

Executive Summary

Introduction

Ashapura Minechem Ltd have long term sourcing arrangement from many bauxite mines in the district of Raigad and through their associate partners viz. Nilesh Mines Corporation, Prachi Mines and Alatge Stone Crushing Industries. Ashapura has proposed the construction of captive jetty for loading of bauxite ore into barges.

Project description

- **About project**

The project consists of total area of approximately 33875 Sq.m area with a single jetty, stock pile area & loading facilities for the cargo. Total construction area is 1375 Sq.m which include main jetty berth area of 500 sq.m. (i.e. 50 m length X 10 m width); Approach Road 375 Sq.m (i.e. 50 m length X 7.5m width); Administration area of 500 Sq.m (office area, parking area & security cabin), green belt development area of 5700 sq m. and remaining area of 26800 Sq.m which will be used for stock area. The handling capacity of mineral cargo will be 2.5 million tons per annum. The plan approving authority is Maharashtra Maritime Board (MMB). The project will comprise construction & operation of jetty, administrative building, green area, stock area and parking space with basic amenities like drinking water, health & safety, solid waste management facilities, Sewage treatment facilities etc.

Technical Specifications – Conveyor System

Designed capacity	800t/h
Average Loading Rate	400 TPH
Belt Width (From Pit to Transfer Tower)	1400 mm
Belt Width (From Transfer Tower to Ship Loader)	1200 mm
Length of Conveyor 1400 mm	127 m Linear length, (Belt Length : 254 m)
Length of Conveyor 1200 mm	23 m Linear length, (Belt Length : 46 m)
	16 m Linear Length (Belt Length : 32 m)

- **Location**

The proposed project is located along Bankot creek at plot bearing s.no. 17/4/A & 17/5, Village – Karivane, Tal- Shrivardhan, Dist- Raigad, Maharashtra. Geographically the project site is located at Latitude: 17°59'09.84"N and Longitude: 73°06'14.41"E.

- **Project activities**

Project activities in construction phase include construction of approach road using precast concrete blocks, Construction of main berth using precast concrete blocks, Development of storage area and Construction of administrative office and utility structures.

Operation phase of the project includes ore transportation from mine area, temporary storage, ore loading into barges using conveyor belt and barge transportation to mother ship anchored 6 to 8 nautical miles away.

- **Resource requirements**

- **Construction Phase:** The construction is scheduled to be completed in one year. About 30 - 50 personnel will be employed during the construction phase of the project. Most of the labours during construction phase will be recruited locally. There will be no worker camp set-up as workers will be sourced locally and nearby villages.
- **Operation Phase:** About 2 security personnel will be present at the jetty during each shift and no other manpower would be required for the Jetty operations. The deployed security persons will be trained on operation and safety aspects. During Operation phase, about 5 - 10 personnel will be using the proposed jetty.

Drinking water, power supply and sanitation facilities including mobile toilet facilities will be provided for labour in both construction & operation phase.

- **Project schedule and cost**

The ground works of the proposed jetty development will be commenced after seeking all necessary clearances from the governing bodies. Design and construction would take maximum one year after obtaining necessary statutory clearances and approvals. Total cost of the project is approximately 830 Lacs.

Baseline environment

Primary data was collected within the study area through actual monitoring using standard practice by MoEF recognised laboratory. The baseline environmental study was carried out in post-monsoon season from October 2017 to December 2017. Secondary data was referred from official sources.

Land

Project land is represented by hilly region situated along bank of Bankot creek. Soil quality monitoring was carried out in and around project site. Analytical results were typical of existing land use and represented soil quality accordingly. No higher concentrations of any pollutants were observed during analysis of soil quality.

Water

Creek water was sampled at six locations. Analysis results indicated traces of heavy metals in sediment and water which can be attributed to industrial waste water discharge in the region. Other physico-chemical parameters indicated regional variations. Project does not involve heavy installations or deep excavations which would affect ground water.

Air

Ambient air quality monitoring was carried out near project site and reference village for three months. Analysis showed levels of PM_{2.5}, PM₁₀, SO₂, NO₂ and CO within permissible limits specified by CPCB.

Noise

Noise level monitoring was carried out near project site and reference village considering social environment as a receptor. As compared to CPCB standards noise level at monitored locations were found to be within permissible limits specific to industrial and residential location.

Ecology and Biodiversity

Terrestrial as well as creek water ecology survey was carried out within study area. Three quadrates were sampled for terrestrial biology survey. Mangrove vegetation was observed on either side of proposed jetty location. It comprised of *Rhizophora mucronata*, *Avicennia*

marina, *Sonneratia apetala* and *Aegiceras corniculatum*. List of mammals, amphibians, reptiles, avifauna and butterflies sighted during survey period is detailed in EIA report. Authentic secondary source of information was used to obtain data on fishery of the region.

Creek water and sediment sampling was carried out to study phytoplankton, zooplankton and macro benthic organisms prevalent in the study area. Centric diatoms were observed as a major component of phytoplankton composition followed by blue-green algae. Zooplankton community showed good diversity in the creek. Copepods showed higher abundance among other zooplankton. Creek sediment indicated oligochaetes as major component of benthic faunal composition.

Socio-economy

The study was conducted based on the sensitive receptors in the surrounding based on actual site observations. There is only one village in the vicinity of project. There are about 22 villages within 5 km radius. Two villages come under the core zone while 20 villages come under the buffer zone. Major occupation of the villages surveyed was rice cultivation which is slowly declining as people are seeking employment from other sources. Fishing activities are sporadic and low intensity.

Anticipated impacts and mitigation measures

Construction phase of the project involves levelling of the project land which would have impact on Land and Air environment. Also the operation of construction equipment and vehicular movements would cause elevation in noise levels as well as dust generation. Terrestrial flora would be moderately impacted due to dust deposition and whereas fauna prevalent in the surrounding region may receive limited disturbance due to noise levels.

Operation phase of the project involves unloading of ore transported from mines at storage place and loading of the ore into barges using conveyor belt. The anticipated impacts associated with these activities are higher concentrations of particulate matter, rise in noise levels and moderate increase in creek water turbidity.

In this report, various mitigation measures such as dust suppression, noise barriers, controlled operations and green belt development etc. are suggested to minimise the impacts. Also, the monitoring program is prepared for various parameters.

Project benefits

The mines near karivane village can have quick transportation through the proposed jetty. The nearest jetty facility is at Dighi Port which is substantially far from the mines and transportation may cause higher impacts along the transportation route. From the proposed jetty bauxite can be transported to the mother ship using lighterage operations, and can be further transported directly to the destinations thereby reducing cost of transportation as well as saving in time.

Environment management

The company has clearly defined environment management cell consisting of trained personnel to take up the responsibility of environmental management as required for planning and implementation of the project. The EMC is headed by an Environmental Manager having control over various environmental issues arising at construction and operation phase of the project.

Management of environment during construction and operation phase includes implementation of environmental management plan and monitoring of effectiveness of the mitigation measures employed to minimize impacts.

Supervision of on-site activities by site supervisor, compliance to regulatory norms, maintaining log books and ensuring implementation of mitigation measure by site in-charge are some of the performance indicators considered during project's construction and operation phase. Environment management plan will be implemented throughout the construction and operation phase of the project.

Environment Management cost during construction phase would be 14.5 Lakhs whereas for operation phase about 10.5 Lakhs would be allocated.

Conclusion

Present EIA study concludes that the proposed project mainly aims to reduce the transport distance, time and cost of the transportation from mines to mother vessel which in-turn will also have environmental and social benefits.

Social benefits include employment opportunities, income generation and better infrastructure for the local area.