Note containing details of the plan for the transportation of the minerals from the mining lease

The Bailadila Iron Ore Project, Deposit-14 mines is fully mechanized opencast mine using shovel dumper combination and various process are drilling, blasting, excavation, quality control, ore processing (crushing & screening), loading of products, sub grade stockpile and waste disposal.

Drilling is done with blast hole drills. Blasting is done with SME explosives. The blasted material of size less than 150mm is excavated using Shovel (4.6 / 8 m^3 capacity) and unloaded into dumpers of 50/85/100 Ton capacity. The dumpers carry the material on designated haul roads to dumper platform where dumpers unload the material into gyratory crusher. Mist water spray is done on haul roads and service roads to suppress dust suppression. At the crushing plant, the ore is reduced in size to –150 mm. The haul roads have maximum gradient of 1 in 16. Berms of 10-12 meters are left out at worked out benches maintaining over all bank slopes of 45 or less. In laterite and blue dust areas the width of the berm is increased to 20 meters for safety and bench height is kept at 10 meters.

The crushed Iron ore material is transported through closed downhill conveyor system to screening plant located at Kirandul. The sizing of ore is done in the plant to separate the ore into Lump ore (minus 150mm & plus 10mm), CLO (30/40 to 10mm), Fine ore (below 10mm). Mist water spray is arranged at all transfer points in the plant buildings to minimise generation of fugitive dust. The above products are transported through closed downhill conveyor system to Loading plants where stacking and reclamation is done through mechanized way. Lump ore is reclaimed mechanically and loaded into the Railway wagon at the Loading Plant. For loading fine ore, now presently both the facilities exist to load into Railway wagons mechanically at Loading plant and manually at the new Fine ore sidings. The iron ore material from hill top to loading plant is transported through closed downhill conveyor system, thereby generation of fugitive dust is avoided.

Mineral transportation:

1. **Electrified broad gauge railway line of 469km already constructed by Indian railways from Kirandul to Visakhapatnam in the year 1966-69 exclusively for transportation of iron ore from Bailadila sector. About 62.70% of material is transported through railway to various customers.**
2. **Essar has set up a Beneficiation plant at Kirandul. The requirement of fine ore from Kirandul mines is being supplied to Essar through dedicated conveyor system / pipeline. About 35.80% of iron ore material is transported through closed conveyor system to Essar.**
3. **The state high way connects very well Kirandul to Bacheli to Geedam covering approx. 50km. The National Highway connects Geedam – Jagdalpur – Raipur. The Pellet / Steel Plants located in the state of C.G. takes the material through above existing road. About 1.50% of material is transported through road.**