

EXECUTIVE SUMMARY

(English & Hindi)

FOR
SOAPSTONE MINING PROJECT
LOCATED AT
VILLAGE – DYALI KUROLI, TEHSIL - DUGNAKURI & DISTRICT – BAGESHWAR,
UTTRAKHAND.

LEASE AREA: 4.195 Hectare.
PROPOSED PRODUCTION CAPACITY: 19000 TPA

PROJECT PROPONENT DETAILS:

M/s JAI MATA DI MINES
VILLAGE – DYALI KUROLI, TEHSIL – DUGNAKURI, DISTRICT – BAGESHWAR
(UTTRAKHAND)

PREPARED BY:

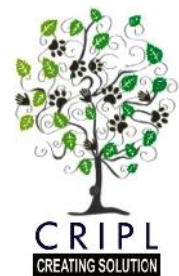
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PURPOSE OF THE REPORT

Environmental Impact Assessment (EIA) is a decision making tool, in the hands of the Authorities which brings forth the factual position about a project that enables them in arriving at an appropriate conclusion for the proposed projects, to retain them if environmentally sound, and reject if found having deleterious overall impact. EIA 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. This process has been envisioned and set in motion by the Ministry of Environment and Forests for sustainable development and the final decision is arrived at only, when those to whom it matters are made known of the salient features of the project being envisaged close to them and their opinion has been sought in a widely advertised Public Hearing Event under the chairmanship of the district authorities so that public could also express their opinion free, without favour and fear. Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received from SEIAA, Uttarakhand, under EIA Notification of the MoEF dated 19-8-2006, and its subsequent amendments and EIA Guidance Manual for Mining of Minerals of MoEF, Govt. of India, for seeking environmental clearance for mining of soapstone in the applied mining lease area measuring 4.195 ha. The proposed project falls under Category “B2” as per EIA Notification 2006 its amendment 2009, 2011, 2012 & 2016 of the Ministry of Environment and Forests, New Delhi but due to NGT recent order it falls under B1 Category.

IDENTIFICATION OF PROJECT & PROJECT PROPONENT

The proposed project of M/s Jai Mata Di Mines is for soapstone which covers an area of 4.195 ha near Village – Dayali Kuroli, Tehsil-Dugnakuri, District- Bageshwar, State-Uttarakhand. LOI has been granted in favour of M/s Jai Mata Di Mines vide Letter No. 163/VII-1/2018/01 Soapstone/16 dated 16.03.2018, attached as Annexure I.

Soapstone finds its uses in all aspects of life and commercial business. Soapstone has wide applications across various industries. Some uses for soapstone or talc are paper, textile, cosmetics, paint, ceramics, detergents, animal feed, insecticide, plastics and various drying powder. Soapstone, also known as Talc or Talcum Powder, is a mineral that is naturally found in nature. The chemical name for Talc or Talcum Powder is hydrated magnesium silicate. The

SOAPSTONE MINE (Area-4.195 ha.)

M/s Jai Mata Di Mines

Village – Dayali Kuroli, Tehsil-Dugnakuri & District-Bageshwar

region Uttarakhand accounts for 29% of India's soapstone production.

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The highest production is 19000 Tonnes/ Annum.

S.No.	Year	Production (Tonnes)
1.	I Year	17000
2.	II Year	19000
3.	III Year	19000
4.	IV Year	18000
5.	V Year	18000
Total		91000

The proposed mining project has been categorized as Category B2 project.

Proponent & Address

M/s Jai Mata Di Mines

Village – Dayali Kuroli,

Tehsil– Dugnakuri, Distt. Bageshwar, Uttarakhand.

BRIEF DESCRIPTION OF NATURE, SIZE AND LOCATION OF THE PROJECT

Brief details of the project are described in the Table below:

Details of the Project

S. No.	Particulars	Description
A	Mining Lease & Location Details	
1.	Name of the Project	M/s Jai Mata Di Mines Soapstone Mine Project
2.	Location	
a.	Village	Dayali Kuroli
b.	Tehsil	Dugnakuri
c.	District	Bageshwar
d.	State	Uttarakhand
3.	Lease Area Coordinate	Latitude : 29° 54' 11.09" to 29° 54' 15.70" N Longitude : 79° 58' 16.74" to 79° 58' 28.23" E
4.	Lease Period of Mine	25 Years
5.	Cost of the project	Rs. 38 Lac
6.	Man Power Requirement	21 Nos.
7.	Water Requirement & Source	3.76 KLD approx. for Drinking & Dust

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SOAPSTONE MINE (Area-4.982Ha.)

Shri Govind Singh Bhauriyal

Village – Dayali Kuroli, Tehsil-Dugnakuri & District-Bageshwar

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		Suppression / Plantation & Source: Nearby villages & natural springs.
B	Environmental Settings	
8.	Elevation(RL)	Highest & lowest levels found in the area are of RL 1868.6m and 1775.8m RL respectively.
9.	Nearest National Highway /State Highway	SH- 37: Balighat-Dharmagarh road; 1 Km SW
10.	Nearest Railway Station	Kathgodam; 82 Km SW (Aerial)
11.	Nearest Airport	Pantnagar; 109 Km SW (Aerial)
12.	Ecological Sensitive Areas(Wildlife Sanctuaries)	Zim Corbett National Park; 97 km SW(Aerial)
13.	Reserved/Projected Forests	Zim Corbett National Park; 97 km SW(Aerial)
14.	Nearest Town/City	Village: Kuroli– 1.0 Km Town: Bageshwar – 45 Km
15.	Nearest River	Saryu River – 8.90 Km NNW
16.	Seismic Zone	Zone – V

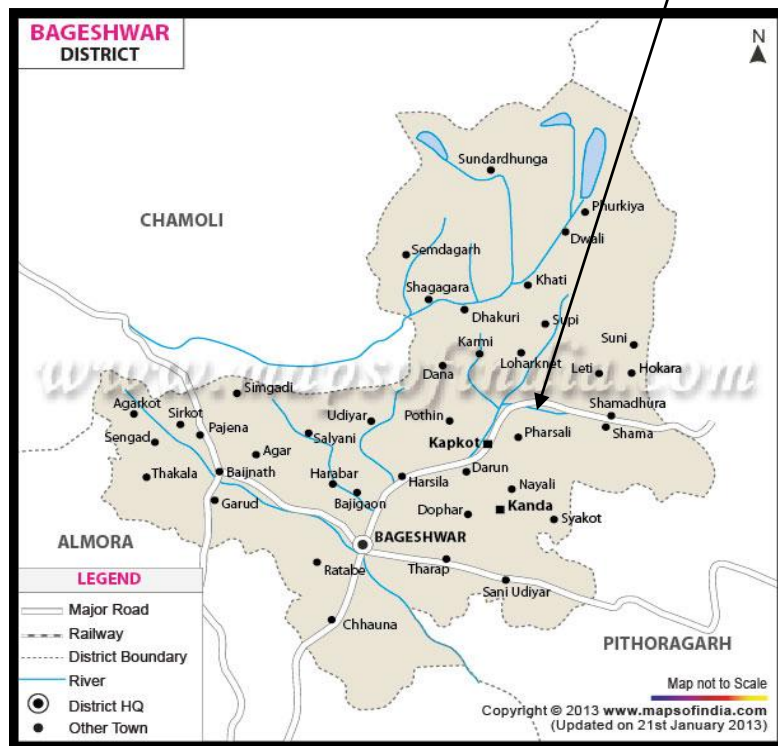
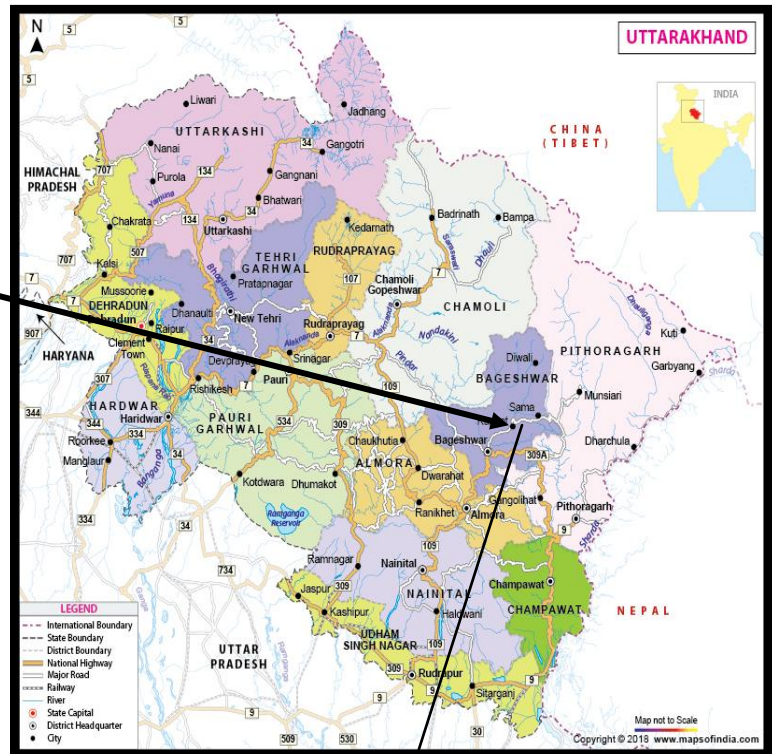


SOAPSTONE MINE (Area-4.195 ha.)

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Project Location



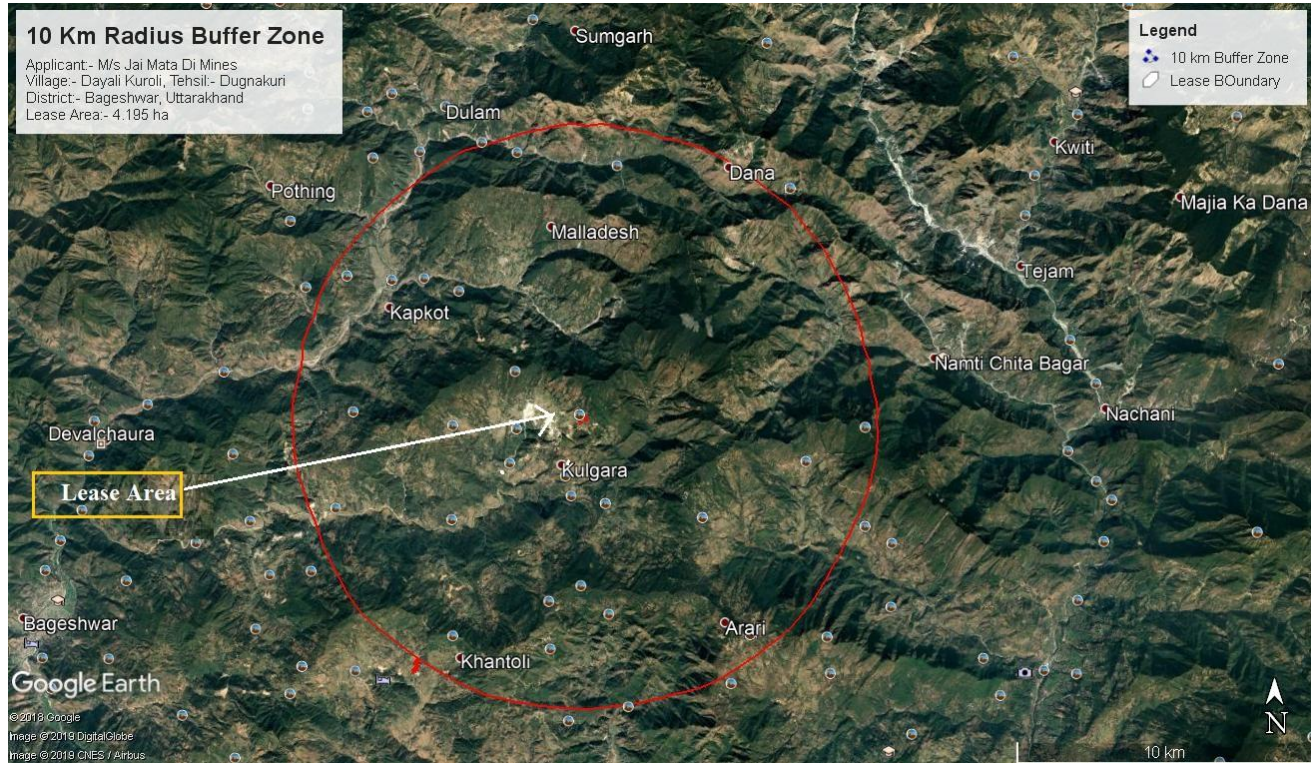
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M/s Jai Mata Di Mines

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10 KM Study area

STATUS OF REGULATORY CLEARANCES OF THE PROJECT

The Mining plan has been approved by DGMU vide Letter No. 1248Mukhya Khanij/M.PLAN.-135/BHU.KHANI.E/2018-19 dated 29.08.2018.

There is no National Park, Wildlife Sanctuary & National Monument, within core zone or 10 km radius of the ML area.

There is no legal issue against the project in the court of law.

MINE DEVELOPMENT AND PRODUCTION

The mining will be done semi-mechanized way in open cast method in quite a systematic manner by forming 6m high benches. However, there may be minor variation in the width and- height which the lessee will keep on mending. The top soil and interburden to be scrapped with the help of JCB machine, dozer, shovels, pickaxe, spade & crowbar and will be stacked separately in dump yard located near the working pit. The developmental working will be done by construction of road/track to different working benches, removal of top soil and interburden. The soil will be filled into the bags, loaded on mules and unload into stockyard.



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Method of Mining

The mining will be carried out in three pits and will be open cast semi -mechanized method in quite a systematic manner by forming 3m height and 3m width benches. The face slope of benches shall be 60 ° – 65 ° with 45 ° overall pit slope. Average thickness of soil has been considered as 0.7m to 1.2m & it shall be stacked separately. All operations of mining will be carried by using JCB as well as conventional manual means using crowbars, spades and chisel etc as well as by using excavator. The production has been proposed in quarry of the ML area. No deep hole drilling and blasting is proposed.

IMPACT ON LAND USE & RECLAMATION OF MINED OUT AREAS

Opencast mining activities may alter the landscape of the lease area and also cause some disturbance to the surface features of the surrounding areas. Mining will be done after leaving 7.5 m safety barrier.

Plantation will be developed in consultation with district administration/ local authority, wherever feasible.

Proposal for reclamation of land affected by mining activities:

The mining will commence from the higher levels and will advance towards lower levels. Intermittent backfilling will commence from the higher levels and subsequently advance towards the lower elevation so that terraced agriculture fields would undertake in such a manner that original land use will be restored i.e. before the onset of monsoon will be handed over to cultivators for cultivation. The final backfilling will be started once the ultimate benches are formed and pit reaches the optimum economic depth. All recovery of the mineral will be of the saleable grade.

Plantation will be raised in 7.5m barrier zone along the boundaries of the mining lease area by planting the native species around ML area, backfilled and reclaimed area, around water body, roads etc. in consultation with the local DFO/Agriculture department.

LAND USE PATTERN

Presently (pre-mining), the land covered under the mine lease area is non-forest land.

BASELINE ENVIRONMENTAL STATUS

Soil Quality

Five soil samples were collected in and around the mine lease area to assess the present soil quality of the region. Physical characteristics of soil were characterized through specific parameters viz bulk density, porosity, water holding capacity, pH, electrical conductivity and texture. Soil pH plays an important role in the availability of nutrients. Soil microbial activity as well as solubility of metal ions is also dependent on pH. In the study area, variations in the pH of the soil were found to be slightly basic (7.42 to 7.69). Electrical conductivity (EC) is a measure of the soluble salts and ionic activity in the soil. In the collected soil samples the conductivity ranged from 268-431 $\mu\text{mhos/cm}$.

The soils with low bulk density have favorable physical condition where as those with high bulk density exhibit poor physical conditions for agriculture crops.

Based on the results, it is evident that the soils are not contaminated by any polluting sources.

Meteorology

Meteorological data at the site was monitored during 1st March 2019 to 31st May 2019 representing winter season.

Ambient Air Quality

Ambient Air Quality Monitoring (AAQM) has been carried out at five locations during pre-monsoon season from March to May 2019. The minimum and maximum level of PM10 recorded within the study area was in the range of 41.7.1 $\mu\text{g/m}^3$ to 62.8 $\mu\text{g/m}^3$ with the 98th percentile ranging between 58.2 $\mu\text{g/m}^3$ to 61.4 $\mu\text{g/m}^3$. The minimum and maximum level of PM2.5 recorded within the study area was in the range of 16.2 $\mu\text{g/m}^3$ to 28.2 $\mu\text{g/m}^3$ with the 98th percentile ranging between 23.2 $\mu\text{g/m}^3$ to 27.7 $\mu\text{g/m}^3$. The minimum and maximum concentration of SO₂ recorded within the study area was 5.5 to 8.4 $\mu\text{g/m}^3$ with the 98th percentile ranging between 5.6 $\mu\text{g/m}^3$ to 7.1 $\mu\text{g/m}^3$. The minimum and maximum level of NO₂ recorded within the study area was in the range of was 7.6 $\mu\text{g/m}^3$ to 17.3 $\mu\text{g/m}^3$ with the 98th percentile ranging between 12.0 $\mu\text{g/m}^3$ to 16.7 $\mu\text{g/m}^3$. The results thus obtained indicate that the concentrations of PM10, PM2.5, SO₂ and NO₂ in the Ambient Air are well within the National Ambient Air Quality (NAAQ) standards for Industrial, Residential, Rural and other areas.

Water Quality

The water quality in the impact zone was assessed through physico-chemical and Microbiological analysis of ground water samples. The results have been compared with the

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drinking water quality standards specified in IS: 10500. It was observed that all the physico-chemical parameters and heavy metals from ground water samples are below stipulated limits for drinking water standards.

- The pH limit fixed for drinking water samples as per IS-10500 Standards is 6.5 to 8.5 beyond this range the water will affect the mucus membrane or water supply system. During the study period, the pH was varying for ground waters from 7.46 to 7.82 and the surface waters are 7.12 to 7.53. The pH values for all the samples collected in the study area during study period were found to be within the limits.
- The desirable limit for total dissolved solids as per IS-10500 Standards is 500 mg/l whereas the permissible limits in absence of alternate source is 2000 mg/l, beyond this palatability decreases and may cause gastro intestinal irritation. In ground water samples collected from the study area, the total dissolved solids are varying from 243 mg/l to 275 mg/l. The TDS of the samples were above the desirable limit but within the permissible limit of 2000 mg/l.
- The desirable limit for chlorides is 250 mg/l as per IS-10500 Standards whereas, permissible limit of the same is 1000 mg/l beyond this limit taste, corrosion and palatability are affected. The chloride level in the surface water samples collected in the study area were ranging from 8 mg/l to a maximum of 20 mg/l, in ground water samples 12 mg/l to 27 mg/l. The chloride samples are within the desirable limits.
- The desirable limit as per IS-10500 Standards for hardness is 200 mg/l whereas the permissible limit for the same is 600 mg/l beyond this limit encrustation in water supply structure and adverse effects on domestic use will be observed. In the ground water samples collected from the study area, the hardness is varying from 149 mg/l to 214 mg/l.
- Fluoride is the other important parameter, which has the desirable limit of 1 mg/l and permissible limit of 1.5 mg/l. however the optimum content of fluoride in the drinking water is 0.6 to 1.5 mg/l. If fluoride content is less than 0.6 mg/l it causes dental carries, above 1.5 mg/l causes flurosis. In the ground water samples of study area the fluoride value were in the range of 0.2 mg/l to 0.5 mg/l. In surface water 0.3 mg/l to 0.5 mg/l.

Overall all the samples collected from the study area were found to be fit for consumption, Most of ground water samples are well within the permissible limits, as per IS-10500. Most of the heavy metals in all samples are below detectable limits.

Noise Levels

The noise level monitoring results of March 19 to May 19. The ambient noise level in study area during the day time varies from 45.45 to 40.26 dB (A) during day time and 41.85 to 35.66 dB (A) during night which is within the specified limits of CPCB.

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Ecological Environment

Based on the field studies and review of published literature, it is observed that there are two Schedules-I species present in the study area of the mine lease area i.e. Indian Leopard and Asiatic Black Bear. There are no wildlife sanctuaries and National Parks within the study area of 10-km radius.

ANTICIPATED ENVIRONMENTAL IMPACTS

Impact on Air Quality

Soapstone mine where PM10 and PM2.5 will be the main pollutants generated in mining activities. The emissions of Sulphur dioxide (SO₂), Nitrogen Oxide (NO₂) contributed by diesel operated equipment and vehicles movement were considered marginal as branded make and vehicles with PUC certificate will be operated only. Fugitive dust and particulates are major pollutants occurred in the mining activities. Fugitive emissions will be settled by 70- 80% by use of multiple water sprinklers. Prediction of impacts on air environment will be made with proposed production and net increase in PM10 and PM2.5 emissions at the proposed site and at the 10 km radius of study area due to mining activities.

Air pollution sources in the operating mine was classified into two categories

- i. Loading and unloading of mineral and OB, IB
- ii. Transportation on the haul road

Impact on Water Resources Surface Water Resources

The topography of the area will not be largely changed in view of the proposed concurrent reclamation. During the mining activity period, there is a possibility of mixing of freshly disturbed material with the rain water. To take care of such happenings, retaining walls have been provided along the backfilled pits and along the soil and interburden dumps.

Groundwater Resources

The water table in hills is usually very deep and does not have any relevance with mining activities. However, concurrent restoration to original topography will not be disturbing the percolating water.

Impact on Water Quality

The impact on water quality will be confined to increased suspended solids during rain. The dumps will be secured with toe walls and rainy water will not carry significant suspended material.

Impact on Noise Levels and Ground Vibrations

With the mining operations, due to the deployment of machinery, operation for mine development, excavation and transportation of soapstone, it is imperative that noise levels would increase. It is also observed that these incremental noise levels will not significantly affect the existing ambient noise levels.

Impact on Soil

The environmental impacts of the mining activities on topsoil are based on the quantity of removal of topsoil and its dumping. In the present project as it is proposed to temporarily store the topsoil and use it for plantation schemes, no impact of dozing of topsoil is envisaged.

The soil erosion from overburden and interburden dumps is not envisaged in the present project, as sufficient measures as detailed in the EMP would be undertaken.

Impact on Flora and Fauna

There is no forest area in the core zone area of the lease. As the mining activity is restricted to core zone, no significant impact on the flora of the buffer zone due to the proposed mining of Soapstone is anticipated.

The incremental dust generations due to the mining operations, at the boundary of the mine lease are insignificant and it is also expected that with the adoption of mitigatory measures as suggested in EMP, the impact due to operation of the mine will be minimal on the terrestrial ecosystem and also on the adjacent forest area.

The impact on the fauna of the buffer zone due to the mining activity will be marginal. The proposed progressive plantation over a period of time will reduce the impact, if any, on the fauna.

Impact on Land Use Pattern

The proposed opencast mine will result in change the land use pattern of the ML area. The land degradation is expected during mining activities like excavation, overburden dumping, soil extraction etc. Land requirement for the project has been assessed considering functional needs.

Impact on Socio - Economic Aspects

The mine area does not cover any habitation. Hence the mining activity does not involve any displacement of human settlement. No public buildings, places, monuments etc exist within

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the lease area or in the vicinity. The mining operation will not disturb/ relocate any village or need resettlement. Thus no adverse impact is anticipated.

The impact of mining activity in the area is positive on the socio-economic environment of the region. The proposed Soapstone Mine will be providing employment to local population and it will be give preference to the local people whenever there is requirement of man power

ENVIRONMENTAL MANAGEMENT PLAN

The summary of environmental mitigation measures are given in below table:

Table: Proposed Environmental Mitigation Measures

Impact Predicted	Suggestive measure
Disturbance of free movement / living of wild fauna	Awareness camps will be conducted for labours to make them aware about sensitivity/importance of forest life.
	<ul style="list-style-type: none"> No tract or new road for movement of labours or vehicles be laid in reserve forest area, this will prevent forest fragmentation, encroachment and human – animal encounter.
	<ul style="list-style-type: none"> Care will be taken that noise produced during vehicles movement for carrying ore materials are within the permissible noise level. Higher noise level in the forest area will lead to restless and failure in detection of calls of mates and young ones.
	<ul style="list-style-type: none"> Care will be taken that no hunting of animals carried out by labours.
	<ul style="list-style-type: none"> If wild animals are noticed crossing the core zone, it will not be disturbed at all.
	<ul style="list-style-type: none"> Labours will not be allowed to discards food, plastic etc., which can attract animals near the core site.
	<ul style="list-style-type: none"> 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.
	<ul style="list-style-type: none"> No honk will be allowed in the forest area, noise level will be within permissible limit (silent zone-50dB will be within permissible limit (silent zone-50dB



	during day time) as per noise pollution (regulation and control), rules, 2000, CPCB norms.
Harvesting of forest flora	<ul style="list-style-type: none"> No tree cutting, chopping, lumbering, uprooting of shrubs and herbs should be allowed. No pilling of ore material should in the reserve forest area. Collections of economically important plants will be fully restricted.

ANALYSIS OF ALTERNATIVES

The Soapstone has been identified based on the result of geological investigations and exploration carried out by the Geological Survey of India (GSI). The mining projects are site specific as such alternate sites were not considered.

The mine is operated by opencast cum semi-mechanized method of mining. No other alternative technologies can be used because of the hard nature of the ore. Proposed mine is using eco-friendly measures to minimize the impact of mining on the surrounding environment.

ENVIRONMENTAL MONITORING PROGRAM

Attributes	Sampling		Measurement Method	Test Procedure
	Network	Frequency		
A. Air Environment				
Meteorological · Wind direction Relative humidity Rainfall	Minimum 1 site in the project impact area	Regularly in one season by Weather Monitoring Station	Mechanical/automatic weather station	-
Pollutants PM ₁₀	7 locations in the project impact area (Minimum 2 locations in upwind side, 2 sites in downwind side / impact	Once in a season.	Gravimetric method	-
SO ₂			Gravimetric method	-
			EPA Modified West & Geake method	Absorption in Potassium Tetra Chloromercurate followed by Colorimetric estimation using P-Rosaniline

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	zone and 1 in core zone)			hydrochloride and Formaldehyde (IS: 5182 Part - II).
NO ₂			Arsenite modified Jacob & Hochheiser	Absorption in dil. NaOH and then estimated colorimetrically with
				sulphanilamide and N (I-Nephthyle) Ethylene diamine Dihydrochloride and Hydrogen Peroxide (CPCB Method).

B. Water Environment

pH, Turbidity, Colour, Odour, Taste, TDS, Total Hardness, Calcium hardness, Magnesium hardness, Chloride, Fluoride, Sulphate, Nitrates, Alkalinity,	Set of grab samples during pre and post-monsoon for ground and surface Water in the vicinity.	Diurnal and Season wise	As per IS 10500	Samples for water quality should be collected and analyzed as per : IS : 2488 (Part 1-5) methods for sampling and testing of Industrial effluents
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Iron, Copper, Manganese, Mercury, Cadmium, Selenium, Arsenic, Cyanide, Lead, Zinc, Chromium, Aluminum, Boron,				Standard methods for examination of water and wastewater analysis published by American Public Health Association.
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C. Noise

Noise levels at Day & night time - Leq dB (A)	Mine Boundary, High noise generating areas within the lease	Quarterly / Half yearly	As per CPCB norms	As per CPCB norms
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D. Soil

pH, Bulk Density, Soil texture, Nitrogen, Available Phosphorus, Potassium, Calcium, Magnesium,	3 locations in the project impact area	Yearly/half yearly	As per USDA Method	As per USDA Method
Sodium, Electrical Conductivity, Organic Matter, Chloride				



E. Socioeconomic				
Demographic structure	Socioeconomic survey is based on proportionate, stratified and random sampling method	Minimum for two phases of the project	Primary data collection through Questionnaire	Secondary data From census records, statistical hard books, topo sheets, health Records and relevant official records available with Govt. agencies
Infrastructure resource base				
Economic resource base				
Health status: Morbidity pattern				
Cultural and Aesthetic attributes				
Education				

COST ESTIMATES

The details of the cost to for the Environmental Management plan for 5 years, the budget for Corporate Environmental Responsibility (CER) (per year) and year wise allocation of funds for the various activities proposed to be taken up under CSR programme has been given in below Table.

S. No.	Activities	Allocation of Fund (Rs. Lacs)
1	Health Camps	1.0
2	Up gradation of toilets of government school in nearby villages	1.5
3	Distribution of Books and Notebooks among meritorious girl child belonging to Scheduled Caste and Scheduled Tribe population.	0.3
4	Repair and Painting of School Building in the project village	1.0
Total		3.8

Budget for Environmental protection

S.No.	Measures	Capital Cost (In Rs.) (1 st Year)	Recurring Cost (In Rs.) (for Subsequent Years)
1	Pollution Control ➤ Dust Suppression	1,00,000	1,00,000
2	Pollution Monitoring i) Air pollution ii) Water pollution iii) Soil Pollution iv) Noise Pollution	1,00,000 60,000 40,000 20,000	1,00,000 60,000 40,000 20,000
3	Plantation/ Green belt	2,65,125	5,65,125
4	Reclamation of mined out area	--	11,75,760
5	Occupational Health	1,00,000	50,000
Total		6,85,125	21,14,905

ADDITIONAL STUDIES

Risk Assessment and Disaster Management Plan

The complete mining operation will be carried out under the management control and direction of a qualified mine manager holding Mines Manager's Certificate of Competency. Moreover, mining staff will be sent to refresher courses from time to time to keep them updated.

Disaster Management Plan

Emergency preparedness is an important aspect in the planning of Disaster Management. Personnel would be trained suitably and prepared mentally and physically in emergency response through carefully planned, simulated procedures. Similarly, the key personnel and essential personnel shall be trained in the operations.

PUBLIC CONSULTATION

Public Hearing

In consonance with the EIA notification dated 14th September 2006, vide section 1 (a) related to Public Hearing, the draft EIA/EMP report shall be submitted to the Uttarakhand Environment Protection & Pollution Control Board (UEPPCB) for public hearing

PROJECT BENEFITS

The impact on the civic amenities will be substantial after the commencement of mining activities. 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.

- 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.

The employment of local people in primary and secondary sectors of project will upgrade the prosperity of the region.

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; and
- 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.

कायकारी सारांश

रिपोर्ट का उद्देश्य

पयावरणीय प्रभाव आकलन (EIA) एक निणय लेने का उपकरण है, जो प्राधिकरणों के हाथों में है, जो एक परियोजना के बारे में तथ्यात्मक स्थिति को सामने लाता है जो उन्हें प्रस्तावित परियोजनाओं के लिए उचित निष्कर्ष पर पहुंचने में सक्षम बनाता है, अगर वे पर्यावरण की दृष्टि से ध्वनि को बनाए रखते हैं, और अस्वीकार करते हैं यदि समग्र प्रभाव पाया जाता है। EIA निणय लेने से पहले एक परियोजना के पर्यावरणीय, सामाजिक और आर्थिक प्रभावों की सीमा की पहचान करता है। ईआईए पर्यावरणीय मापदंडों की मौजूदा स्थितियों के ऊपर और ऊपर प्रस्तावित परियोजना के लाभकारी और प्रतिकूल दोनों प्रभावों को व्यवस्थित रूप से जांचता है और यह सुनिश्चित करता है कि परियोजना के डिजाइनिंग चरण के दौरान इन प्रभावों को ध्यान में रखा जाए और संयुक्त प्रभावों के मूल्यों को कभी भी अधिक और बने रहने की अनुमति नहीं है। वैधानिक मानदंडों के भीतर। पर्यावरण और वन मंत्रालय द्वारा सतत विकास के लिए इस प्रक्रिया की परिकल्पना और सेट की गई है और अंतिम निणय केवल तब लिया जाता है, जब जिन लोगों के लिए यह मायने रखता है, उन्हें परियोजना की मुख्य विशेषताओं के बारे में बताया जाता है, जिनकी परिकल्पना की गई है। जिला अधिकारियों की अध्यक्षता में एक व्यापक रूप से विज्ञापित जन सुनवाई कार्यक्रम में उनकी राय मांगी गई है ताकि जनता भी बिना किसी पक्ष और भय के अपनी राय स्वतंत्र रूप से व्यक्त कर सके। पर्यावरणीय प्रभाव आकलन रिपोर्ट SEIAA से प्राप्त संदभ (TOR) की शर्तों का पालन करने के लिए तैयार है, MoEF की EIA अधिसूचना के तहत उत्तराखंड, 19-8-2006 दिनांक, और इसके बाद के संशोधन और MoEF, खनिज के खनन के लिए EIA मागदर्शन मैनुअल। भारत में, 4.195 हेक्टेयर को मापने वाले लागू खनन पट्टे क्षेत्र में सोपस्टोन के खनन के लिए पर्यावरणीय मंजूरी की मांग की गई। प्रस्तावित परियोजना EIA अधिसूचना 2006 के अनुसार श्रेणी "बी 2" के अंतर्गत आती है, इसके संशोधन 2009, 2011, 2012 और 2016 में पर्यावरण और वन मंत्रालय, नई दिल्ली के हैं, लेकिन NGT के हालिया आदेश के कारण यह बी 1 श्रेणी के अंतर्गत आता है।

परियोजना की पहचान और परियोजना प्रस्तावक

मैसस जय माता दी माइंस की प्रस्तावित परियोजना सोपस्टोन के लिए है, जो गांव - दयाली कुरौली, तहसील-दुगनाकुरी, जिला- बागेश्वर, राज्य-उत्तराखंड के पास 4.195 हेक्टेयर क्षेत्र को कवर करती है। LOI को मैसस जय माता दी माइंस के पत्र संख्या 163 / VII-1/2018/01 सोपस्टोन / 16 दिनांक 16.3.2018 के पक्ष में अनुलग्नक 1 के साथ संलग्न किया गया है।

सोपस्टोन जीवन और वाणिज्यिक व्यापार के सभी पहलुओं में इसके उपयोग पाता है। सोपस्टोन के विभिन्न उद्योगों में व्यापक अनुप्रयोग हैं। सोपस्टोन या टॉल्क के लिए कुछ उपयोग कागज, कपड़ा, सौंदर्य प्रसाधन, पट, चीनी मिट्टी की चीज़, डिटर्जेंट, पशु चारा, कीटनाशक, प्लास्टिक और विभिन्न सुखाने पाउडर हैं। सोपस्टोन, जिसे टैल्क या टैल्कम पाउडर के रूप में भी जाना जाता है, एक खनिज है जो स्वाभाविक रूप से प्रकृति में पाया जाता है। टॉल्क या टैल्कम पाउडर का रासायनिक नाम हाइड्रेटेड मैग्नीशियम



सिलिकेट है। उत्तराखंड में भारत के सोपस्टोन उत्पादन का 29% हिस्सा है।

सबसे अधिक उत्पादन 19000 टन / वर्ष है।

क्र.		त्प
1.	प्रथम वर्ष	17000
2.	द्वितीय वर्ष	19000
3.	तृतीय वर्ष	19000
4.	चतुर्थ वर्ष	18000
5.	पंचम वर्ष	18000
		91000

प्रस्तावित खनन परियोजना को श्रेणी बी 1 परियोजना के रूप में वर्गीकृत किया गया है।

प्रस्तावक

मैसर्स जय माता दी माइंस

ग्राम - दयाली कुरौली,

तहसील- दुगनाकुरी, जिला- बागेश्वर, उत्तराखंड।

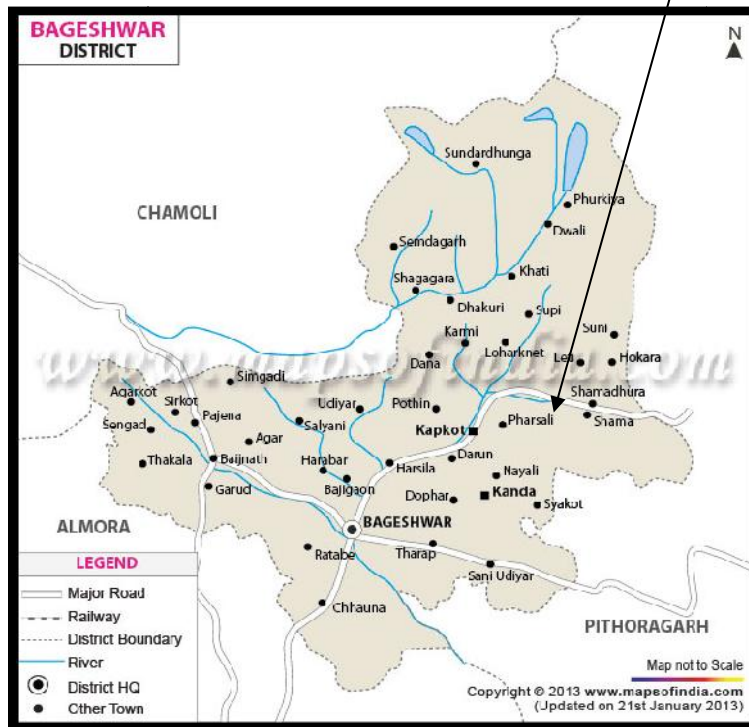
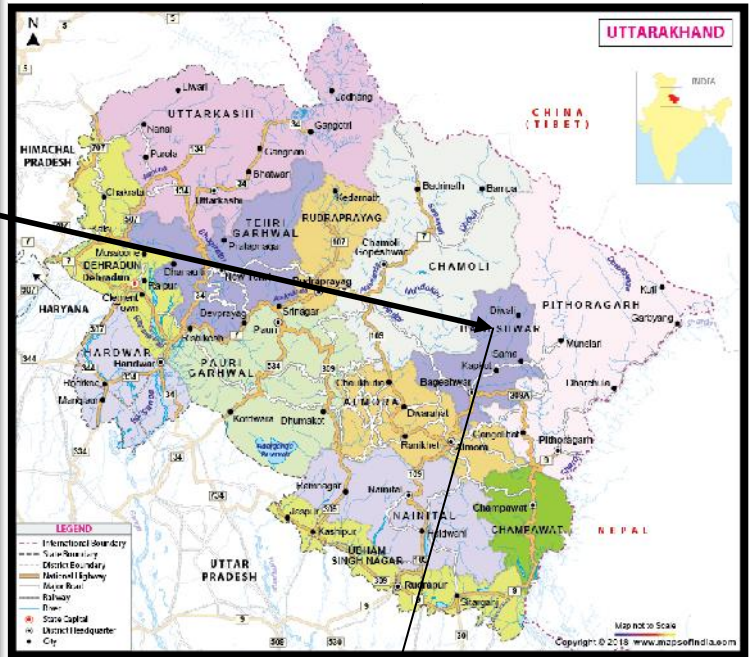
संक्षिप्त
परियोजना का संक्षिप्त विवरण नीचे दी गई तालिका में वर्णित है:

क्र	ख	ब्यं	र
1.		परियोजना का नाम	मैसर्स जय माता दी माइंस सोपस्टोन की खान परियोजना
2.		र	
a		गाँव	दयाली कुरौली
b		तहसील	दुगनाकुरी
c		जिला	बागेश्वर
d		राज्य	उत्तराखंड
3		पट्टा क्षेत्र को आडिनेट	अक्षांश: 29° 54' 11.09" to 29° 54' 15.70" N देशान्तर: 79° 58' 16.74" to 79° 58' 28.23" E

4	लीज की अवधि	25 साल
5	परियोजना की लागत	रुपये 38 लाख
6	श्रम शक्ति की आवश्यकता	51नग
7	पानी की आवश्यकता और स्रोत	3.76 केएलडी लगभग। पीने और धूल के दमन के लिए / वृक्षारोपण और स्रोत: निकटवर्ती गाँव और प्राकृतिक झरने
	रि	
8	ऊंचाई (आर एल)	क्षेत्र म पाए जाने वाले उच्चतम और निम्नतम स्तर आरएल के हं क्रमशः 1868.6 मीटर और 1775.8 मीटर आरएल।
9	निकटतम राष्ट्रीय राजमाग / राज्य राजमाग	एसएच- 37: बालीघाट-धमगढ़ रोड; 1 किमी दक्षिण पश्चिम
10	निकटतम रेलवे स्टेशन	काठगोदाम; 82 किमी दक्षिण पश्चिम (हवाई)
11	निकटतम हवाई अड्डा	पंतनगर; 109 किमी दक्षिण पश्चिम (हवाई)
12	पारिस्थितिक संवेदी क्षेत्र (वन्यजीव अभयारण्य)	जिम कॉबट नेशनल पाक; 97 किमी दक्षिण पश्चिम (हवाई)
13	संरक्षित / अनुमानित वन	जिम कॉबट नेशनल पाक; 97 किमी दक्षिण पश्चिम (हवाई)
14	निकटतम कस्बा / शहर	गाँव: कुरोली- 1.0 किलोमीटर कस्बा: बागेश्वर - 45 किलोमीटर
15	निकटतम नदी	सरयू नदी - 8.10 किलोमीटर NNW
16	भूकंपीय क्षेत्र	क्षेत्र - V

SOAPSTONE MINE (Area-4.195 ha.)
M/s Jai Mata Di Mines
Village- Dayali Kuroli, Tehsil Dugnakuri,
District-Bageshwar, Uttarakhand

Executive Summary



Cognizance Research India Pvt Ltd
NABET-QCI Accredited Consultant

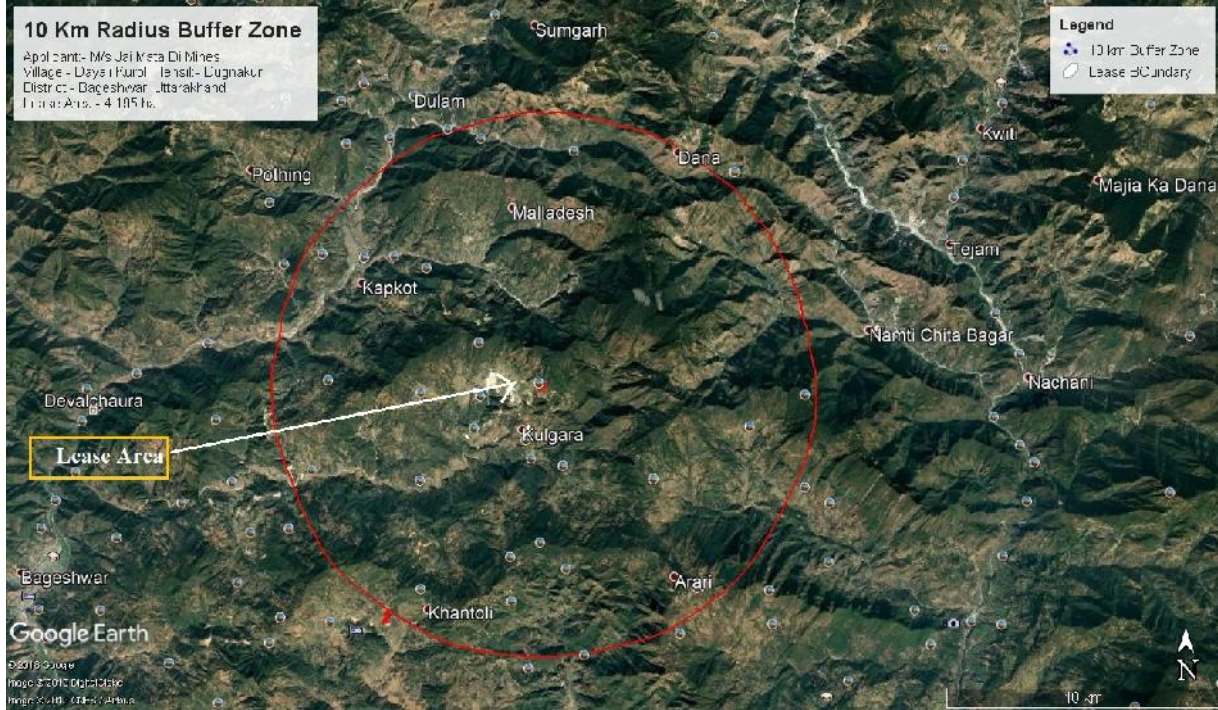
SOAPSTONE MINE (Area-4.195 ha.)

M/s Jai Mata Di Mines

Village- Dayali Kuroli, Tehsil Dugnakuri,

District-Bageshwar, Uttarakhand

Executive Summary



10 Km ध्य क्षेत्र

f क्षेत्र f

खनन योजना को भूतत्व एवं खनिकम इकाई द्वारा पत्र क्रमांक 1248 मुख्य खनिज / मा10 प्लान - 135 / भू0खनि0 इ0/ 2018-19 दिनांक 29.08.2018 द्वारा अनुमोदित किया गया है।

कोर क्षेत्र या एमएल क्षेत्र के 10 किमी के दायरे में कोई राष्ट्रीय उद्यान, वन्यजीव अभयारण्य और राष्ट्रीय स्मारक नहीं है।

वहाँ कानून की अदालत में इस परियोजना के खिलाफ कोई कानूनी मुद्दा नहीं है।

त्य

खनन को 6 मीटर ऊँची बंच बनाकर व्यवस्थित ओपनकास्ट तरीके से अध-मशीनीकृत तरीके से किया जाएगा। हालाँकि, चौड़ाई और ऊँचाई में मामूली भिन्नता हो सकती है जो पट्टेदार को जारी रहेगी। शीष मिट्टी और इंटरबडन को जेसीबी मशीन, डोजर, फावड़ियों, पिकेक्स, कुदाल और मुकुट की मदद से खुरच कर अलग किया जाएगा और काम करने वाले गड्डे के पास स्थित डंप याड में अलग से ढेर किया जाएगा। अलग-अलग काम करने वाली बच्चों, शीष मिट्टी को हटाने और इंटरबडन के लिए सड़क / टैक के निर्माण से विकासत्मक कार्य किया जाएगा। मिट्टी को थैलियों में भरा जाएगा, खच्चरों पर लोड किया जाएगा और स्टॉकयाड में उतार दिया जाएगा।



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खनन तीन गड्डों में किया जाएगा और 3 मीटर ऊंचाई और 3 मीटर चौड़ाई वाले बच बनाकर काफी व्यवस्थित मैरिनर में खुला कच्चा अर्ध-मशीनीकृत तरीका होगा। 45 समग्र गड्डे ढलान के साथ बच का चेहरा ढलान 60 - 65 होगा। मिट्टी की औसत मोटाई 0.7 मीटर से 1.2 मीटर तक मानी गई है और इसे अलग से ढेर किया जाएगा। खनन के सभी कार्यों को जेसीबी के साथ-साथ पारंपरिक मैनुअल का मतलब है कि क्राउबर, हुकुम और छेनी आदि का उपयोग करके और साथ ही उत्खनन का उपयोग करके किया जाएगा। उत्पादन एमएल क्षेत्र की खदान में प्रस्तावित किया गया है। कोई गहरी ड्रिलिंग और ब्लास्टिंग प्रस्तावित नहीं है।

प्रति प्र

ओपनकास्ट खनन गतिविधियाँ पट्टे के क्षेत्र के परिदृश्य को बदल सकती हैं और आसपास के क्षेत्रों की सतह सुविधाओं में कुछ गड़बड़ी पैदा कर सकती हैं। 7.5 मीटर सुरक्षा अवरोध छोड़ने के बाद खनन किया जाएगा।

जहां भी संभव हो, जिला प्रशासन / स्थानीय प्राधिकरण के परामर्श से वृक्षारोपण विकसित किया जाएगा।

प्र ग्रं प्रस्त :

खनन उच्च स्तर से शुरू होगा और निचले स्तरों की ओर बढ़ेगा। आंतरायिक बैकफिलिंग उच्च स्तरों से शुरू होगी और बाद में कम ऊंचाई की ओर अग्रसर होगी ताकि सीढ़ीदार कृषि क्षेत्र इस तरह से कार्य करे कि मूल भूमि का उपयोग बहाल हो जाए। एक बार अंतिम बच बनने और अंतिम आर्थिक गहराई तक गड्डे पहुँचने के बाद अंतिम बैकफिलिंग शुरू कर दी जाएगी। खनिज की सभी वसूली बिक्री योग्य ग्रेड की होगी।

स्थानीय डीएफओ / कृषि विभाग के परामर्श से एमएलएम, बैकफिल्ड और रिक्लेड एरिया, जल निकास, सड़कों आदि के आसपास देशी प्रजातियों को लगाकर खनन पट्टे क्षेत्र की सीमाओं के साथ 7.5 मीटर बाधा क्षेत्र में वृक्षारोपण किया जाएगा।

स्वरू

वर्तमान में (पूर्व खनन), खदान के अंतर्गत आने वाली भूमि गैर-वन भूमि है।

स्थिति

ई त्त

क्षेत्र की वर्तमान मिट्टी की गुणवत्ता का आकलन करने के लिए और उसके बाद खदान के पट्टे क्षेत्र के आसपास पांच मिट्टी के नमूने एकत्र किए गए थे। मिट्टी की भौतिक विशेषताओं को विशिष्ट मापदंडों अर्थात् थोक घनत्व, छिद्र, जल धारण क्षमता, पीएच, विद्युत चालकता और बनावट के माध्यम से चित्रित किया गया था। मृदा पीएच पोषक तत्वों की उपलब्धता में महत्वपूर्ण भूमिका निभाता है। मिट्टी माइक्रोबियल गतिविधि और साथ ही धातु आयनों की घुलनशीलता भी पीएच पर निर्भर है। अध्ययन क्षेत्र में, मिट्टी के

M/s Jai Mata Di Mines

Village- Dayali Kuroli, Tehsil Dugnakuri,

District-Bageshwar, Uttarakhand

पीएच म भिन्नता थोड़ी बुनियादी (7.42 से 7.69) पाई गई। विद्युत चालकता (ईसी) मिट्टी म घुलनशील लवण और आयनिक गतिविधि का एक उपाय है। एकत्र मिट्टी के नमूनों म चालकता 268-431 μ mhos / सेमी से लेकर है।

कम थोक घनत्व वाले मृदा म अनुकूल भौतिक स्थिति होती है, जहां उच्च थोक घनत्व वाले लोग कृषि फसलों के लिए खराब भौतिक स्थिति प्रदर्शित करते हैं।

परिणामों के आधार पर, यह स्पष्ट है कि प्रदूषण

सम्बन्धित स	1	2019	31	2019
प्र				
त्व				
त्त				
2019	प्र	प्र	प्र	त्त
(AAQM)	प्र	प्र	प्र	त्त
$\mu\text{g} / \text{m}^3$	62.8	8	$\mu\text{g} / \text{m}^3$	98
$\mu\text{g} / \text{m}^3$	28.2	23.2	$\mu\text{g} / \text{m}^3$	27.7
$\mu\text{g} / \text{m}^3$	5.6	7.1	$\mu\text{g} / \text{m}^3$	7.1
$\mu\text{g} / \text{m}^3$	16.7	17.3	$\mu\text{g} / \text{m}^3$	17.3
PM10, PM2.5, SO ²	NO ²	NO ²	NO ²	NO ²
त्त (NAAQ)	त्त	त्त	त्त	त्त

त्त	त्त	त्त	त्त	त्त
-10500	7.46	7.82	7.12	7.53
-10500				500 mg / l



SOAPSTONE MINE (Area-4.195 ha.)
M/s Jai Mata Di Mines
Village- Dayali Kuroli, Tehsil Dugnakuri,
District-Bageshwar, Uttarakhand

Executive Summary

उत्सर्जन 70- 80%
प्रस्त र प्रस्त क्षेत्र 10 10 2.5
प्रस्त त्प द्ध द्वि प्र ष
i) प्र सं श्रे ि
ii) ि
प्रस्त ि प्रत्य प्र दे क्षेत्र र
रू प्र र्ग श्र
ल्ल ष्ठ
श्य
प्र स्त र हु ि पुनस्थापना, द्रे
त प्र त प्र ि ि त्व र्ग
ध्व स्त प्र स्त र्ग ि
रू ध्व स्त र्ग द्वि
स्त ि स्त त्व रू प्र
प्र त्ठ ि ि ि प्र स्त रू स्तं
क्ष ि ि ि प्रस्त त्ठ रू स्तं
प्र ि ल्प ि ल्प
ः ि ि ि ल्प



क्यं स्तु
स्व प्र क्षेत्र क्षेत्र
स्टं प्रस्त स्व त्वं प्र
र्म द्वे द्वि तत्र ण्य
प्र स व्य रि त्र क्षेत्र
प्र
प्रस्त प्र क्ष प्र
स्वरू प्र
प्रस्त स्त री स्वरू द्व क्षेत्र स्वरू
ख र्म र्म र्म श्य त्म श्य क्ष
हु
क्षेत्र प्र स
स र स्म द्वे क्षेत्र
प्र प्र प्र प्र क्षेत्र प्र क्षेत्र त्म
प्रस्त स्तं र क्ति श्य प्र स
प्र न्य
: प्रस्त न्य

प्र	ते
क्त व्य र	/ त्व
/	रू रू



SOAPSTONE MINE (Area-4.195 ha.)
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Village- Dayali Kuroli, Tehsil Dugnakuri,
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Executive Summary

	<ul style="list-style-type: none"> क्षेत्र : क्र
	<ul style="list-style-type: none"> क्षेत्र : च स्त
	<ul style="list-style-type: none"> क्षेत्र : द्व
	<ul style="list-style-type: none"> क्षेत्र : ह
	<ul style="list-style-type: none"> क्षेत्र : प्लास्टिक
	<ul style="list-style-type: none"> क्षेत्र : प्र
	<ul style="list-style-type: none"> क्षेत्र : प्रदूषण नियंत्रण प्र
	<ul style="list-style-type: none"> क्षेत्र : ध्व प्र (
	<ul style="list-style-type: none"> क्षेत्र : -50 dB
	<ul style="list-style-type: none"> क्षेत्र : -50 dB) CPCB
स्प	<ul style="list-style-type: none"> क्षेत्र : स्त
	<ul style="list-style-type: none"> क्षेत्र : स्त



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Executive Summary

	प्र	रू	त्व	प्र
--	-----	----	-----	-----

ल्य श्ले श सर्वक्षण () द्व श न्वे
 फि स्टि फि स ष्ट क्यं
 ल्पि र त्री स्क
 प्र न्य ल्पि प्रस्त
 क्र

	क्ष प्रक्रिया	
	उ	ते
A.		
क्षे आर्द्रता	क्षेत्र न्यु 1	स्ते द्व रू
प्र PM ₁₀	क्षेत्र 7 र (न्यु	त्र
SO ₂	2 र 2 / प्र क्षेत्र 1)	त्र
		Gravimetric
		Gravimetric
		EPA श्चे Geake
		क्लोरोमासंट
		क्लं लिड (: 5182



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SOAPSTONE MINE (Area-4.195 ha.)
M/s Jai Mata Di Mines
Village- Dayali Kuroli, Tehsil Dugnakuri,
District-Bageshwar, Uttarakhand

Executive Summary

				- II)
NO ₂				NaOH
				लपे (- ए) क्ल क्स ()
B.				
स्व लि प्र क्ल ल्ये क्ष स्त क्र ल्य	क्षेत्र	प्र	IS 10500	त्र प्र श्ले : 2488 (1-5) क्ष ब्लि प्र श्ले
C.				
स्त - Leq	च त्रै	/	CPCB	CPCB



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Executive Summary

dB (A)	क्षेत्र, क्षेत्र दृ			
D. दृ				
pH, त्व, दृ ब्य स्फ र्न लि	क्षेत्र 3 र	/	USDA	USDA
क्ल				
E.				
जनसांख्यिकी	सर्वक्षण	न्यू	प्रश्न ध्य प्र ग्र	ध्य खि पुस्तक, स्व स्थि ब्य प्र र्न
स्व स्थि रुण स्थिति:	स्त यादृच्छिक र्न			
स्व				
क्ष				

5 प्र दृ
म्मे (CER) (प्र) क्र प्रस्त न

क्र ख		रु (रु.)
1.	स्व स्थि	1.0
2.	स्व च	1.5
3.		0.3



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	स्त पुस्तिकाओं	
4.	स्व म्म	1.0
		3.8

क्ष

क्र ख		(रु) (प्र)	ि (रु) (ि)
1.	प्र त्र	1,00,000	1,00,000
2.	प्र		
	i) प्र	1,00,000	1,00,000
	ii) प्र	60,000	60,000
	iii) प्र	40,000	40,000
	iv) ध्व प्र	20,000	20,000
3.	क्ष / र्ट	2,65,125	5,65,125
4.	क्षेत्र	--	11,79,780
5.	व्य स्वस्थ	1,00,000	50,000
		6,85,125	21,14,905

ि क्त ध्य

ि ल्य प्र य प्र त्र य प्र प्र त्र
नें घ य प्रशिक्षण
प्र प्र त्व ि क्त
प्र क्षे ि रू म्यु प्र के ध्य प्र के
प्र क्षे ि रू प्र श्य

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प्रस्तावित / विद्यमान तत्क्षेत्र प्रस्तावित
() प्रस्तुत

f

प्रस्तावित रूप विद्यमान प्रस्तावित रूप
प्रस्तावित रूप प्रस्तावित स्थिति रूप
प्रस्तावित रूप प्रस्तावित रूप

- प्रस्तावित रूप ;
- प्रस्तावित रूप व्यंज्य स्वच्छि
- प्रस्तावित रूप

f प्रस्तावित रूप क्षेत्रों र क्षेत्र समृद्धि त्र

निष्कर्ष

- MoEF & CC श्य ;
- प्रस्तावित रूप क्षेत्र त्व त्र
- प्रस्तावित रूप प्रक्रिया सर्वात्म बंध प्रौद्योगिकी सर्वात्म प्र
- प्रस्तावित रूप ;
- प्रस्तावित रूप प्रस्तावित रूप () प्रस्तावित रूप
- प्रस्तावित रूप त्व त्र प्रस्तावित रूप

