

EXECUTIVE SUMMARY OF DRAFT EIA REPORT

FOR

Proposed Chhechhar Riverbed Sand Mining Project

Address of Applied land	Land Khasra	Area of applied lease (Ha)	Total Cluster Area
Village – Chhechhar, Tehsil – Kasdol, District – Balodabazar-Bhatapara	1(part)	10.00	14.90 Hect.

Applicant Name & Address

Name of Applicant	Address
Shri Akash Agrawal	H.No.72, Street 12, Smriti Nagar Village & Post – Bhilai, Tehsil – Bhilai Dist – Durg(CH) Pin – 490001

Terms of Reference

Name of Applicant	Number and date of Terms of reference
Shri Akash Agrawal	Vide letter no. 496/S.E.A.C.C.G./Ret Khadan /2747 Nawa Raipur Atal Nagar, Dated 13/05/2024

ENVIRONMENTAL CONSULTANT



Environmental Consultancy & Laboratory
(Lab. Gazetted by MoEF-Govt. of India)

M/s. ULTRA-TECH
ENVIRONMENTAL LABORATORY AND CONSULTANCY

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EXECUTIVE SUMMARY

1.0 Introduction

The proposed project is a project of Mining of Riverbed Sand Mine (Total lease area in cluster including applied mine is 14.90 Ha of Riverbed Sand) village – Chhechhar & Changori, Tehsil - Kasdol, District - Balodabazar-Bhatapara, State Chattishgarh. Details of the entire lease are discussed in other coming chapters. The lease holder in the cluster is Akash Agrawal owner of Chhechhar Sand Mine having lease area of 10.00 Ha. TOR issued in favour of project proponent whose details is as follow –

Chhechhar Sand Mine – Vide letter no. 496/S.E.A.C.C.G/ Ret Khadan /2747 Nawa Raipur Atal Nagar, Dated 13/05/2024.

As per MoEF Notification dated 15.01.2016 Appendix – XI (6) ‘A cluster shall be formed when the distance between the peripheries of one lease is less than 500 m from the periphery of other lease in a homogeneous mineral area’. The proposed Riverbed Sand mining is an individual mine.

According to above, information about the mines coming under B1 category whose ownership and lease details is as follows.

Project Location –

The proposed project of Chhechhar Riverbed Sand mine having an area of 10.00 hect. and situated at Village- Chhechhar, Tehsil- Kasdol, District: Balodabazar-Bhatapara, State: Chattishgarh under Khasra No. 1(Part). Applied production is 1,80,000 cum/yr. The proposed method of mining is open cast semi mechanized mining.

Location Map of Proposed Site from District Office

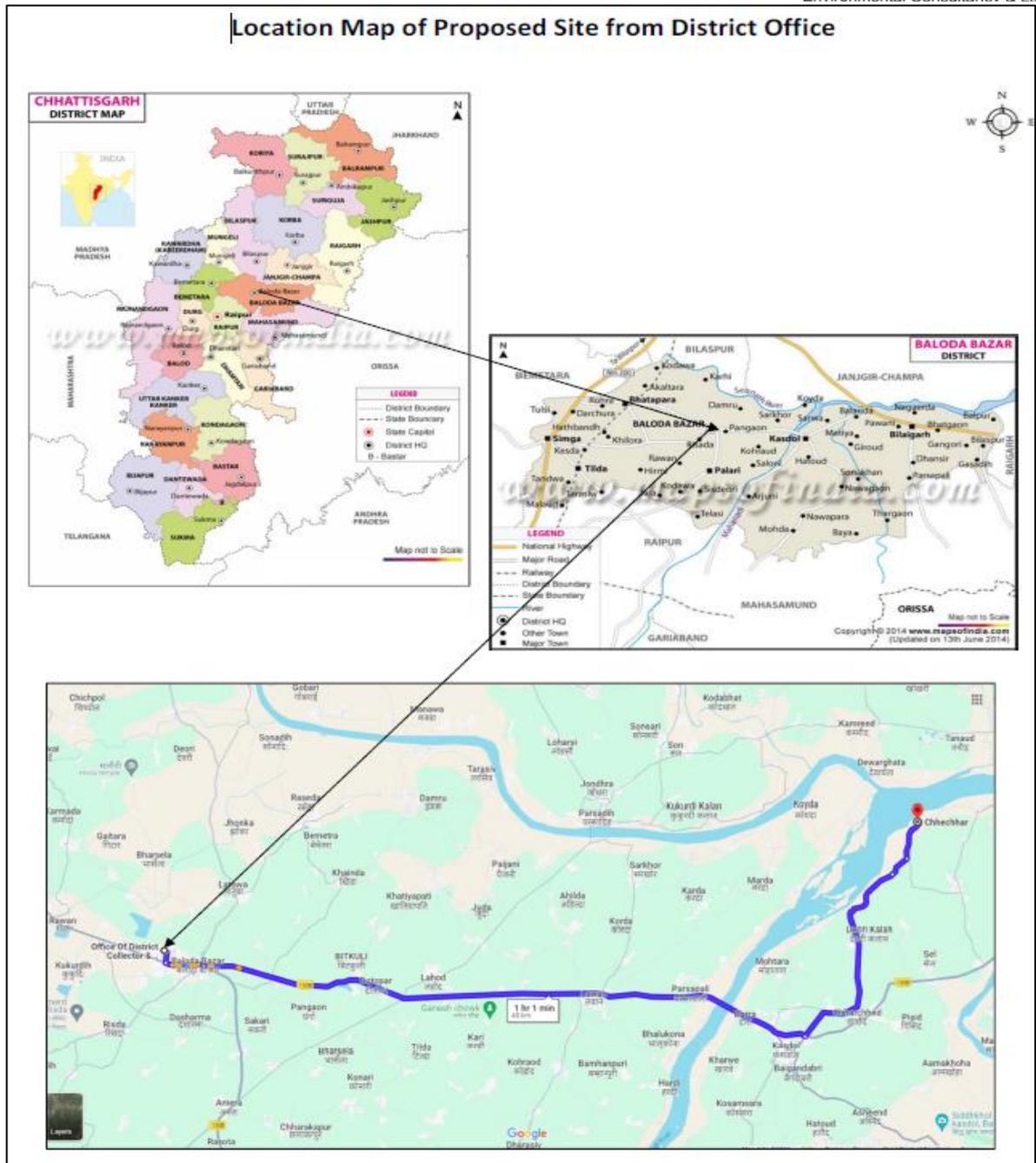


Figure 1: Location map of the Project Site

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Table E.1: Environmental Setting of Proposed Riverbed Sand Mining Projects

Particulars	Details		
Name of the Project	Chhechhar Riverbed Sand Mining Project, Area: 10 Ha. (Govt. land)		
Location of the Project	Village- Chhechhar, Tehsil- Kasdol, District- Balodabazar-Bhatapara, State- Chhattisgarh		
Geographical Coordinates:	Pillars	Latitude(N)	Longitude(E)
	C 1	21°43'10.78"N	82°28'23.72"E
	C 2	21°43'15.41"N	82°28'20.69"E
	C 3	21°43'26.45"N	82°28'39.22"E
	C 4	21°43'23.29"N	82°28'41.48"E
Size of the Project	10 Ha		
Nearest Highway	NH 130 B at 7.80 km towards south (Raipur-Sarangarh Road)		
Nearest railway station	Akaltara at 34.30 km towards north		
Nearest Airport	Bilasa Devi Kevat Airport, Bilaspur - 48.00 Km toward North - West		
Nearest town/City	Shivrinarayan at 11.20 km towards North - East		
Densely populated or built-up area	Shivrinarayan at 11.20 km towards North - East		
Archaeologically important places	None within 10 km radius		
Water Body	Dam/ Reservoir	18.65 Km Daldali Dam towards SE.	
	Irrigation Canal	1.10 Km towards SE.	
	Water Supply / Irrigation Scheme / Anicut –	12.80 Km towards east over Mahanadi River.	
	Nalla	2.35 Km towards SW.	
	Tank /Pond	1.20 Km towards SE.	
Protected areas as per Wildlife Protection Act (Tiger reserve, Elephant reserve, Biospheres, National parks, Wildlife sanctuaries, community reserves and conservation reserves)	None within 10 km radius		
Reserved / Protected Forests	Open Mixed Jungle :7.30 Km, NE		
Defense Installations	None within 10 km radius		
Seismicity	Since project site comes under Seismic zone II, which is least active zone for earthquakes as per IS: 1893 (Part 1: 2002).		
Wildlife Sanctuary	None within 10 km radius		
National Park	None within 10 km radius		
Biosphere reserves	None within 10 km radius		

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Particulars	Details
Important migration routes of birds	None within 10 km radius
Ramsar sites (Wetlands of International Importance)	None within 10 km radius
Unique or threatened ecosystems	None within 10 km radius
Important topographical features, including ridges, river valleys, shorelines, and riparian areas	None within 10 km radius
Mangrooves	None within 10 km radius
Physical Sensitive Receptors	None within 10 km radius
Notified Ground Water Zone by CGWA	None within 10 km radius
Critically Environmental polluted Area	None within 10 km radius
Pollution Sources	None within 10 km radius

2.0 Project Description

The proposed project of Mahanadi Riverbed Sand mine having an cluster area of 10 Ha is situated at Village- Chhechhar, Tehsil- Kasdol, District Balodabazar-Bhatapara, State: Chattishgarh. The life span of proposed mine block is 5 years. The proposed method of mining is open cast semi mechanized mining.

Table E-2: Salient Features of the Proposed Mining Project

INFORMATION	DETAILS
Name of the project	Chhechhar Riverbed Sand Mine
Village	Chhechhar
Tahsil	Kasdol
District	Balodabazar-Bhatapara
State	Chhattisgarh
Toposheet No	64 K/6
Name of Lease holders	Akash Agrawal
Address and Contact details of Lease Holders	S/o.Shri Manoj Agrawal H.No. 72, Street 12, Smriti Nagar

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	City –Bhilai, Tahsil- Bhilai District – Durg, Pin code – 490001
Name of the Mineral to be mined	Riverbed Sand
Type of land	Govt. Land
Status of Operation (New Project or Existing Project operating since)	New Project
Mine Area	10.00 Ha
Ultimate depth of mining	3 m
Minable Reserve	1,80,000cum
Production Capacity	1,80,000 cum/yr
Life of Mine	Not applicable as applied area is river bed sand mine where mine pit gets replenished during moonsoon season
Quantity of topsoil and Overburden estimated to be removed	Nil. This is ordinary river bed sand. There have no any top soil or overburden.
Depth of Ground Water Table	3.00mtr of depth from top surface layer.
Method of Mining	Opencast Semi-Mechanized
No.of working days	240 Days
SeismicZone	SeismicZone II

2.1 Mining Methodology

The method of mining is open cast semi-mechanized i.e. ordinary sand will be excavated in layers of 1 meter depth to avoid ponding effect and after first layer is excavated; the process will be repeated for the next layer so on up to a depth of 3 meter in Riverbed. Sand will be gathered in small hips on suitable areas as instructed for loading purpose. Loading will be done by deploying light capacity and light weight loaders.

2.2 Water Requirement-

The total water requirement shall be 9.00 KLD for domestic, green belt and sprinkling purpose, which will be sourced from Water Tankers from nearby village. Detail of water requirement is given below:

Table E-3: Water Requirement Details

Sr. No.	Usage	Water Requirement	
1.	Greenbelt Development@ 2.5 L/tree	2000Trees X 2.5Lit/day = 5,000Lit/day	5.00KLD

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2.	Dust Suppression @ 0.5 L/Sqm (twice a day)	Haul /Approach road Area = (540 m Length x 4 m width = 2,160 sqm.) x 0.5 li/sqm = 1,080 lit /day x 2 time = 2,160 lit/day or say 3.00 lit/day	3.00 KLD
3.	Domestic Purpose @25 lpd/worker	24 workers x 25 lit per day = 600Lit/Day or say 1 lit/day	1.00 KLD
Total ::			9.00KLD

2.3 Power Requirement

Power is not required in operation phase of the proposed project, as diesel equipments will be used. Open cast semi mechanized method will be used for excavation. There is no power requirement for the project as excavators will run on diesel and the excavation will be done only day time.

2.4 Manpower Requirement

The mining project will generate direct & indirect employment. About 24 per day people will get direct employment, and some persons will also be affected indirectly and employed with allied and related industries, such as transportation, maintenance, etc. Following staff & workers are proposed to be employed: -

Table E-4: Manpower Details Malpuri Riverbed Sand Mine

S.No.	Category	No. of persons
1	Assistant Manager	1
2	Foreman	1
3	Supervisor staff	1
4	Supervisor cum First Alder (Skilled)	2
5	Semi – Skilled/ skilled Labours	2
6	Unskilled personnel	2
7	Driver and Machine operators	15
Total		24

3.0 Description of Environment

The area around the proposed mining site has been surveyed for physical features and existing environmental scenario. The field survey and baseline monitoring has been done from the period of 20th October 2023 to 20th January 2024 (Post monsoon Season).

The observations for Post-Monsoon season -(20th October 2023 to 20th January 2024) are summarized below:

3.1 Meteorology

The secondary meteorological data of the study period collected from (<https://www.nasa.gov.in/>). The month wise meteorological data is given in Table E-5.

Table E-5: Meteorological Data of the study area (NASA Power - Raipur)

Period	Wind Speed (m/s)			Temp (°C)			Relative Humidity (%)			Rainfall (mm)			Solar Radiation		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
Oct -23	4.28	0.08	1.93	33.31	24.26	20.98	100	51.19	75.04	0	0	0	852.63	0	224.7
Nov -23	3.49	0.14	1.74	28.28	13.83	19.14	100	49	75.89	0	0	0	761.56	0	172.1
Dec -23	4.29	0.13	1.98	27.16	9.87	18.26	100	37.69	74.31	0	0	0	727.59	0	146.8
Jan -24	3.89	0.41	2.11	27.08	3.74	16.68	100	31.12	69.44	0.2	0	0	764.33	0	139.2

Source: Weather Summary for 20th October 2023 - 20th January 2024(<https://www.nasa.gov.in/>)

3.2 Air Environment

The ambient air quality is carried out at 10 locations in and around the project site and studies are carried out as per CPCB standards. It is observed that, all the values are within the prescribed limits as per National Ambient Air Quality Standards (NAAQS), 2009.

3.3 Noise Environment

Noise levels were monitored in eight locations including project within the study area. The noise levels ranged between 52.4 to 59.0 dB (A) during day time and noise levels ranged between 43.9 to 49.6 dB (A) during night time. Over all the monitored noise levels are found to be within the stipulated standards set by CPCB.

3.4 Water Environment

In order to establish the baseline water quality, 5 ground water and 5 surface water samples were collected and analyzed in the study area. The quality of surface water samples was compared with surface water specification IS 2296:1982 and the surface water quality comes under Class D (Propagation of wildlife and fisheries). The ground water samples were compared with drinking water specification IS 10500:2012 standards.

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3.5 Soil Quality

A total of 10 samples in and around the project site are collected and analysed. It has been observed that the pH of the soil quality ranged from 6.9 (S6) to 8.1 (S4) indicating that the soil is slightly alkaline in nature.

Table E- 6: ENVIRONMENTAL BASELINE STUDY

Particular	Number of Locations	Description
Background Ambient Air Quality Monitoring	Sampling was done at 10 Locations	PM ₁₀ :-43 to 69 µg/m ³ PM _{2.5} :-22 to 38 µg/ m ³ SO ₂ :- 5 µg/ m ³ to 15µg/ m ³ NOx:- 10 to 25 µg/ m ³ CO:-0.4 to 1.5 mg/ m ³ SiO ₂ -0.01 to 0.07 µg/ m ³
Noise Level Monitoring	Monitored at 10 Locations	Noise Level During Day Time :- 52.4 to 59.00 dB (A) Noise Level During Night Time:- 43.9 to 49.6 dB (A)
Water Sampling	Ground water sampling was done at - 5 Locations	pH :- 7.2 to 7.8 ; TDS :- 392 to 542 mg/l ; Total Hardness :- 248 to 452 mg/l SO ₄ :-52 mg/l to 69 mg/l; Chloride :- 57 mg/l to 87 mg/l; Zn & Fe: - Below detectable limit.
	Sampling:- 5 at Surface water	pH :- 7.3 to 7.7 ; TDS :- 222 mg/l to 588 mg/l; Dissolve oxygen: - 5.7 to 5.9 mg/l. Chloride :- 47 mg/l to 125 mg/l; Calcium :- 26 mg/l to 67 mg/l; Magnesium :- 14 mg/l to 38 mg/l; Total Hardness :- 128 to 322 mg/l ;
Soil Sampling	Sampling was done at 10 Locations	pH :- 6.9 to 8.1; Nitrogen:- 168 to 203 kg/ha. Phosphorus:- 58 to 85 kg/ha Potassium :- 327 to 451 kg/ha Electric Conductivity:- 292 to 513 ms/cm

Land Use/Land Cover of the Study Area

The project location is situated in Chhechhar is a village in the Kasdol Tehsil of Chattisgarh's Balodabazar-Bhatapara District. Total Study area of Silica sand mining project is 329.62

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sq.km. Agricultural Land is present in the study area is 25.83 km contributing 7.83 % area of the study area. Fallow land extends 146.68 sq.km contributing 44.50 % in this map. . Out of total area, 3.63 sq. Km area comes under built up land class. This is 1.14 % of total study area. Settlements near Project site are detected scattered. No major settlement is detected. Chhechhar is a village near Project Site. These areas were identified and mapped as water bodies; this unit is spatially distributed in 19.81 sq. Km area which is 6.00 % of total area. Mahanadi and Lakes are observed in the study area using remotely sensed Image. Lilagar Nadi, Phunki Nala, Seonath River, Maha nadi are some water bodies detected.

This Land use/land cover class in the study area covers 113.51 sq. Km area as vegetation. It is 34.43 % in the study area. Open Land is detected in the study area is 5.78 sq. km and consisting 1.75 %. Barren Land is detected in the study area at some of the stone quarries is 0.81sq. Km and consisting 0.24 %.

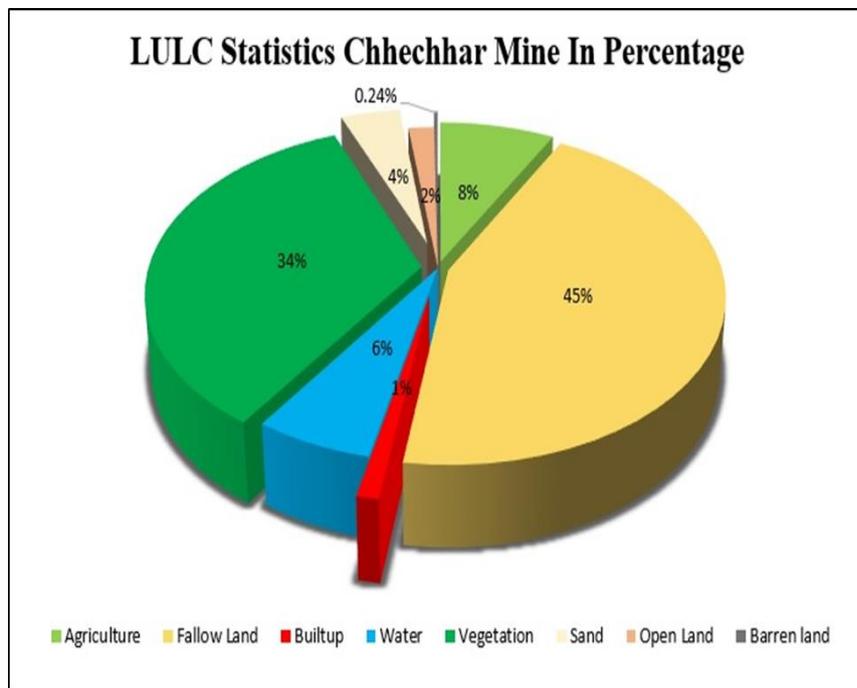


Figure 2: LULC Classification (10 km radius Proposed Project Area) of the project site

3.6 Biological Environment

The ecological study of the area has been conducted within 10 km radius of the project site in order to understand the existing status of flora and fauna to generate baseline information. Based on land use map & topo sheet there are no patches of Reserve forest within 10 km of study area.

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3.7 Socio-economic Environment

Socio-economic has been recognized as, a component of environment. It focuses primarily on the social and economic effects that are likely to occur as a result of the construction and operation of the proposed development. It includes various factors, viz. demographic structure, availability of basic amenities such as housing, education, health and medical services, occupation, water supply, sanitation, communication and power supply, prevailing diseases in the region as well as features such as places of tourist attraction and monuments of archaeological importance. The study of these parameters helps in identifying predicting and evaluating the likely impacts due to project activity in the surrounding region. Any developmental activity exerts direct, indirect, positive and negative impacts on the socio-economic environment of the region.

4.0 Anticipated Environment Impacts and Environment Management Plan

Land/Soil Environment Impact Mitigation

The mitigation measure of the land environment includes:

- The Riverbed Sand excavated from the lease area will be completely sellable resulting no dump with in the lease area
- Due to semi mechanised mining operation emission from the Riverbed Sand mines are negligible, there will be no impact on the surrounding soil quality and cropping pattern of the area.
- The propose project falls under the seismic zone –II (Low Hazard Risk Zone). Since this project will not have physical infrastructure to be constructed, no impact of seismicity is envisaged in this project. Further, this project will not change/alter the seismic behaviour of the area.

Air Impact Mitigation

The mitigation measures undertaken in the mine for control of air pollution are:

- Checking of vehicles and machinery to ensure compliance to Indian Emission Standards Transportation vehicles and machinery to be properly and timely maintained and serviced regularly to control the emission of air pollutants in order to maintain the emissions of NO_x and SO_x within the limits established by CPCB.
- Total 9.00 KLD water required for riverbed sand mines towards dust suppression purpose for which 1 no. of water tanker with 2000 liter capacity will be hired and used for water sprinkling twice in a day in haul roads, dumping site, loading and unloading site of each lease and this will be regularly monitored by the lease management. Water sprinkling on

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transport road side, stock yard (if any) etc. will be done by tractor mounted water sprinkler.

- Regular impaction and grading of haul roads will be done to clear the accumulation of loose material
- All the mines workers will be provided with the dust masks.
- Trees can act as efficient biological filters. As this is a small lease, the area available for plantation is very less. However a well planned plantation programme has been proposed for the mining area to arrest the dust pollution within the lease boundary. There is the proposal for continuous plantation along the river bank and both side of the road connecting the cluster.
- Vehicles with valid PUC shall be used for transporting the minerals to avoid the exhaust emission.
- A greenbelt development plan is prepared with local species. The greenbelt on the periphery will reduce the dust level sits
- Regular monitoring of the air quality as per the monitoring plan detailed in Chapter 6 of this EIA report shall be adopted during the operation phase, to ensure that, the air quality is within the desired limits prescribed by CPCB.

Noise Impact Mitigation

- No noise polluting work shall be carried out in the night hours
- Provision of PPE's for the workers
- Vehicles to be serviced regularly and maintained properly to avoid any unwanted generation of noise or vibration from them
- Green belt plantation and garden trees will help in reducing the noise, traffic related pollution and heat island effects.
- Proper lubrication, muffling and modernization of equipment shall be used to reduce the noise during operation phase.
- Regular monitoring of the noise levels as per the monitoring plan detailed in Chapter 6 of this EIA report, shall be adopted during the operation phase, to ensure that, the noise levels are within the limits prescribed by CPCB.

Water Impact Mitigation

- Provision of temporary toilets for laborers

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- Domestic waste water will be treated into septic tank followed by soak pit outside of the proposed cluster project with a safe distance and no wastewater will be allowed to be get discharged into the water body.
- Any areas with loose debris within the lease hold should be planted.
- Ground water table will not be intersected during the mining activity

Biological Impact Mitigation

Impact on Flora

- As it is sand mining project, activities will be confined to (river bed) core zone only. The project area is surrounded by agricultural land. There is no forest land involved in mine lease area. Thus no direct impact is foreseen on the flora of the forest area because of mining, whereas activities related to mining as transportation of material and passage of workers to and from mining area will have an adverse impact on the road side flora.
- Significant reduction in total chlorophyll content at road side plant species affects the plant species by affecting the plant metabolism. The reduction in chlorophyll concentration corresponds directly to the reduction in plant growth.

Mitigation Measures

- Plantation will be carried out on approach roads and surrounding of project site.
- Native plant species which are stress and pollution tolerant and comparatively well acclimatized should be grown along roadsides, for selection of plant species it is necessary to consider certain factors as agro climatic suitability, height and canopy architecture, growth rate and habit and aesthetic effect (foliage, conspicuous and attractive flower color).
- Annual bio-monitoring of roadside plants exposed to vehicular pollution will be done to check the dust load and Air Pollution Tolerance Index (APTI).

Impact on Fauna

The mining, specifically, will have no adverse impact on fauna whereas the operational activities such as human activity, transportation and noise generation may have an adverse impact on fauna.

- No national park wild life sanctuary is present within 10 km area so radius of study

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area. No major wildlife observed within mine lease area during the survey period. Considering size of mine and management practice by scientific method of mining with proper Environmental Management Plan including pollution control measures especially for air and noise, which will not cause any adverse impact on the surrounding animals.

- Greenbelt development will be carried out which will help in arresting dust and minimizing sound level arising from the mining operation.
- Some fauna will move from the area of the road side as a result of habitat loss and physical disturbance

Mitigation Measures

- All equipment should have sound-control devices no less effective than those provided on the original equipment. Motorized equipment used should be adequately muffled and maintained.
- Use exhaust silencers and optimized acoustical pipe lagging (acoustical wrapping) to minimize compressor noise.
- As the mining site is river so there is no vegetation, thus clearance of vegetation is not required.
- Thus there will be no loss for wildlife.
- Large woody debris in the riparian zone will be left undisturbed or replaced when moved and not be burnt.
- The drilling and transportation will be carried out during the day time only minimizing the impact on the wild fauna movement.
- Fencing around the entire mine lease area is recommended in order to restrict the entry of stray animals into the mining area.

Socio-Economic Environment Impact Mitigation

The setting up of any kind project would undoubtedly include significant impact on socio-economic and cultural life of the people in the project area. Here, an attempt is made to visualize and discuss such tentative impacts likely to be induced by the project. The likely impacts due to project activity are described below:

Positive Impacts

- Revenue for the State Govt. in form of taxes and duties.

- The proposed mining project activity does not involve any resettlement and rehabilitation process as the project is freshly designed at representative site where none of the settlement is present.
 - Mining and dragging phase could lead to creation of employment and procurement opportunities.
 - A multiplier effect will be felt on the creation of indirect employment through the local community like labor contract, transport suppliers.
 - The operation of the mining would help to improve socio-economic condition of people in villages through separate fund allocated for CSR/CER.
- **Negative outcomes**
- During mining phase, increase level of dust and other air pollutants may lead to health problems.
 - Vehicular traffic and construction activities may create noise pollution.
 - The mining activity could lead to increased nuisance level from air emissions and noise due to transportation of material and equipment as well as laborers.
 - There would be influx of workers during mining phase which could lead to pressure on key local infrastructure such as Road Transportation.

Socio Economic Environment: Mitigating Measures

In order to mitigate the adverse impacts likely to arise in the surrounding area due to proposed project activity, it is necessary to formulate an effective mitigation plan. The suggestions are as follows:

Before Commencing and During Initial Phase:

- Communication with the local community should be institutionalized and done on a regular basis. The forum could provide opportunities to discuss local critical issues and prepare programmes of mutual benefits.
- Information regarding the proposed development plan, community programmes etc. should be communicated to the local community in the form of display Poster, booklets and audio-visuals.

Mining Phase:

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- Project proponent should take appropriate steps to keep environment clean and healthy during construction phase.
- Provision of adequate drinking water, toilet and bathing facilities should be made available on project site also in labour camp site.
- Water shall be sprinkle/spread over the truck and road to suppress dust during transportation of mining material to control air pollution and thereby avoid adverse health impact.
- A barrier located in the direction of the wind, with a height of approximately three times the height of the storage pile, would reduce PM10 and PM2.5 emissions.
- While transportation of dragging material, truck, tractors should be covered.
- Proper Training and awareness programme should be carried out so that the workers understand the importance of safety equipment's.

5.0 Environmental Monitoring Program

Environmental monitoring shall be carried out at the locations to assess the environmental health in the post period. A post study monitoring programme is important as it provides useful information on the following aspects.

- It helps to verify the predictions on environmental impacts presented in this study.
- It helps to indicate warnings of the development of any alarming environmental situations, and thus, provides opportunities for adopting appropriate control measures in advance.

Detailed EMP plan during the operation phase is given chapter 6 of EIA report.

6.0 Risk Assessment

The hazards and its risk assessed during the operation phase of the proposed Riverbed Sand mining project are low, medium & high. The project proponents are proposed to implement all the mitigation measures to prevent the impact or consequences of the risk expected to be happened in both the project sites. The level of impact after implementing the mitigation measures will be low/medium in all the hazards identified.

7.0 Emergency Response and Disaster Management Plan

Impact of disaster can be significantly reduced through attempts at preparedness, mitigation, and post-event rehabilitation work. Based on hazard identification in the proposed project, an emergency plan has been prepared and the same plan will be implemented by the project

implementing agency with the coordination of District Authorities to minimize the damage. The risk assessment and disaster management plan is detailed in Chapter 7 of the EIA report.

8.0 Project Benefits

Mining is back bone of infra-structure development of country. Proposed project has following benefits as given below:

- Employment for local people
- Revenue for the State Government in form of excise duties, GST, taxes, levies etc.
- Generate business opportunity for the people
- Need based funds will be used for welfare of people in villages
- EMP funds will improve environmental quality.
- The operation of the Riverbed Sand mining would help to improve socio-economic condition of people in villages through separate fund allocated for Need Based Activity.

9.0 Budget for Social Development

The total estimated cost of the project is 53.92 lacs. Rs 1,18,000/- lac will be allocated for Need based activity for causes of village for drinking water, sanitation, pond, health.

10.0 Environment Management Plan (EMP)

The detailed Environment Management Plan has been prepared based on the mining activities and the impacts imparting on land/soil, air, noise, water by the activities. The EMP and the cost for the environment protection measures are detailed in Chapter 10 of EIA report..

Expenditure Proposed for Environmental Protection Activities:

S.No.	Particulars	Chhechhar Sand Mine	
		Capital Cost in Rs	Recurring Cost in Rs
1	Air Pollution Control	-	72,000
2	Green Belt Development	2,75,625	3,42,000
3	Maintenance of Road	-	40,000
4	Facilities for Mine workers	50,000	1,08,000
	Total ::	3,25,625	5,62,000
Total Capital Cost in Rs		3,25,625	
Total Recurring Cost in Rs		5,62,000	
Total Cost of EMP in Rs		8,87,625	

Executive Summary of Draft EIA Report of Chhechhar Riverbed Sand Mining of Shri Akash Agrawal at Village Chhechhar, Tehsil- Kasdol, District- Balodabazar-Bhatapara, State- Chattishgarh.

11.0 Conclusion

As discussed, it is safe to say that the collection of minor minerals from the proposed lease area is not likely to cause any significant impact on the ecology of the area as the mineral is and waste generated is non-toxic and does not harm the surrounding environment.

Adequate measures will be taken to control the fugitive emissions to be generating during mining operation. Socio-economic condition of the surrounding villages will improve in long run due to involvement of local population and improvement of infrastructure facilities. Green belt development in the statutory boundary, approach roads, schools are proposed with the participation of local people. This proposed plantation in the area will improve the aesthetic look along with betterment of ecology and environment of the locality.