

Risk Assessment

The present sand (bajri) mining activity will be semi mechanized using low power hydraulic excavator, so there will not be any major risk hazard associated with the process. The possible scenarios selected for this project are as below:

- Inundation / Flooding
- Drowning
- Accident during sand loading and transporting
- Accident due to vehicular movement

Inundation/Flooding

The consequences of flooding/inundation are catastrophic or fatal. The likelihood of occurrence of flooding is occasionally possible. As per mining plan the mining work will not be carried out during monsoon season. The likelihood of occurrence of drowning is rare due to dry season mining.

Drowning

The consequences of drowning can be fatal or may result in hospitalization and day loss. The likelihood of occurrence of drowning is rare so the risk is medium. Due to dry season mining this scenario will be under "Acceptable Region".

Accident during sand loading and transporting

The consequences of this scenario are minor which may be taken care with first aid care. This will not lead to any day loss. The likelihood of occurrence can be regular due to carelessness of the workers.

Accident due to vehicular movement

The consequences of this scenario are moderate and may result in hospitalization and day loss. The likelihood of occurrence is occasionally possible.

RECOMMENDATION FOR RISK REDUCTION

Measures to prevent Inundation / Flooding/ drowning

- Being on riverbed there should not be any mining operation during monsoon or rainy day.
- Formation of deep pits should not be allowed.

Measures to Prevent Accidents during Loading

- The truck should be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.
- The loading should be done from one side of the truck only.
- The workers should be provided with gloves and safety shoes during loading.
- Opening of the side covers (pattas) should be done carefully and with warning to prevent injury to the loaders.
- Operations during daylight only.
- Stockpiling of harvested material on the river bank should be avoided.

Measures to Prevent Accidents during Transportation

- Vehicles must be periodically checked and maintained in good condition.
- Overloading should not be permitted.
- To avoid danger of accident roads and ramp near embankment should be properly maintained.
- The truck should be covered and maintained to prevent any spillage;
- The maximum permissible speed limit should be ensured;
- The truck drivers should have proper driving license.

Additional Recommendations

The minerals will be loaded in the trucks manually by using hand shovels or by low power hydraulic excavator. There is possibility of injury in the hands during loading with shovels. So care should be taken while using the shovel. There is possibility that the workers standing on the other side of loading may get injury due to over thrown sand. Supervisors are needed to be alert for preventing these activities.

There is possibility of workers getting injured during opening of side covers to facilitate loading. Supervisors are needed to be alert for preventing these activities.

There is possibility of riverbank collapse. Care should be taken not to start working immediate after heavy rain.

There are chances of falling of cattle/children into pits by overlooking of fenced area near worksite or improper supervision. Supervisors are needed to be alert for preventing these activities.

There are possibilities that due to overloading some pebbles or big boulder may injure the passerby public. This can be avoided by following the traffic & vehicle load bearing licensed capacity.

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