

# 1. RISK ASSESSMENT

## 1.1 RISK ASSESSMENT

The possible risks in the case of river bed mining project are bank erosion, floods, accidents due to transportation etc. Mining and allied activities are associated with several potential hazards to both the employees and public at large. A worker in a mine should be able to work under adequately safe and healthy condition. This is possible only when there is adequate safety in mines. Safety of the mine and the employees is taken care of by the Mining Rules & Regulations, which are well defined with laid down procedure for safety, which when scrupulously followed safety is ensured not only to manpower but also to machines & working environment.

### 1.1.1 POSSIBLE RISKS DUE TO INUNDATION & ITS CONTROL

Mining will be done during the non-monsoon periods (October-June), therefore problem of inundation is not likely to happen.

### 1.1.2 DEWATERING

Depth of mine is limited to 2.33 m depth only from the river bed level whereas the ground water flows at 3m to 6m below the bed level. Hence no dewatering is required.

### 1.1.3 POSSIBLE RISKS DUE TO FAILURE OF PIT SLOPE & ITS CONTROL

Pits will be created of limited depth of 2.33 m only, thus the chance of failure of pit slope does not exist.

### 1.1.4 POSSIBLE RISKS DUE TO FAILURE OF WASTE DUMP & ITS CONTROL

During extraction of sand, stone and bajri from Pilli river bed; silt and clay will also be removed in form of waste materials. The excavated silt and clay will be used for backfilling of the pits. Therefore there is no risk associated with failure of waste dump.

### 1.1.5 POSSIBLE RISKS DUE TO FIRE AND ITS CONTROL

The operation does not anticipate any fire disaster as there is no use of electrical equipments or any heavy machines other than dumpers.

### 1.1.6 MEASURES TO PREVENT ACCIDENTS DUE TO TRUCKS AND DUMPERS.

- All transportation within the mine lease area should be carried out directly under the supervision and control of management.

- The vehicles will be maintained in good working 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 vehicles especially at working place/loading points, stopper should be posted to properly guide reversing/ spotting operating.

#### **1.1.7 OTHER POSSIBLE MEASURES TO AVOID RISKS/DISASTERS DUE TO RIVER BED MINING**

- Unwanted material including mineral or spillage (if any) should not be stacked on the banks as it will hinder the flow of water in monsoon season.
- Mining of minerals/ working will be started from dip side towards rise at the centre and also laterally from 1 meter slice so that river coarse will not get affected.
- The minerals will be mined out in a uniform wash so that the river flow/ coarse shall not get disturbed.
- Mining is to be done leaving safety barrier on both sides and maximum barrier should be on concave side of the river, preferably the flow channel (excavation void) created should be kept straight so as to help avoid erosion.
- River banks will not be excavated to form access ramps. Only excavated river gravel should be used to deposit against the river bank to form access ramps.