EXECUTIVE SUMMARY

1. PROJECT DESCRIPTION

The project has been proposed by Smt. Sudershna Rani Sharma M/s Om Stone Crusher for the Mining of Sandstone and Bajri from Mauza/Mohal Jorrian kuthar beet, Tehsil Haroli, District Una H.P. The letter of intent by the Department of Industries has been issued vide letter No. Udyog-Bhu(Khani-4) Laghu- 321/2024-14679 Dated 12.03.2024 which was valid upto one year. Extension of LoI has been applied.

The proposed project has an area of 8.1568Ha. (Pvt. Land, Hill slope) and falls under Category- "B1" as per EIA Notification 2006 and amendments thereof by the Ministry of Environment, Forests and Climate Change, New Delhi.

1.1 DETAILS OF MINING PROCESS & LOCATION

Project Name	Mining of Sandstone and Bajri from Mauza/Mohal Jorrian kuthar beet, Tehsil Haroli, District Una H.P.
Mining Lease Area	Mining lease Area: (8.1568 Hectare)
Location of mine	Khasra No. 330/1, 338, 339, 342, 344, 326, 340, 341 & 343 Mauza/Mohal Jorrian kuthar beet in Tehsil Haroli, District Una, Himachal Pradesh.
Latitude	31° 24' 16.84" N to 31° 24' 17.66" N
Longitude	76° 10' 18.80" E to 76° 10' 6.19"E
Toposheet number	53A3, 53A4
Minerals of mine	Sand, Stone and *Bajri*
Proposed production of mine	97000 TPA (Excluding Waste)
Method of mining	Semi mechanized
No of working days	270 days
Cost of the Project	20 lacs
Water demand	0.9 (Domestic) + 3.0 (Dust Suppression) =3.09KLD
Sources of water	Local source of gram panchayat for drinking and dust suppression.
Manpower	20

Waste Generation	41999 tons of mine waste will be mined.
Nearest railway station	Jaijon Doaba Railway Station: about. 6.84 km in the SSW direction (Aerial Distance).
Nearest state highway/national highway	National Highway: - NH 503A (Hoshiyarpur-Una Road) About 9.8 km in NE direction. MDR 39 (Nangal Santokhgarh Tahliwal Polian Jaijon Road) About 1.3 km in NE direction.
Nearest airport	Ludhiana Airport: approx. 64.53 km in S Direction (Aerial Distance).
Seismic zone	Seismic zone IV

2. DESCRIPTION OF THE ENVIRONMENT

The baseline environment quality represents the background environmental scenario of various environmental components such as Land, Water, Air, Noise, Biological and Socio-economic status of the study area within 10 kms of the project site. Three months baseline study, conducted from October 2022 to December 2022, has been taken from nearby project M/s Lakhwinder Stone Crusher which comes under the 5km radius of the project site.

Ambient Air quality was monitored at 8 locations. The value of all parameters, i.e. PM_{10}, $PM_{2.5}$, SO_2, NOx, Co, NH_3 and O_3 was found within permissible limits. Surface & ground water were monitored at 6 and 6 locations respectively. The water was found fit for consumption for various uses. The soil samples were collected at 6 location soil is alkaline pH ranges from 7.12 to 7.89 and texture is Sandy Loam.

3. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

3.1 LAND

There is no significant degradation of land due to creation of access roads, mining operations, and transportation of mined material. In order to prevent the environmental degradation of leased mine area and its surroundings, the following measures shall be taken.

- Mineral will be mined out after leaving the 5-meter safety zone .
- In this activity, the work is proposed to be done manually as well as semi mechanically which will avoid adverse effects associated with heavy machinery and their functioning.
- The mining will be done in non-monsoon seasons only.

- Operations during daylight only.

Movement of the vehicles on the road will be increased; however, non-metalled road leading to sand and stone mining areas will be sprinkled with water at regular intervals. In addition to preventing spillage by trucks/tractor trolley, overloading should be controlled along with speed limit.

There is no soil over mineralized areas. Soil Quality will be monitored on yearly basis in the area surrounding the core zone used for agricultural activity to check for any negative impacts on the soil quality.

Since the mining lease area is restored after mining so plantation will be done in the lease area however, plantation of suitable species like Kachnar, Kashmal, Simbal, Khirak, Anjan, Dhoob, Behul, Kahu, Chir, Bhekal, Kainth, Munj, Tirmira etc. will be planted.

It is suggested to carry out plantation for five years with suitable species from the date of operation.

3.2 WATER POLLUTION CONTROL MEASURES

I Surface water

There will be no surface water pollution due to sand mining. However, the following measures shall be undertaken to prevent water pollution.

- Utmost care will be taken to minimize spillage of stone and sand.
- Drains and their Catchments will be constructed just beside the access roads so that the storm water gets settled before flowing to the river/Nallah.
- The washing of trucks and tractor trolleys in the mining lease will be avoided.
- Plantation will be done to restore the affected mining lease area.

II Ground water

There would not be any adverse effect on the ground water quality. The process of sand, stone and *Bajri* mining activity does not contain any harmful elements, which could percolate into the ground and pollute the ground water. Hence, no control measures are required.

- However, regular monitoring of water quality in the existing hand pumps/tube wells in the vicinity will be carried out.

3.3 AIR POLLUTION CONTROL MEASURES

The proposed mining operations are not anticipated to raise the concentration of the pollutants beyond prescribed limits. However, the following measures would be adopted to mitigate the PM_{10} level in the ambient air. Dust particles generated during various mining activities when

becoming airborne lead to an increase in PM_{10} level in the ambient air. The major source of dust generation is the transport of material by trucks and tractor trolleys. Adequate control measures should be taken during mining operations as well as the transportation of minerals.

The following steps shall be adopted to prevent air pollution due to airborne dust.

- Plantation will be done along the roadsides and also at the crusher site after consultation with local villagers/authorities.
- Dust masks are provided to the workers engaged at dust generation points like excavations, loading and unloading points.
- The only air pollution sources are the road transport network of trucks. The dust suppression measures like water sprinkling will be done on the roads.
- Utmost care will be taken to prevent spillage of sand and stone from the trucks.
- Overloading will be prevented. The trucks/ tractor trolley will be covered by tarpaulin covers.

3.4 NOISE POLLUTION CONTROL MEASURES

As there is no heavy earth moving machinery therefore, no major impact on noise level due to the proposed mining and other association activities, a detailed noise survey has been carried out and results were cross referenced with standards and were found to be well within limits.

Blasting is not used for this sand and stone mining, hence, no possibility of land vibration. It was found that the proposed mining activity will not have any significant impact on the noisy environment of the region. The only impact will be due to transportation of sand and stone by trucks and tractor trolleys.

As the only impact is due to the transportation of stone to the stone crushing unit and sand to the market though village roads, the following control measures should be taken to keep the ambient noise levels well within limits:

- Minimum use of horns and speed limit of 10 kms per hour in the village area.
- Timely maintenance of vehicles and their silencers to minimize vibration and sound.
- Phasing out of old and worn-out trucks.
- Provision of green belts in consultation with village panchayat along the road networks.
- Care will be taken to produce minimum sound during sand and stone loading.

3.5 BIOLOGICAL ENVIRONMENT

The mining activity will have insignificant effect on the existing flora and fauna. Data have been collected from various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre project biological environmental conditions. It was found that the sand and stone mining activity will not have any significant impact on the biological environment of the region.

Mitigation measures of impacts on biological environment

1. It will be ensured that no mining activity will be carried out during the monsoon season.
2. As the mining site has no vegetation, no clearance of vegetation will be done.
3. Sprinkling will be done on the haul roads with water to avoid the dust emission, thus avoiding damage to the crops.
4. Mining will be carried out day time only.
5. No discard of food, polythene waste etc. will be allowed in the lease area which would distract/attract the wildlife.
6. No nighttime mining will be allowed which may catch the attention of wild.
7. Workers will be made aware of the importance of the wildlife and signage will be displayed at the sensitive area to caution worker and other passerby.

3.6 SOCIO-ECONOMIC ENVIRONMENT

This project operation will provide livelihood to the poorest section of society. The overall impact of mining of stone, boulders, bajri & sand on the social economics of the area shall be a very positive one, as not only it will generate employment opportunities for local population at mine site but also in associated activity i.e at stone crushing plant, for transportation of mined material, *etc.* It will also give a good boost to the general economy of the area. This project operation will provide the direct employment to about 20 workers from the nearby villages, and they shall be engaged in extraction of Stone, loading of material into tractor trolleys and allied mining activities. This activity will provide employment to the people residing in vicinity directly and indirectly.

Anticipated impacts and evaluation

The results of the field survey conducted based on a questionnaire prepared to understand the knowledge and perception of the people living around the project area, gives a clear idea about the need for the project. A major portion of the houses in the study area are pucca type structures. The solid waste generated in the area is dumped into open land since there are no collecting agencies in the area. The awareness level regarding the proposed mining activity is very high.

The proposed mining activity is expected to provide stimulus to socio-economic activities in the region and thereby accelerate further development processes. However, there is an

apprehension that local people may get engaged in illegal activities if the proposed mining operation or the project is shelved or there is inordinate delay in its execution.

4. ENVIRONMENTAL MONITORING PROGRAMME

All the environmental parameters viz. air, water, noise, and soil will be monitored regularly to detect any changes from the baseline status. Environmental Monitoring program will be followed till the mining operations ceases.

Sr. No.	Aspect	Parameters to be monitored	Frequency
1	Air Quality monitoring	PM10, PM2.5, SO2, NO2, Free Silica	As per CPCB/ SPCB requirement on monthly basis.
2	Noise Quality monitoring	Leq for day and night	As per SPCB/MoEF & CC requirements of compliance
3	Water Quality Monitoring	Comprehensive monitoringas per IS:10500 Groundwater level (bgl) and Surfacewater quality as per IS 2296:1991	Periodic during operation phase as per SPCB/ CPCB guidelines
4	Soil	Organic matter, Texture, pH, EC, Permeability, Water holding capacity, porosity etc.	Periodic during operation phase as per SPCB/ CPCB guidelines
5	Plantation	Plantsand shrubs in the Green belt area and their mortality status	Periodic during operation phase as per SPCB/CPCB compliance requirements

5. ADDITIONAL STUDIES

Traffic density measurements were performed at two locations for MDR-39 and NH 503 about 4.3 km in South Direction and NH about 16 km in East Direction. The Monitoring was performed during the study period. The result is given in the table below.

S. No.	Type of Vehicle	Vehicle Distribution/ day	PCU	No. of Vehicles in PCU/day
1	Cars	5	1	5
2	Trucks	4	3.7	14.8

3	Two Wheelers	4	0.75	3
Total		**13**	**…..**	**22.8**

6. PROJECT BENEFITS

The proposed project is mining sand, stone, and bajri and from the hill slope, which has no major impact on surrounding environment. The proposed activity should provide raw material to Stone crusher there by boosting production of construction material. This will bring overall improvement in infrastructure development and economic growth of the area.

- Generating useful economic resources for construction.
- Generating employment and improvement of socio-economic conditions of the study area.

7. ENVIRONMENT MANAGEMENT PLAN

BUDGET ALLOCATION FOR ENVIRONMENT MANAGEMENT PLAN FOR FIVE YEARS

(RS IN LAKHS)

SR. NO.	TITLE	CAPITAL COST RS IN LAKHS	RECURRING COST/YR RS IN LAKHS	RECURRING COST RS IN LAKHS FOR 5 YRS	TIMELINE
1.	Monitoring of Air, Water, Soil, etc. twice a year.	----	0.8	4.0	Once in a six month (As per CPCB guideline)
2.	Air Pollution Control- Management of Haulage Roads & mine road of 500 meters including Sprinkling. Tractor trolley with sprinkler *Depreciation cost of water sprinkler	3.0	0.81	4.05	Twice a day & as per requirement
3.	Green Belt Development Area for Plantation= 8.1568 Ha.	12.54	5.92	29.62	After formation

	No. of plants = 9789 Plants Plantation is proposed @* 1200 plants per Hect. *Cost and No. of plants are as per the *No.Ft.1790-/71(D)2011-12/Vol-VIII(Norms), Himachal Pradesh Forest Department, Shimla Dated 07 June 2019				of each Benches
4	Protection wall for waste dump Dimension* R1* (L -80 m X W- 1 m X H-3m)*4 =960 Cu.m *@1469.25/cu.m*((@Rs.979.50/cu.m* *And 50% escalation cost). Dry rubble masonry in breast wall and retaining walls revetment walls and parapets etc. as per Standard Schedule of Rate 2009 H.P.)*	14.1	1.14	5.7	Protection wall constructed around the waste dump at the 1st year of mining
5	Septic tank	0.20	0.06	0.30	Constructed before the mining operation started

6	Check Dam/Retaining wall structure. Check Dam 1,2,3,4,5 *(L -100m W- 1.0m X H- 2.0m) Each 120 Cu.m X 5 =1000 Cu.m. *@1469.25/cu.m*(@Rs. 979.50/cum and 50% escalation cost). Dry rubble masonry in breast wall and retaining walls revetment walls and parapets etc. as per Standard Schedule of Rate 2009 H.P.)	14.69	1.46	7.34	As per mining plan, five numbers of Check dams /Retaining Wall of (100 meters' length 1 meters' Width and 2.0 meter's height) has been proposed for protect the debris to move downwards.
7	Occupational Health Measures Provision of PPE, First Aid and other miscellaneous expenditure.	0.20	0.10	0.50	As per requirement
Total		**44.73**	**10.29**	**51.51**	**---------**