

Scrutiny comments on the Modified Mining Plan of Sirigao Iron Ore Mine (Amalgamated) over an area of 171.247Ha of M/s. Chowgule & Company Pvt Ltd, in the village – Sirigao & Maem, Taluka – Bicholim, District-North Goa submitted under rule 17(3) of MCR 2016 for the period 2017-18.

Geology:

- Detailed estimation sheet for reserve and resources need to be furnished showing sectional area as per UNFC category, influence, BD, recovery factor, location on plan & sections etc. The basis of bulk density and recovery factor should be given on the field tests conducted for different grade of minerals. Test result on moisture contents may also be included. Cut-off grade based on international/domestic market conditions, mining and processing losses i.e. generation of tailing etc may also be considered for estimation of reserves & resources.
- Detailed estimation table for reserves & resources as per UNFC has to be given in text. Minerals (Evidence of Mineral Contents) Rules 2015 has to be followed for exploration grid interval for UNFC reserves & resources estimation. Beyond & below the depth of boreholes, it should be considered as resources as per above said rule.
- Additional exploration is to be proposed to know the continuity of ore in depths and to complete the exploration as per UNFC compliance has to be planned. Many sections are not having sufficient Boreholes and many boreholes are in complete to find out the contact zone.
- Geological reserves & Resources have to be shown in table to compare as per previous approved plan and as on now. How much reserve has increased or depleted to be explained.
- Using single Boreholes or without boreholes, section has drawn and ore is considered as G-1. As per Minerals (Evidence of Mineral Contents) Rules 2015, it has to consider as resources only. Hence the production plan has to be re-change.
- It is proposed during 2017-2018 to produce 361,000 tons of ROM from 350E to 100E, whereas the proposed area available reserves are more than the proposed quantity.

Mining:

1. Status of Violation pointed out by the IBM :- The recent violation and status of compliance as pointed out by the IBM for both the leases (TC No.31/49 and 05/49)under MCDR, 2017 were not discussed.
2. Lease Boundary Pillars were not properly maintained in the field along the area of common boundary with the adjacent lessee of TC No. 05/49.
3. The earlier Mining plans were approved in lease wise for two separate contiguous leases and the current proposal for approval is based on the amalgamated order. The comparative lease wise excavation for existing and proposal should be discussed in the tabular form.
4. As discussed in the documents the Geotechnical Studies on slope Stability has been conducted by reputed agency in the past. The proposal regarding design of Pit and dump should be given as per the recommendation of studied.
5. It has been proposed in the study that the external loading on the Mine slope should be avoided. In case of overburden dump is placed over an active mining slope, it is suggested that a minimum distance of 20-25m be maintained between the slope crest and dump toe. In addition to this, the dump should be properly sloped by making benches of 5-7m height. The proposal of working should be given by considering the recommendations of the CIMFR.
6. In the view of the recommendation, sustainability and safety as per the current scenario of mining practices e.g. proposal from MSL 78m to-33m, the study for slope stability and hydrogeological from reputed agency should be carried out.
7. The proposal for waste disposal should be made leaving the minimum statutory distance from the common boundary.
8. The proposal for modification of approved documents were submitted to this on 8/8/2017 whereas the documents were prepared based on the survey 1st April 2017. The Mining operation between the periods were not indicated in the documents. Thus, the documents should be updated as per the current working status of Mines. The proposal of development and production during 2017-08 should be of balance remaining months only.

9. The documents for Qualified Persons in support of qualification and experience should be enclosed as per rule 15 of MCR, 2016
10. Financial Assurance Plan:- The area indicating like 100m zone from the dump edge should be properly located in the plan.
11. Environment Plan: - Surface features falling within 60mtr from the lease boundary should be marked clearly.
