahari, etc. The common reptiles in the buffer zone are Rat snake, Russell viper, Garden Lizard, Cobra etc. The common

birds in the buffer zone are House sparrow, Common crane, Common Myna, Blue Rock Pigeon etc.

ANTICIPATED ENVIRONMENTAL IMPACTS

Impact on air - Various mining activities i.e. loading, removal of overburden and movement of other transport vehicles used in mining will generate dust (SPM / RSPM). Proper water sprinkling shall be carried out at the mine site. The mineral will be transported by road through covered trucks/tippers to reduce the fugitive emission caused by the wind.

Impact on water environment

Impact on surface water bodies- No any small or Major river passes through lease area.Jamuniya river, approx. 6.0 Km in NW direction &Banjari nalla, approx. 8.0 Km in South direction. There is no toxic element in and around the applied area or in OB or ore. Hence contamination of any nature is not expected for surface or any ground water source.

Impact on ground water table-

The ground water table in the lease area varies from 40m-45m below general ground and the mining will be done upto 25.0 m. So, mining will not intersects the ground level.

Noise Impact

The impact of noise on the villages is negligible as the villages are far located from the mine workings. Since there is no involvement of major machinery, the impact of noise levels will be very low.

Impact on Land Environment

Opencast mining activities may alter the landscape of the lease area and also cause some disturbance to the surface features of the surrounding areas. About 1.849ha area will be mined out.At the end of mine life this area will be converted into water reservoir at the conceptual period. It will also serve the purpose as socio economic and corporate social responsibility of the lessee by way of supplying water for irrigation purpose or at will of the local people.

Impacts on Biodiversity- There are no endangered species, wildlife sanctuary, wildlife corridors, faunal migratory routes or eco-sensitive area within the study area.

Impacts on agriculture- Agriculture activities practiced in nearby areas may get impacted because of dust generation but mitigative measures such as regular water sprinkling on active areas for example haul roads, dump sites shall be strictly followed so that impact is minimized.

4.6 Socio economic environment

The impact of mining activity in the area is positive on the socio-economicenvironment of the region. Limestonemine will provide employment to local population employing only local people whenever there is requirement of man power.

5.0 POST PROJECT MONITORING PROGRAM

S. No.	Description	Frequency of Monitoring
1	Ambient Air Quality	Quarterly/Half yearly
2	Meteorological data	Daily
3	Noise Level Monitoring	Half yearly
4	Water Level & Quality	Quarterly/Half yearly
5	Soil Quality	Half yearly
6	Monitoring of Agricultural crops	Half yearly

6.0 ADDITIONAL STUDIES

The Additional Studies conducted are Risk Assessment & Disaster Management / Hazard Management & Occupational Health & Safety.

7.0 PROJECT BENEFITS

The project will prove beneficial to the people as the company has already agreed to provide infrastructural facilities to the villagers like educational facilities, medical facilities, transportation facilities, water supply etc. which will improve the socio-economic environment of the area.

ENVIRONMENT MANAGEMENT PLAN

Air Management

Following measures will be taken to control air pollution during mining operations:

- Adequate water spraying on the haul roads.
- Construction of proper haul roads in the lease area.
- Development of Green belt/plantation within mining lease along haul roads, mine office to arrest dust.
- Water spraying shall be done before the mineral is loaded in dumpers/trucks.

Water Management

No wastewater generation is envisaged during the mining process. The sanitary waste generated from the mine office will be treated in the septic tanks via soak pits.The probable cause of surface water pollution in the proposed mining area will be soil erosion andwash off from the stacked mineral in monsoon period. Adequate control measures will be adopted to check not only the wash-off from soil erosion but also uncontrolled flow of mine water.

Noise Management

- All precaution will be taken to reduce generation of noise and noise level survey will be done at regular intervals.
- Ear protectors or earplugs will be given to persons working in higher noise level area or on machines.
- Regular measurement of noise level is proposed near drilling equipment and other heavy earth moving machinery & steps will be taken to improve the maintenance of all equipments so that the noise level will remain within permissible limits.
- Plantation of trees on internal roads and barriers.

Land Reclamation

Reclamation will be carried out by converting the mined out into water reservoir at the conceptual period.About 0.578ha area will be converted into water reservoir. About **1610**number of trees will be planted in reclaimed area during plan period.

Stage wise land use pattern

Articles	Land use at the end of 5 years in Ha
A. Lease Area	2.387
B. Quarrying & allied	
1. Area under pits	1.849
2.Area for dumping	
3.Area for road	-
5. Area for Infrastructure	-
6. Plantation	0.538 (along lease boundary)
7. Storage of Mineral	-
8. Storage of fines	-
9. Crushing unit	-
10. Untouched Area	-
Total	**2.387**

Green belt development- It is proposed to total plant1610 (1050 in safety zone, 460 along both side of approach road & 100 at govt. school in village). Species with fruit bearing along with medicinal trees will be planted.

Budget for Environmental Protection

Particulars		1st Year	2nd Year	3rd Year	4th Year	5th Year
Pollution control generate due to dust generation during movement of vehicles from mine site to nearest road		30,000	30,000	30,000	30,000	30,000
both side plantation on access road 230m (460 No's)	Amount for plantation (90% survival rate)	25,000	5000	5000	5000	5000
	Amount for Fencing	25,000	-	-	-	-
	Fertilizers, seeds & maintenance of plant	30,000	10,000	10,000	10,000	10,000
Environment Monitoring (Quarterly)		20,000	20,000	20,000	20,000	20,000
Maintenance of Road/Approach Road		20,000	20,000	20,000	20,000	20,000
Plantation of trees at Village Road (upto 0.23 K.M.)		30,000	10,000	10,000	-	-
Total		**1,80,000**	**95,000**	**95,000**	**85,000**	**85,000**

CONCLUSION

Based on the EIA study it is observed that there will be an increase in the dust pollution, which will be controlled by adopting wet drilling, controlled & muffled blasting, sprinkling of water and plantation. There will be an insignificant impact on ambient environment and ecology due to the mining activities moreover the mining operation will lead to direct and indirect employment generation in the area. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to control the pollutants released from the premises of the limestonemine. Monitoring program will be followed till the mining operations continue. Hence, it can be summarized that the development of the mine will have a positive impact on the socio-economic of the area and lead to sustainable development of the region.

The region is economically backward mostly dependent on seasonal farming. The per capita income of villages is much below the national average. It will increase the profitability of the company and will have positive impact in the socio-economic status of the people in the region &

will increase opportunities for employment

The study area is still lacking in education, health, housing, water, electricity etc. It is expected that same will improve to a great extent due to proposed mining project and associated industrial and business activities. Proposed activities and expenses on Corporate Social Responsibility will be as per CER Mandate of the Government.

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