

**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. As mentioned, Lessee is a firm/company. Hence, its copy of incorporation with latest list of directors/Partners to be enclosed.
2. Copy of resolution of directors/partners regarding authorization of one partner/Director as nominated owner of the mine to be enclosed.
3. Undertaking/certificate/consent etc. should be signed by the nominated owner/authorized partner only, alternatively by all partners/Directors. Photo id of the authorized partner/nominated owner to be enclosed.
4. On cover page, lease area indicate 'Forest including road' instead of 'Forest & Road'. Status of forest clearance to be given in introduction.
5. In introduction/Preamble: Detailed reasons of earlier approved MP & modification of MPs are not required to be given here. Only brief lease details with Status of all statutory clearance obtained and Surface right acquired should be given along with documentary proof as enclosure wherever necessary.
6. Chapter-2: Page 3 to 6 : in lease details, name of lessee and status of lease to be given in brief with date of grant of lease and its validity. Copy of relevant pages of latest ML deed indicating leases area, expiry date, name of lessee etc. to be enclosed.
7. Chapter-2: Page 9: Details of area falling under ESZ to be mentioned here at para (vi) along with supporting document.
8. Chapter-3: Para 3.3: last MMP was approved on 20.09.2016, and review up to year 2015-16 was already carried out in the same. Hence, the same should not be repeated; Same to be followed wherever applicable. Review of year 2016-17 till date to be given.
9. Chapter-3: Para 3.4: last MMP was approved on 20.09.2016, and review up to year 2015-16 was already carried out in the same. Hence, Status of compliance of violations pointed recently, if any, in 2016-17 to be given here.
10. Chapter-3: Para 3.5: Details of any suspension/ closure/ prohibitory order, which has already been given in last MMP, is not required to be repeated again.
11. Chapter-3: Para 3.6: Justification for submitting this modification of approved MP to be given in detail w.r.t. last approved quantity and proposed quantity along with reserve position and systematic, scientific and environmentally friendly mining.

**Geology:**

- Para.3.3:- 20 No of Boreholes has been proposed for the year 2016-2017, as on date not a single borehole has been drilled. Reason for deviation has to be given. Now the same no of boreholes has been proposed for the year 2017-2018.
- As on 01.04.2016, the 111 category of Normal ore is 27,13,608 tons and as on 01.02.2017 it is 26,59,608 tons. Depletion of both ore is 54,000 tons. But actually removed quantity is 1,15,200 tons of production during 2016-2017 upto 01.02.2017. It is need to be explained. Hence reserves estimation has not done properly.
- 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.

## **MINING**

12. Para a): In proposed Mine workings, only brief Sequence of different mining operations should be described. Existing pit dimensions to be given. Detailed proposed Mine workings to described in subsequent Para - c) & d).
13. Para b) i): As per guideline of “IBM manual on appraisal of Mining Plan-2014”, a NOTE to be added below the proposed year wise excavation summary Table (given in Cubic m), before arriving the year-wise tentative tonnage, considering recovery % and Bulk-Density based on time series data and few samples test.
14. Para b) ii): If there is no proposal of recovery of ore from Dump re-handling, then this Para is not applicable.
15. Para (c): the advancement of benches and bench parameters proposed to be given in tabular form.
16. Para (d): Proper water management plan to be discussed.
17. Para (f): Proposal of conceptual period to be given only in relevant para.
18. Conceptual Plan: Proposal of exploration/exploitation/ rehabilitation measures etc. after year 2017-18 (2018-19 onward) to be discussed.

## **MINE DRAINAGE**

19. Existing arrangement and proposal for protective measures to control wash-off from mine discharged water should be elaborated and given in quantified terms.

## **STACKING OF MINERALS REJECT/ SUB-GRADE AND DISPOSAL OF WASTE**

20. In mining Chapter, generation of Mineral reject is not planned/envisaged; however in this chapter blending of Mineral reject is planned. This needs to be corrected or clarified.
21. Details of existing Waste Dumps, Sub-grade/mineral rejects stocks, Back-filing carried out etc. within the lease area should be given in text vis-à-vis that is actually available on the site.
22. Configuration and sequence of back-filling & its year-wise build up to be described in detail with manner of disposal of waste (whether in advancing or retreating manner) at each stages/terraces.
23. Protective measures already taken and proposed of to be carried out around the surface waste dumps, like retaining wall, check dams, garland drainages, settling pits and geo-textiling/plantation etc. should be given in quantified terms in tabular form.

## **MINERAL PROCESSING**

24. Dry Processing carried out/to be carried within the lease area to be discussed briefly.

## **PMCP**

25. Para 8.1, page no. 111: the details of Wild life sanctuary and its buffer zone to be discussed.
26. Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are to be elaborated. Specially to mitigate air pollution, arrangement of fixed/semi permanent type water sprinkle to be proposed over the permanent haul road stretch.
27. In summary of PMCP table for Item No. 8.3, Cumulative actual achievement as on date to be given in quantified terms and proposal from 2016-17 onward only to be given. Under heading ‘others’, environment monitoring to be carried out should be given. Protective measures for reclamation and rehabilitation works table on page 125 to 127, for the year 2013-14 to 2015-16 to be removed.
28. Para 8.4: Disaster management and risk assessment to be discussed properly for various mining operations.
29. Para 8.5: Slope Monitoring of the mine faces and dump to be discussed.
30. Para 8.6 : F.A. to be given as per the guideline of “MCDR-2017”.

## **Enclosure:-**

31. Annexure given are not paged and also along with Annexure nos., page nos. are not mentioned in the Index. All the annexure to be properly indexed, numbered & paged and signed by the TQPs.

## **PLATES:**

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.

Geological plan and section has to show only the present lithology. UPL line is not matching with plan and section.

At present, Normal ore is available in between Borehole-92 & 93 in Section line-36P with RL 40m, whereas in previous approved plan Normal ore is at 37m RL only. Geological plan & section has to be updated based on recent survey.

- 32.** 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 and certified by the qualified Person
- 33.** All existing surface features to be clearly shown on surface plan. Dump area to be marked properly.
- 34.** 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
- 35.** As per surface Plan & other plans submitted, mining (excavation/dumping) was carried out at common ML boundary with another mining leases. Permission from competent authority in this regard to be enclosed.
- 36.** Except Environment Plan, over all the plans surface features and proposals within the lease area only to be shown.
- 37.** Area Demarcation line for proposed temporary backfilling to be shown over the development & reclamation plan.
- 38.** Drainage pattern should be clearly marked on reclamation plan.
- 39.** Existing and proposed plantation on Dump No. 2 to be clearly marked with different colours over the plans.
- 40.** Protective Measures to be made prominent in Reclamation plan. All protective measures to be clearly indicated over the reclamation plan.
- 41.** Proposed Temporary backfill area extent to be demarcated over the plans.

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