

CHAPTER – 10

Executive Summary

10.1 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.

10.1.1 ENVIRONMENTAL CLEARANCE

The proposed project is categorized under 1 (a) (<50 hectare of mining lease area) of Gazette Notification dated Sep 14th, 2006 and subsequent amendment made on 01.12.2009 & April 2011. As per the Gazette Notification, 2006. The proposed project is under “B” category no National Park, Biosphere reserve, Migratory routes of fauna and National Monument within 5 Km radius from the project site under 1(a) activity of EIA Notification.

10.1.2 TERMS OF REFERENCE

The Environmental Impact Assessment report is being prepared in order to comply with the Terms of Reference (TOR) received from SEAC, Chhattisgarh TOR letter no. **TOR Identification No. TO24B0107CG5439978N File No.-OL/TOR/MIN/SAKTI/3462** dated : 21/11/2025 under EIA notification of the MoEF dated 07-9-2019, for seeking environmental clearance for mining of mineral.

10.2 Name and Address of the Lessee –

Lessee: M/s MRS Minerals

Mailing/ Correspondence Address of Project Proponent:

M/s. MRS Minerals,
Frineds Colony, Raigarh
Tehsil & District - Raigarh
496001

b) Objective of the project – The mining lease of Dolomite Mine at Khasra No: 2333/8 (New Khasra No. is 2333/8, 2333/9) at Village –Dumarpara Tehsil – Shakti Dist. – Sakti (Jajgir-Champa), Chhattisgarh Area- 4.350 ha. has been granted to (Shri Naveen Kumar Bansal) (M/s. MRS Minerals) Resident of Friends Colony, Near Dhimirapur Chowk, Raigarh P.O. & Tehsil- Raigarh , for 50 years.

c) Need of the Project

The economy of India is the eleventh largest in the world by nominal GDP and the third largest by purchasing power parity. The primary reason for the economic growth can be attributed to the growth in infrastructural facilities such as buildings & Infrastructural growth in steels and iron rod etc . With the growing infrastructural requirement of the India, the demand of raw materials has increased geometrically. The Dolomite is required in various rolling mill and steel industries and in sponge iron units

d) Type of Project

This project is for mining of mineral Dolomite Mine by Opencast Mechanized Method of Mining.

10.3 DESCRIPTION OF THE PROJECT

The mining lease of Dolomite Mine at Khasra No: 2333/8 (New Khasra No. is 2333/8, 2333/9) at Village –Dumarpara Tehsil – Shakti Dist. – Shakti (Jajgir-Champa), Chhattisgarh Area- 4.350 ha. has been granted to (Shri Naveen Kumar Bansal) (M/s. MRS Minerals) Resident of Friends Colony, Near Dhimrapur Chowk, Raigarh P.O. & Tehsil- Raigarh , for 50 years.

Location of the project –

The mining lease is located in Village: Dumarpara, Tehsil- Naya Baradwar, District- Janjgir-Champa (C.G.)

Latitude / Longitude of any boundary point-

Toposheet No. -	64 K/13
Latitude	- 21°58'56.80091"N to 21°58'51.33935"N
Longitude	- 82°51'02.81308"E to 82°51'01.29981"E
Altitude	- 250-246 m A.M.S.L.

The lease area is about 20 km from Champa. The QL area can be approached from National Highway- 49 at which is at a distance of 3.40 km N Direction. The Nearest Railway Station at Naya Baradwar approx of 4.45 km. The Nearest Airport Bilasa Devi kevat Airport approx 75.60 km in W direction.

This project is for mining of mineral Dolomite by Opencast i Mechanized Method of mining.

NEARBY SENSITIVE AREAS AND EXISTING BASIC AMENITIES (in 10 Km Buffer)

Project Name	M/s MRS Minerals	
Location of the Project	Village: Dumarpara, Tehsil: Naya Baradwar , Distric: Sakti (C.G.)	
Mine Lease Area	4.350 ha	Khasra No: Attached as Annexures.
Latitude & Longitude	Latitude	Longitude
	21°58'56.80091"N to 21°58'51.33935"N	82°51'02.81308"E to 82°51'01.29981"E
Toposheet Number	64 K/13	
Type of Land	Non forest Private land	
Elevation	Highest Elevation: 250 m AMSL Lowest Elevation : 246 m AMSL	
Project Cost	130 Lacs	
Man Power & No. of Working days	30 person /300 Working Days	
Total Geological Reserve	30,26,943.67 T	

Total Mineable Reserve	20,91,927.79T
Targeted Production	Production from mine largely depends on market demand presently it is fixed at 4,00,000 Tonnes as per present market scenario.
Validity of Lease	30 years
Seismic Zone	Seismic Zone II as per IS-1893 (Part-1)-2002
End use of Product	In Chhattisgarh dolomite is mostly used in iron and steel industries. Most of the dolomite is used in Steel plant.
Nearest Town	Champa 20 km in NW Direction.
Nearest Airport	Bilasa Devi kevat Airport approx 75.60 km in W direction.
Nearest Railway Station	Railway Station Naya Baradwar approx at 4.45 km in NW Direction.
Nearest Highway	National Highway 49 at 3.40 km N Direction
Nearest Water Bodies	Hasdeo River at 16.70 km W Direction and Son River at 6.27 km West Direction, and Borai River approx 6.5 km East Direction.
Historical Monuments (in 10 km Buffer)	None within the study Area.
Status of Protected/ Other Areas (in 10 Km Buffer)	None within the study Area.
Nearest Dispensary & Govt. Hospital	Agrawal City Hospital, at Baradwar 4.3 km in NW Direction.

10.4 LEASE HOLD AREA

Mining Lease Area	4.350 ha
Revenue Village Name of the ML Area	Village: Dumarpara, Tehsil: Naya Baradwar, Dist: Shakti (Janjgir Champa) (C.G.)
Khasra No.	2333/8 (New Khasra No. is 2333/8, 2333/9)

No ancillary activity is proposed. No area other than the QL area is required for this project

10.3 Mining

0.3.1 Opencast mechanized method of mining will be adopted in the lease area. The excavation will be carried out usually by excavator and with the use of jack hammer, compressor, loader, JCB, dumper, etc. and loaded into tractor/truck/tipper. The Dolomite will be suitably blended to be supplied in sponge iron unit.

Method of Mining

Opencast mechanized method will be adopted. It has already mentioned that, the complete mining operation will be mechanised in nature. Some drilling and blasting will be required for removal of mineral body.

However, if, mine owner wants to increase the production in the lease area than in that condition some mechanical excavator might be used for removal and loading of top soil and the dolomite.

When production increased, machines will be deployed according to requirement of work and Mining plan will be modified accordingly.

Drilling: - Drilling machines:

The holes will be drilled by compressed air operated by 65 mm dia wagon drill with compressor/DTH or Jack hemmer (32mm dia) and spacing between two holes will be 2.0 m, the depth of each hole will be 3.0m. Total requirement of drilled equipment is as under:

S. No.	Particulars	ROM
1	Maximum proposed annual production	4,00,000 T
2	Excavation per day	Say 1334 T
3	Capacity of dumper/tipper	15 T
4	One Tipper can carry (as safety measures)	13 T.
5	No of trips required per day $1334/13 = 102.6$	Say 103 trips
6	Total time taken for spotting, loading, transporting to C&S plant, unloading at C&S plant and back to the quarry	30 minutes
7	Overall efficiency = (Availability x utilization x operating efficiency)	0.50 (50%)
8	Effective hours per day $3 \times 0.5 = 4$ hours	4 hours
9	One dumper/tipper can make trips in an hour	2 trips
10	Hence, one dumper/tipper can make trips in a day 4×2	Say 8 trips
11	Nos. of dumper/tipper required $(103/8=12.8)$	Say 13 trips

Type	Nos.	Size/ capacity	Make	Motive power	H.P.
Dumpers / Tipper	13	15	TATA	Diesel	110-210

Blasting: - Blasting will be carried out by contractual agency in accordance with the Explosive Act and MMR, 1961.

Drilling is proposed to be done by wagon/DTH (65/90 mm dia) or Jack Hemmer (32mm dia). The drilling parameter of the wagon is as under:

Output per blast hole will be	2.0 x 1.5 x 3.0 x 2.85	25.6 T
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(Spacing x Burden x Depth of hole x B.D.)		
Maximum production in a year (av.)		100000 T/yr
Production in a day will be (Av. 300 working days)	400000/300	Say 1334 T
No of holes to be drilled per day	1334/25.6=52.1	Say 52 nos.
Meterage to be drilled per day	52 x 3.0 (depth)	156 m
Charge per hole	1000-1200 gm approx.	Approx. 1100 gm
Max. charge per day	1100 x 156 = 171600 kg	171 kg
Powder Factor	1334/171.6 = 7.7	7.7 T/kg

The blasting will be carried out by 80% special gelatin.

OR

If the cartridges are used for blasting using wagon/DTH (65/90 mm dia) or Jack Hemmer (32mm dia), the specification of cartridge for blasting will have the following parameters:

Diameter of cartridge	40 mm
Length of the cartridge	420 mm
Weight of the cartridge	2.2 kg

During the blasting, all Rules, Regulations and Precautionary measures will be taken. The blasting area will be covered by red flags at appropriate safety distance and operators and workers will be removed to safety distance and blasting will be conducted by a qualified blaster. The blasting will be done in twice/thrice in a week early morning or in the afternoon.

Production Plans for First Five Years

Year	Area in m ²	Bench height in m	Tentative ROM	Dolomite (Recoverable 95% of ROM) (T)	Intercalated Waste (T) @ 5%	Upto RL In M.
(1)	(2)	(3)	(4)=(2x3)x2.85	(5) = (4x95%)	(6) = (4x5%)	(8)
1st	23391.82	3.0	2,00,000	1,90,000	10,000	B1-244-241
2nd	23391.82	3.0	2,00,000	1,90,000	10,000	B1-244-241 B2-241-238

3rd	46783.63	3.0	4,00,000	3,80,000	20,000	B3-238-235 B4-235-232 B5-232-229
4th	23391.82	3.0	2,00,000	1,90,000	10,000	B5-232-229 B6-229-226
5th	23391.82	3.0	2,00,000	1,90,000	10,000	B5-232-229 B6-229-226
Total			12,00,000	11,40,000	60,000	

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-1960 and MCDR-1988 will be followed for safe, scientific & systematic working to follow the principles of safety & conservation of human health & mineral.

10.4.2 Machinery to be deployed

List of Machine

S. NO.	LIST OF MACHINES	MAKE	MOTIVE POWER	PROPOSED
1	Drifter Wagon Drill	Atlas Copco	Air Compressed	4
2	Jack Hammer	Atlas Copco	Air Compressed	1
3	Excavator & JCB	NIL	Diesel	6
4	Dumpers/Tipper	TATA	Diesel	13
5	Pump 10HP	-	Diesel	1
6	Tractor & Water Tank	-	Diesel	1
7	Drill, Other & Spares	-	Diesel	1
8	Pumps-5 Hp	As Per Requirement		
9	Mining Safety Equipments As Safety Shous, Helmets, Hand Gloves, Leg Guard Etc.	As Per Requirement		
10	Mining Equipment Such As Crowbar, Pick-Axe, Spade, Chisel Etc.	As Per Requirement		

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:** - Top soil and Lateritic soil will be removed from the lease area. Total alluvial top soil 16350 m³ top soils will be generated from the area 4167 cum Soil will be spread in 4.5 barrier zone with 1.0 m dump height, and remaining 12183 cum soil will be temporary dumped on Adjacent own land which will be used for reclamation purpose

The top soil will be used as plantation.

(2) OB and Mine waste: - Nil

Method and manner of disposal of waste: Top soil and Lateritic soil excavation details are given bellow table:-

Year	Area (m2)	Top Soil in Cum	OB/SB /IB in (cum)	Intercalated Waste in Cum @5%	Total Waste (Cum)
(1)	(2)	(3) = (2)x0.6	(4)=92)x2.4 m	(5)	(6) = (3+4+5)
1st	27250	16350	65400	3508.77	85258.77
2nd	Nil	Nil	Nil	3508.77	3508.77
3rd	Nil	NA	Nil	7017.54	7017.54
4th	Nil	NA	Nil	3508.77	3508.77
5th	Nil	NA	Nil	3508.77	3508.77
Total	27250	16350	65400	21052.62	102802.62

10.44 Use of Mineral

The Dolomite is being sale to various part of the India for use in steel industries as flux

10.4 General Features

I) Surface Drainage Pattern

In the Study area of 10 km radius, Hasdeo River (Distance at 16 km)

ii). Vehicular Traffic Density

The lease area is about 20 km from Champa. The QL area can be approached from National Highway-49 which is at a distance of 3.40 km. the Nearest Railway Station Naya Baradwar approx at 4.45 km in NW Direction. The Nearest Airport is Bilasa Devi kevat Airport approx 75.60 km in W direction

The mode of transport of mineral and waste will be dumpers or trucks within the QL area. The mineral transportation to the destination industry outside the mining lease area will be by road.

iii). Beneficiation/Processing

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

iv). Township

There is no scope of earmarking any land for township; local workers will be employed.

v). Power, Water Supply and other Infrastructure requirements

a. Power

The mine will be worked by Mechanized method. No power will be required. Only for site office power will be obtained from solar energy. Transportation will be done through dumpers or trucks operating on diesel. No storage for diesel is proposed.

b. Infrastructure and Basic Amenities

Basic amenities like rest room shelter/tents, first aid facility, temporary office and water for drinking and portable bio-toilets will be provided during operational phase.

vi) Water Supply

The water required is mainly for dust suppression, green belt development, drinking and other domestic purpose during mining operations. The total requirement will be 8 KLD. Water required during operation phase will be procured from bore well in the lease area and sump.

Daily water requirement

Activity	Water requirement, KLD	Source
Dust suppression /allied mining activity	1.5	Mine sump and bore well
Green Belt/Plantation	1.5	
Domestic	2	
Total	5	

Water Balance Chart

10.5 MANPOWER REQUIREMENT

About 25 persons will be getting direct and indirect employment in this mine. The man power will be mostly skilled and semiskilled.

10.6 ANALYSIS OF ALTERNATIVES

Mining is a site specific activity and mine is located in the Non forest Private Revenue land of the lease area. In the proposed project, opencast semi mechanized mining will be carried out. For that, no other methodology is going to be changed, depending upon the geological set up, strata of the rock and its structural behavior. The stripping ratio is also low.

10.7 DESCRIPTION OF ENVIRONMENT

This section contains the description of baseline studies of the 10 km radius of the area surrounding the Mine. 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: The land-use is divided into agriculture land, settlement, and river and forest area as shown in the map. The area is fertile and dominated by the proportion of agriculture land.

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.

(a) Results of Soil Analysis

The analysis results show that soil is basic in nature as pH value ranges from 7.04 to 7.45 showing the saline property of soil. High electrical conductivity (320 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 0.067 to 0.080 %. 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 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 6.72 – 7.19. The TDS were found to be in the range of 382-506 mg/l. Total Hardness is in range of 139.39 – 220.41 mg/l. The analysis results indicate that pH of the surface water to be in range of 7.12– 7.34. The TDS is found to be in the range of 561-615 mg/l. Total Hardness is in range of 320-360 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 13 monitoring stations the minimum concentrations of $\text{PM}_{2.5}$ are 20.23 $\mu\text{g}/\text{m}^3$ at AQ4 (Parsadakalan) and maximum 38.25 $\mu\text{g}/\text{m}^3$ at AQ1(Project site). The results of PM_{10} reveal that the minimum concentration of 29.78 $\mu\text{g}/\text{m}^3$ at AQ6 while maximum concentration of 68.28 $\mu\text{g}/\text{m}^3$ is found at AQ1. These values for PM_{10} and $\text{PM}_{2.5}$ are within prescribed CPCB limit of 100 $\mu\text{g}/\text{m}^3$ and 60 $\mu\text{g}/\text{m}^3$, respectively for residential and rural areas at all stations.

The gaseous pollutants SO_2 and NO_2 are within the prescribed CPCB limit of 80 $\mu\text{g}/\text{m}^3$ for residential and rural areas at all stations. The minimum & maximum concentrations of SO_2 were found to be 11.03 $\mu\text{g}/\text{m}^3$ at AQ5 & 34.82 $\mu\text{g}/\text{m}^3$ at AQ8, respectively. The minimum & maximum concentrations of NO_2 are found to be 9.12 $\mu\text{g}/\text{m}^3$ at AQ4 & 28.08 $\mu\text{g}/\text{m}^3$ 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 66.59 dB (A) at NQ8 (Industrial zone) and 36.54 dB (A) at NQ11 (Silent zone) and maximum & minimum noise levels at night time

were recorded in the range of 48.92 dB (A) at NQ8 (Industrial zone) and 30.12 dB (A) at Village NQ11 (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

During the course of the study 25 social factors were identified that may influence the socio-economic life of the people in the study area. Except one all of them are positive impacts, which are expected to improve the quality of life of the local people. Beside the above the mining will bring revenue to the state government.

10.8 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

10.8.1 Impact on Ambient Air Quality

The mining is proposed to be carried out by opencast other than fully 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 (SO₂), Oxides of Nitrogen (NO_x) 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.

10.8.2 NOISE ENVIRONMENT

Noise generated at the mine is due to 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.

S. No.	Impact Prediction	Mitigation Measures
1	Noise Impact due to mining activities.	The noise levels from all the sources are periodical and restricted to particular operation.
2	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

10.8.3 BIOLOGICAL ENVIRONMENT

S. No.	Impact Predicted	Suggestive measure
1	Disturbance of free movement/living of wild fauna	<ul style="list-style-type: none"> • Care will be taken that noise produced during vehicles movement for carrying OB and ore materials are within the permissible noise level. • Care will be taken that no hunting of animals (birds) carried out by labours. • If wild animals are noticed crossing the core zone, it will not be disturbed at all. Labours will not be allowed to discard food, plastic etc., which can attract animals near the core site. • 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 • Noise level will be within permissible limit (silent zone-50dB during day time) as per noise pollution (regulation and control), rules, 2000, CPCB norms
2	Harvesting of flora	<ul style="list-style-type: none"> • No tree cutting, chopping, lumbering, uprooting of shrubs and herbs should be allowed • Collections of economically important plants will be fully restricted

10.8.4 LAND ENVIRONMENT

S. No.	Impact Prediction	Mitigation Measures
1	Change in the Topography of the Land / Land Degradation	The proposed mining activity is carried out in hilly 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.
2	Solid waste generation	About 10% mineral wastes will be generated. Top Soil will backfilled in the mined out 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.

10.8.5 WATER ENVIRONMENT

S. No.	Impact Prediction	Mitigation Measures
1	Effect on the Ground Water Table	Max Elevation of the ML area is 250 m AMSL Ultimate depth of mine is up to 246 m AMSL. Ground Water table is 30m to 40m 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	Portable Bio-toilets will be used; hence no sewage / liquid effluent will be generated and contamination is also not expected due to percolation.
5	Siltation in nearby agriculture field	A Garland drain has 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.

10.9 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.

Budget for Environmental Protection

<u>Particulars</u>	<u>Capital Cost</u>	<u>Recurring Cost/ year in Rs.</u>
<u>Environmental Protection</u>		
<u>Dust Suppression</u>	<u>90,000</u>	<u>35,000</u>
<u>Tarpaulin and cover for trucks</u>	<u>70,000</u>	<u>20,000</u>

<u>Environmental Monitoring</u>	<u>60,000</u>	<u>32,000 (Air – 12,000)</u> <u>Water -10000</u> <u>Soil and Noise- 10000)</u>
<u>Green Belt along with chain link fencing in barrier zone</u>	<u>6,69,364</u>	<u>1,92,876</u>
<u>Total</u>	<u>8,89,364</u>	<u>2,79,876</u>

Budget for Occupational Health

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

Budget for Water, Shelter and Sanitation for Mine Worker

Scheme	Capital Cost (In Rs)	Recurring Cost (In Rs)/year
Drinking water facility	50,000	30,000
Rest shelter	50,000	40,000
Sanitation (Urinal and Toilet)	1,00,000	30,000
Total	2,00,000	1,00,000

**10.7 IMPORTANT ASPECTS OF THE ENVIRONMENTAL MANAGEMENT PLAN
STAGE-WISE PLANTATION, & POST MINING LAND USE**

The species of Neem, Pipal, Karanj, Munga, Ber, Bel, Mango, Dalbergia sissoo, Gulmohar, Amla, Kachnar, Gamhar, Khamhar, Jamun, Mahua, and Kadam etc. will be planted etc. will be planted every year. Barbed wire fencing will be done to protect the plants.

The proposed land use at the end of fifth year and at the end of mine life is given in table below:

Break-Up of Land Utilization Pattern (Area in ha)

Articles	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.
1 Lease area	4.350	4.350	4.350

2	Area under pits	0.232	2.957	3.752
3	Storage for top soil	0.195	0.477	0.477
4	Area for OB/waste dump	Nil	0.144	0.944
5	Minerals storage	Nil	0.01	Nil
6	Infrastructure	Nil	0.080	0.001
7	Roads	Nil	Nil	0.008
8	Other to specify (Restricted area)	Nil	0.292	0.133
9	Total area	0.427	3.817	4.371
10	Undisturbed area	3.923	0.533	0.021

Articles		Pvt. Land (waste land)		
		Land use at Present in	Land use at the end of	Land use at the end of C.P.
A.	Lease Area	1.8	1.8	1.8
B.	Mining & allied			
1	Area under pits	0.0	0.9	1.3
2	Storage for top soil	0.0	0.4	0.4
3	Area for waste dump	0.0	0.1	0.0
4	Mineral storage	0.0	0.0	0.0
5	Infrastructure (workshop, administrative)	0.0	0.0	0.0
6	Roads	0.0	0.0	0.0
7	Railways	0.0	0.0	0.0
8	Tailing Pond	0.0	0.0	0.0
9	Effluent Treatment Plant	0.0	0.0	0.0
10	Mineral separation plant	0.0	0.0	0.0

11	Township area	0.0	0.0	0.0
12	Other to specify (Plantation)	0.0	0.44 on dump	0.44 on dump
13	Total Area (1 to 12)	0.0	1.6	1.7
14	Undisturbed area	1.8	0.2	0.0

10.8 Important Aspects of the Environmental Monitoring Programme

The monitoring of the environment parameters will be out sourced and carried by the lab of SPCB or a lab approved by MoEF/NABL.

10.9 DISCLOSURE OF CONSULTANTS ENGAGED

P & M Solution is an environment consulting and research organization is accredited by NABET in sectors 1a.

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.

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

Executive Summary English

M/s MRS Minerals

at

**Village: Dumarpara (Block -3), Tehsil: Naya Baradwar, District: - Sakti,
State: Chhattisgarh,
Area: -4.350 ha**

**Khasra No: -2333/8 (New Khasra 2333/8 - 2.175 hac & 2333/9- 2.175 hac)
Capacity: 4,00,000 Tons per annum**

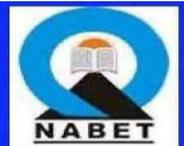
**Applicant
Shri Naveen Bansal**



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