

# **Executive Summary**

**For**

Sand Mining Project, Block-2 (River Bed Mining)

**Located at**

Village- Parjian Biharipur, District- Ludhiana, Punjab

**by**

**“M/s Mahadev Enclave Private Limited”**

Project schedule 1(a): Mining of Minerals

**Category: B1**

**Production Capacity: 5,34,852 TPA**

(TOR Letter No. – SEIAA/M.S./2020/3226 dated 05.11.2020

(Baseline Monitoring Period – October,2020 - December, 2020)

**Submitted by**



**M/s. Eco Laboratories & Consultants Pvt. Ltd.**

Eco Bhawan, E-207, 204 & 205, Industrial Area, Phase VIII-B (Sector-74)

Mohali (Punjab) - 160071.

[www.ecoparyavaran.org](http://www.ecoparyavaran.org)

(QCI NABET Accreditation No. - NABET/EIA/1720/SA095 dated 01.10.2019)

(In-house Lab., NABL Accreditation No. – TC-7477 dated 22.06.2018)

April,2021

## EXECUTIVE SUMMARY

### 1.0 PROJECT DESCRIPTION

The proposed project involves mining of minor mineral i.e. sand from the bed of river Sutlej in Village Parjian Biharipur, District Ludhiana, Punjab. The proposed project is having an auctioned area of 37.0 hectares. The auction has been allotted in favour of M/s Mahadev Enclave Private Limited vide provisional acceptance letter with memo no. 780/M/G dated 09-07-2019. Copy of provisional acceptance letter is enclosed as **Annexure – 2**. Further copy of e-auction letter is enclosed as **Annexure – 1**. As per approved mining plan, production of mineral is 5,34,852 TPA.

The proposal is for grant of environmental clearance for sand mining project from the bed of river Sutlej in Village Parjian Biharipur, Tehsil Jagraon, District Ludhiana, Punjab, Hadbast no.: 181, Khasra No. 24//23, 24, 25, 31//8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 32//1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 33//4, 5, 6, 7, 11,12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 34//22, 23, 35//1,2, 36//19,22, 37//1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25 measuring 37.0 hectares of land. But Khasra No. 31//10,11,12,18,19,20,21,22,23,24 i.e. approx. 4.0 Ha. of land out of total area of 37.0 Ha. falls under instream of the river and no mining will be done in this area. Thus, total mineable area considered is 3,30,156 sq.m. (33.0 Ha.) for the production of sand @5,34,852 TPA over a period of 3 years,

As per MoEF, New Delhi Gazette Notification dated 14th September 2006 and amended thereof, the proposed mining project is categorized as category 'B1' project which requires Environmental Clearance.

The salient features of the project will be as under:

- **Production capacity:** 5,34,852 TPA and 1,604,556 Tonnes for three years.
- **Total Area:** 37.0 hectares
- **Estimated Project Cost:** Rs. 4.47 Crores
- **Interlinked projects:** None.



### 2.0 LOCATION & CONNECTIVITY

Project site is located at Village Parjian Biharipur, Tehsil Jagraon, District- Ludhiana, Punjab. The project site is located at a distance of approx. a distance of around 2.65 km from

NH-71 (Jalandhar Road).. The nearest railway station is Jagraon railway station, 18.8 km in S direction. The nearest Airport is Ludhiana Airport at a distance of about 50 km in 'South-East direction. There are no Wildlife sanctuaries or National Park within 10 km radius.

Project boundary corner coordinates are as follows:

PIT I		
Pillar No.	Latitude	Longitude
1	30°58'25.12"N	75°26'44.21"E
2	30°58'25.14"N	75°26'51.62"E
3	30°58'23.25"N	75°26'51.76"E
4	30°58'23.30"N	75°26'56.72"E
5	30°58'27.09"N	75°26'56.80"E
6	30°58'27.16"N	75°27'1.89"E
7	30°58'28.87"N	75°27'1.86"E
8	30°58'29.00"N	75°27'9.39"E
9	30°58'23.36"N	75°27'9.39"E
10	30°58'23.25"N	75°27'16.88"E
11	30°58'27.07"N	75°27'17.06"E
12	30°58'27.15"N	75°27'21.98"E
13	30°58'17.37"N	75°27'22.08"E
14	30°58'17.05"N	75°27'9.56"E
15	30°58'7.51"N	75°27'9.36"E
16	30°58'7.63"N	75°26'59.31"E
17	30°58'9.69"N	75°26'59.32"E
18	30°58'9.56"N	75°26'56.80"E
19	30°58'17.15"N	75°26'56.76"E
20	30°58'17.40"N	75°26'44.08"E
PIT II		
1	30°58'19.24"N	75°27'24.65"E
2	30°58'19.30"N	75°27'27.24"E
3	30°58'16.84"N	75°27'27.61"E
4	30°58'16.81"N	75°27'27.22"E
5	30°58'15.48"N	75°27'27.12"E
6	30°58'15.43"N	75°27'22.07"E
PIT III		
1	30°58'11.32"N	75°27'11.95"E
2	30°58'11.34"N	75°27'14.46"E
3	30°58'7.51"N	75°27'14.46"E
4	30°58'7.52"N	75°27'11.99"E

*Amisha*

The project site and study area falls in the Survey of India, Toposheet No. **H43J5, H43D8, H43D12 & H43J9.**

### 3.0 BRIEF FEATURES OF PROJECT

**Table 1: Size/magnitude of operation of project**

S. No.	Parameters	Description																											
1.	<b>Identification of the project</b>	Sand Mining Project on bed of river Sutlej of 37.0 Ha. area with production capacity of 5,34,852 TPA falls under Schedule 1(a) as per EIA Notification dated 14 <sup>th</sup> September, 2006 and its subsequent amendments.																											
2.	<b>Project Proponent</b>	M/s Mahadev Enclave Private Limited <b>Mr. Avnit Kumar</b> (Authorized Representative) E-mail: Avnit.kaushal@gmail.com																											
3.	<b>Brief description of nature of the project</b>	The proposed project production capacity is 5,34,852 TPA. Total area of mine lease is 37.0 Hectare and depth of the mine will be 3m from the surface level thus total volume of the mineral reserve will be 1,604,556 Tonnes. About 19,98,000 Tonnes geological reserve deposited by replenishment every year at Sutlej river after monsoon.																											
4.	<b>Salient Features of the Project Proposed</b>																												
4.1	<b>Overall plant capacity</b>	About 1,604,556 tonnes of mineral sand in three years and accordingly average proposed production for yearly shall be 5,34,852 TPA.																											
4.2	<b>Area Details</b>	Project area is 37.0 Hectares																											
4.3	<b>Location</b>	Project boundary coordinates of all corners are as follows: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="3">PIT 1</th> </tr> <tr> <th>Pillar No.</th> <th>Latitude</th> <th>Longitude</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>30°58'25.12"N</td> <td>75°26'44.21"E</td> </tr> <tr> <td>2</td> <td>30°58'25.14"N</td> <td>75°26'51.62"E</td> </tr> <tr> <td>3</td> <td>30°58'23.25"N</td> <td>75°26'51.76"E</td> </tr> <tr> <td>4</td> <td>30°58'23.30"N</td> <td>75°26'56.72"E</td> </tr> <tr> <td>5</td> <td>30°58'27.09"N</td> <td>75°26'56.80"E</td> </tr> <tr> <td>6</td> <td>30°58'27.16"N</td> <td>75°27'1.89"E</td> </tr> <tr> <td>7</td> <td>30°58'28.87"N</td> <td>75°27'1.86"E</td> </tr> </tbody> </table>	PIT 1			Pillar No.	Latitude	Longitude	1	30°58'25.12"N	75°26'44.21"E	2	30°58'25.14"N	75°26'51.62"E	3	30°58'23.25"N	75°26'51.76"E	4	30°58'23.30"N	75°26'56.72"E	5	30°58'27.09"N	75°26'56.80"E	6	30°58'27.16"N	75°27'1.89"E	7	30°58'28.87"N	75°27'1.86"E
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		Google Earth Image showing project location & its surroundings within 1 km are attached along as <b>Drawing 3</b> . Project and its study area falls in the Survey of India, Toposheet No. <b>H43J5, H43D8, H43D12 &amp; H43J9</b> is attached along as <b>Drawing 2</b> .		
4.4	<b>Water requirement</b>	<b>Source: Water Tanker</b>		
		<b>Water Requirement</b>		
		<b>S. No.</b>	<b>Purpose</b>	<b>Water Requirement (KLD)</b>
		1.	Dust Suppression	1.5
		2.	Domestic	1.8
		<b>Total</b>		<b>3.3</b>

Admitted

4.5	<b>Wastewater</b>	Domestic wastewater @ 1.4 KLD will be generated by the worker coming to site. Mobile toilet facility will be provided at the site. The wastewater generated will be treated in a septic tank and the overflow will be used for green area.
4.6	<b>Man Power</b>	40 skilled/ semi-skilled/ un-skilled workers including 1 mining competent and 1 supervisor will be hired from nearby villages, only temporary rest shelters & sanitary facility will be provided to them at the site Hence, there will be no any long term housing required.
4.7	<b>Power requirement</b>	Mining will be done only in the day time hence there is no power requirement for the sand mining project.
4.8	<b>Alternative site</b>	The proposed sand mining quarry is on river bed of Sutlej, therefore no need of rehabilitation or resettlement plan, and only local labor will be employed and who will leave the site after completion of work.
4.9	<b>Land form, Land use and Land ownership</b>	The ownership of the land is in the name of M/s Mahadev Enclave Private Limited, # B-37, Ayodhya Marg, Hanuman Nagar, Jaipur, Rajasthan-302021. The present land use pattern in the area is plain land with deposits of fine sand. The land is non-forest land. Therefore, there is no change in the land use. The land documents are enclosed as <b>Annexure 4.</b>

#### 4.0 METEOROLOGY

Meteorological data has been taken for the period of October,2020 to December,2020 from the 10km study area of the project from NABL / MoEF&CC approved laboratory. The predominant winds are mainly flowing towards West North West, with the secondary wind direction being from the South East.

#### 5.0 AIR QUALITY

Thus, PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub> and NO<sub>2</sub> levels (Criteria Pollutants) as well as Lead and Free silica in PM were monitored at five locations in the 10 km study area of the project. Sites of the monitoring stations were keeping in view of the dominant wind direction. On an average, the

observed levels are as follows: PM<sub>10</sub> from 56.7 µg/m<sup>3</sup> to 128.8 µg/m<sup>3</sup>, PM<sub>2.5</sub> from 31.5µg/m<sup>3</sup> to 77.7µg/m<sup>3</sup>, SO<sub>2</sub> from 8.0µg/m<sup>3</sup> to 16.7µg/m<sup>3</sup>, NO<sub>2</sub> from 16.5 µg/m<sup>3</sup> to 33.3 µg/m<sup>3</sup> and Free silica in PM<sub>10</sub> from BDL(DL0.01) to 0.023. The results when compared with National Ambient Air Quality Standards (NAAQS) of Central Pollution Control Board (CPCB) for "Industrial/ Residential/ Rural and Other Areas", it was observed that except PM<sub>10</sub> & PM<sub>2.5</sub> all the values of SO<sub>2</sub>, NO<sub>2</sub>, and Lead and Free Silica in PM were within prescribed limits. Mass levels of particulate dust as PM<sub>10</sub> & PM<sub>2.5</sub> were quite higher than 24 hours average NAAQ standards of 100 µg/m<sup>3</sup> and 60 µg/m<sup>3</sup> respectively.

#### **6.0 NOISE QUALITY**

Ambient noise levels were measured at 5 locations within 2km radius of the project location. Noise levels varied from 46.2 dB(A) and 48.3 dB(A) during the day time and were 36.1 dB(A) and 38.2 dB(A) during night time in the study area. The obtained noise levels are well within prescribed limits for industrial area and for residential areas.

#### **7.0 WATER QUALITY**

The ground water test results indicate that water is good in quality and safe for drinking purpose and fit for cooling water requirement. In the study area, since the samples have been collected from different sites at isolated places, the level of concentration and different elements vary quite considerably which may be due to small aquifers. However, the levels of the various components are within acceptable/ permissible norms for drinking water.

As no effluent will be generated from the industry after the commissioning of the industry. Hence, surface water quality will not be affected due to the mining operation.

#### **8.0 SOIL QUALITY**

The observations show that in the study area soil are generally alkaline in nature and Sandy loam texture with medium class of fertility.

#### **9.0 ECOLOGY**

No plant or animal species were found as per the endangered list within 10 km radius of the project site. No ecologically sensitive area like biosphere reserve, tiger reserve, elephant reserve, migratory corridors of wild elephant, wetland, national park and wildlife sanctuary are present within 10 km distance of the project location.

*Admit*

## 10.0 ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

### 10.1 AIR QUALITY

In this mining project the source of emission of air pollution is excavation, loading, transportation, haul road etc. The proposed mining operations are not anticipated to raise the concentration of the pollutants beyond prescribed limits. However, the measures are suggested to mitigate any harmful impacts of pollutants like plantation of trees along haul roads, specially near settlements, to help to reduce the impact of dust on the nearby villages; planning transportation routes of mined material so as to reach the nearest paved roads by shortest route (minimize transportation over unpaved road); regular water sprinkling on unpaved roads to avoid dust generation during transportation etc.

### 10.2 NOISE QUALITY

Increase in ambient noise level due to operation of excavator and movement of transport vehicles. Mining activities will be restricted to day time only and intermitten flow of well-maintained vehicles will there. In addition, truck drivers will be instructed to make minimum use of horns in the village area and sensitive zones. Transportation vehicle will be run into prescribed speed limit. It can be stated that the impact on the present noise levels due to mining operations will be restricted to the work zone areas only.

### 10.3 WATER QUALITY

Domestic wastewater @ 1.4 KLD will be generated by the worker coming to site. Mobile toilet facility is provided at the site. The wastewater generated will be treated in a septic tank and the overflow will be used for green area. Riverbed mining will be carried out where sediment replenishment capacity is greater. No pits/ channels will intercept the ground water/ water table. In this project, it is not proposed to truncate or divert any stream. The water table will not be intersected during mining in the riverbed as ultimate depth is limited up to 3 m or above Red line.

### 10.4 SOLID WASTE

#### 10.4.1 DOMESTIC WASTE

No waste will be generated at the site as all the mineral material is saleable. Only domestic waste of about 8 kg/day will be generated which will be disposed to the dump site of the nearest village.

*Admit/ by*



## 11.0 GREENERY DEVELOPMENT

The green belt development will be carried out by Project Proponent and maintenance will be done by the villagers/NGO's with their active participations. Plantation (3700 trees) i.e. 1000 trees per Ha of green area considered equal to 10% area of total lease area will be done. Tree plantation around the plant helps to arrest the effects of particulate matter and gaseous pollutants in the area besides playing a major role in environmental conservation efforts. The green belt would:

- mitigate gaseous emissions
- have sufficient capability to arrest accidental release
- effective in wastewater reuse
- maintain the ecological balance
- control noise pollution to a considerable extent
- prevent soil erosion
- improve the Aesthetics

All the species suggested are pollution tolerant, besides having an aesthetic appeal.

## 12.0 ENVIRONMENTAL MONITORING PLAN

The environment monitoring plan enables environmental management system with early sign of need for additional action and modification of ongoing actions for environment management, improvement and conservation. The environmental monitoring points will be decided considering the environmental impacts likely to occur due to the operation of project as the main scope of monitoring program is to track, timely and regularly, the change in environmental conditions and to take timely action for protection of environment. Monitoring of environmental samples will be done as per the guidelines provided by MoEF&CC/CPCB/PPCB. Separate records for water, air, soil & noise will be maintained regularly. Along with other budgets, budget for environmental management will be prepared and revised regularly as per requirement.

## 13.0 RISK MITIGATION MEASURES

Even with all precautions, disasters or accident may take place. As such, an Emergency Plan will be formulated to take care of any disaster in the project area and surrounding areas. The mining site will be supplied with first aid facilities and the entire mines worker will have access to that. To avoid danger while reversing the trackless vehicles especially at the

*Arvind*

embankment and tipping points, all areas for reversing of Lorries should be made man free as far as possible. All transportation within the main working will be carried out directly under the supervisions and control of the management. Overloading should not be permitted and the maximum permissible speed limit should be ensured.

#### **14.0 PUBLIC CONSULATION**

Public hearing for sand mining project will be conducted by Punjab Pollution Control Board (PPCB). The proceedings of the same will be incorporated in the final EIA report.

#### **15.0 PROJECT BENEFITS**

Production of sand will facilitate infrastructure development, creation of new employment opportunities and enhancement of income and alleviation of poverty. It will also result in annual revenue generation as royalty to the state government. The capacity of proposed project also, aiming to fill the demand-supply gap through optimum allocation and excavation of natural resources required to meet the demand effectively in the local region. Legalized sand mining will help in the prevention of illegal mining and loss of revenue

#### **16.0 ENVIRONMENTAL MANAGEMENT PLAN**

Environment Management Department will implement the EMP of the project. All recommendations given in the EIA report including that of occupational health, risk mitigation and safety will be complied. Capital cost for the pollution control for project is estimated to be Rs. 12.75 lakhs and recurring cost per year will be Rs. 18.0 lakhs per annum. Greenbelt and greenery development will be intensified by the EMD. Guidelines issued by the Central Pollution Control Board (CPCB) on greenbelt development will be followed. Environmental awareness programs for the employees will be conducted. EMD will also ensure cleanliness in and around the project.

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