EXECUTIVE SUMMARY

INTRODUCTION

As per MoEF&CC, New Delhi Gazette dated 14th September 2006 and amended thereof, the proposed mining project is categorized as category B-1 due to project area is more than 5.0 Ha. The LOI was granted in favor of Om Enterprises Prop- Rangesh Kumar Gautam Ward no 9, near Church, Daudnagar, Dist- Aurangabad via letter no- 1868/Kh, dated 21-10-2022., for the period of 5 years (A copy of LOI is attached as Annexure-I.)

The Proposed Sand Mining Project at Khata No. 1293, Khasra No. 6156 in Mauza- Shamshernagar, Vill- Shamshernagar, P.O- Shamshernagar, P.S- Daudnagar, Block- Daudnagar, District- Aurangabad, Bihar. Mine Lease Area – 86.85 Ha for production of 1563300 Cum or 2813940 TPA **Sand**

Details of each mine lease is shown in the table No. 1.1

TABLE NO.1.1 GHAT WISE DETAILS OF SAND GHATS

Sl No.	**Name of Sand Ghats**	**Name of Lessee**	**Area in hectare**	**Production in Tonnes/Yrs**
1	Aurangabad Sone 04	Om Enterprises Prop- Rangesh Kumar Gautam	86.85	2813940

ESTIMATED COST

The estimated cost of the project are shown in table no. 1.2 given below.

TABLE NO.1.2 GHAT WISE DETAILS OF SAND GHATS

NAME OF THE GHAT	**TOTAL PROJECT COST. (Lakhs)**	**EMP COST Lakhs)**		**CER COST (Lakhs)**
		Capital Cost	Recurring Cost	
Aurangabad Son 04	Rs. 2660.445	18.65	7.94	Rs. 53.21 Lakhs

PROJECT DESCRIPTION

LOCATION

The proposed mining lease area falls in Survey of India G45M12. he Proposed Sand Mining Project at Khata No. 1293, Khasra No. 6156 in Mauza- Shamshernagar, Vill- Shamshernagar, P.O- Shamshernagar, P.S- Daudnagar, Block- Daudnagar, District- Aurangabad, Bihar

TABLE NO.1.3 GHAT DETAILS OF SAND GHATS & PLOT

S. No.	Name of Ghat	Area	Khata No.	Khesra No.	Mauza/ Village
1	Aurangabad Ghat 04	86.85	1293	6156	Mauza- Shamshernagar, Vill- Shamshernagar

SITE COORDINATES

The mine lease co-ordinates are listed below:

TABLE NO. 1.4 THE MINE LEASE CO-ORDINATES

Sl. No	Latitude	Longititute
A	25° 05' 37.6080" N	84° 25' 56.1360" E
B	25° 05' 48.3720" N	84° 25' 52.8960" E
C	25° 05' 33.8280" N	84° 26' 44.1600" E
D	25° 05' 25.6560" N	84° 26' 40.4160" E
E	25° 05' 12.2640" N	84° 26' 33.1800" E
F	25° 05' 20.1120" N	84° 26' 4.3080" E
G	25° 05' 29.7960" N	84° 26' 0.8880" E

CONNECTIVITY:

- Bikramganj Railway Station, approx. 21.05 Km towards NW
- NH-139 Approx. 1.71 Km towards SE
- Gaya Airport, approx. 63.01 Km towards SE

SALIENT FEATURES OF PROJECT

<table>
<tr><td>Name of the applicant & Address of Lessee</td><td>
<table>
<tr><th>Sl No.</th><th>Name of Sand Ghats</th><th>Applicant Name/Address</th></tr>
<tr><td>1</td><td>Aurangabad 04</td><td>Applicant: OM ENTERPRISES PROP- RANGESH KUMAR GAUTAM Ward no 9, near Church, Daudnagar, Dist- Aurangabad</td></tr>
</table>
</td></tr>
<tr><td>Name of Mine</td><td>Aurangabad Ghat 04</td></tr>
<tr><td>Village& Tehsil</td><td>
<table>
<tr><th>S. No.</th><th>Name of Ghat</th><th>Mauza/ Village</th><th>Block.</th></tr>
<tr><td>1</td><td>Aurangabad Ghat 04</td><td>Mauza- Shamshernagar, Vill- Shamshernagar</td><td>Daudnagar</td></tr>
</table>
</td></tr>
<tr><td>District & State</td><td>Aurangabad, Bihar</td></tr>
<tr><td>Mineral</td><td>Sand</td></tr>
<tr><td>Area (ha)</td><td>
<table>
<tr><th>Sl No.</th><th>Name of Sand Ghats</th><th>Name of Lessee</th><th>Area in hectare</th><th>Production in Tonnes/Yrs</th></tr>
<tr><td>1</td><td>Aurangabad Ghat 04</td><td>Om Enterprises Prop- Rangesh Kumar Gautam</td><td>86.85</td><td>2813940 TPA</td></tr>
</table>
</td></tr>
<tr><td>Water demand</td><td>
<table>
<tr><th>Name of The Ghat</th><th>Total Water Requirement KLD</th><th>Domestic KLD</th><th>Dust Suppressions KLD</th><th>Green belt KLD</th></tr>
</table>
</td></tr>
</table>

	Aurangabad Ghat 04	8.61	1.0	5.0	2.61	

MINING

The mining process is opencast semi-mechanized method without drilling & blasting. Light weight excavators will be used for loading of mineral in tippers. No drilling/ blasting are required as the material is loose in nature.

The sand shall be exploited up to depth of 3.0 m. The sand shall be exploited with the deployment of an excavator & filled into tippers & transported to various buyers.

RESERVE AND PRODUCTION

Safety zone of 7.5 meter will be left all around the lease area. Working depth will be 3 meter from the surface. Volume is multiplied by bulk density (1.8) to get tonnes.

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 sand each year and area will restore its original topography.

SITE FACILITIES AND UTILITIES

Water Supply

Water requirement for the proposed project will be provided for the workers for drinking & domestic purpose. Water will also be provided for dust suppression. Fresh water will be only used for drinking purpose. The water will be supplied from available sources from nearby village.

Temporary Rest Shelter

A temporary rest shelter will be provided for the workers near to the site for rest. In addition, First aid box will be made available at the site. Sanitation facility i.e. septic tank or community toilet facility will be provided for the workers.

BASELINE ENVIRONMENTAL STATUS

Environmental data has been collected in relation to proposed mining for Air, Noise, Water, Soil, Flora & Fauna. The baseline environment study was carried out over an area with radial distance of 10 km around the mining lease area during winter season from Dec. 2022 to Feb. 2023

Meteorology

The Summarized Meteorological Data for the Monitoring Period (winter season from Dec. 2022 to Feb. 2023)is given below:

TABLE 1.5:- BASELINE ENVIRONMENTAL STATUS

Attribute	Baseline status
Ambient Air Quality	The ambient air quality study for the 8 AAQ monitoring stations shows that the maximum and minimum ground level concentration for PM10 is respectively 95.0µg/m3 at AQ1 and 66.5 µg/m3 at AQ6. Whereas the maximum and minimum ground level concentration for PM2.5 ranges between 53.0µg/m3 at AQ1 and 27.3µg/m3 at AQ8 respectively. Similarly, for SO2, the maximum and minimum ground level concentration varies between 16.2µg/m3 and 8.4µg/m3 for respectively AQ1 and AQ7 stations. For NO2 the maximum and minimum ground level concentration varies between 28.3µg/m3 & 14.5µg/m3for respectively AQ1 and AQ5 stations.
Noise Levels	Noise monitoring study reveals that the minimum & maximum noise levels at day time were recorded as 41.8 dB (A) at NQ8 & 53.5 dB (A) at NQ2. The minimum & maximum noise levels at night time were found to be 32.4 dB (A) at NQ7 & 44.6 dB (A) at NQ2.
Water Quality	5 Groundwater samples and 4 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards by Indian Standards IS: 10500. From the Surface water analysis it is evident that most of the parameters of the samples comply with 'Category 'C' standards of CPCB indicating their suitability for Drinking water source after conventional treatment and disinfection.

Soil Quality	Samples collected from identified locations indicate pH value ranging from 7.42 to 8.40, which shows that the soil is slightly alkaline in nature. Organic Matter ranges from 0.5% to 0.8% in the soil samples and, whereas the Potassium is found to be ranging from 137 mg/kg to 185 mg/kg.
Ecology and Bio-diversity	There are no Ecologically Sensitive Areas present in the study area.

ANTICIPATED ENVIRONMENTAL IMPACTS

Impact on Air Environment

The collection and lifting of minerals will be done semi-mechanically. Therefore, the dust generated is likely to be insignificant as there will be no drilling & blasting. The only air pollution sources are the road transport network of the trucks.

Water sprinkling will be done on the haul roads twice in a day. This will reduce dust emission further by 74%. Monitoring to ensure compliance with emission limits would be carried out during operation

Impact on Water Environment

Mining of sand from within or near river has an indirect impact on the physico-chemical habitat characteristics during monsoon season. These characteristics include in stream roughness elements, depth, velocity, turbidity, sediment transport and stream discharge.

The detrimental effects, if any, to biota resulting from bed material mining are caused by following:

- Alteration of flow patterns resulting from modification of the *river*
- An excess of suspended sediment during monsoon season.

Project activity will be carried out only in the dry part of the Son River. Hence, none of the project activities affect the water environment directly. In the project, it is not proposed to divert or truncate any stream in monsoon season only. No proposal is envisaged for pumping of water either from the *River* (in monsoon) or tapping the ground water.

Impact on Land Environment

The proposed extraction of stream bed materials, mining below the existing streambed, and alteration of channel-bed form and shape may lead to several impacts such as erosion of channel bed and banks, increase in channel slope, and change in channel morphology if, the operations are not carried out systematically.

The systematic and scientific removal of sand will not cause bed degradation. The silt and clay generated as waste will be used for plantation or filling up low lying area elsewhere. The mining is planned in non- monsoon seasons only, so that the excavated area gets replenished gradually during the monsoons each year.

Impact on Noise Environment

The proposed mining activity is semi-mechanized in nature. No drilling & blasting is envisaged for the mining activity. Hence, the only impact is anticipated is due to movement of vehicles deployed for transportation of minerals. The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.

Impact on Biological Environment

As the proposed mining will be carried out in a scientific manner, not much significant impact is anticipated. No mining will be carried out during the monsoon season to minimize impact on aquatic life which is mainly breeding season for many of the species. The mining site has no vegetation, no clearance of vegetation will be done. Haul roads will be sprinkled with water which would reduce the dust emission, thus avoiding damage to the crops.

Impact on Socio Economic Environment

The impact of mining activity in the area is positive on the socio-economic environment of the region. Sand mining will be providing employment to local people whenever there is requirement of manpower.

POST PROJECT ENVIRONMENTAL MONITORING

S.No.	Description of Parameters	Schedule of Monitoring
1	Air Quality	24 hourly samples twice a week in each season except monsoon
2	Water Quality (Surface &Groundwater)	Once a season for 4 seasons in a year
3	Soil Quality	Once in a year in project area
4	Noise Level	Twice a year for first two years & then once a year
5	Socio-economic Condition	Once in 3 years
6	Plantation Monitoring	Once in a season

ADDITIONAL STUDIES

Public Hearing

The public hearing will be conducted after the draft EIA submission to the Concerned authorities. The issues and items identified by the public and other stake holders will be granted in the form of public hearing minutes, accordingly it will be included in Final EIA report.

Risk Assessment

The complete mining operation will be carried out under the management control and direction of a qualified mine manager holding. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert.

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.

PROJECT BENEFITS

Physical Benefits: Road Transport, Market, Enhancement of green cover & Creation of community assets.

Social Benefits: Increase in Employment Potential, Contribution to the Exchequer, Increased Health related activities, Educational attainments & Strengthening of existing community facilities.

Environmental Benefits:

- Controlling *river* channel and protection of banks.
- Reducing submergence of adjoining agricultural lands due to flooding.
- Reducing aggradation of *river* level.
- A check on illegal mining activity.

CORPORATE ENVIRONMENTAL RESPONSIBILITY

2% of the capital cost of the project cost will be allotted for the Corporate Environmental Responsibility for activities related to education, social causes, healthcare & environmental.

ENVIRONMENTAL MANAGEMENT PLAN (EMP)

- Extraction will be done from the bed leaving safety zone from bank.
- The maximum working depth will remain above ground water table of the area.
- Provide health facilities to the workers & surrounding people in the impact area to reduce the health impacts.
- Ensuring wildlife protection & arranging awareness campaigns for the same.
- Minimize activities that release fine sediment to the *river*.
- Effective mitigation measures will be adopted to minimize disturbance during transportation & handling of minerals

- Establishment of reclamation program with plantation of local/native &fast-growing species
- Establishment of restoration plan during the closure of mine at the onset of monsoon season.
- Establishment of effective Disaster Management Plan to take timely precautionary measures to avoid effects of impending disasters.
- Establishment of effective Monitoring Program monitored by Environment Management Cell.

TABLE-1.6 :-ENVIRONMENT MANAGEMENT BUDGET

Sl. No	Description	Capital Cost (lakh)	Recurring Cost (lakh)
1	Pollution Control & Dust Suppression	**Nil**	**4.0**
2	Pollution Monitoring i) Air pollution ii) Water pollution iv) Noise Pollution	--	2.0
3	Plantation and salary for one gardener (part time basis).	17.4	0.5
4	Haul road Maintenance Cost	1.25	1.44
TOTAL		**18.65**	**7.94**

CONCLUSION

Based on the EIA study it is observed that there will be an increase in the dust pollution, which will be controlled by sprinkling of water and plantation. There will be an insignificant impact on ambient environment and ecology due to the mining activities moreover the mining operation will lead to direct and indirect employment generation in the area. Green belt development around the area will also be taken up as an effective pollution mitigative technique, as well as to control the pollutants released from the premises of the Mine.

Monitoring program will be followed till the mining operations continue. Hence, it can be summarized that the development of the mine will have a positive impact on the socio-economic environment of the area and lead to sustainable development of the region.

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shown (on the map). The details about the quantity of sand extracted from overlapped area should also be furnished duly certified from the concerned District Mining Officer.

3. The satellite imageries (high resolution) of last three years in succession for summer, rainy and winter seasons of each proposed mining lease must be submitted. A map on appropriate scale be submitted to show extraction paths to be used outside the mining lease boundary to approach major public roads (Rural/District road or State/National Highway).
4. Alternative route be explored if extraction path is passing through dense population/ human settlements.
5. A Cumulative traffic management plan for cluster sand mining proposal must be submitted.
6. A map of the area falling within 2.5 km radius from boundary of each mining lease showing all man-made public utility features such as bridge/public civil structure (including water intake points), culverts etc. and highways, and a table showing distance of the above mentioned man-made features from the mining lease boundary to facilitate decision making pertaining to relevant rules / Guidelines be submitted.
7. A report of the cumulative EIA/EMP study for the cluster sand mining blocks of the proposed mining site.

Sd/-
(Sudhir Kumar)
Member-Secretary
SEIAA, Bihar

Copy, through email, for information and necessary action to:-

1. Member Secretary, Bihar State Pollution Control Board, Patna (By Email).
2. Director, Deptt. of Mines and Geology Govt. of Bihar, Patna (By Email).
3. Additional Secretary, Deptt. Of Envit, Forest & CC GoB, Patna (By Email).
4. Guard file.

(Sudhir Kumar)
Member-Secretary
SEIAA, Bihar