

Project: Bastipur, Dehri & Pali Soan Sand (Silica) Mining Project
Applicant: M/S Dehri-On Sone Laborer Co-Operative Society Ltd
(Chairman: Arun Kumar)

SUMMARY

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EXECUTIVE SUMMARY

The proposed project of 343.98 Ha area is of river bed Sone sand (Silica sand) mining and falls under Category- “A”, as per EIA Notification 2006 & amendments thereof of Ministry of Environment and Forests, New Delhi.

The mining lease area is located in Bastipur, Dehri & Pali village of Tehsil: Dehri, District Rohtas, State: Bihar.

Mine lease has been granted in favor of M/S Dehri-on-Sone Laborer Co-Operative Society Ltd (Chairman: Arun Kumar) for a period of 20 year from 14-03-1994 to 13-03-2014. The lessee has applied for 1st Renewal on 12-03-2013. The renewal will be considered after Environmental Clearance which is mentioned via DM letter patrank 389 M dated 7-10-2015. The proposed rate of production is 18, 75,700 TPA of Sone Sand (Silica sand). The cost of the project is Rs. 60, 00,000. The salient features of the project are detailed below:

Mining Lease Area	343.98 ha
Location of mine	The mining site situated in Bastipur, Dehri & Pali village of Tehsil: Dehri, District Rohtas, State: Bihar Bastipur Mining Site: 24°52'49.59"N 84°11'0.80"E Dehri Mining Site : 24°53'32.56"N 84°11'43.24"E Pali Mining Site: 24°54'26.54"N 84°12'18.48"E
Toposheet No.	Toposheet 72D/1 & 72D/5.
River/Nalla/Tanks/Lakes etc	River Sone
Topography	Elevation is 104 ASML to 100 ASML for the block.
Minerals of mine	Sone Sand (Silica Sand)
Proposed production of mine	18, 75,700 TPA
Method of mining	Opencast Semi-Mechanized Mining
Drilling/Blasting	No drilling and blasting is proposed
Water demand	28.44 KLD
Ultimate depth of Mining	3 m bgl or above ground water level whichever comes first
Man power	432

Solid Waste	No waste is expected as all the mineral collected is saleable
Nearest railway station	Dehri-On Sone railway station is about 3.0 Km NW directions.
Nearest state highway/national highway	NH 2C: About 2.0 km NW direction Japla Barun Road: About 2.5 km NE direction
Nearest Airport	Patna international Airport: About 119 Km in NE direction

Identification of Project and Project Proponent

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The details of the project and its proponent are given below:

Name of the applicant	M/S Dehri-on-Sone Laborer Co-Operative Society Ltd (Chairman: Arun Kumar) Station Road, Post: Dalmianagar, Dihri
Name & Address of Applicant	M/S Dehri-on-Sone Laborer Co-Operative Society Ltd (Chairman: Arun Kumar) Station Road, Post: Dalmianagar, Dihri
Name of Mine	Bastipur, Dehri & Pali Sone Sand (Sicila Sand) Mining Project

Area	348.98 ha
Mineral	Sone Sand (Silica Sand)

Brief description of the nature of the project

It has been proposed to collect approximately 18, 75,700 TPA of Sone sand (Silica Sand). No mining activity will be undertaken during the monsoon season. So the river bed material will be replenished during the monsoon season every year.

Surface Mining: The mining is confined to excavation of Sone sand (Silica Sand) from the river bed. The operation will be semi mechanized in which the river bed material will be collected in its existing form. Sone sand (Silica Sand) Mining will be carried out only upto a depth of 3 m bgl or above ground water level, whichever comes first. Mining will be carried out only during the day time. Excavation of river bed material will be completely stopped during the monsoon season.

Need for the project and its importance to the country and region

The project lies on the river bed of Sone River. The sediment in the form of river bed material (RBM) deposited in the last many years had changed the shape of the river bed from a valley to a raised land. Because of this, every year during monsoon season, heavy and devastating floods damage large tracts of land lying on both the banks of the river. Hence, it is necessary to remove the materials so that the river gets channelized.

This project operation will provide employment directly and indirectly to the people residing in vicinity, thus improving the Socio-economic status of the area.

Demands-Supply Gap

The demand for sand/Moram 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 nearby cities and towns. Therefore there is always a good demand of the mineral in the domestic market.

Employment Generation

The total direct manpower requirement for the proposed mining operation will be around 432. Indirect employment is also expected due to the associated activities.

Manpower Requirement

S. No.	Category	Numbers
1.	Administration	5
2.	Supervisor	10
3.	Skilled	50
4.	Un-skilled	367
TOTAL		432

PROJECT DESCRIPTION

Type of project including interlinked and interdependent projects, if any

The proposed project for excavation of Sone sand (Silica Sand) is an independent project in which minerals excavated will be directly sold in the local markets.

Details of alternate sites considered

Mineral is site specific as well as the lease has been allotted in the particular area. Hence no alternative site is examined for mining.

3.4 Size or magnitude of operation

The proposed mine has lease over an area of 343.98 ha. The maximum rated capacity of the project will be 18, 75,700 TPA which will be excavated out in layers.

Project description with process details

The mining project is located on the river bed of Sone River. The mining is confined to excavation of Sone Sand (Silica Sand) from the river bed. The operation will be open cast Semi Mechanized with use of excavators/JCBs etc. Mining will be done up to a depth of 3m bgl or above the water level whichever is comes first. Proper slicing of 1.0 m height and 6m width will be maintained for mining blocks as per guideline M.M.R-1961, under rule 106. Which the river bed material will be collected in its existing form. No drilling /blasting are required as the material is loose in nature. Mining will be done in layers of 1 m each which will avoid ponding effect. It will be done leaving a safety zone from bank for bank protection. Mining will be carried out only during the day time. Excavation of river bed material will be completely stopped during the monsoon season.

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Mining Process:

Mining will be done as per the guidelines of Bihar Minor Mineral Concession Rules, 2014. Applied area has been on the River bed of sone river. Mining will be done leaving safety distance from bank and stream for river bed & barrier zone around the Applied Area.

The Sone sand shall be excavated by backhoe type excavator's capacity & mineral is directly loaded into trucks/trippers for dispatch to consumers situated in and around Rohtas District. Water is sprinkled in the area from where the Sone sand is to be removed before the operation starts and thereafter at regular intervals to keep the dust allayed at the source itself. Removal of soil (overburden) precedes the winning of Sone sand (Silica Sand). Silica sand is found 20% of 100 kg from local sone river sand under the process of separation. Sone Sand (Silica sand) will be processing in his own glass making factory & also will be sent to other industries. The sand excavated will be stocked at a single place in the area & transported directly to the work place. The silica sand will be used for glass making factory, soap, detergent, and textile & cement industries. The 80% of the sone sand collected is rejects which will be used for construction of buildings, road etc. The sand will also be used for stowing of coal mines.

Once a pre-determined area has been exhausted of the sand, it shall be replenished by sand during monsoon period leveled it & maintained its maximum original topography. There is no need for drilling & blasting as hard rock is not encountered in sand mining. Therefore, Environment and Ecology of the area remains undisturbed. Light weight excavators/JCB will be deployed for extraction. Mining shall be carried through the formation of slice. Height & width of benches shall be kept 1.0m & 6m. Haul road having width 6.0 & gradient 1:12 shall be provided for the movement of machineries & transportation of sand. Mineral will be loaded in trucks of 10 tonne capacity. There will be no OB or waste generation as the sand is exposed in the river bed. Bench will advance parallel to the banks of the river. Workings will be restricted within the Applied Area/ khasra as per the description report given by Mining Department. Mining activities will be carried out in a manner so that there is no obstruction to the movement of water flow, if any, during rainy season. The bench will be in the form of slices/ strips parallel to the banks of the river. Roads in the Applied Area for the movement of loaded trippers/ trucks will not have slopes more than 1 in 20. However, movement of trucks after mineral loading will be towards both sides through approach roads connecting to

tar roads. Every block will have its own approach roads, well connected to main highways. No processing of mineral will be done.

- Mining will be done upto a maximum depth of 3 m in layers of 1.0 m each which will avoid ponding effect.
- It will be done leaving a safety zone of total of 1/5th of the width of the river from the banks for bank protection.
- Excavated area will be replenished naturally due to sediment inflow from the catchment area.

Restriction on mining:

- i) The quarrying of sand will be proposed after leaving a safety distance of 300 meter from bridge falling under NH/SH from both side of the bank, & leaving a safety distance of 100 meter from any bridge.
However the prohibited zone in respect of any particular bridge may be extended by the State Government through a notification in this regard, if so required for reasons of safety.
- ii) No quarrying shall be permitted within 50 (fifty) meters of any public place i.e. cremation ghat or any religious place etc.
- iii) No quarrying shall be permitted within 5 (five) meters from both banks of the river.
- iv) The quarrying of sand shall be prohibited within 100 (one hundred) meters upstream and downstream from any dam/weir or any other structure erected for irrigation purpose.
- v) No quarrying shall be permitted within 46 (forty six) meters distance from Flood control embankments. The quarrying shall be restricted up to a depth of 1.80m within 46 (forty six) meters to 61 (sixty one) meters to 91 (ninety one) meters distance from the above said embankments.
- vi) The irrigation outlet shall be maintained at the same level as that of the river bed and in no case the river bed level shall be permitted to be below the irrigation outlet level. No quarrying shall be permitted around the infiltration well/intake well up to a distance of 5 meters.
- vii) The extraction of sand shall be permitted only after obtaining a No Objection Certificate from the Water Resources Department in the case of rivers where from irrigation channels are out flowing.
- viii) No quarrying of sand shall be permitted in any private land owned by a person other than the settle unless the settle obtains the consent of the concerned land owner/royal tee.

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- ix)** No quarrying of sand shall be permitted in any area which the State Government notifies as a restricted area.