

Scrutiny comments on examination of Modification of Mining plan (MMP) of Vichundrem Iron & Mn. Mine, Lessee: Hiru B. Gauns over an area of 100.1710 Ha ha in North Goa district of Goa State. (T. C. No. 38 of 1952)

Text:

GENERAL

1. Self-attested copy of qualification & experience certificates as required for qualified person to prepare mining plan/Review of Mining Plan/Scheme of mining/its modification under MCR'2016 to be enclosed.
2. It is mentioned in introduction/Preamble, out of 100.1710 Ha ML area, Forest area is 81.40 Ha. and forest clearance has been obtained for 81.40 Ha area and its copy enclosed as Annex-1. Whereas as per Letter dtd 23.5.2001 of MoEF enclosed as Annex-1, forest clearance/approval given for only 15.4175 ha of forest land (4.9465 h. already broken up and 10.471 ha to be broken up). Thus information given is incorrect/ suppressed.
3. Status of forest clearance obtained for the forest area within the ML should be given along with documentary proof as enclosure. The same to be substantiated by forest area plan/map duly authenticated by the State govt. or forest department and the forest and non-forest area, Forest area (already cleared) within the ML area to be marked clearly over the same.
4. Status of Surface right acquired for the area within the ML should be given along with documentary proof as enclosure.
5. In introduction/Preamble & statutory Clearances, Lessee is mentioned as M/s Hiru Bombo Gauns. Whereas as per text, lessee is an individual. Undertaking/certificate/consent etc. enclosed with the document is signed by one Nacul alias Gurudas Hiru Gauns, indicating as owner. Hence, Lessee/ owner is not clear. It should be clarified and substantiated with documentary evidence. Undertaking /certificate/consent etc. to be signed by Lessee or all his legal heirs. In case of legal heirs/ heir documentary evidence to be enclosed.
6. Introduction & Chapter-2. Para 2.b): It is to be clarified that whether ML area falls under ESZ/CRZ etc. or not. Distance from nearest wild life sanctuary/protected area/ submergence zone etc. to be mentioned and marked in the plans.
7. Chapter-3: Para 3.3: In review for Exploration, Development and ROM Ore production not carried out against the proposal; reason mentioned as unavailability of forest clearance. Whereas, in introduction/Preamble, It is mentioned that out of 100.1710 Ha ML area, Forest area is 81.40 Ha. and forest clearance has been obtained for 81.40 Ha area. Therefore, reason given is not satisfactory.

8. Last Modification of Mining Plan approved on 06.05.2011, for proposal up to 2012-13 itself. Now instant Modification of Mining Plan is submitted. Reason for non-submitting (not having) review of Mining Plan/Scheme of mining documents for gap period (2013-14 to 2016-17) is not given with justification.
9. UNFC Feasibility assessment report is not submitted. Reserve/resource is not estimated properly; reserve in forest area indicated under 111 cat. Exploration carried out so far is also not corroborated with documentary evidence in respect of name of agency, order for the work, cost involved, and payment details by the lessee etc. with copy of form J & K maintained as per rule 47 & 48 of MCDR as evidence. Further, during inspection no trace of BHs drilled at the site and also no any core samples were shown. Hence, exploration carried out as reported appears to be inconsistent and basis of Reserve/resource estimated is not clear.
10. Very less exploration reported carried out in the past, however no future exploration programme is given to fully explore the ML area and quantify the Reserve/resource before expiry of the lease period i.e. 31.03.2020.

Geology:

- Para: 3.3:- It is mentioned that due to want of forest clearance the excavation, exploration and other activity would not carried out. But annexure-1, shows forest clearance has issued on 2001. Then for what purpose the mine is not working from 2010 and if same situation arise, how the proposed production 2017-2018 will be achieved.
- Mining plan was approved on 2008 & modification on 2011, whereas from 2006 there is no production & development has been mentioned in any returns submitted to IBM office. But number of pits & dump has been increased when compare to previous first approved plan.
- Deemed extension has been granted on 03.10.2016, with a condition to execute supplementary lease deed with in period of 180 days. The lessee has not mentioned anything about the lease deed and copy also not enclosed.
- 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.
- There is no proposal of exploration during the current block and reason is mentioned as Block wise permission given by forest department. Hence the copy of the permission and same has to be shown in plan also.
- The present exploration is not adequate and 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 G-1 level in entire mineralized area so as to satisfy the provisions of Rule 12(4) of MCDR 2017. 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 as per previous approved plan and as on now. How much reserve has increase or depletion to be explained.
- An attempt may be made to prepare slice plans for estimation of reserves & resources due to complex deposit with intrusion and shape of the mineralised zone etc. Refer sub-para-k of Part-A Geology & Exploration of universal format for Mining Plan.
- Using single Boreholes or without boreholes, section has drawn and ore is consider 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 in Section line-4.
- In R & R Table, the section ID has wrongly given. Under 211 category ore is mismatching with plan & text. Hence Reserves table has to be re-estimated.
- Borehole Log is not as per standard, lithology is not enclosed. Log is not enclosed for all the boreholes.
- Borehole analysis of BH-18 & 20 has below +35% Fe, but in R & R it has considered as above +35% Fe. Based on this sections also has been draw.

MINING

11. The existing pits & its dimension along with no of benches, top & bottom RL etc., is not described properly.
12. In Para b) – a NOTE to be added below the proposed year wise excavation summary Table for arriving tentative year-wise tonnage, considering Recovery % and Bulk-Density(Tonnage factor). Basis of considering Recovery % and Bulk-Density(Tonnage factor) to be given with documentary evidence.
13. 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).
14. Para d) & 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 based on total annual handling of ROM & Waste.
15. Conceptual Plan : Proposal of exploitation/ rehabilitation etc. after year 2017-18 (2018-19 onward) only to be discussed with adequate exploration proposal.

MINE DRAINAGE

16. Para 3.c):- pumping arrangement or course of discharge and places where the mine water is finally proposed to discharge & related environmental concern to be discussed.
17. Para 3.d):- 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

18. Para b): proposal of exploration at proposed surface dumping ground to be given to prove presence or absence of ore.
19. Para c): Configuration and sequence of surface dumping & its build up to be described in detail with manner of disposal of waste in stages/terraces. Build-up of dumps from year to year to be mentioned in text w.r.t., bottom and top mRL of individual terrace, dump slope, individual terrace height, total height of the dump and designed capacity of the dumps.

MINERAL PROCESSING

20. 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.

OTHER

21. Employment of Statutory persons to be given as per MCDR,2017 & MMR,1961.

PMCP

22. Environmental monitoring data to be enclosed of 2011 & 2012; Latest baseline Environmental monitoring data to be enclosed. It should be clarified that base line data collected & assessment done by which agency, period of data collection & assessment and whether it is conforming to the norms of MoEF.
23. Para 8.1, Regarding distance from nearest Wildlife to ML, documentary evidence is not enclosed. It may also be clarified whether lease area or part thereof fall within the area declared as Eco-Sensitive zone if Netravali Wildlife sanctuary notified by the MoEFCC vide S.O.No. 555(E) dated 17/02/2015.
24. Environment Impact Assessment with Mitigation measures of impacts associated with mining i.e. mainly related to air, water, noise, vibration, land, aesthetics etc. are not given properly.
25. Para 8.3: In summary of PMCP table for Item No. 8.3, Cumulative actual achievement as on date is not given. Under heading 'others', environment monitoring measures to be given.

Enclosure:-

26. Copy of ML deed is not enclosed.

PLATES:

27. Lease area has not been surveyed properly. Surface plan & other plans are prepared based on incomplete/incorrect survey. No. of existing Pits, Pit bench profile, waste dumps, old pits, water course etc. as shown over the surface plan & other plans submitted, are not observed to be made as per the actual field position. Submitted Surface plan & other plans are also inconsistent with earlier approved Surface plan & other plans as enclosed with earlier approved MP/MMP.
28. Rule 31, 32 & 34 of MCDR, 2017 to be followed for preparation of all plans & sections.
29. 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.
30. Ultimate pit limit should have been depicted on relevant plans.
31. Forest area (already cleared area, area in process), Non Forest area, Surface right acquired area etc. are not clearly demarcated over plans & also not clarified in the text. These may be clarified and proposal for next five year should be given accordingly. These different areas may be marked on Lease Plan, Surface plan & Geological plan for clarity.
32. 7.5 m statutory barrier along the ML boundary should be marked clearly over all the plans.
33. Drainage pattern should be clearly marked on environment & reclamation plan.
34. Plantation and Protective Measures existing and proposed to be shown prominently over Reclamation plan in different colours.
35. Over FA Plan : Existing and proposed land use to be shown clearly in distinct colours.
36. All plan and section should be modified/ rectified based on above scrutiny points.
