

**DRAFT ENVIRONMENT IMPACT ASSESSMENT  
REPORT  
& ENVIRONMENT MANAGEMENT PLAN  
of**

**Executive Summary English**

**Khamhariya Dolomite Deposit**

**at**

**Village: Khamhariya, Tehsil: Jaijaipur, District: Janjgir-Champa,**

**State: Chhattisgarh**

**Area 4.636 ha (11.45 Acres) at Khasra No:**

**869/1, 869/2, 870, 871/1&2, 872, 873, 874, 875, 876/1, 876/2, 877, 878, 886 (part),  
887/2(part), 888, 899/2, 900, 901/1, 901/2, 902/1, 902/2, 906, 907/1, 907/2, 907/3,**

**Capacity: 150,000 Tons per annum**

**Proposal No. SIA/CG/MIN/54325/2020**

**Applicant**

**Shri Gyanchand Prasad Agrawal**

**Indian Mine Planner & Consultant**

**NABET/EIA/1821/IA0037**

**ACCREDITED BY NABET UNDER "A" CATEGORY FOR OPEN CAST MINES**

**Corp. Office: GE-61, Rajdanga Main, Road, Behind Gateway Hotel, EM Bye Pass, Kolkata**

## **EXECUTIVE SUMMARY**

### **INTRODUCTION**

Environmental Impact Assessment (EIA) is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision making tool, which guides the decision makers in taking appropriate decisions for proposed projects. EIA systematically examines both beneficial and adverse consequences of the proposed project and ensure that these impacts are taken into account during the project designing.

The mining lease is located in village of Khamhariya, Tehsil-Jaijaipur, District- Janjgir-Champa (C.G.) Geo-graphically the ML area extends from Longitude E 82° 51' 40.65" to 82° 51' 39.80" and Latitude N 21° 55' 35.12" to 21° 55' 33.26".

The study area of the proposed project comprises of 10 km radius around the mining lease boundary, the map showing the core zone (ML area) and buffer zone (10 km radius from the lease boundary).

The life of the mine is anticipated at 50 years based on the level of exploration and reserve established as per UNFC classification and expecting the market demand will remain at 150,000 Tonnes per Year.

### **Location**

The mining lease is located in village of Khamhariya, Tehsil-Jaijaipur, District- Janjgir-Champa (C.G.) Geo-graphically the ML area extends from Longitude E 82° 51' 40.65" to 82° 51' 39.80" and Latitude N 21° 55' 35.12" to 21° 55' 33.26".

### **Connectivity**

The lease area is about 22.5 km from Champa. The QL area can be approached from National Highway-200 which is at a distance of 15 Km. The Nearest Railway Station Janjgir Champa 22.5 km. The Nearest Airport is Swami Vivekanand Airport at a distance of 142 km.

### **Mailing/ Correspondence Address of Project Proponent:**

Shri Gyanchand Prasad Agrawal  
C/o- Dolomite Mining Corporation,  
Road, P.O. Baradwar, Teh-Jaijaipur,  
Dist- Janjgir-Champa, Chhattisgarh.  
Pincode - 495687

### **Size of the Project**

The total Mine Lease areas considered is 4.636 ha (11.45 Ha). The proposed production is 150,000 Tonnes per Year

### **Anticipated Life of Project and Cost of the Project**

The life of the mine is anticipated at 50 years based on the level of exploration and reserve established as per UNFC classification and expecting the market demand will remain at 150,000 Tonnes per Year

### **MINING**

Opencast semi mechanized method of mining will be adopted in the lease area. The excavation will be carried out usually by manual labour with the use of jack hammer, excavator, compressor etc. and loaded into tractor/truck/tipper. The Limestone will be suitably blended to be supplied in market. Rest is inner burden.

#### **Year wise Production details**

Year	Area in m <sup>2</sup> (A)	Bench height in m. (B)	Tentative ROM (cum) (C=A x B)	Net Volume 84% of ROM (cum) (D=C x 84%)	Saleable of Ore (T) (Dx2.65 B.D.)	Intercalated Waste(cum) (Cx16%)	Up to RL In M.
1st	22461.82	3.0	67385.46	56603.78	150000	10781.68	229.0
2nd	22461.82	3.0	67385.46	56603.78	150000	10781.68	229.0
3rd	22461.82	3.0	67385.46	56603.78	150000	10781.68	229.0
4th	22461.82	3.0	67385.46	56603.78	150000	10781.68	226.0
5th	22461.82	3.0	67385.46	56603.78	150000	10781.68	223.0
Total			<b>336927.30</b>	<b>283018.90</b>	<b>750000</b>	<b>53908.40</b>	

**Summary of Land use at different stage will be as follows (inHa):**

Articles		Pvt. Land (Non forest land)		
		Land use at Present in Ha.	Land use at the end of 5 years in Ha.	Land use at the end of conceptual period in Ha.
<b>A.</b>	<b>Lease Area</b>	<b>4.636 Ha.</b>	<b>4.636 Ha.</b>	<b>4.636 Ha.</b>
<b>B.</b>	<b>Mining &amp; allied</b>			
1	Area under pits	Nil	3.074	3.963
2	Storage for top soil	Nil	0.670	0.27
3	Area for waste dump	Nil	0.40	Used for Backfilling, 0.385 out of 1
4	Mineral storage (temp.)	Nil	0.02	Nil
5	Infrastructure (workshop, administrative building etc.)	Nil	Out side	Out side
6	Roads	Nil	0.067	0.067
7	Railways	Nil	Nil	Nil
8	Tailing Pond	Nil	Nil	Nil
9	Effluent Treatment Plant	Nil	Nil	Nil
10	Mineral separation plant	Nil	Nil	Nil
11	Township area	Nil	Nil	Nil
12	Other to specify	Nil	Nil	Nil
13	<b>Total Area (1 to 12)</b>	<b>Nil</b>	<b>4.231</b>	<b>4.300</b>
14	Undisturbed area	Nil	0.405	0.336

Systematic working will be done by formation of benches as per M.M.R. 1961. All applicable rules of MMR 1961, Mines Act-1952, MCR-2016 and MCDR-1988 will be followed for safe, scientific & systematic working to follow the principles of safety & conservation of human health & mineral.

**Disposal of Waste**

**Nature of waste, its rate of yearly generation and proposals for disposal of waste:** The mine waste is in the form of following:-

- (1) Top soil:** -Only top soil will be removed from the lease area. Total 61490 m<sup>3</sup> soil will be generated from the area which will be dumped on 6700 m<sup>2</sup> area.
- (2) OB and Mine waste:** - The waste generated as topsoil will be used for plantation purpose at safety zone.

### **Selection of Dumping Site:**

Total 61490 m<sup>3</sup> soil will be generated from the area which will be dumped on 4000 m<sup>2</sup> area along the lease boundary

### **Method and manner of disposal of waste:**

Top soil excavated from the height of Max 3.0 Mtrs and will be dumped at safety barriers around the lease area and will be used for plantation purpose at safety zone.

### **Use of Mineral**

The low grade Limestone is being sale to various part of the India for making roads, building and for other construction works etc

### **General Features**

#### **I) Surface Drainage Pattern**

In the Study area of 10 km radius, Hasdeo River (Distance at 6.19 km) is coming at 23.0 km.

#### **ii). Vehicular Traffic Density**

The lease area is about 22.5 km from Champa. The QL area can be approached from National Highway-200 which is at a distance of 15 km. the Nearest Railway Station Naya Baradwar approx at 22 km in NW Direction. The Nearest Airport is Swami Vivekanand Airport at a distance of 142 km.

### **Traffic Study**

S. No.	Vehicles Distribution	Number of Vehicles Distribution/Day	Passenger Car Unit (PCU)	Total Number of Vehicle (PCU)/Hour
		State Highway 2		State Highway 2
1.	Cars	170	1.0	170

2.	Buses	30	3.0	90
3.	Two wheelers	400	0.5	200
4.	Three wheelers	120	1.50	180
5.	Trucks	180	3.0	540
<b>Total</b>		<b>900</b>		<b>1180/24=49 PCU/hr</b>

**Existing Traffic Scenario & LOS**

Road	V (Volume in PCU/hr)	C (Capacity in PCU/hr)	Existing V/C Ratio	LOS
<b>State Highway 2</b>	49	1100	0.04	A

**Note:** V= Volume in PCU's/hr & C= Capacity in PCU's/ hr

The existing Level of Service near Village is "A" i.e. excellent and at NH is "A" i.e. excellent.

V/C	LOS	Performance
0.0-0.2	A	Excellent
0.2-0.4	B	Very Good
0.4-0.7	C	Good/ Average/ Fair
0.7-0.8	D	Poor
0.8-1.0	E	Very Poor
>1.0	F	Worst

**Source: Transportation Research Board (1994) Highway Capacity Manual, 3rd Edition, p. 3-9.  $sf$  = free flow speed,  $v$  = volume,  $c$  = capacity,  $a = 0.15$  and  $b=4$ .**

**During Mine Operation**

Maximum proposed annual production	1,50,000 tonnes per annum
No. of working days	300 days
Production / day	500 tonnes per day
Carrying capacity of truck	15 tonnes
No. of truck trips/day	33
Working Hours per day	8 hours
No. of truck trips/hr	4 (i.e. 4 truck every 1 hr)
No. of trucks deployed/day to and fro	33 * 2 trucks = 66 trucks
No. of trucks deployed/d, PCU	66* 3.0 = 198 PCU
No of trucks deployed/hour, PCU	198/8 = 24.75 or say 25

*Traffic Scenario & LOS*

Road	Increased PCU'S- Raipur Rd	V	C	Modified V/C Ratio	LOS
Baradwar Marg	49+25	74	1100	0.067	A

**Conclusion**

The LOS value from the proposed mine may be “Excellent”. So the additional load on the carrying capacity of the concern roads is not likely to have any significant adverse effect.

**iii) Water demand**

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

**Manpower Requirement**

About 40 persons will be getting direct and indirect employment in this mine. The man power will be mostly skilled.

**DESCRIPTION OF BASELINE-ENVIRONMENT**

This section contains the description of baseline studies of the 10 km radius of the area. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

Environmental data has been collected in relation to propose mining for:-

- (a) Land
- (b) Water
- (c) Air
- (d) Noise
- (e) Biological
- (f) Socio-economic

**(a) Land Use:** Object of this study is to provide a baseline status of the study area covering 10 km radius around the proposed Mine site so that temporal changes due to the mining activities on the surroundings can be assessed. The land-use is divided into agriculture land, settlement, river / Nala and forest area as shown in the map. The area is fertile and dominated by the proportion of agriculture land.

Classification scheme adopted for the preparation of land use/land cover maps on 1:50,000 scales. Land use / Land cover classification is given in the table below.

**Land Use Pattern of the Study Area (within 10 km Buffer)**

S.N.	LAND USE TYPE	AREA (in ha)
1	OPEN LAND	750.65
2	STONY QUARRY/BRICK QUARRY	150.5
3	SETTLEMENT	1500.6
4	WATERBODIES	305.90
5	AGRICULTURE LAND	29699
<b>TOTAL</b>		<b>32406.65</b>

There is no National Park, Biosphere reserve, Migratory routes of fauna and National Monument within 10km periphery of the lease area as per secondary data available. There is no habitation within lease area.

**Analysis Results of Baseline Environment**

**(a) Results of Analysis of the Soil.**

The analysis results show that soil is basic in nature as pH value ranges from 7.07 to 7.45 showing the saline property of soil. High electrical conductivity (370 to 428  $\mu\text{S}/\text{cm}$ ) is observed in the analysis report showing soil electrical behavior and dissolved solids in soil. The presence of Nitrogen content varies from 0.071 to 0.082 %. The concentration of Nitrogen, Phosphorus & Potassium are found low value in the soil samples. pH and EC values vary greatly and are affected by several environmental factors including, climate, local biota (plants and animals), bedrock and surficial geology, as well as human impacts are shown in the analysis report.

Low values of EC indicate relatively dilute waters, such as distilled water or glacial melt water and low deposition of TDS.

**(b) WATER ENVIRONMENT**

The results of Ground water samples are collected at six locations in the post-monsoon season as discussed above for organoleptic & physical parameters, general parameters, toxic and biological parameters. The analysis results at the six ground water locations and two surface water locations are given below:



The analysis results indicate that pH of the groundwater is in range of 6.75 – 7.46. The TDS were found to be in the range of 387-545 mg/l. Total Hardness is in range of 168.72 – 220.42 mg/l. The analysis results indicate that pH of the surface water to be in range of 7.16– 7.38. The TDS is found to be in the range of 211-233 mg/l. Total Hardness is in range of 323-365 mg/l. Other parameters like chloride and sulphate are observed within the prescribed limits. The necessary treatment required to minimize the impact is mentioned in Environment Management Plan and cost is born by the Project Proponent.

### **(c) AMBIENT AIR QUALITY**

The Ambient Air Quality Monitoring reveals that of 10 monitoring stations the minimum concentrations of PM<sub>2.5</sub> are 14.49 µg/m<sup>3</sup> at AQ10 and maximum 38.23 µg/m<sup>3</sup> at AQ1 (Core Zone). The results of PM<sub>10</sub> reveal that the minimum concentration of 23.65 µg/m<sup>3</sup> at AQ10 while maximum concentration of 53.63µg/m<sup>3</sup> is found at AQ8. These values for PM10 and PM2.5 are within prescribed CPCB limit of 100 µg/m<sup>3</sup> and 60 µg/m<sup>3</sup> respectively for residential and rural areas at all stations.

The gaseous pollutants SO<sub>2</sub> and NO<sub>2</sub> are within the prescribed CPCB limit of 80 µg/m<sup>3</sup> for residential and rural areas at all stations. The minimum & maximum concentrations of SO<sub>2</sub> were found to be 9.26 µg/m<sup>3</sup> at AQ7 & 34.82 µg/m<sup>3</sup> at AQ8 respectively. The minimum & maximum concentrations of NO<sub>2</sub> are found to be 9.12 µg/m<sup>3</sup> at AQ4 & 28.08 µg/m<sup>3</sup> at AQ8 respectively.

### **(d) NOISE ENVIRONMENT**

The values of noise observed in some of the areas are primarily owing to vehicular traffic and other anthropogenic activities. Noise monitoring results reveal that the maximum & minimum noise levels at day time were recorded in the range of 61.3 dB(A) at NQ6 (Industrial Zone) and 39.5 dB(A) at NQ8 (Silent Zone) and maximum & minimum noise levels at night time were recorded in the range of 46.1 dB(A) at NQ6 (Industrial Zone) and 30.5 dB(A) at NQ8 (Silent Zone), respectively.

### **(e) BIOLOGICAL ENVIRONMENT**

The lease area as well as buffer zone area reveals no endangered and endemic species of flora and fauna in the area.

### **(f) Socio- economic**

#### **Population Composition**

According to 2011 Population Census the study area has a total population of 97121. Of this 49.74 percent are male and the remaining 50.26 percent are female. Further 13.80 percent of the total population belongs to 0-6 age group. About 56.91 percent of them are male and the remaining 43.09 percent are female.

### **Sex Ratio**

The overall sex ratio in the study area has been worked out to 975 females per 1000 males, which is more than the national average of 940 females per 1000 males. The highest sex ratio recorded in the study area is 1030 females per thousand of males. Sex ratio of Children belonging to 0-6 age group has been worked out to 757 females per 1000 males.

### **Density of Population**

The overall density of population in the study area has been worked out to 381 persons per sq. Kilometre. This is less than the density of population for the state, which stands at 489 persons per sq. Kilometre, according to census 2011.

### **Households**

There are 21775 households in the study area and the average household size is five. .

### **Social Structure**

In the study area the total number of persons belonging to Scheduled Caste community is 20691, which is 27.81 percent of the total population. The gender wise distribution of schedule caste population indicates male 50.23 percent and female 49.77 percent, registering a sex ratio of 990 females per one thousand males.

Further analysis of data reveals that in the study area, the total number of persons belonging to Scheduled Tribe community is 17051, which is 27.24 percent of the total population. This is nearly same as the total number of persons belonging to Scheduled caste community residing in the study area.

About 55.05 percent of the total population belongs to General category, which includes people belonging to 'Other Backward Castes'. In absolute number the population belongs to this category are 59379 with 48.47 percent male and 51.53 percent female. The sex ratio of General category population has been worked out to 1063 females per 1000 males.

The socio-economic development of poor and downtrodden scheduled caste and scheduled tribe people is a continuous process and the governments, both at the centre and the states are constantly making efforts to improve the destiny of these people. Distribution of surplus land to the members of the above categories of people is an important step taken by the government for their economic empowerment. The State Governments have drawn up its own list of socially and educationally backward classes and implementing various developmental schemes for them. These schemes are mainly in the field of education and income generation. All the ongoing schemes are critically examined and modified periodically to cater to the needs of different groups amongst the above communities. The government has also started various schemes to improve the quality of life of the rural poor, especially for the scheduled castes and scheduled tribes by making special provisions for them. 'Sampornma Grameen Rozgar Yojana' (SGRY) is one such programme, which was launched to safeguard the interest of the weaker sections and women by providing them

wage employment. The 'Swarnjayanti Gram Swarozgar Yojana' (SGSY), another rural development scheme aims at bringing poor families above the poverty line by providing them with income generating assets through a mixture of credit and subsidy. The SGSY has also made an explicit provision that 50 per cent of the Swarozgaris assisted should be from Scheduled caste and Scheduled Tribe communities.

Over the decades the Scheduled caste and scheduled tribe people are making rapid progress both in economic and social sphere. Today they are no more untouchables. The literate Schedule Caste and Scheduled tribe people are engaged in trade, commerce & industry, private & government services including police and armed forces.

### **Literates and Literacy Rate**

All persons aged seven years and above, who can both read and write with understanding in any language including Braille are considered as literate. The total numbers of literate persons in the study area are 58126 which is 66.19 percent of the total population. Of the total number of literate persons 57.32 percent are male and the remaining 42.68 percent are female.

The overall literacy rate in the study area has been worked out to 66.24 percent. The gender wise distribution of literacy rate reveals that 78.32 percent of the literate persons are male and 54.24 percent are female. This creates a gender gap of 24.08 percent.

### **ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES**

#### **Impact on Ambient Air Quality**

The mining is proposed to be carried out by opencast semi mechanized method. The air borne particulate matter generated by ore and handling operations as well as transportation is the main air pollutant. The emissions of Sulphur dioxide (SO<sub>2</sub>), Oxides of Nitrogen (NO<sub>x</sub>) contributed by vehicles plying on haul roads are marginal. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions.

#### **Mitigation Measures**

1. Water sprinkling will be done on the haul roads twice in a day.
2. The dust generated during the process will be minimized by water spray at the working faces before and after the activity.
3. Plantation will be carried out on approach roads and in Lease boundary.
4. Planning transportation routes of mined material so as to reach the nearest paved roads by shortest route. (minimize transportation over unpaved road);
5. Personal Protection Equipments (PPE) like dust masks, ear plugs etc. will be provided to mine workers.
6. Rock breaker will be used for breaking over size boulders in order to reduce dust and noise generation, which otherwise would be generated due to secondary blasting.
7. Speed limit will be enforced to reduce airborne fugitive dust from vehicular traffic.

8. Deploying PUC certified vehicles to reduce their noise emission.
9. Haul road shall be covered with gravels
10. Spillage from the trucks will be prevented by covering tarpaulin over the trucks.
11. Ambient Air Quality Monitoring will be conducted on regularly basis to assess the quality of ambient air.
12. Proper maintenance of machines improves combustion process & makes reduction in the pollution.
13. Good maintenance and monitoring of fuel and oil will not allow significant addition in the gaseous emission.

#### **10.4.2 NOISE ENVIRONMENT**

Noise generated at the mine is due to semi mechanized mining operations and truck transportation activities. The noise generated by the mining activity dissipates within the mine. There is no major impact of the mining activity on the nearby villages. However, pronounced effect of above noise levels is felt only near the active working area.

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 minimal.

<b>S. No.</b>	<b>Impact Prediction</b>	<b>Mitigation Measures</b>
<b>1</b>	Noise Impact due to mining activities.	The noise levels from all the sources are periodical and restricted to particular operation.
<b>2</b>	Noise impact due to vehicular movement.	a) Proper maintenance, oiling and greasing of machines at regular intervals will be done to reduce the generation of noise. b) Plantation along the sides of approach roads, around office building and mine area will be done to minimize the propagation of noise. c) Personal Protective Equipments (PPE) like earmuffs/earplugs will be provided to all operators and employees working near mining machineries or at higher noise zone. d) Periodical noise level monitoring will be done

#### **10.4.3 BIOLOGICAL ENVIRONMENT**

<b>S. No.</b>	<b>Impact Predicted</b>	<b>Suggestive measure</b>
<b>1</b>	Disturbance of free movement/living of wild fauna	<ul style="list-style-type: none"> <li>• Care will be taken that noise produced during vehicles movement for carrying OB and ore materials are within the permissible noise level.</li> <li>• Care will be taken that no hunting of animals (birds) carried out by labours.</li> <li>• Labours will not be allowed to discards food, plastic etc.,</li> </ul>

		<p>which can attract animals near the core site.</p> <ul style="list-style-type: none"> <li>• Only low polluting vehicle will be allowed for carrying ore materials. All vehicles allowed in the project site area will have to provide pollution under control certificate at the end of three months</li> <li>• Noise level will be within permissible limit (silent zone- 50dB during day time) as per noise pollution (regulation and control), rules, 2000, CPCB norms</li> </ul>
2	Harvesting of flora	<ul style="list-style-type: none"> <li>• No tree cutting, chopping, lumbering, uprooting of shrubs and herbs should be allowed</li> <li>• Collections of economically important plants will be fully restricted</li> </ul>

#### **10.4.4 LAND ENVIRONMENT**

<b>S. No.</b>	<b>Impact Prediction</b>	<b>Mitigation Measures</b>
1	Change in the Topography of the Land / Land Degradation	The proposed mining activity is carried out in flat region and waste land After removal of ore body, a undulating portion will be created. All the broken area will be reclaimed by systematic backfilling and rehabilitated by afforestation so that landscape of the area is improved. And rest area is used as water reservoir and used for pisciculture
2	Solid waste generation	About 10% mineral wastes will be generated. Top Soil will used on the barrier zone areas on which plantation will be raised.
3	Change in Drainage Pattern	Water flow / course will not be obstructed and natural drains or nallahs will not be disturbed. Run-off from mine and mineral stack will be prevented to avoid being discharged to surroundings, particularly to agricultural land. Garland drains and, catch pits has been constructed to prevent run off affecting the surrounding agricultural land. Green belt has been developed in boundary.
4	Impact on the Agricultural Practice at nearby area due to dust generation	Agriculture activities are practiced nearby areas may impacted because of dust generation but mitigative measures such as regular water sprinkling on active areas for example haul roads, excavation sites will be strictly followed so that impact is minimized.

#### **10.4.5 WATER ENVIRONMENT**

<b>S. No.</b>	<b>Impact Prediction</b>	<b>Mitigation Measures</b>
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1	Effect on the Ground Water Table	Max Elevation of the ML area is 239m AMSL Ultimate depth of mine is up to 236 m AMSL. Ground Water table is 40m below ground level. The mining activity will not intersect with the ground water table.
2	Wash off from the dumps	No dumping has been proposed.
3	Soil Erosion	Reclamation of the mined out area will be done with plantation to avoid the soil erosion
4	Waste Water generation/ Discharge	Toilets with septic tanks will be used; hence no sewage / liquid effluent will be spread and contamination is also not expected
5	Siltation in nearby agriculture field	Garland drains have been constructed on the sloping side barrier of the ML area. The garland drain has been routed through settling tank to remove suspended solids from flowing into storm water.

### **10.5 ADDITIONAL STUDIES**

#### **DISASTER MANAGEMENT PLAN**

In order to avoid any danger in the mine site at the end of life of mine a disaster management cell headed by local authority District Collector will be constituted. Police department health authorities, including doctor, ambulances and so on will have a vital part to play following a disaster along with the mine management, and they will be an integral part of the disaster management plan.

The disaster management plan is aimed to ensure safety of human life and property and protection of environment Following are the objective of the disaster management plan.

- (i) First Aid to injured.
- (ii) Rescue operation and provision of adequate medical facilities to the injured.
- (iii) Safety of the human life in the buffer zone if needed.
- (iv) Protecting and minimizing damage to property and the environment.
- (v) Initially restrict and ultimately bring the incident under control.
- (vi) Identify any dead.
- (vii) Inform to the administration, DGMS and statutory persons as per Rules.

#### **10.6 PROJECT BENEFITS AND COSTS EVALUATION**

The project will improve the physical infrastructure, social infrastructure like improvement of road conditions water supply during dry season, drainage, educational institutions and improved environmental conditions, etc. The project also provides direct employment to 20 persons and indirect employment to another 19 persons. It increases economic activities, better living standard, educational facility, health facility and infrastructural development. The project will contribute to district mineral fund which will directly provide aid to the local authority to fund the development projects. The management will provide free saplings of fruit bearing and other trees, etc. to local during rain for plantation. This will increase the consciousness in workers and near-by villagers for greenery. Fruit trees can contribute towards their financial gains.

**PROJECT: KHAMHARIYA DOLOMITE MINE OVER AN AREA OF 4.636 Ha (11.45 Acres) VILLAGE KHAMHARIYA  
 APPLICANT: MR. GYANCHAND PRASAD AGRAWAL**

The CER activities are increasingly being taken up by the project proponent not only as fulfilling of mandatory provisions but also for the formation or enhancement of brand image. Besides the above, CER is seen more as a responsibility towards Environment & society rather than a business promotion activity.

Year wise allocation of funds for the above activities proposed to be taken up by the project proponent is provided in the table below:

**Tentative allocation of funds for the various activities proposed to be taken up by the project proponent under CSR program**

S. No	Activities	Tentative allocation of fund in Thousands					
		Year 1	Year 2	Year 3	Year 4	Year 5	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Health awareness and camps for local community	2500 0	25000	25000	2500 0	25000	25000
2	Financial Assistance for Construction of separate toilets for boys and girls in schools	4000 0	40000	40000	4000 0	40000	40000
3	Water supply in dry season	1500 0	15000	15000	1500 0	15000	15000
4	Green Belt Development in Buffer Zone	2000 0	20000	20000	2000 0	20000	20000
<b>Total</b>		1 Lacs	1 Lacs	1 Lacs	1 Lacs	1 Lacs	1 Lacs

All the activities listed above are for community development as a whole and not for individual person or a family. Each development initiative will be implemented in close collaboration with the village Panchayat. The Project proponent may avail the services of a NGO for the implementation of the above programme, if felt needed.

**Budget for Environmental Protection**

Particulars	Capital Cost	Recurring Cost/ year in Rs.
Environmental Protection		
Dust Suppression	1,30,000	25,000
Tarpaulin and cover for stack of ore	1,00,000	15,000

Environmental Monitoring	1,40,000	30,000 (Air – 11,000 Water -9000 Soil and Noise- 10000)
Green Belt & Tree guards	80,000	30,000
<b>Total</b>	<b>7,65,000</b>	<b>1,00,000</b>

**Budget for Occupational Health**

<b>Particulars</b>	<b>Capital Cost (Rs.)</b>	<b>Recurring Cost (Rs.)</b>
For routine checkup	--	1,00,000
Infrastructure &PPE's	50,000	50,000

**Budget for Water, Shelter and Sanitation for Mine Worker**

<b>Scheme</b>	<b>Capital Cost (In Rs)</b>	<b>Recurring Cost (In Rs)/year</b>
Drinking water facility	75,000	50,000
Rest shelter	25,000	15,000
Sanitation (Urinal and Toilet )	1,00,000	35,000
<b>Total</b>	<b>2,00,000</b>	<b>1,00,000</b>

**CORPORATE ENVIRONMENT RESPONSIBILITY**

Corporate Environment responsibility (CER) refers to responsibility of a company/ organization to ensure positive impact on environment, consumers, employees, communities, stakeholders and all other members of public sphere. The CER activities are increasingly being taken up by the project proponent not only as fulfilling of mandatory provisions but also for the formation or enhancement of brand image. Besides the above, CER is seen more as a responsibility towards Environment & society rather than a business promotion activity. It is the need of the day for expansion of Environment & occupational welfare. This will not only improve the socio-economic status of the people living in the nearby areas but also enhance the reputation of the project proponent among the local people.

Year wise allocation of funds for the above activities proposed to be taken up by the project proponent is provided in the table below:



**Tentative allocation of funds for the various activities proposed to be taken up by the project proponent under CER program**

<b>Activities under CER</b>	<b>Expenditure</b>
<b>Installation of Rain water harvesting system in the school premises</b>	<b>1,50,000</b>
<b>R.O. Will be installed in the school for drinking purpose</b>	<b>20,000</b>
<b>Separate water tanks for toilet of boys and girls will be constructed in school</b>	<b>60 000</b>
<b>Plantation along with tree guards</b>	<b>1,20,000</b>
<b>Total</b>	<b>3,00,000/-</b>

All the activities listed above are for community development as a whole and not for individual person or a family.

**CONCLUSION**

As discussed, it is safe to say that the proposed facilities are not likely to cause any significant impact to the ecology of the area, as adequate preventive measures will be adopted to keep the various pollutants within the permissible limits. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to serve as biological indicators for the pollutants released from the premises of "Khamhariya Dolomite Mine."