

ANNEXURE- I

Discrepancies observed in Modification in approved Mining Plan & PMCP of Bhandarbodi Manganese Mine (Area 17.51 hect.) submitted by M/s Tirupati Minerals under Rule 17(3) of Minerals (Other than atomic and Hydrocarbons Energy Minerals) Concession Rules 2016

Text:

1. Unit of latitude/longitude given in lease plan is in UTM, whereas in text and plates it is in 'degree, minute, second' format both the format needs to be identical and preferably in DMS format for easy understanding and perception.
2. Date of execution of mining lease and date of first opening of mine have not been given in the text.
3. It is a partnership firm; name and address of the partners / board of directors along with address/contact nos. are not given in the document alongwith details of nominated owner.
4. Para 3.4 status of monthly and annual return submission have not been mentioned.
5. Geology and Exploration:- Chronological order is not maintained i.e. First of all the Mineral resources estimated in earlier mining plan should have been given, then resources/reserves established during the last 5 years period/proposal period of the MP/SOM is to be given.
6. It is mentioned that extension of lease for 50 years as per amendment of MM (DR) 2015, but period of lease mentioned only 20 years, both period should be same. Necessary correction needs to be done, thus total period for which lease is required is to be mentioned along with proposal period. Letter from state govt., DGM Maharashtra in support of extension of lease period is to be submitted (Para. 1.00)
7. It is mentioned that 'no modification in the approved mining plan was carried out for previous approved period' (para 3.2), whereas in other place it is mentioned that 'the lessee submitted modification in approved mining plan for the proposal period 2014-15 to 2016-17 for enhancement in production'. Further retrospective proposals for the period 2014-15 and 2015-16 on page no.6 item No. 3.3 needs to be eliminated.
8. As per chapter Geology and exploration 1.0 (k) (page-16), under the heading Mineral reserves as per UNFC classification it is mentioned that Mineral Resources of Manganese Ore has been estimated under Proved Mineral reserves (UNFC code 111) and Probable Mineral Reserves (UNFC code 121) mineral resources as zero (0). Only under the category of Probable Mineral Reserves (UNFC code 122)-131376 MT and prefeasibility Mineral Resources (UNFC code-222)-40320 MT, thus total 171696 MT has been shown. Further the planning is based on reserves only and not resources
9. Procedure of calculation of reserve may be elaborated in detail as per Mineral Evidence Rules-2016.
10. In the Geological plan 5 nos. of Manganese veins / bands shown, also 5 nos. of sections were drawn namely C-C0, C1-C2, C3-C4, C5-C6 and longitudinal section

L1-L2. All veins / bands have to be given nomenclature like vein-1, vein-2... etc for easy identification and accordingly reserve may be calculated section wise, vein wise and shown in tabular form taking into consideration proper influence as per UNFC guidelines.

11. It is found that only 2 section lines i.e. C1-C2 and C2-C3 were drawn from boreholes, in some of the section borehole influence of manganese ore body has not been taken into consideration, it appears that without any borehole data reserves have been calculated randomly, also it is found that depth persistence have been considered without any basis or supporting data which is contradictory to UNFC guidelines, only borehole projection is to be consider for reserve calculation. Thus reserve estimated is exaggerated and not supporting the level of production proposed. Fresh boreholes need to be drilled core drilling in respect of enhancement of mineral resources.
12. As mentioned above 5 nos. of boreholes drilled, but lithological details of core sample has not been given, only chemical analysis report of single sample has been attached. Chemical analysis of the core of borehole drilled has not been not given, which needs to be given original / attested copy after proper analysis from NABL accredited laboratory.
13. Copy of Notice of sinking boreholes in Form 'J' as per rule 47 of MCDR 1988 has not been enclosed with the document.
14. Copy of Form 'K' as per rule 48 of MCDR 1988 regarding particulars to be recorded in a durable bound paged book in respect of each bore-hole / pit / shaft is not kept and not shown during inspection.
15. Details of photographs of location of boreholes and the core details/ lithologs should be attached with the report.
16. Status of violation pointed out has not been given correctly.
17. Under climate and rainfall data should be rewrite mentioning source of information
18. Existing proposal in the approved mining plan with the proposal of Modification in the year 2016-17 and accordingly proposal of exploration is to be given with respect to approved mining plan.
19. Proper indexing has not been done for Annexure. All annexure should be attested by the person who prepared, each pages should be serial numbered.
20. On all the certificates of undertaking the date and signature may be mentioned.
21. Sufficient number of coloured photographs of the area showing existing status may be submitted with proper caption, out of which some of the photographs of pillars is also to be enclosed.
22. In Human Settlement chapter population within and around 5 Km of the lease area should be given alongwith source of information and year of census.
23. All the document has to be page numbered signed and sealed by qualified person who is preparing the document.
24. In a forestation programmme yearwise cumulative No. of trees planted is to be given.

Plates

25. Lease Map - Unit of latitude/longitude given in lease plan UTM which is authenticated by state government whereas in text and plates unit was degree minute, second which needs identical for easy understanding and perception
26. Khasra Map- Area should be mark by red ink.
27. In all plans grid lines notation have been given wrong it should be corrected. Also some of the spellings in all plans are wrong which need to be corrected.
28. The word Key person should be eliminated from all plates.
29. Some of the symbols like dump, electric line should be denoted correctly. Unless otherwise specified, all plans and sections should confirm to the provisions of rule 27 and 28 of MCDR, 1988, IS 7974 and MMR 1961 in respect of details to be shown, use of legend, use of scale etc.
30. Key plan- This plan should be prepared as per requirement of rule 28(5) (a), keeping area in centre features of buffer zone should be incorporate. Population of villages with their boundary has not been shown. The other ML/PL leasehold areas falling within 5 Kms should be marked with their identifying details. Type of land of leasehold area and adjoining area should be marked.

Geological Plan & Sections-

31. Plate no. 6 heading should be surface geological sections.
32. The Geological cross section are to be modified based on the depth proved by pitting /trenching/boreholes under 111 and 122 category.
33. Pit limit and bottom level up to which reserves/resources are estimated needs to be shown on the plates and discussed.
34. Nomenclature of veins alongwith category of reserve/resources should also be marked on geological plan and sections.
35. **Year-wise Development and Production Plan and Sections:** table showing year wise development, waste generation, proposed development, ROM, Clean ore and rejects during the year, have not been shown on the on the relevant plan. Some of the sections are to be drawn from the dumps showing dump design. The scale of the sections should be used as such so that dump design with stabilization measures should be clearly shown. Benches shown in plan have not been marked bench like manners. Benches and dump should have been depicted like bench and dump manner in plates.
36. **Financial Area assurance plan:** - Area considered for calculating of financial assurance in respect of excavation and overburden dump and other items have not been shown with different color as per area put to use for calculation of financial assurance table. All other feature needs to be removed from plates.

(S.M.Dorle)
Assistant Mining Engineer