

1.0 RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Mining are associated with several hazards that pose impacts on Workmen & surrounding area necessitating adequate implementation of Safety and health measures. **M/s Mateshwari Mintech Pvt. Ltd.** will use manual /Semi mechanized method of mining by excavators operated by diesel engine. Bajri Mining along Gair Mumkin Nadi & Nallah (Ruparel or Barah Nadi) will not be done during rainy season to protect banks from erosion.

2.0 HAZARD IDENTIFICATION & RISK ASSESSMENT

Major Risks involved in River Bed Mining are following:

1. River Bed Inundation
2. Soil Erosion
3. Uneven/ Irregular mining of sand or bajri
4. Disturbance of Ground water Level
5. Damage of River bank due to access of Entry Points/Ramps
6. Surface degradation due to road network
7. Sand storage stacks stability Failure
8. Fugitive Emissions due to loading
9. Diesel fumes from diesel operated machines.

3.0 MITIGATION MEASURES

Possible Risks Due to Inundation & Its Control

Mining will be done during the non monsoon periods so there shall be no problem of inundation. Mining will be restricted to a depth of 3 m from surface or 1 m above water level, whichever is earlier.

Soil Erosion

There is no top soil in the core zone. The lease area is a part of gair mumkin nadi & nalla. No mining will be done within 10 m from the either side of river banks to maintain its protection. Mining will proceed along the river in the direction from downstream to upstream in each block. No mining will be done across the river-nallahs.

Uneven/ Irregular mining of sand or bajri

Due to uneven/ irregular thickness of sand bed, river bed mining may result in ponds to develop. Excessive mining can change River direction & geometry altering recharging capacity of replenishment. Proper management of excavation can overcome this.

Disturbance of ground water Level

Uncontrolled mining activity may lead to intersection of Ground water table resulting contamination & leakage. Ground Water will not be intersected as mining will be restricted to a depth of 3 m from surface or 1 m above water level, whichever is earlier.

Possible Risks Due to Failure of waste Dump & Its Control

There is not waste generation in this river bed mining project so no waste dump is created therefore the question of failure of waste dump does not exist.

Possible Risks Due to Fire & Its Control

The operation does not anticipate any fire disaster (only use excavators that are diesel based engines onsite for bajri collection and storage)

Fugitive Emissions due to loading/Unloading

Fugitive emissions due to loading and unloading causes impact on health of mine workers, staff. Regular water sprinkling will be done for dust suppression.

Diesel fumes from diesel operated mechanization

Health impact due to from emission of diesel operated vehicles and Equipment. Proper maintenance of vehicles will be done.

4.0

MEASURES TO PREVENT ACCIDENTS DUE TO TRUCKS AND DUMPERS

- ✓ All transportation within the mining block will be carried out directly under the supervision and control of the management.
- ✓ The vehicles will be maintained in good condition and checked thoroughly at least once a month by the competent person authorized for the purpose by the management.
- ✓ Road signs will be provided at each and every turning point up to the main road (wherever required).
- ✓ To avoid danger while reversing the trackless vehicles especially at the embankment and tipping points, all areas for reversing of trucks/ tippers should as far as possible be made man free.
- ✓ A statutory provision of the fences, constant education, training etc will go a long way in reducing the incidents of such accidents

Other Possible Measures to Avoid Risks/ Disaster Due to River Bed Mining

- ✓ Every mining block will have clearly identified approach road/ entry points into the rivers- nalla and similarly the exit points.
- ✓ Excavation will be carried out up to a maximum depth of 3 meters from surface of sand deposit and not less than one meter from the water level of the River channel whichever is reached earlier.
- ✓ Unused material including bajri will not be stocked on the banks as it will hinder the flow of river in monsoon season.
- ✓ Collection of minerals/working shall be started from the centre towards the bank periphery so that the river course could not get affected.
- ✓ The minerals will be mined out in a uniform way so that the river flow/course shall not get disturbed in its uniformity.

- ✓ River bank areas, under operation will be protected by avoiding unauthorized gravel excavation along rivers as that may cause instability to the river bank.
- ✓ Access roads/ramps to river bed will be breached before onset of monsoon to permit unhindered flow of river.
- ✓ Only excavated river bajri/Gravel should be used to deposit against the river bank to form access ramps.
- ✓ Markers showing water level will be provided on the site.
- ✓ In order to make adequate replenishment, blocks will be mined in alternate year, so that one block is kept idle/ non-working while the other is being worked.
- ✓ The MoEF Guidelines issued by a working group in March, 2010 and Rajasthan State Government Policy Notification No. GSR 27 dated 21 June, 2012 in respect of mining of bajri will be followed. Mining will be done as per Approved Mining Plan & Progressive Mine Closure Plan.

