

Scrutiny comments on examination of Modification of Mining plan (MP) of Costi Iron ore Mine over 166.1433 ha., of Shri V.V. Chowgule in South Goa District of Goa state

Text:

GENERAL

1. In Enclosed Undertaking/certificate/consent etc. from lessee/TQP, submission date is not given.
2. Status of all statutory clearances obtained should be given in introduction along with documentary proof as enclosure.
3. Para 2. b): ML is the name of Sri Vijay V. Chowgule, legal heir of V.D. Chowgule. Whereas in details of Surface right acquired area within the ML, different names of Individuals and Companies/firm are given. The same to be clarified. Further area acquired by lessee to be clarified along with documentary proof as enclosure.
4. Para 2. C): Amalgamation of two leases is carried out. Whereas EC obtained involving three leases are mentioned. The same to be clarified. Further Copy of EC mentioned as Annex. No.-4 is not enclosed.
5. Chapter-3: Para 3.1: Approval dt. Of earlier approved MMPs are not given correctly.
6. Chapter-3: Para 3.3: review of last approved proposal is not carried out properly. Review of exploration, ROM production and Waste generation etc. to be carried out separately with reason of deviation, if any, up to preceding month for 2017-18.
7. Chapter-3: Para 3.4: Status of compliance of violations pointed, up to preceding month for 2017-18, to be given.

Geology:

1. Para.3.3:- 18 No of Boreholes has been proposed for the year 2017-2018, as on date even a single borehole has not been drilled. Reason for deviation has to be given.
2. 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 in working pit also to know the existence of mineral as well as its UNFC compliance. Exploration should be proposed upto G1 level in entire mineralized area so as to satisfy the provisions of Rule 12(4) of MCDR2017. 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.
3. 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.
4. Below Cutoff grade is considered as 111 category, hence it is not mineable the ore has to be considered under resources.

MINING

8. Para a): Sequence of different mining operations should be described in brief here.
9. Para b) - year-wise tentative Excavation in Cubic Meters to be indicated from (i) In-situ excavation as per guideline. Then, a NOTE to be added below the proposed year wise excavation summary Table regarding tentative tonnage as arrived considering Recovery % and Bulk-Density(Tonnage factor) based on time series data and samples test.
10. 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). In the interest of systematic and scientific mining, entire excavation to be planned from Pit No.-2 only to exhaust the ore and facilitate Backfilling of waste afterward.
11. Para d):- Description of different mining machineries proposed to be deployed should be given with its rated capacity along with detailed calculation in respect of its adequacy and optimal utilization.

12. As per Surface Plan, Excavation was carried out in 7.5 m statutory barrier along the ML boundary Between ML boundary Pillars from BP-A1 to BP-T. 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

13. 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.
14. Para 3.d):- Mine is having large catchment area with undulating terrain and substantial quantity of rain water be flowing through the lease area. One river also exists adjacent to the lease area. However, adequate rainwater management plan i.e. drainage plan along with arrangement for arresting solid wash off is not incorporated. Therefore, adequate rainwater management plan i.e. drainage plan along with arrangement for arresting solid wash off should be given. Existing arrangement and proposal for protective measures to control wash-off from mine discharged water should be given in quantified terms.

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

15. Details of existing Waste Dumps, Sub-grade/mineral rejects stocks, Back-filling carried out etc. within the lease area should be given in text vis-à-vis that is actually available on the site.
16. During inspection it was observed that waste back-filling being carried out in un-systematic manner. Hence, 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.
17. Protective measures already taken and proposed 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.
18. Adequate proposals of plantation to be given over the existing waste dump/back-filled area.

MINERAL PROCESSING

19. Processing/Beneficiation being carried out/to be carried within the lease area to be discussed.

PMCP

20. Mitigation measures of impacts associated with mining based on EIA i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. to be elaborated.
21. In summary of PMCP table for Item No. 8.3.5, Under heading 'others', environment monitoring to be carried out should be given.
22. Para 8.4: Disaster & risk assessment: risk analysis of different mining operations and safety management plan to be given.
23. Para 8.6: Financial Assurance: Financial Assurance area table to be given as per the guideline of "IBM manual on appraisal of Mining Plan-2014". Table No. 8.6 (i) is not matching with Table No. 8.6 (ii) & Table No. 8.6 (iii). Further, In Table No. 8.6 (i), 49.3615 Ha. area considered as fully reclaimed and rehabilitated, which was not mentioned in the earlier approved MMPs. The same needs to be rectified/clarified.

Enclosure:-

24. All the annexure to be properly indexed, numbered, paged and signed by the TQP.
25. Relevant pages of ML deeds having ML area, Expiry date etc. to be enclosed.
26. Copy of amalgamation of MLs order/deed to be enclosed.

PLATES:

- 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 Rule 31, 32 & 34 of MCDR, 2017 to be followed for preparation of plans & sections.
- 31 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.
- 32 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
- 33 Environment Plan: The plan to prepared showing details as per MCDR 2017. All existing surface features beyond the 60m of lease boundary to be shown in detail. Monitoring stations at the strategic points in core & Buffer zone for different environmental components should also be shown.
- 34 Environmental protective measures to be shown clearly over environment plan & reclamation plan.
- 35 Financial Assurance Area Plan- The plan should be updated & modified as per above scrutiny. The land used details should be given specifically as table & text. Proposed land use to be shown clearly in distinct colours.

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