

Project: Dhunga (Mitardhai) Soapstone Mining Project
Proponent: Shri Harish Chandra Upreti
Village: Dhunga (Mitardhai) Tehsil & District-Bageshwar,
State- Uttarakhand
Area: 9.708 Ha

EXECUTIVE SUMMARY

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“Dhunga (Mitardhai) Soapstone Mining Project”

At

**Village- Dhunga (Mitardhai),
Tehsil & District-Bageshwar, State- Uttarakhand
(Area- 9.708 Ha)**

Submitted by

Shri Harish Chandra Upreti

**R/o – Amrawati Colony-2 Talli Bamori, Haldwani, District-
Nainital, State- Uttarakhand**

Prepared by

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Certificate No. NABET/EIA/1922/RA0151, Valid Till: September 10, 2023



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Project: Dhunga (Mitardhai) Soapstone Mining Project
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1.0 INTRODUCTION OF PROJECT & PROPONENT

Environmental Impact Assessment (EIA) is a decision-making tool, identifies the extent of the environmental, social and economic impacts of a project prior to decision-making. EIA systematically examines both beneficial and adverse impacts of the proposed project over and above the prevailing conditions of environmental parameters and ensure that these impacts are taken into account during the project designing stage itself and the values of the combined impacts are never allowed to exceed and remain within the statutory norms.

The proposed project of Dhunga (Mitardhai) Soapstone Mining Project by Shri Harish Chandra Upreti S/o Shri Vindeshwari Prasad Upreti, for soapstone mineral mining which covers an area of 9.708 Ha at Dhunga (Mitardhai), Tehsil & District-Bageshwar, Uttarakhand. LOI has been granted in favour of Shri Harish Chandra Upreti S/o Shri Vindeshwari Prasad Upreti, vide letter no. 1779/VII-A-1/2021/1(42)/2021 dated 09.12.2021, for a period of 50 years attached as Annexure II. The EIA-EMP report has been prepared as per the TOR granted under the EIA Notification of September 14th 2006. In order to assess the impact on environment due to proposed mining, it is necessary to ascertain the present status of environment prevailing at the project site and identification and assessment of impacts on the environment of the proposed operations.

As per NGT Order Dated 13-09-2018 and MOEF & CC OM No L-11011/175/2018-IA-II (M) Dated 12-12-2018 the project comes under B1 Category as the area is more than 5 Ha. Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received from SEIAA, Uttarakhand, under EIA Notification of the MoEF, 281/SEIAA Dated 03 June, 2023.

1.1 LOCATION

| Village | Tehsil & District | State | Area in Ha. |
|--------------------|-------------------|-------------|-------------|
| Dhunga (Mitardhai) | Bageshwar | Uttarakhand | 9.708 |



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Table1.1- Detail of site & surrounding around Lease Area

| | |
|----------------------------------|--|
| Nearest Settlements | <ul style="list-style-type: none"> Arara Village, 0.05 km in SSW direction Simtoli Village, 0.24 km in NNW direction |
| Nearest Road | <ul style="list-style-type: none"> NH-309, approx* 1.83 km in N Direction Arara Village Road, 0.05 km in SSW direction. |
| Nearest Airport | <ul style="list-style-type: none"> Pant Nagar Airport, 91.53 km in SSW direction |
| Nearest Railway Station | <ul style="list-style-type: none"> Kathgodam Railway Station, 64.77 km in SSW direction |
| Water body | <ul style="list-style-type: none"> Saryu river 1.46 km in SSW direction Gomti River 5.50 km in NW direction |
| Nearest School/ college | <ul style="list-style-type: none"> Government Primary school, Naugaon approx. 0.15 km in SW direction Government Inter College, Dafaut approx 1.47 km in ESE direction. |
| Reserve/ Protected Forest | <ul style="list-style-type: none"> Malla Nagpur Reserve Forest, 6.96 km in west direction Dasoli Reserve Forest, 5.47 km in South direction Urgam Reserve Forest, 4.50 km in East direction |
| Nearest Hospital | <ul style="list-style-type: none"> District Hospital Bageshwar, Dug Bazar -approx. 1.75 km in ENE direction Primary Health Center (PHC), Darochhina approx. 5.18 km in SW direction |
| Temple | <ul style="list-style-type: none"> Shri Ganga Nath Temple is about 0.05 km in ESE direction. Shri Harunath Temple, Naugaon approx. 0.79 km in about SW direction |

Table 1.2 Project Salient features

| | |
|---|--|
| On-line proposal No. | SIA/UK/MIN/425821/2023 |
| File No. allotted by SEIAA, UK | EC-01/(36)/2023 |
| Name of Proponent | Prop: Shri Harish Chandra Upreti S/o Shri Vindeshwari Prasad Upreti |
| Full correspondence address of Proponent | R/o – Amrawati Colony-2 Talli Bamori, Haldwani, District- Nainital, State- Uttarakhand |
| Name of Project | Dhunga (Mitardhai) Soapstone Mining Project |



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| | | | |
|---|--|--------------------------|------------------|
| Name of Village | Dhunga (Mitardhai) | | |
| Tehsil | Bageshwar | | |
| District | Bageshwar | | |
| Name of Minor Mineral | Soapstone | | |
| Sanctioned Lease Area (in Ha.) | 9.708 ha | | |
| Category of the project | "B1" | | |
| Max & Min mRL within lease area | Max- 1140.40 mRL & 1222.10 mRL | | |
| Pillar Coordinates (Verified by DMO) | Pillar No. | Latitude | Longitude |
| | 1 | 29°48'19.72"N | 79°48'25.75"E |
| | 2 | 29°48'22.80"N | 79°48'22.34"E |
| | 3 | 29°48'22.81"N | 79°48'28.28"E |
| | 4 | 29°48'25.83"N | 79°48'26.55"E |
| | 5 | 29°48'27.42"N | 79°48'33.13"E |
| | 6 | 29°48'22.82"N | 79°48'39.05"E |
| | 7 | 29°48'14.56"N | 79°48'36.73"E |
| | 8 | 29°48'12.49"N | 79°48'33.81"E |
| | 9 | 29°48'16.80"N | 79°48'33.13"E |
| Maximum Proposed Production | 26,055 tonnes /annum (in Vth year) | | |
| Sanctioned Period of Mine lease | Maximum 50 years | | |
| Method of Mining | Open Cast Mechanized Method | | |
| No. of working days | 240 days | | |
| Working hours/day | 8hrs | | |
| No. of workers | 47 | | |
| Type of Land | Agriculture land, waste land, State Govt. Land & Public Utility Land | | |
| Ultimate Depth of Mining | 18 m | | |
| Nearest metalled road from site | 50 m | | |
| Water Requirement | PURPOSE | REQUIREMENT (KLD) | |
| | Drinking | 0.47 | |
| | Suppression of dust | 3.60 | |
| | Plantation | 9.60 | |
| | Mobile Toilet | 0.47 | |
| | Total | 14.14 | |



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| | |
|--|---|
| Any litigation pending against the project or land in any court | No |
| Details of Lease Area in approved DSR | Yes, given in the DSR At page No. 40 Serial No. 56 |
| Proposed Project cost | Rs 48, 00, 000 /- |
| Proposed EMP budget including the CER Cost as per OM dated 30 Sep 2020 | Recurring Cost- 6.00 Lakh Capital Cost (including CER) - 12.00 Lakh CER Cost – 2.40 lakhs |
| Length and breadth of Haul Road | Length: 360 m, width: 6 m |
| No. of Trees to be planted | 4800 plants |

1.2 MINING PROCESS

Briefly describe the existing/proposed method for developing/working the deposit with all design parameters:

(I) Existing Method of mining:

It is fresh grant case of mining lease & mining operations yet to be commenced.

(II) Proposed method of mining:

It will be open cast mechanized mine.

- Mining shall be carried out in one pit I & pit II.
- It will be open cast mechanized. Average thickness of soil has been considered as 0.20m & it shall be used for the purpose of plantation therefore no such proposal has been envisaged for its separate stacking.
- Bench height will be kept 6.0m width of benches shall be kept 8.0m with face slope 70°

Table 1.4- Proposed productions in mining plan period – 05 years

| Year | Quantities of soapstone (Tonnes) | | Total Quantities of Soapstone (Tonnes) | Stripping ratio (T/Cum) |
|-------------------|----------------------------------|----------|--|-------------------------|
| | Pit - I | Pit - II | | |
| I st | 7987 | 5824 | 13811 | 1:1.01 |
| II nd | 10309 | 7463 | 17772 | 1:0.67 |
| III rd | 11357 | 8643 | 20000 | 1:0.86 |
| IV th | 11980 | 11004 | 22984 | 1:0.78 |

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| | | | | |
|-----------------------|--------------|--------------|---------------|---------------|
| Vth | 13534 | 12521 | 26055 | 1:0.69 |
| Total | 55167 | 45455 | 100622 | 1:0.79 |

Total Proposed Production:

Maximum Production: 26055 tonnes /annum (in Vth year)

1.3 WATER DEMAND

The water requirement will be around **14.14 KLD**. About 0.47 KLD for domestic and 3.60 KLD will be required for dust suppression. Water for drinking purpose will be supplied from the Uttarakhand Jal Sansthan and naulla's of nearby villages. This water will be supplied by private tankers. For dust suppression and Plantation the water supplied from nearby private tankers and treated water.

Table 1.5- Water Demand

| S.NO. | Purpose | Manpower/Area | Water Demand (KLD) | Source |
|--------------|---------------------|--|--------------------|----------------------------|
| 1. | Drinking | Manpower (47) 47*10L =470 lpcd | 0.47 | Nearby village Tubewell |
| 2. | Toilet | Manpower (47) 47*10L =470 lpcd | 0.47 | Private tanker |
| 3. | Plantation | 4800 trees *2L = 9600L | 9.60 | Private tanker |
| 4. | Dust Suppression | Length= 360m Width= 5m Area= 360 x 5 = 1800m ² 1800*2L =3600 lpcd | 3.60 | Private Tanker |
| Total | | | 14.14 | |

1.4 BASELINE DATA

This section contains the description of baseline studies of the 10 km radius of the area surrounding Village- Dhunga (Mitardhai), Tehsil and District- Bageshwar, Uttarakhand. 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 proposed mining for:-



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- (a) Air
- (b) Noise
- (c) Water
- (d) Soil
- (e) Ecology and Biodiversity
- (f) Socio-economy

Table 1.6: BASELINE ENVIRONMENTAL STATUS

| Attribute | Baseline status |
|----------------------------|---|
| Ambient Air Quality | Ambient Air Quality Monitoring (AAQM) has been carried out at eight locations during pre-monsoon season from March 2023 to May 2023. The minimum and maximum level of PM _{2.5} recorded within the study area was in the range of 25.12µg/m ³ to 49.5µg/m ³ with the 98th percentile 39.9 µg/m ³ to 49.26µg/m ³ at. The minimum and maximum level of PM ₁₀ recorded within the study area was in the range of 59.70µg/m ³ to 93.20µg/m ³ with the 98th percentile 79.13µg/m ³ to 92.92µg/m ³ . The minimum and maximum concentration of SO ₂ recorded within the study area was in the range of was 4.12 µg/m ³ to 13.56µg/m ³ with the 98th percentile 7.15µg/m ³ to 13.23 µg/m ³ . The minimum and maximum level of NO ₂ recorded within the study area was in the range of was 6.14µg/m ³ to 16.54µg/m ³ with the 98th percentile 12.02µg/m ³ to 16.52µg/m ³ . The results thus obtained indicate that the concentrations of PM ₁₀ , PM _{2.5} , SO ₂ and NO ₂ in the Ambient Air are well within the National Ambient Air Quality (NAAQ) standards for Industrial, Residential, Rural and other areas. |
| Noise Levels | Noise monitoring was carried out at 4 locations. The results of the monitoring program indicated that both the daytime and night time levels of noise were well within the prescribed limits of NAAQS, at all the four locations monitored. |
| Water Quality | 3 Groundwater samples and 2 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500-2012. From the surface water analysis it is evident that most of the parameters of the samples comply with 'Category C' standards of CPCB Drinking water source with conventional treatment followed by disinfection. |
| Soil Quality | Samples collected from identified locations indicate the soil is sandy type and the pH value ranging from 7.50 to 7.74, which shows that the soil is alkaline in nature. |

| | |
|--------------------------|--|
| Ecology and Biodiversity | There are no Ecologically Sensitive Areas present in the study area |
| Traffic analysis | From the analysis it can be seen that the LOS is not Likely to change near village |

1.5 BIOLOGICAL ENVIRONMENT

FLORA - Flora of the Core Zone

The core zone comprises of private agriculture land, where mining operation is proposed. Few invasive species like *Parthenium hysterosporus*, *lantana camara*, shrubs like *Cannabis sativa* etc are present. No ecologically sensitive plant species has been reported from core area.

Flora of the Buffer Zone

Buffer zone of the proposed project falls in lesser and Greater Himalaya region. Buffer zone consists of many reserve forests enlisted above, a variety of faunal species are found in the region. Many tree species are planted in the area because of their usefulness, economic and aesthetic values. The tree species observed in the area are, Aam (*Mangifera indica*), Jamun (*Syzygium cumini*), Bail (*Aegle marmelos*), Dakain (*Melia azadirach*), Neem (*Azadirachta indica*), Peepal (*Ficus religiosa*), Bhimal (*Grewia optiva*) etc. In agricultural waste land and along the road side, growth of shrubs (including invasive species) like *Argemone mexicana*, *Cannabis sativa*, *Cenchrus ciliaris*, *Parthenium hysterosporus*, etc. are very common. These weeds are affecting the agricultural productivity of the region due to fast growth, short life cycle and enormous production of seeds.

Agricultural Crops

Vegetation pattern in villages and surrounding areas are slightly different and lesser from the rest of the regions of Bageshwar district. The common species grown near villages are mostly edible or useful plants such as *Mangifera indica*, *Azadirachta indica*, *Albizia lebbek*, *Delonix regia*, *Ficus religiosa*, etc.

Fauna

Fauna Reported in Core zone:

During the faunal survey in the area no wildlife corridor or movement of animals was recorded from proposed project area. As far as the reptile community was concerned, Indian cobra, garden gecko and house lizard are recorded from the study area. No established habitats of any mammals or birds are noticed along the banks. No bird's habitats like nesting, breeding and foraging patterns are noticed in the core zone.

Fauna reported in Buffer zone:

Many domesticated mammal species are reported from buffer zone during the field survey. Common domestic animals like Buffalo, cow, goat etc. can be noticed in open grass fields while grazing. Small mammals like Indian palm squirrel (*Funambulus palmarum*) and field mouse (*Apodemus sylvaticus*) are noticed in vicinity of the village. Inquiry from village people regarding wild animals reveals that monkey (*Macaca mulatta*), Indian hare (*Lepus nigricollis*), fruit bat (*Pteropus conspicillatus*), mongoose (*Herpestes edwardsii*), jackal (*Canis aureus*), etc. are often seen in the area.

The bird population consists of Common teal (*Anas crecca*), White throated kingfisher (*Halcyon smyrnensis*), Pied kingfisher (*Ceryle rudis*), Red wattled lapwing, House crow (*Corvus splendens*), House sparrow (*Passer domesticus*), Common hill Myna (*Gracula religiosa*), Red-rumped Swallow (*Cecropis daurica*), Hoopoe (*Upupa epops ceylonensis*) etc are noticed.

The reptilians species commonly reported are Garden lizard (*Calotes versicolor*), *Eutropis macularia*, rat snakes (*Ptyas mucosus*), Cobra (*Naja naja*) and Banded krait (*Bungarus multicinctus*) etc.

Impact on Biodiversity

Present data have been collected through direct inventory as well as various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre-project biological environmental conditions. There are no endangered species, wildlife sanctuary, wildlife corridors, faunal migratory routes or eco-sensitive area near the whole study area. Save the flora/fauna around the project area, is one of the basic objective of

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present project. For this, mine owner agency will plant a good roadside plantation along both side of the mine road.

Plantation shall be carried out side the lease area over van panchayat land & shall be

Undertaken all along prominent wind direction to arrest the airborne dust particulate matter. The

Tree species to be planted is as below:

Peach (Aadu) - *Prunus persica*, Walnut (Akhrot) - *Juglans spp.*, Apricot (Khumani)- *Prunus armeniaca*, Oak Tree- *Quercus leucotrichophora*, Bayberry (Kaaphal) - *Myrica esculenta* Buch. Etc.

Impact on Agriculture

The mine area and the surrounding is all agricultural land. Total 2.09 Ha of area comes under Agricultural area. The mining shall be carried out from lower levels to upper levels through the Formation of benches. During plan period as the mining pit shall reach its maximum economical Depth backfilling shall be commenced to restore maximum original topography of one area. The Backfilled shall again utilize for agriculture purpose.

Impacts on aquatic ecology

Mining activities may result in affecting the riverine ecology by polluting the river water. But in this case, Rivers lies almost 1.71 km or more away from mine site and also nothing is being discharged into the River. Thus, it is recommended that adequate surveillance measures are implemented during project operation phase to ameliorate such impacts.

Mitigation Measures

There is a requirement to establish a stable ecosystem with both ecological and economic returns. Minimization of soil erosion and dust pollution enhances the aesthetic value of the core and the buffer zone. To achieve this, it is planned to increase the area of green cover of plantation and green belts activities. The basic objectives of plantations are as follows:

- Improvement of Soil quality,
- Quick vegetative cover to check soil erosion,
- Improvement in mining site stability,



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- Conservation of biological diversity of plants, birds and animals,
- As dust receptor and dust filter, this is likely to be produced during mining.
- If birds are noticed crossing the core zone, they will not be disturbed at all;
- Labors will not be allowed to discards food, plastic etc., which can attract animals/birds near the core site;
- Only low polluting vehicles having PUC will be allowed for carrying mining materials.
- Noise level will be maintained within permissible limit (silent zone-50dB (A) during day time or residential zone 55dB (A)) as per noise pollution (regulation and control), rules, 2000, CPCB norms.

1.6 LAND ENVIRONMENT

The proposed opencast mine will result in change of land use pattern of the mining lease area. The land degradation is expected during mining activities like excavation, overburden dumping, soil extraction etc.

Impact on land use & reclamation of mined out areas

The impact on land form or physiography will be land use on the hilly terrain will undergo radical changes due to the open cast mining. During the first five years mining, 2.09 ha land will be degraded due to mining & allied activities. The breakup of the land to be affected during first five years and end of conceptual period of due to mining operation is given below:

| S.No. | Activities | End of 5 Years (Ha) | Area Occupied (Ha) End of Conceptual Plan |
|--------------|---------------------------------------|----------------------------|--|
| 1 | Mining pits | 1.265 | 3.95 |
| 2 | Interburden dumps | 0.494 | Nil |
| 3 | Soil stack | Nil | Nil |
| 4 | Foot track/PWD road | 0.151 | 0.151 |
| 5 | Habitation | 0.018 | 0.018 |
| 6 | Drainage | 0.106 | 0.106 |
| 7 | Retaining Wall | 0.0585 | 0.20 |
| 8 | Backfilled pit | 0.837 | 3.95 |
| 9 | Balance undisturbed Agricultural Land | 7.6155 | 5.283 |
| | Total | 9.708 | 9.708 |

At the end of conceptual period, there shall be no mining pits & all the mined-out pit shall be Backfilled/reclaimed to retain its maximum original topography of the area.

(b) Solid waste generation and management

Solid waste is generated at the project site. Below soil cover boulders of weathered magnesite & Dolomitic occurs having average thickness 2.0 m & same is treated as overburden/waste Material. All quantities of waste material to be generated each year shall be dumped with in lease Area secured with Gravity retaining wall (Gravity retaining wall having width & height 2.0m & 1.0m shall also be erected at the base of backfilled pit at the base & side of dump). All quantities of waste generated during plan period shall be used for backfilling the mined-out pits. The dumps are temporary in nature & all quantities shall be used in premature back filling over mined out pit before commencement of monsoon. After over the monsoon, the waste material shall be rehandled from mining pits & dump on the earmarked dump area. From third year onwards all quantities of waste material shall be used in backfilling.

Waste generation from Working Mules at the Mining lease Area

There are sloppy terrains in hilly regions and so metalled roads cannot be constructed anywhere. Soapstone is a kind of mineral found in various hilly regions and areas where roads are connected to haul paths which are poorly maintained and also “Kuccha” in nature. To load the mineral in trucks for market, it needed to be transported by mules (khachhars) from the haul paths to the main metalled road.

Mules were needed to be deployed by the proponent for mineral transportation and so waste is being excreted by mules. The waste is being collected simultaneously by the labors on their way back and collected by mule operators in a separate bag tied on the mule, and dumped or collected at a specific location of the mining lease area which is not under operation at that time. Of this large amount of waste, portions of this can be taken away by the local people for vermicomposting or composting or as manure to their fields. Rest of the Waste will be transported at the end of the day to the nearby biogas facility. Biogas plant will be constructed after due discussion and consultation with the Gram Panchayat.

1.7 AIR ENVIRONMENT

Proposed Soapstone mine where emissions of Sulphur dioxide (SO₂), Oxides of Nitrogen (NO_x) contributed by vehicles movement were considered marginal as branded make and vehicles with PUC certificate will be operated only. Fugitive dust and particulates are major pollutants which will occur in the mining activities. The trucks and tippers are well maintained so that exhaust smoke does not contribute abnormal values of noxious gases and un-burnt hydrocarbons.

Control of Fugitive Emissions

- Use of Personal Protection Equipment's (PPE) like dust masks, ear plugs etc. by the mine workers.
- No Blasting will be done.
- Regular water sprinkling on haul roads & loading points will be carried out.
- Development of green belt/plantation around the lease boundary, roads, dumps etc.
- Ambient Air Quality Monitoring will be conducted on regularly basis to assess the quality of ambient air.

Prevention and control of Gaseous Pollution

- In mining activities, the sources of gaseous emissions would be through truck movements
- Proper maintenance of vehicles improves combustion process & makes reduction in the pollution. Good maintenance and monitoring of fuel and oil will not allow significant addition in the gaseous emission.
- All the vehicles used will have PUC certificate.
- Vehicles carrying mineral will be covered with tarpaulin sheet. This will prevent dust emission.

1.8 WATER ENVIRONMENT

Damage in the water body, depends on its assimilative capacity. Mining of soapstone does not have any significant impact on the water quality and parameters as the mining does not intercept with the ground water level. In this project, it is not proposed to divert or truncate any stream. No proposal is envisaged for pumping of water from the river. There will not be any adverse impact on surface hydrology and ground water regime due to this project. The water collected in the mine

during monsoon season will be extracted with the help of pump & will be drained in nearby water body with the help of tankers approach road and area demarcated by gram panchayat. Thus, the project activities shall not have any adverse effect on the physical components of the environment and therefore may not have any effect on the recharge of ground waters or affect the water quality.

(a) Impact on Water Resources& Surface Water Resources:

The topography of the area will not be largely changed in view of the proposed concurrent reclamation. No surface water body exists and passes through the lease area. During the mining activity period, there is a possibility of mixing of freshly disturbed material with the rain water. To take care of such events, retaining walls have been provided along the backfilled pits and along the soil and inter-burden dumps. Before the commencement of rain all the mining pits shall be backfilled so that rain water does not accumulate in the mining pits. Rain water will be channelized along the slopes it shall not carry suspension to natural streams.

1.9 NOISE ENVIRONMENT

Anticipated impacts and evaluation

Noise generated at the mine is due to semi-mechanized mining operations, mechanized loading and truck transportation activities. The noise generated by the mining activity dissipates within the mine. 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 machinery, the impact of noise levels will be minimal.

(a) Noise Abatement and Control

In this mine the noise level will be up to tolerable limit (70 dB (A)) and the noise level can be reduced by:

- Proper maintenance, oiling and greasing of transport vehicles at regular intervals will be done to reduce the generation of noise.
- Adequate silencers will be provided in all the diesel engines.

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- Plantation along the sides of approach roads, around office building and mine area will be done to minimize the propagation of noise.
- Personal Protective Equipment's (PPE) like earmuffs/earplugs will be provided to all operators and employees working near mining machineries or at higher noise zone.
- Periodical noise level monitoring will be done.

1.10 TRAFFIC ANALYSIS

From the above analysis it can be seen that the V/C ratio for mines w.r.t Village Road is likely to change from 0.164 to 0.197 with LOS being no Change with 'A' as per classification LOS stated above & also for NH 309/A V/C ratio changed from 0.173 to 0.1774 with LOS being same "A" which is 'Excellent' as per classification LOS stated above. The minerals excavated will be loaded directly into trucks and transported to the concerned market.

1.11 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Table 1.7: Budget allotted for the project operation cost & Environmental Management Plan

| EMP BREAK UP | | | |
|-----------------------------------|--|-------------------------------------|-----------------|
| Environment Management Plan (EMP) | | Capital Costs in (Rs.) | Recurring Cost |
| A | Haulage Path Repair & Maintenance Filling, Levelling and widening of the road up to width of 6m. | | 1,50,000 |
| B | Water Sprinkling on Haulage Path for Dust Suppression | | 1,50,000 |
| C | Monitoring Cost for six monthly compliance Air /Water /Noise /Soil Monitoring | | 1,00,000 |
| D | Plantation along the road side & post plantation care (4800 Saplings in 5 years) | 9,60,000 Plantation @200/sapling | 1,00,000 |
| E | Corporate Social Responsibility | 2,40,000 | |
| F | Mule Waste Collection/ Transportation/ Fodder (Distribution to Biogas beneficiary Facility) | | 1,00,000 |
| Total | | 12,00,000 | 6,00,000 |



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1.12 BENEFIT OF MINING

The impact on the civic amenities will be substantial after the commencement of mining activities. The basic requirement of the community needs will be strengthened by extending health care, educational facilities developed in the township to the community, providing drinking water to the villages, building/strengthening of existing roads in the area. The proponent will initiate the above amenities either by providing or by improving the facilities in the area, which will help in uplifting the living standards of local communities. Medical facilities will be provided in the form of first-aid facility at the mine. These medical facilities will also be available to local people in the surrounding in case of emergencies.

➤ SOCIAL BENEFITS

- Generation of employment and improved standard of living;
- Increased revenue to the State by way of royalty, taxes and duties; and
- Superior communication and transport facilities etc.
- There will be significant change in the socio-economic scenario of the area.
- The proposed project will enhance the prospects of employment. Recruitment for the unskilled and semiskilled workers for the proposed project will be from the nearby villages.
- The development of the basic amenities viz. roads, transportation, electricity, drinking water, proper sanitation, educational institutions, medical facilities, entertainment, etc. will be developed as far as possible.
- Overall, the proposed project will change living standards of the people and improve the socio-economic conditions of the area.

ENVIRONMENTAL BENEFITS

➤ Enhancement Of Green Cover

Plantation/afforestation will be done as per program 2900 plants will be planted along the approach road and area demarcated by Gram Panchayat/Local Administrative body with consultation & permission of concerned authority within 5km from lease boundary along with

Project: Dhunga (Mitardhai) Soapstone Mining Project
Proponent: Shri Harish Chandra Upreti
Village: Dhunga (Mitardhai) Tehsil & District-Bageshwar,
State- Uttarakhand
Area: 9.708 Ha

EXECUTIVE SUMMARY

provision for maintenance for 5 years. Post plantation, the area will be regularly monitored in every season for evaluation of success rate. For selection of plant species local people will also be involved. The management will provide free saplings of fruit 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.

1.13 CORPORATE SOCIAL RESPONSIBILITY

Table 1.8 Budget allotted for Corporate Environmental Responsibility

| S no. | Activity | Quantification | Capital cost |
|--------------|--|----------------|-----------------|
| 1 | Maintenance of Religious Places | 1 | 50,000 |
| 2 | Distribution of Solar lamps | 25 | 50,000 |
| 3 | Installation of Solar street lights | 2 | 1,00,000 |
| 4 | Distribution of stationary items and maintenance of school | - | 40,000 |
| Total | | | 2,40,000 |

1.14 CONCLUSIONS

- The mining operations will meet the compliance requirements of MoEF & CC;
- Community impacts will be beneficial, as the project will generate significant economic benefits for the region;
- Adoption of Best Available Technology and Best Management Practices with more environmental friendly process
- With the effective implementation of the Environment Management Plan (EMP) during the mining activities, the proposed project can proceed without any significant negative impact on environment.



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