

**Scrutiny comments on examination of Modification of Mining plan (MMP) of Copila Gaichem Paul Iron Ore Mine over 94.8364 ha. (T. C. No. 88 of 1952) of Sociedade Timblo, Rep. By Fomento Industrial Pvt. Ltd. in South Goa District of Goa state**

**Text:**

**GENERAL**

1. In Enclosed Undertaking/certificate/consent etc. from lessee/authorized Director, Signing date is not given.
2. Para 2. b): In details of ownership of land within lease area, name of different individuals/ firm are given in addition to lessee. Area acquired by lessee to be clarified along with documentary proof as enclosure.
3. Chapter-2. b) Para (vi): It is to be clarified that whether ML area falls under ESZ/CRZ etc. or not.
4. Chapter-3: Para 3.3: Waste Generation instead of Development and ROM Ore production instead of Production to be mentioned. Exploration carried out in 2017-18 till date reported as nil against the proposal. Hence, suitable proposal for exploration to be incorporated & given in Geology chapter to make up the exploration shortfall in rest period of 2017-18.
5. Chapter-3: Para 3.6: Reason for submitting this modification of approved MMP is given as: "Due to area constraints there is a need to finalize and demineralize the proposed working area for utilization of the same for other mining allied activities. Hence the present modification of approved MMP is submitted for change in working and dumping area for the production capacity of 0.248 million for the year 2017-18." However, during inspection of mines, no any constraints observed in proposed working and dumping area as envisaged in MMP approved on 22.03.2017. Even, back-filling of waste envisaged in MMP approved on 22.03.2017 and being carried out in separated area in the pit and again now proposed in the almost same area. Rather, constraints like presence of scattered blasted waste/reject stacks, mineral stack, huge ROM stock etc. observed in proposed working area in present submission of modification MMP. In yr. 2017-18, during period 1.4.2017 to 30.06.2017, 65000 te of ore has already been reported produced, and only 183000 te remains to be achieved; which may easily be achieved from proposed working area as envisaged in MMP approved on 22.03.2017. Further, Validity of MMP approved on 22.03.2017 is going to be expired on 31.03.2018 and as per MCDR,217; Lessee has to submit Review & Updation of Mining Plan, 180 days prior to 31.03.2018. That means the Review & Updation of Mining Plan, for subsequent five years has to be submitted in Sept.,2017 itself. Hence, any Review & Updation can be included in the same. Approved Mining Plan has also been modified frequently in the past on dt. 12.08.2015, 20.09.2016, and 22.03.2017. Therefore, Reason given for submitting this modification of approved MMP is not convincing. Hence, detail Justification for submitting the present modification of approved MMP needs to be given.

**Geology**

- Para.3.3:- 51 No of Boreholes has been proposed for the year 2017-2018, as on date nil borehole has been drilled. Reason for deviation has to be given. Now the no of boreholes has been reduced in proposal for the year 2017-2018.
- 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 for Reserves & Resources estimation. Additional exploration has to be proposed working pit also to know the existence of mineral as well as its UNFC compliance. Core boreholes have to be planned based on type of deposit and various intrusion etc. Beyond & below the depth of boreholes, it should be considered as resources as per above said rule.
- Geological reserves & Resources have to be shown in table to compare as per previous approved plan and as of now. Addition or depletion of reserves/ resources to be explained.
- As on 01.02.2017, the 111 category of Normal ore is 26,59,608 tons and as 01.07.2017 it is 22,05,483. Depletion of both ore is 4,54,125 tons. But actually removed quantity for four months is

less than 2,00,000 tons of production during 2016-2017 and upto 01.07.2017. It is need to be explained. Hence reserves estimation has not done properly.

- Previous plan has approved on March 2017, for quantity of 4,50,000 tons whereas achieved quantity is 2,87,000 tons only. For 2017-2018 almost half year it has been worked in proposed area, now in the modification the area has been changed and reason for changing the area is not suitable.
- There is about 1 lakhs tons of ROM stock in the proposed production area. During this year, there is proposal to doze the Rom Stock materials. Hence the proposed area is not suitable as per mineral conservation.

### **MINING**

6. Para a): Only brief Sequence of different mining operations should be described here i.r.o. existing & proposed Mine workings. Details of Mining machineries be described in subsequent Para - e). Existing Waste Dumping and Protective Measures details to be given in waste dumping Chapter.
7. Para b, c & d) ref. with Development plan & Sections:- Year-wise excavation/development proposal to be given for prospective period of 06 months only from Oct.2017 to March 2018 (Fy-2017-18). As aforesaid constraints like scattered blasted waste/reject stacks, mineral stack, huge ROM stock etc. are present in proposed working area. Hence, proper planning to be given for disposal of the same in scientific way.
8. Para e) : Layout of mine workings should be given in detail along with optimum selection of mining Machinery and pit road layout. Description of different mining machineries proposed to be deployed to be given with its rated capacity along with detailed calculation in respect of its adequacy and optimal utilization. Waste Dumping/back-filling and Protective Measures etc. proposals to be given in details in waste disposal Chapter.
9. As per Surface Plan & Environment Plan, Excavation and Dumping were carried out in 7.5 m statutory barrier along the ML boundary (common boundary) at many places. Permission from competent authority regarding the same to be enclosed and also it is to be clarified that when the same was carried out.

### **MINE DRAINAGE**

10. Para 3.a. : minimum & maximum depth of ground water table to be given clearly.
11. Para 3.c):- Make of water, arrangement of de-watering of pit etc. needs to be calculated based on annual rain fall and catchments area. Manner of discharging mine water & related environmental concern to be discussed.
12. Para 3.d):- content of Para 3.c) should not be repeated here. As, Mine is having large catchment area with undulating terrain and substantial quantity of rain water be flowing through the lease area. One Nalla also exists adjacent to the lease area. Therefore, adequate rainwater management plan i.e. drainage plan along with arrangement for arresting solid wash off should be given.
13. Existing arrangement and proposal for protective measures to control wash-off from mine discharged water should be given in quantified terms.

### **MINERAL PROCESSING**

14. Processing/Beneficiation being carried out/proposed within the lease area only to be discussed here with material balance chart and flow sheet. If any kind processing is not carried out within lease area or proposed/ carried out outside lease area then only ROM Despatch to be mentioned.

### **PMCP**

15. The baseline information of environmental components as per IBM/MOEF guidelines for EMP and frequency of monitoring to be discussed. Base line data collected & assessment done by which agency to be clarified with Period of data collection. The baseline Environmental monitoring data to be enclosed.
16. Para 8.1, Viii : Regarding details of Wild life sanctuary and its buffer zone near ML, documentary evidence mentioned as Annex-1A is not enclosed..

17. Para 8.3: In summary of PMCP table for Item No. 8.3, Cumulative actual achievement as on date should be given year-wise. Under heading 'others', environment protective works to be carried out year wise and monitoring measures to be given.
18. Para 8.6 : Financial assurance: Most of the ML area is utilized by mining and dumping. However, 19.7 ha. area mentioned as un-utilized. Hence, the Area considered for financial assurance should be verified /rechecked, and financial assurance to be paid accordingly.

**Enclosure:-**

19. Copy of ML deeds to be enclosed.

**PLATES:**

20. Rule 31, 32 & 34 of MCDR, 2017 to be followed for preparation of all plans & sections.
21. All plans to be prepared based on recent and accurate survey and to be correct as per existing surface features & mine profile. Such plans should be prepared by the qualified Surveyor and certified by the mining engineer of the mine for its correctness.
22. 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
23. Drainage pattern should be clearly marked on reclamation plan.
24. Plantation and Protective Measures existing and proposed to be shown prominently over Reclamation plan in different colours.
25. Over FA Plan : Existing and proposed land use to be shown clearly in distinct colours.
26. All plan and section should be modified/ rectified based on above scrutiny points.
27. All boreholes should be marked with type, diameter, inclination, collar level and depth. Boreholes above pit bottom must be shown by hatched lines in sections and old boreholes hanging in air above the pit bottom are not required.
28. An attempt may be made to prepare slice plans for estimation of reserves and resources due to complex deposit with intrusion and shape of mineralized zone etc. Refer sub para –K of part-Geology & Exploration of universal format for Mining Plan.
29. Geological plan and section has to show only the present lithology and UNFC code can't be given as separate lithology intend of that UNFC code may show. UPL line is not matching with plan and section.
30. In section 12P, 111 category ore has been converted to waste without drilling the area. In reserves table also there is no change in 111 category. Geological plan & section has to be updated based on recent survey.
31. It is proposed during 2017-2018 to produce 1,83,000 tons of ROM from 12P to 20P, whereas the proposed area available reserves are more than the proposed quantity.

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