## 1. Executive Summary

| S. No | Information | Details | | |
|---|---|---|---|---|
| 1. | Project Name | "MINOR MINERAL (River Bed Material)" at Block No. 5/7 Downstream Old Chenab Bridge, Akhnoor | | |
| 2. | Project Proponent | Nagar Singh S/O Sh Koula Ram | | |
| 3. | Project Coordinates | **Pillars** | **Latitude** | **Longitude** |
| | | A | $32^0$51'23.89" N | $74^0$41'18.81"E |
| | | B | $32^0$51'21.26" N | $74^0$41'10.26"E |
| | | C | $32^0$51'33.91" N | $74^0$41'06.20"E |
| | | D | $32^0$51'36.87" N | $74^0$41'15.10"E |
| 4. | Toposheet No. | 43L/9 | | |
| 5. | Altitude of the Area | The Highest Point at 297.70 MSL in SE direction<br>The Lowest Point at 297.30 MSL in NW direction | | |
| 6. | Location | Block No 32 Downstream Old Chenab Bridge, Akhnoor | | |
| | Lease Hold Area | Area: 9.98 Ha | | |
| | Village | Malpur | | |
| | Tehsil | Bhalwal | | |
| | District | Jammu | | |
| | State | J & K | | |
| 7. | Lease Status | The applicant being the highest bidder was issued with Letter of Intent (LOI) by DGM office vide letter No No. 810/MCC/DGM/Block-5/7/Jmu/20/3380-87 Dated: 5-08-2020under rule 55(9) of Prevention of the Jammu and Kashmir Minor Mineral Concession Storage, Transportation of Minerals and illegal Mining Rules, 2016. | | |
| 8. | Topography of Mine lease area | Non-arable, non-forested land of river bed.<br>(Flood Plain formed by Chenab river, State Land) | | |
| 9. | Name of the Mineral Mining | River Bed Mineral | | |
| 10. | Mode of Mining | Open Cast, Semi-mechanized | | |
| 11. | Total Geological Reserve | 5,53,200 MT | | |
| 12. | Total Mineable Reserve | 5,07,600 MT | | |

| | | |
|---|---|---|
| 13. | Capacity of Production | Proposed 92,200 MT/Annum |
| 14. | Life of mine | It is a river bed deposit and mined out area shall be replenished each year during monsoon period and depth of quarry shall be filled back by river river bed material each year. Therefore it is not practically forecast the anticipated life of mine. |
| 15. | Drilling / Blasting | No |
| 16. | Man Power Used | 14 |
| 17. | Land utilization Pattern | 100% wasteland earmarked for the River Bed Material mining by the Govt. of Uttar Pradesh. |
| 18. | Project Cost | Rs. 2.56 carore |
| 19. | CSR Expenditure | Rs. 12.78 Lakhs |
| 20. | Water requirements and source | **Water Requirement**:20.66 KLD of water will be used for the project site (Dust Suppression, Drinking and Plantation)<br>**Source**: Potable tankers (Drinking purpose) & River water (Dust Suppression & Plantation) will be the source |
| 21. | Solid waste | None |

## 2.1 INTRODUCTION OF THE PROJECT/ PROJECT BACKGROUND

## 2.2 INTRODUCTION OF THE PROJECT

**Name of project** **:** "MINOR MINERAL (River Bed Material)" at Block No. 32 Downstream Old Chenab Bridge, Akhnoor

**Location of Project** **:** Block No. 5/7, (Area-9.98 Ha),
Downstream Old Chenab Bridge, Akhnoor
Village- Malpur (Bhalwal Block),
Tehsil-Bhalwal, District- Jammu

**Production** **:** 92,200 MTPA

**Total ML area** **:** Area-9.98 Ha

**Name and address of the project proponent:** Sh.karanvir singh S/o Sh. Surinder Singh
R/O 33A/D, Gandhi Nagar,
District- Jammu

## 2.3 Brief description of the nature of project

The project is proposed for mining of Minor Mineral (River Bed Material) of 92,200 MTPA from the Non-forest, Non-arable, rugged wasteland within the mining lease area.

## 2.4 Need of the project and its importance to the country and or region:

The basic objective of the project is to effective utilization of Mineral in the country and /or region. With the development and industrialization has enhanced the demand of building material.
Mainly in infrastructure projects-like highways buildings, township etc which has raised the demand of river bed material beside of the mineral. River bed material mining not only provides the building material but also employment economic growth of the state that will ultimately enhance the socio-economic status of the people of the region / area.

## 2.5 Demand supply Gap:

There is large demand of River Bed Material for construction activities in the region. Demand of the river bed material if fulfilled by this project of the follow grade to various end users in the open market.

The demand for river bed material material is ever growing with the growth of the infrastructure sector in our country. The mineral is used mainly in the construction activities like buildings, bridges, etc. The requirement for the mineral is always high in the state itself and also in the nearby cities and towns. Therefore there is always a good demand of the mineral in the domestic market. With start of the project, it will bridge the gap between demand & supply of the mineral.

## 2.6 Import Indigenous Production:

This is indigenous production. This will not be neither exported nor imported.
There is always an ever increasing demand of these minerals in the domestic market. Hence the production will contribute for indigenous consumption so that there will be no need of importing of minerals.

## 2.7 Export Possibility:

Not exported.

## 2.8 Domestic/ Export Markets

**Domestic Market**

In the domestic market river bed material will be sold to builders, contractors etc to nearby vendor.

**Export Market**

The proposed mining activity is for indigenous consumption only for real state, road making etc.

**2.9 Employment Generation (Direct and indirect) Due to project:**

The proposed mining activity will provide employment to about 14 workers. The workers will be hired mostly from the nearby villages.

**Employment Potential**

The number of persons to be employed is given below

| | | |
|---|---|---|
| i) | Mining Foreman | 1 |
| ii) | Office Assistant/Dispatch Supervisor | 1 |
| iii) | Environment Supervisor | 1 |
| iv) | Office Boy | 1 |
| v) | Skilled worker/mechanic | 2 |
| vi) | Piece rated workers | 8 |
| | **Total** | **14** |

About 270 working days will be available in a year. Proposed production is being 92,200 tonnes per year which implies about 341 tonnes per day.

**3.1 Project description:**

The proposed project is mining unit of river bed material in the area of 9.98 ha situated at Block No. 5/7, (Area-9.98 Ha) Downstream Old Chenab Bridge, Akhnoor, Village- Malpur (Bhalwal Block), Tehsil-Bhalwal, District- Jammu. It is proposed to produce 92,200 MTPA.

**3.2 Type of project including interlinked and interdependent projects, if any:**

The project involves mining of River bed material; it is not interlinked with any existing project. River bed material mining is open cast, semi-mechanized method, send to the consumers for constructions of building, schools, road, footpath, runways. River bed material is directly sold as such. No requirement for further processing of the river bed material. It is neither interlinked nor interdependent project.

**3.3 Location of Project**:

The Proposed Project Site located at Block No. 32, (Area-9.98 Ha) Downstream Old Chenab Bridge, Akhnoor, Village- Malpur (Bhalwal Block), Tehsil- Bhalwal, District- Jammu, which is about 6.5 km away from Malpur village. Mining area is 1.2 km away from Link Road (Rakh Kharoon – Domi Link Rd). The lease area is about 3.0 km, away from Jourian-Akhnoor Road & 5.0 km away from Jammu-Akhnoor Hwy. The location plan is shown below:

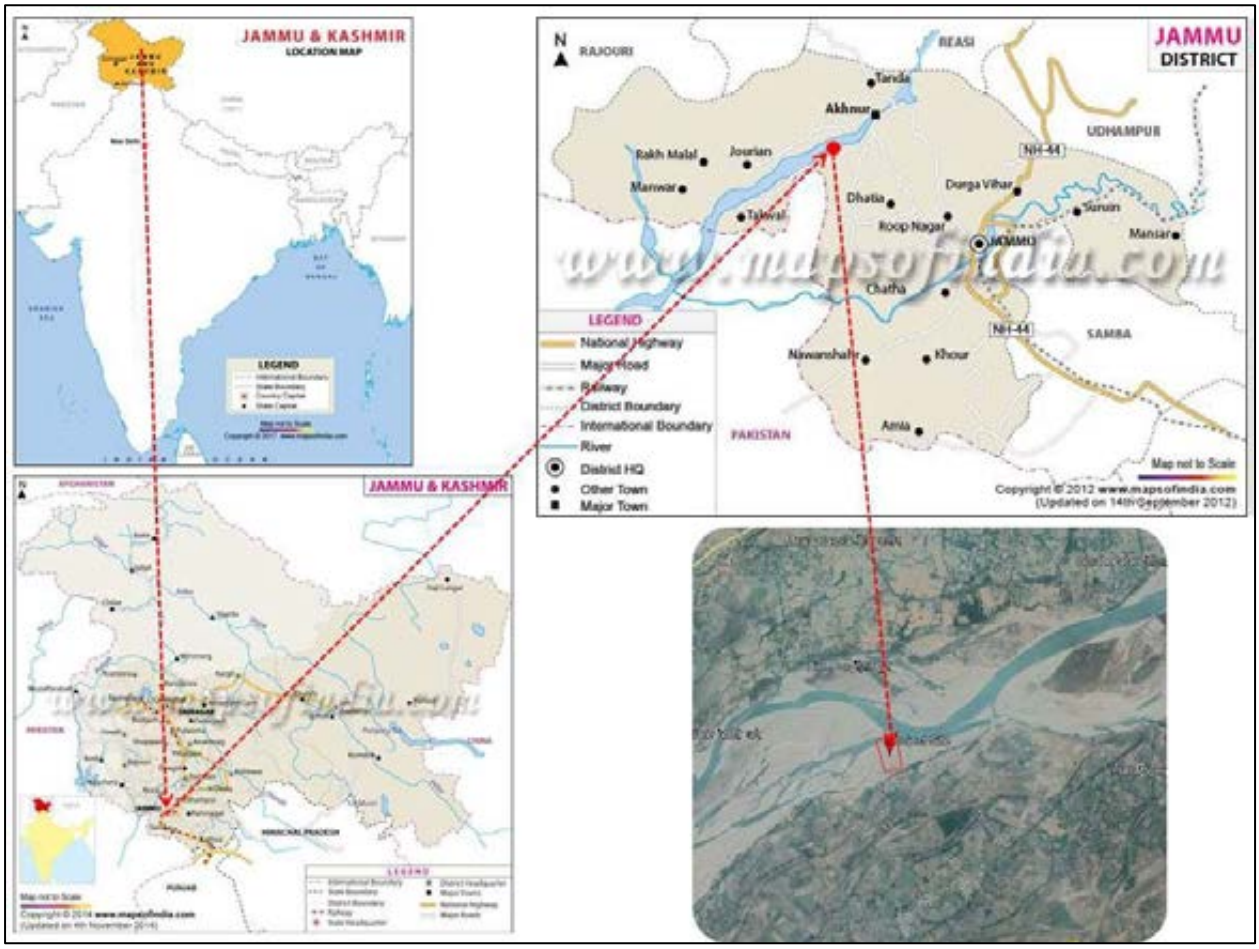



**Figure 1: Location Plan**

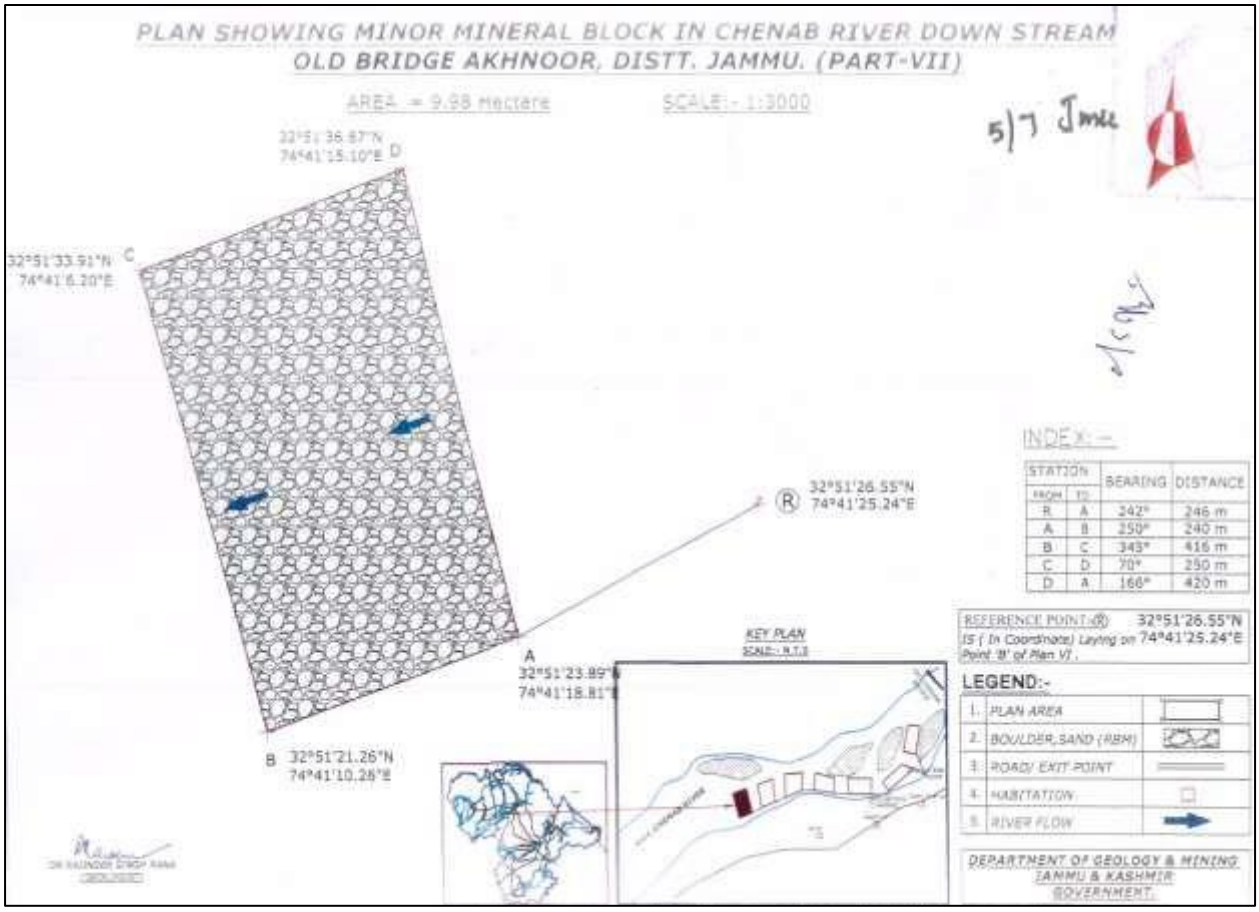



**Figure 2: Key Plan**

**3.3 Details of alternate sites considered and the basis of selecting the proposed site, particularly the environment considerations gone into should be highlighted.**

This is site specific project. Mining activities are carried out based on local geology and availability of the mineral.

**3.4 Size or Magnitude of operation**:

It is a river bed deposit and mined out area shall be replenished each year during monsoon period and depth of quarry shall be filled back by river bed each year. Therefor it is not practically forecast the anticipated life of mine.

**Proposed method of mining:**

Mining will be carried out by open cast bench method. It is proposed to produce 92,200 MT/Annum. Considering 270 working days daily production comes to 341 tons/ day of river bed material, for this, following consideration taken for the proposed mine layout to be carried out systematically & scientifically:

1. Mining activity will be carried out by open cast Semi-mechanized method.

2. Lightweight excavators will be used for digging & loading of mineral in Tippers.
3. No OB/ waste material will be produced.
4. No drilling/ blasting are required as the material is loose in nature.
5. Proper benching of 0.5 m height will be maintained.
6. Roads will be properly made and sprayed by water for suppression of dust.
7. Roads in the lease area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20.
8. Extraction activities will start in the blocks from the upstream side to downstream side. This will not obstruct the movement of water, if any, during monsoon period in the river course.
9. Approach roads from the various blocks as already described earlier will be merging with permanent tar roads on both sides of the river for transportation of the mineral to final destinations.

**Description for the Mining Layout: -**

Considering 270 working days in a year;

Production per day = 341 T/day

Proposed bench height = 0.5m

Bulk Density of Mineral = 2.0

Volume to be broken per day = Production per day/Bulk Density of mineral

=341/2

=170.5 $m^3$

Area to be broken per day = Volume/Bench Height

= 170.5/0.5

=341sq/m

**<u>Yearwise Production of five Years</u>**

| Year | Bench Level (mRL) | Production Rate(Tones) | Required Production% |
|---|---|---|---|
| 1st | 297 – 296.5 mRL | 92,200 | 100 |
| 2nd | 297 – 296.5 mRL | 92,200 | 100 |
| 3rd | 297 – 296.5 mRL | 92,200 | 100 |
| 4th | 297 – 296.5 mRL | 92,200 | 100 |
| 5th | 297 – 296.5 mRL | 92,200 | 100 |

**Conceptual Mining Plan [Plate No 6]**

The reserves of River Bed Material estimated on surface geological plan are to the tune of 0.922 million tones. The deposit in the river bed will never perish as it will be regularly replenished during monsoon floods by the action of river water.

a) Pit limit at the end of lease period

Dimensions of the pits are expected to be as

Maximum length=420 m
Maximum width=250 m
Maximum height= 0.5 m

b) Sites of disposal of waste rock and top soil at the end of lease period

No top soil or waste will be generated in the mining as such no disposal of waste is needed.

### 3.5 Raw Material Required Along With Estimated Quantity, Likely Source, Marketing Area of Final Product/S, Mode of Transport of Raw Material and Finished Product

No raw material will be required for production of River bed material.

In the operation phase River bed material will be excavated by Open cast, Semi-mechanized method and loaded directly into trucks/trolleys to directly supplied to the end users.

### 3.6 Resource Optimization/ Recycling and Reuse

Not envisaged.

### 3.7 Availability of Water Its Source, Energy/ Power Requirement and Source:

#### 3.7.1Availability of water, its source

The people of the area are dependent on "Wells" for water. They use the well water both for agriculture and household purpose. The average water table level in the region about 6.78 – 8.49 m below the ground level. The mining staff/workers use water from bore well to be dug near the leasehold.

**Water requirement**

20.66 KLD Water will be sourced from nearby villages through water tankers. Permission will be been taken from the Gram Panchayat for the same and will be used for plantation, dust suppression and drinking use.

| Purpose | Avg. Demand/ Day |
|---|---|
| 1. Dust suppression()<br>2. Drinking<br>3. Land reclamation/plantation | 20.5 KLD<br>0.065 KLD<br>0.098 KLD |
| **Total** | 20.66 KLD |

### 3.7.2 POWER

The operation will be done during day light; hence there is no power requirement for the project at site.

### 3.8 Quantity of waste to be generated (liquid or solid) and scheme for their management / disposal.

No solid waste generation is expected from the mining procedure. 14 persons including the works man and the administrative staff are supposed to produce negligible waste like gutka pouches, smoking litter, and newspapers etc. belonging to biodegradable category waste.

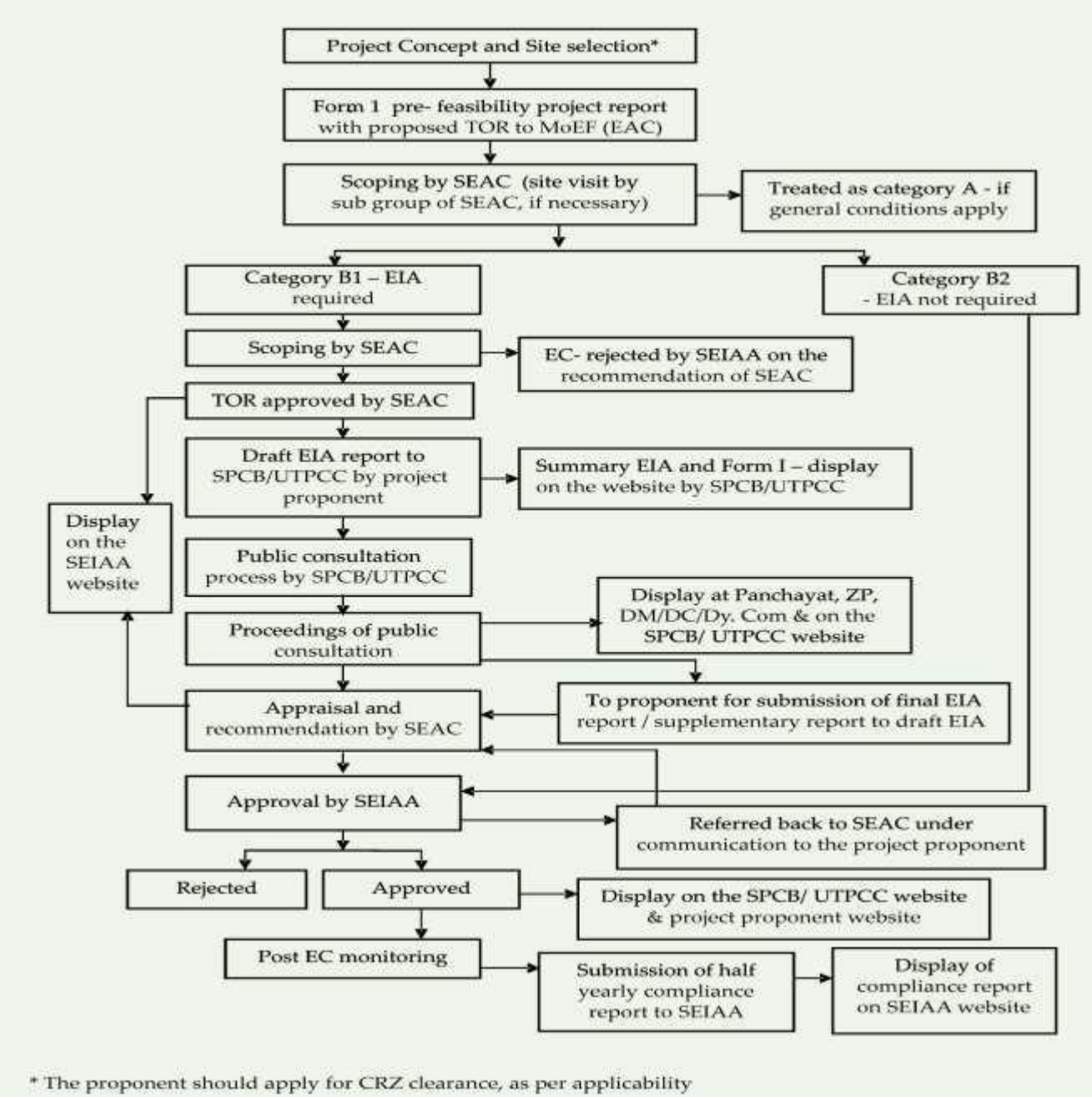
### 3.8.1 Solid Waste Generation & its Disposal

Waste generated will be collected on regular basis and will be disposed as per the Municipal Solid Waste Management (Management & Handling) Rule 2000 and its subsequent amendments.

### 3.8.2 Generation of Liquid Effluent

There is no waste water generation during the process.

**3.9 Schematic representations of the feasibility drawing which give information of EIA purpose:**




*(**Source:** EIA manual guideline for mining & minerals)*

**4.1 Site Analysis:**

**4.2 Connectivity:**

The proposed project site of Minor Mineral (River Bed Material) mining located Block No. 5/7 Downstream Old Chenab Bridge, Akhnoor, Village- Malpur (Bhalwal Block), Tehsil: Bhalwal, District: Jammu, J & K, which is about 22 km away from Jammu City. Mining area is 1.2 km away from Link Road (Rakh Kharoon – Domi Link Road) which is coming from Jammu- Akhnoor Hwy & 5.0 km away from National Highway-44 (Jammu-Akhnoor Hwy). The nearest populated town Akhnoor is about 6.5 km in NE direction. The Nearest Railway Station is at Jammu Tawi 25 Km towards SE and Nearest Airport, Jammu Airport is 23.5 km, SE from the lease area.

**Figure 3: Connectivity Details from Project Site**

**4.3 Land form, land use and land ownership**

The mine lease area spreads in 9.98 ha, which is government trasverse land. The land form is mostly river bed and non-forest land. Moreover there will be no change in land use as the mining will be confined to river bed, which will get replenished naturally in the subsequent monsoon season.

Nagar Singh S/O Sh Koula Ram

**4.4 Topography Along With Maps:**

Jammu district derives its name from Raja Jambolochan, "the founder of Jammu city". Jammu city also known as the "City of Temples". The district with its headquarter at Jammu town, lies between 32°33'07" & 33° 07'30" North latitudes and 74°27'00" & 77°21'00" East longitudes and is covered by Survey of India Degree Sheet No. 43K, L & P and Toposheet no. 43 L/5, 9, 10, 11,13, 14 &15 and 43 P/1 & P/2. District is well connected by Air, Rail and road network. National Highway No.1A passes through the district (Plate-I). The district has a total geographical area of 3097 sq. km out of which 1097 sq. km is covered by hilly terrain and outer plains cover 2000 sq. km which comprises of Kandi and Sirowal belts. The district is bounded by Rajouri district in the west, Reasi & Udhampur districts in the north and northeast and Kathua district in the east and southeast. It has International Border with Pakistan in the West and southwest. The total population of the district is 18.45 lakhs. The district comprises of 5 tehsils (Jammu, R.S. Pura, Akhnoor, Samba, and Bishnah) and 12 Blocks and has 1162 villages out of which 119 are uninhabited. There are 396 panchayats and 14 towns in the districts (as per old Jammu district data).

*Source: http://www.cgwb.gov.in/District_Profile/JandK/jammu.pdf*

The mining area of 9.98 Ha falls on Toposheet No. 43L/9 within Latitude: $32^0$51'23.89" N to $32^0$51'33.91" N & Longitudes: $74^0$41'18.81" E to $74^0$41'06.20" E. Topographical map showing project site prepared on a scale of 1:50000. The Highest Point at 297.70 MSL in SE direction, while Lowest Point at 297.30 MSL in NW direction. The topography of lease area is shown in Sheet No. 3 of the minin g plan.

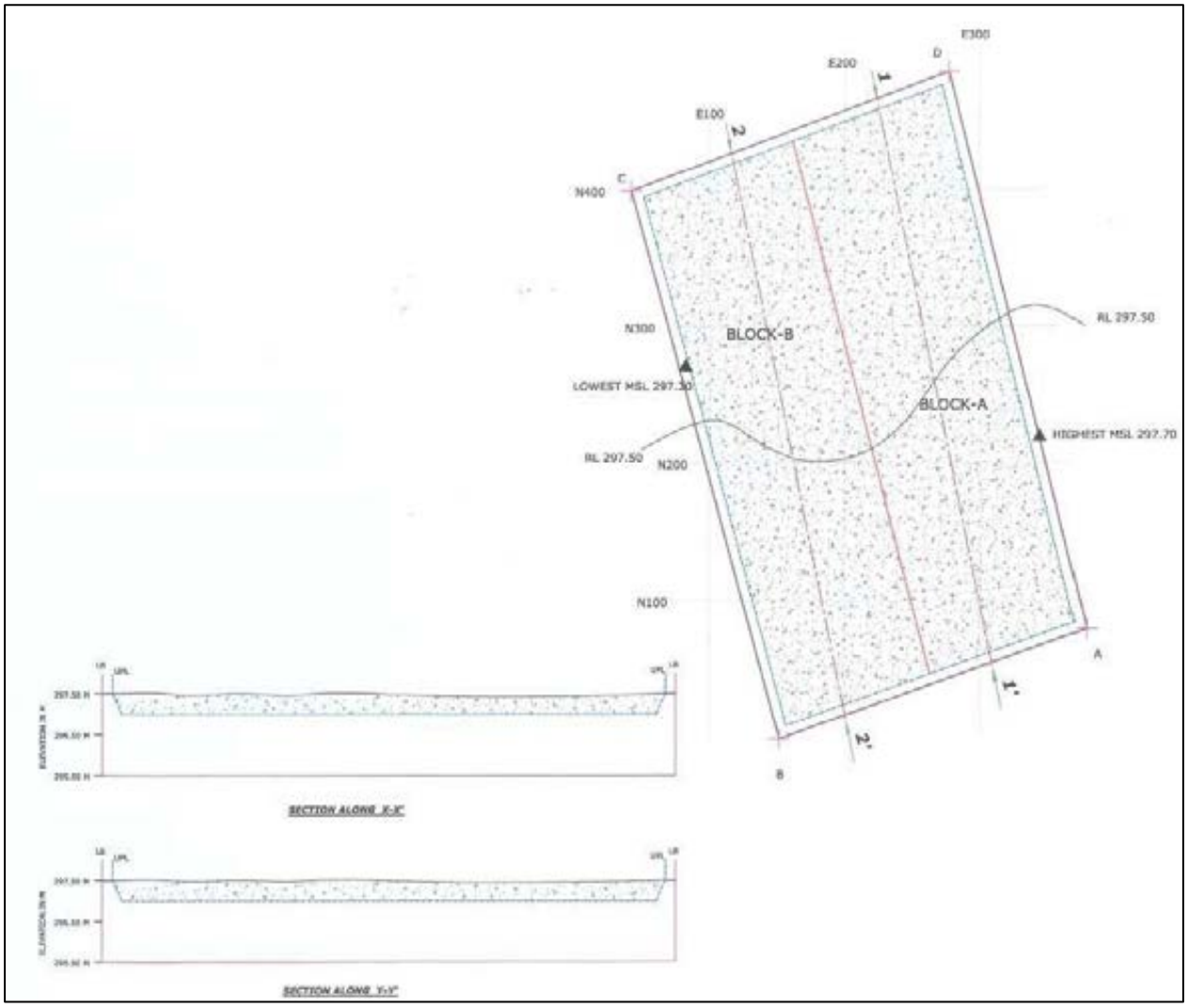



**Figure 4: Geological Surface Plan** ***(Source: Approved Mining Plan)***

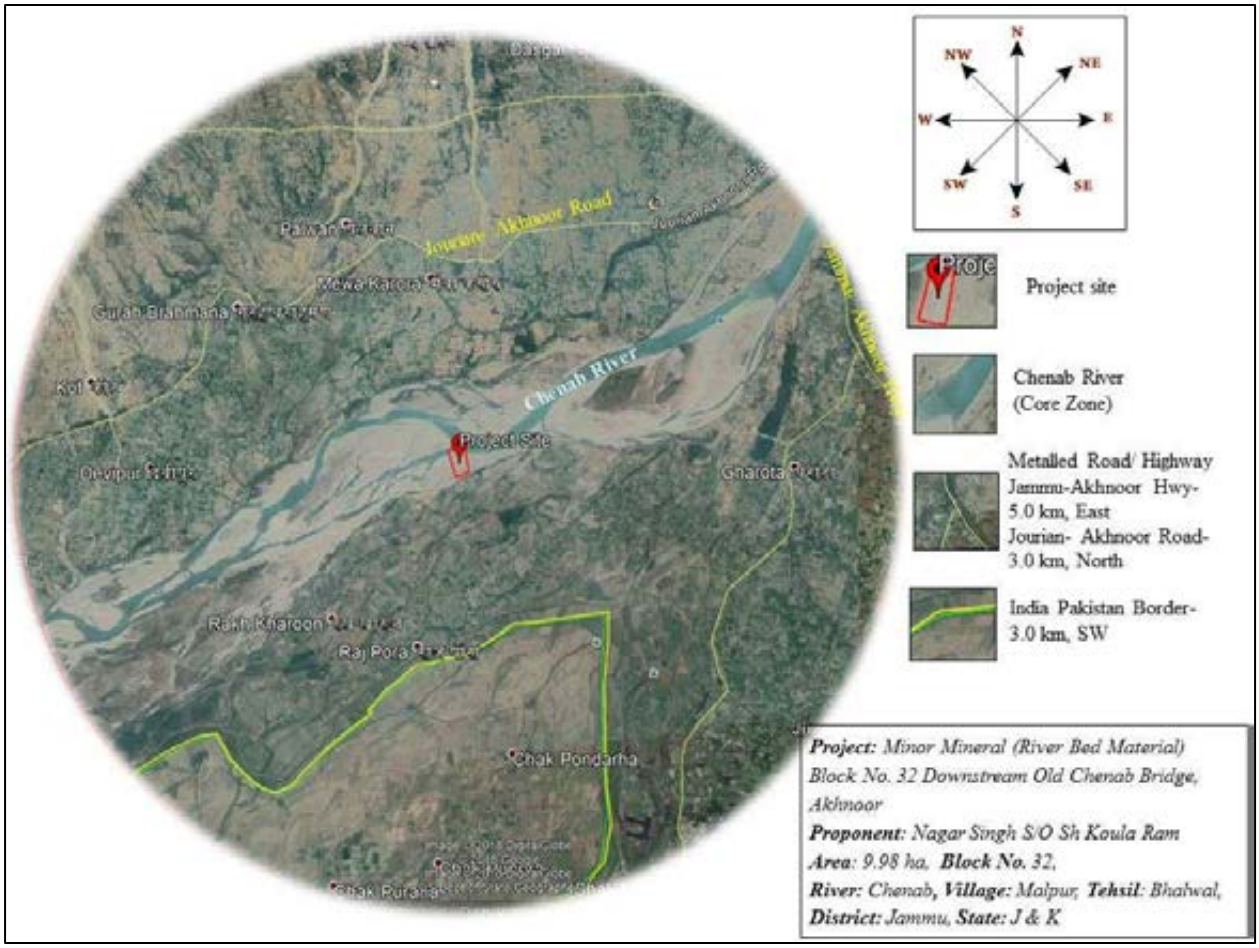



**Figure 5: Google Map showing 5.0 km radius of Buffer Zone**

**4.5 Existing Land Use Pattern {Agriculture, Non-Agriculture, Forest, Water Bodies (Including Area Under CRZ)}, Shortest Distances From The Periphery Of The Project To Periphery Of The Forests, National Park, Wild Life Sanctuary, Eco Sensitive Areas, Water Bodies (Distance From The HFL Of The River), CRZ. In Case Of Notified Industrial Area, A Copy Of The Gazette Notification**

**Table: Environmental Settings:**

| S.N. | Particulars | Details |
|---|---|---|
| **1.** | Nearest Villages | • Gharota, 3.5 Km, SE<br>• Malpur, 5.5 Km, East<br>• Akhnoor, 6.5 km, NE |
| **2.** | Nearest city/ town | Nearest Town: Akhnoor 6.5 km, NE<br>Nearest City & District: Jammu 22 km, SE |
| **3.** | Nearest Railway Station | Jammu Tawi Railway Station 25 km SE |
| **4.** | Nearest National /State | Jammu- Akhnoor Hwy, 5.0 km, East |

| | | |
|---|---|---|
| | Highway | |
| **5.** | Nearest Airport | Jammu Airport, 23.5 Km, SE |
| **6.** | Archaeological Important Place | None, within 10 km radius area of mine site. |
| **7.** | Ecological Sensitive Areas (National Park, Wildlife Sanctuary, Biosphere Reserve etc.) | There is no National Park, Wild Life Sanctuaries, Biosphere Reserves, Tiger Reserves, Wildlife Corridors, etc. within 10 km radius. |
| **8.** | Reserved/Protected Forest within 10 km radius | None |
| **9.** | Nearest River / water body | Chenab River, Core Zone |
| **10.** | Seismic Zone | V (Very Severe Intensity Zone) |

**4.6 Existing infrastructure:**

**4.5.1Roads:**

The proposed project site is about 22 km away from Jammu City. Mining area is 1.2 km away from Link Road (Rakh Kharoon – Domi Link Road) which is coming from Jammu-Akhnoor Hwy & 5.0 km away from National Highway-44 (Jammu-Akhnoor Hwy). The nearest populated town Akhnoor is about 6.5 km in NE direction. The Nearest Railway Station is at Jammu Tawi 25 Km towards SE and Nearest Airport, Jammu Airport is 23.5 km, SE from the lease area

**4.5.2 Water Supply:**

The people of the area are dependent on "Wells" for water. They use the well water both for agriculture and household purpose. The average water table level in the region about 6.78 – 8.49 m below the ground level. The mining staff/workers use water from bore well to be dug near the leasehold.

**4.5.3 Electrification:**

Malpur and surrounding villages already are receiving electric power supply while lease area is not connected with electricity. Surrounding villages in 10 km buffer zone are electrified.

**4.5.4 Educational – Facilities:**

Primary education facilities available in the villages. For higher education students go to Bhalwal, Akhnoor & Jammu.

**4.5.5 Health Service:**

The Primary Health Centre is at Malpur, Govt. Hospital Medical shops at Bhalwal, Akhnoor & Jammu.

### 4.5.6 Postal – Facilities:

The post office is at Bhalwal, Akhnoor & Domana.

### 4.5.7 Transport:

The applied area is approachable to 1.2 km away from Link Road (Rakh Kharoon – Domi Link Road) which is coming from Jammu-Akhnoor Hwy & 5.0 km away from National Highway-44 (Jammu-Akhnoor Hwy). The nearest populated town Akhnoor is about 6.5 km in NE direction. The Nearest Railway Station is at Jammu Tawi 25 Km towards SE and Nearest Airport, Jammu Airportis 23.5 km, SE from the lease area.

### 4.6 Soil Classification:

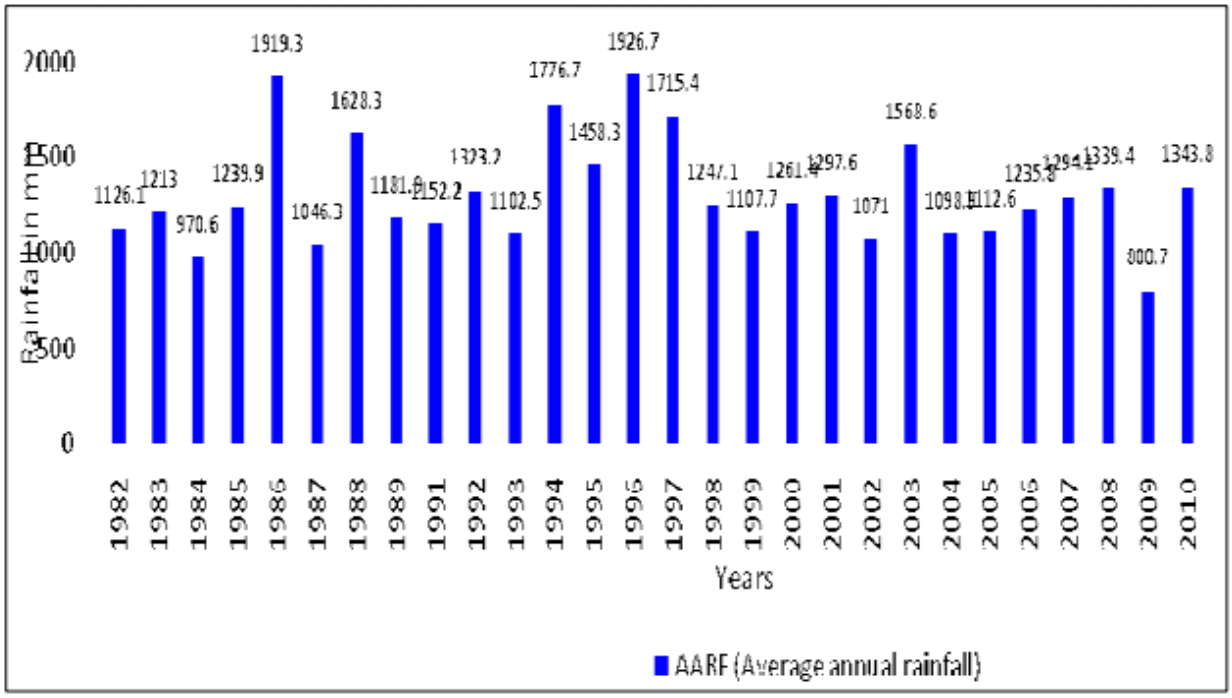
Two types of soils are mainly observed in the district viz. Lithosol and Alluvial soil and description of soils are given below.

*i)* **Lithosols:** These soils are found on steep slopes in the foot hills of Jammu district. The soil is gravelly loam to gravelly silty loam. The pH of the soil is nearly neutral in nature i.e. 7.1 to 7.8. The soils have a good water holding capacity.

*ii)* **Alluvial soils:** The alluvial soils are mostly found in the flood plains of Ravi, Chenab, Jhelum and Sind rivers and their tributaries. The soils are found in plains Jammu district. These soils have been divided into two groups viz. old alluvial and new alluvial. The old alluvial soils are calcareous and neutrals to alkaline in their reaction (pH 7.6- 8.4) and low to medium in organic carbon and nitrogen. The pH of the new alluvial soil ranges between 7.0-7.7 and is calcareous with low in organic carbon and nitrogen.
*Source: http://www.cgwb.gov.in/District_Profile/JandK/jammu.pdf*

### 4.7 Climatic data from secondary sources:

The climate of the district is classified as sub-humid to sub-tropical type of climate. The summer season starts from April and lasts till June is followed by southwest Monsoon that has maximum rainfall of the year spread over the months of July, August and September. The post monsoon season (October and November) also experiences some rainfall and is followed by winter season (December-February). The nearest meteorological observatory is located in Water Management and Research Centre (SKUAST) at Pounichak and taken as representative of the study area. The sub humid to sub-tropical district receives normal annual rainfall of 1246 mm. June is the hottest month of the year with mean daily temperature ranging between $24.9^0$C and $41.7^0$C and reached up to $47^0$C. January is the coldest month and temperature comes as low as 4.0ºC. Most of the rainfall is received through the southwest monsoon which lasts from the last week of June to end of September. 9 During remaining period rainfall is sporadic and scanty. The humidity is lowest in May i.e. 26% and maximum in December and January is 89%. The rainfall is maximum in the months of July and August. Minimum rainfall occurs in November. Average Monthly rainfall of Jammu district is graphically presented in figure given below.




*Source: http://www.cgwb.gov.in/District_Profile/JandK/jammu.pdf*

**4.8 Social Infrastructure**

- Health & educational facilities (in the form of primary and secondary schools) are available in the nearest villages.
- Medical facilities, Primary Health Centre are there in the area.
- Village people are availing drinking water facilities generally from the hand pump, open well and tube well. The water supply is also supplied through tanker in few villages.
- Communication services like post office and telephones are available in the nearby village. Some of the villagers are having mobile phones.

**5.1 Planning Brief**

**5.2 Planning Concept:**

Applied area forms flood plain of Chenab River & remains submerged under river water nearly for 90 days in a year. As a result the working period in a year is reduced to about 270 days. It is envisaged that excavated pit in a year will be restored to its original topography in the preceding year due to deposition of suspension by water action of consecutive flood during monsoon periods. The harvesting of the river borne material deposited in the block proposed to be made on rotation basis from the surface RL up to the depth of 0.5 m (Refer Plate4). To serve this purpose the Block has been divided two sub blocks i.e. Block A & Block B. The Block A will be harvested w.e.f. February 15 to June 30 during the each year of mining operation and the Block

B will be harvested w.e.f. October, 1 to 14 February. During the break periods i.e. July, August and September months every year for the 5 consecutive years the sub blocks in the river bed accordingly shall be recouped with respect to river borne material thereby rejuvenating to its original profile and topography. The river bed material is exposed and does not have any over burden so no development work will be required for the mining of river bed. Extraction of river bed material will be done by semi- mechanized means and transportation will be by hired tippers. It is proposed to produce about 92,200 MTPA

**5.3 Population Projection:**

Manpower required will be engaged from nearby areas. No significant influx of people is anticipated in the area.

**5.4 Land use planning (breakup along with green belt etc.)**

The area likely to be degraded due to quarrying, pitting & roads:

The impact on the land form or Physiography will be limited to the modification of the slope. The landscape and land use will undergo a radical change due to open cast mining. The impact during next two years is limited as benches will be formed. Besides these benches, roads will also modify the Physiography.

The impact on land use will also be limited. The various modifications due to mining allied & activities during next five years are given below:

**In next five years of mining degradation of land will be as below**

| S.No | Landscape | Area in Hectares |
|---|---|---|
| 1. | Quarry | 9.22 |
| 2. | Infrastructure | 0.00 |
| 3. | Dumps | 0.00 |
| 4. | Buffer zone of 7.5 m | 0.76 |
| **5.** | **Total** | **9.98** |

**5.5 Assessment of Infrastructure Demand (Physical & Social)**

Temporary office and stores will be provided in the mining area. Specified first-aid box with all necessary facilities will be maintained at the site office. Communication services like post office and telephones are available in the nearby village. Some of the villagers are having mobile phones.

### 5.6 Amenities/Facilities

Additional facilities will be made as per the requirement. Arrangements for safe and healthy working conditions. Provision of Drinking water from nearby villages or through tankers in dry period.

**Transport of Men and Material:**

Workers from nearby villages will be engaged for mining and transportation purposes. They will come for work on foot. The material from the mine will be transported by trucks / dumpers.

## 6. Proposed Infrastructure

### 6.1 Industrial Area (Processing Area)

No infrastructure is proposed.

### 6.2 Residential Area (Non Processing Area)

As local workers from nearby areas will be engaged for the mining activity, no residential area/ housing are proposed.

### 6.3 Green Belt/Afforestation:

The lease area is in the river bed & devoid of any vegetation. Mining activities will not cause any harm to riparian vegetation cover as the working will not extend beyond the 20.0 m offset left against the banks in the river. Link road from the active zone pass through the areas. It is proposed to have plantation on both sides of the roads as greenbelt to provide cover against dust dissemination. Plantation will also be carried out as social forestry programme in villages, school and the areas allocated by the Panchayat State authorities.

Native plants like Sal, Teak, Neem, Pipal, Khejri, Mango and other local species will be planted. A suitable combination of trees that can grow fast, evergreen and also have good leaf cover shall be adopted to develop the greenbelt. Thick plantation will work as a pollutant arrestor, reduces floods as well as avoids the situation of erosion of soil during monsoon season

**Table: Greenbelt Programme**

Year wise no of saplings to be planted is as below:

| Year | Saplings to be Planted | Survival 80% | Species | Place of Plantation |
|---|---|---|---|---|
| I | 50 | 40 | Sal, Teak, Neem, Peepal, Mango, Sirish, Anwala, Babool, Shisham, Gulmohar | along the road side and near civic amenities, which will be allotted by Government Bodies as it is not feasible to plant trees near the mine lease area. |
| II | 50 | 40 | | |
| III | 50 | 40 | | |
| IV | 50 | 40 | | |
| V | 20 | 40 | | |
| **Total** | **250** | **200** | | |

***Note: 5 Trees per ha in area near lease (Source: Sustainable Sand Mining Management Guidelines – 2016)***

**6.4 Social Infrastructure:**

Physical & Social Infrastructure is provided, and if necessary other facilities will also be provided by mine's proponent.

- Road facility (existing roads will be maintained regularly)
- Public transport system improvement
- Direct & Indirect employment opportunity
- Social awareness camps,
- Increase revenue, sales tax, road tax to state government
- Formation of self- help groups for the women in nearby villages

**6.5 Connectivity:**

The proposed project site of Minor Mineral (River Bed Material) mining located Block No. 32 Downstream Old Chenab Bridge, Akhnoor, Village- Malpur (Bhalwal Block), Tehsil: Bhalwal, District: Jammu, J & K, which is about 22 km away from Jammu City. Mining area is 1.2 km away from Link Road (Rakh Kharoon – Domi Link Road) which is coming from Jammu-Akhnoor Hwy & 5.0 km away from National Highway-44 (Jammu-Akhnoor Hwy). The nearest populated town Akhnoor is about 6.2 km in NE direction. The Nearest Railway Station is at Jammu Tawi 25 Km towards SE and Nearest Airport, Jammu Airport is 23.5 km, SE from the lease area

**6.6 Drinking Water Management (Source & Supply of Water):**

The main drinking water requirement will be for mine workers. The strength of workers will be 14. It can be seen that drinking water requirement will be 1.0 KLD. The drinking water is provided through Hand-pump and bore well.

**6.7 Sewerage System:** As mentioned earlier Septic tank and soak pits will be provided for domestic waste generation.

**6.8 Industrial Waste Management:** Not Applicable

**6.9 Solid Waste Management:** There is no overburden or soil cover. All the quantity of ROM produced will be used as raw material source for aggregate. So there will be no waste handling. No toxic and hazardous elements are present in the inter-burden material.

**6.10 Power Requirement & Supply/ Source:**

The operation will be done only during the day light; hence there is no power requirement for the project at site.

### 7.1 Rehabilitation and resettlement (R &R) Plan

It is entirely a government traverse land, sanctioned the Mine Lease to the project proponent. No human settlements are existing in the ML area. The proposed project does not involve any rehabilitation and resettlement.

- There is no human settlement within the mine lease area.
- No human settlement will be disturbed due to the mining activity. Hence, no Rehabilitation and Resettlement issues are present.

### 8. Project Schedule& Cost Estimates:

Likely date of start of construction and likely date of completion:

Proposed project will be started after getting Environment Clearance and progressive closure plan will be submitted in due course of time.

**Project Cost along with analysis in terms of Economic Viability of the Project:**

| S. No. | Description | Unit | Total (Rs.) |
|---|---|---|---|
| **1.** | Laborers charge (Excavation & Loading) | Rs.300 / day (Man power 14) Assuming 270 days) | **11,34,000** |
| **2.** | Equipment's/Tools/Machineries | 270 days Assuming Rs.5000/day | **13,50,000** |
| **3.** | Royalty Charges paid to Govt. (Bid Amount) | - | **2,26,93,000** |
| **4.** | Haulage Road Repair & Maintenance | Annual | **2,00,000** |
| **Break-up of Expenditure on Environment Protection & Environment Management** | | | |
| **5.** | Water Sprinkling on Haulage Road for Dust Suppression | Assuming Rs.500/day for 270 days of working | **1,35,000** |
| **6.** | Plantation along the road side | ----- | **50,000** |
| | **Total** | | **2,55,62,000** |

**Corporate Social Responsibility:**

**CSR (Corporate Social Responsibility) details for the Project**

CSR plan is given below:

Total Cost of the Project = Rs. 2.56 Crore

Yearly CSR cost for the project, i.e. 5% of the total project cost

**Rs. 2.56 Crore x 0.05 = Rs.** ***1278100*** **(12.78 lakhs)**

| S.N. | Activity |
|---|---|
| **1.** | Distribution of Mosquito nets to the poor peoples of nearby villages |
| **2.** | Solar lamp distribution |
| **3.** | Construction of Ladies Toilets in the primary school nearby village |
| **4.** | Medical facilities or checkups in the village |
| **5.** | Distribution of Wheel Chairs for the Handicapped people |
| **6.** | Educational support & sanitary facilities in schools for poor students specially girls |
| **7.** | Educational grants to girl child to check drop outs in schools |
| **8.** | Setting up of Bus shelters |
| **9.** | Renovation of nearby community hall, school buildings, agan- bari center, repairs of school terrace |
| **10.** | Provide drinking water facility in surrounding villages and schools by hand pump/dug well/water tank |

**9.1 Analysis of proposal (Final Recommendations):**

The Project will bring economical benefits to the state by the way of royalty for mineral and to the local people by way of direct and secondary employment opportunities. The mine management will also help the nearby villages by providing aid to school, conducting medical and social awareness camps, helping in formation of self -help groups, etc. especially keeping in view the tribal and economically backward population in the area. Thus the project will bring about socio-economic improvement of the area and will prove beneficial to the area.

### 9.2 Financial and social benefits with special emphasis on the benefit to the local people including tribal population, If any, In the area

This project will provide employment directly or indirectly to the people residing in vicinity and also will provide livelihood to the poorest section of the society. The project involves collection of river bed material which has high demand in the local market. Thus, it will bridge the gap between the demand & supply.

This is also very essential to prevent widening of the riverbeds and to prevent flooding off by removing excess river bed material deposited on the beds. Thus it helps in maintaining the existing course of the river and thereby preventing damage to the adjoining areas like agricultural field, settlements, etc. This also ensures scientific method of excavation which will be environmental friendly.

## 10.0 CONCLUSION

The basic objective of the project is to effective utilization of Mineral in the country and /or region. With the development and industrialization has enhanced the demand of building material in last 10-15 years. Mainly in infrastructure projects like highways, buildings, township etc, which has raised the demand of River bed material beside of the mineral. River bed material mining not only provides the building material but also employment, economic growth of the state that will ultimately enhance the socio-economic status of the people of the region. The project will be environmental compatible to the surrounding due to the high standards of pollution control measures to be adopted during the operation activity. Thus it can be safely stated that the mining activities will not have any adverse effect on the surroundings, if the proper environmental management plan is adopted.