



2.0 MINING

A. OPEN CAST MINING:

- a) Briefly describe the existing as well as proposed method for excavation with all design parameters indicating on plans /sections.

Proposed Mining Method:

The Rengalbeda (NE) Iron Ore Block is to be considered under Category-A (Fully Mechanized Opencast category) as per the IBM guidelines. The mine is proposed to be worked by mechanised opencast mining method by engaging HEMMs with deep hole drilling and blasting. Bench height & width are proposed to be 10 m and 15 m respectively. Average bench slope is proposed to be 70°-80°. Drill hole diameter is proposed to be 115 to 150mm. Blasting is proposed to be carried out with emulsion/slurry explosive. NONEL is proposed to be used to control ground vibration & better optimization in blasting. The blasted ROM is proposed to be fed to mobile crusher & screening plants for further sizing and screening to CLO (+10-40 / +5-18 mm) and fines (-10/-5 mm). The output is to be sent to designated stack yards for selling in domestic markets. The production capacity envisaged for the mine is 2 million tonnes of ROM per year.

Proposed Drilling & Blasting:

Blast hole drilling are proposed by DTH drills of 115/150mm dia. Single or multi row drilling with hole to hole delay are proposed. Proper charging, stemming and control blasting by using NONEL of different delay interval are proposed to reduce the ground vibration.

Proposed Loading & Transportation:

Waste/ ROM material is proposed to be loaded into 25 - 35t capacity dumpers using 2.5-4.5m³ excavators which in turn is to be transported to dump yard or crushing & screening units. ROM after processing in crushing and screening plants is to be stacked in the designated stockyards within the lease hold area for selling to buyers.

Justification for site selection for mining during proposed Plan period

Where mining is proposed in Rengalbeda (NE) Iron Ore Block is covered under G2 category of exploration. Hence the selected site is considered for mining.

- b) Indicate year-wise tentative Excavation in Cubic Meters indicating development, ROM, pit wise as in table below.

I. In-situ Tentative Excavation

The year-wise in-situ tentative excavation for the first five years from the date of opening of the mine is given below.


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