

SCRUTINY COMMENTS ON VENKATAGIRI IRON & MANGANESE ORE MINE OF MS LAKSHMI MINERALS, OVER AN AREA OF 21.73 HA, AS PER CEC/ AS PER ML DEED, M.L. NO.2551, IN VILLAGE VENKATAGIRI, SANDUR TALUK, BALLARI DISTRICT, STATE KARNATAKA. SUBMITTED UNDER RULE 17(1) OF MCR,2016. FOR THE PERIOD FROM 2017-18 TO 2021-22. COMPLETE AREA FALLS IN RAMGHAD RESERVE FOREST, CATEGORY OF TH MINE IS A (MECHANISED MINE).

COVER PAGE

1. The extent of the area is given as 21.73 ha, whether as per CEC or as per ML deed is not indicated, however, both need to be furnished.
2. The document prepared by the name of the persons given without indicating as qualified persons. Another qualified person may be added who is having M.Sc.(Geology)/ Mining Engineering qualification with minimum five years' experience in the related field and signed.
3. Ramgad reserve forest need to be indicated, instead of just writing forest.
4. The category of the mine should be written as A (Mechanised mine.)

GENERAL

5. The copy of the valid bank guarantee up to the proposed period need to be enclosed.
6. Annexure-no.10 need to be added with the title of the letter, instead of just indicating letter from plants. Similarly annexure-12 need to be corrected. Few mine photographs need to be enclosed for reference, including the stacks, dumps, infrastructure etc.
7. In the introductory part, having given the 1<sup>st</sup> lease grant date, followed by the other details may be given in chronological order with other relevant things,. The present mining is in operation or not is not briefed for reference, since last working need to be given. The present submission of document and the purpose for which it is submitted and the changes that is incorporated in reserve and the production if any based on the additional exploration undertaken in the said lease area may be given for clarity. The period should be corrected as 2017-18 to 2021-22.
8. Para 1(f), the rule 17(1) of MCR, 2016 may be changed from 22c of MCR 1960.
9. Para 2(a), Original date of grant is given without mentioning the period of grant.
10. Table-9, the extent of the area for the MP/SOM is found to be different, which must be explained.
11. In table-11, the R & R work carried out in the mine are given, but the balance of R & R work, & its completion period is not indicated, which ought to have been.
12. Para 3.3: (i) Proper justifications regarding non-excavation in proposed float iron ore area have not been discussed. (ii)Details of exploration carried out after approval of last SOM document should be supported by borehole logs and form-J. Besides, based on para 3.5 discontinuance & re-opening notice if available may be enclosed.

PART-A

13. Para 1(a): Drainage pattern, vegetation, climate and rainfall data of the area should also be discussed in brief as per Universal format.
14. Para 1(c): (i) Lumps to Fines ratio of Iron ore should also be mentioned. (ii) Non-occurrence of Mn-ore in ML has not been discussed even though ML granted for both Iron and Mn-ore.
15. Para 1(e) (ii): All borehole logs should be enclosed for easy reference. Besides, it is given no trial pits was carried out, but in table-16 & 17, trial pits details are furnished in contrary, which must be checked and attended.
16. Para 1(j): (i) The reserves and resources estimated (111-449,522 tonnes + 333---215,595 tonnes) in last approved SOM document dated 10/7/2013 may also be mentioned.(ii) Enhancement of recovery factor for float iron ore w.r.t. earlier approved document should be properly justified. Bulk density and recovery factor should be determined based on field tests conducted & confirmed.

17. Para 1(k): The assessment of 211 resources at table no-24 is not matching. Similarly, the assessment of 222 resources at table no-25 is not matching. The same should be checked and reconciled.
18. Para 1(l): (i) Sub-paras (a) to (c) have not been discussed as per Universal format. (ii) A separate feasibility study report as per existing procedure has not been enclosed. Economic Evaluation chapter should be discussed in detail with NPV & IRR. Proposed operation cost should also include royalty and payment to NMET (2 % of Royalty) & DMF (30 % of royalty). Accordingly, economic viability may be made w.r.t. present sale value of ore. (iii) Foot note as per universal format may be incorporated below Table no-28. (iv)The grand total of proved category siliceous ore at table no-30 is not matching. (v) The recovery factor considered for assessment of reserves/resources of siliceous ore and BHQ has not been mentioned. The same should be checked and reconciled. Further, the proposals of selling of these materials in present plan period w.r.t. mining chapter and CEC's production limit may also be indicated. (vi) F-axis (page No-20):---The calculation of royalty & payment to NMET & DMF should be checked and corrected w.r.t. IBM average sale value /market price of iron ore mentioned.
19. In para 2(a), under mining, it is expected to brief number pits exist in the mine and the number of pits intent to operate in the present submission for the clarity, instead of giving proposals without the back ground of the mine. Further, the slope of faces, direction of advancement, approach to the faces & specification of roads, etc to be marked. Also, the existing dumps parameters spread, height, slope protective works etc., to be marked.
20. Para 2(d), it is proposed for bench height & width will be maintained at 7m, but in para 2(a), bench height of 7m & bench width from 8 to 9m differently, which is not appropriate. In page-25, 7m bench height & width shall be maintained; refer para 2(f), therefore, uniformity in the proposals may be adopted. Further, the slope of faces, direction of advancement, approach to the faces & specification of roads, etc to be marked. Also, the existing dumps parameters spread, height, slope protective works etc., to be marked.
21. Para 2(f), need to be attended based on the remarks given in the above paras. Besides, the waste generation in the form of BHQ should be dumped separately instead of dumping along with the pure waste materials. Further, it is given that, during the conceptual stage, all the mined out land, dumps will be reclaimed & rehabilitated through afforestation is not appropriate proposals. The mined out area need to be back filled with waste muck and followed by plantation /afforestation only will be complete in reclamation and rehabilitation; just with afforestation will not be called as said above. Para need to be attended suitably.
22. In page-28, the land use pattern furnished for the existing, plan period & for the conceptual stage, wherein no area is reported under reclamation and rehabilitation, though, in some para under conceptual stage, proposals were made, but nothing reflected in the land use pattern to the reality.
23. Para 3(b), wherein the general ground mRL indicated may be rechecked, including the optimum level at the conceptual stage.
24. Para 4(b), under dumping area, area demarked for BHQ/ subgrade materials is not marked in the surface plan/ dump plan for reference. The angle of repose may be talked about.
25. Para 8.3.2, under this para, it is expected to mention, that there is no mined out land, instead of leaving blank without attending to the para in specific.
26. table-51, need to be attended indicating the latest date as 1.4.2017.
27. Table -52 needs to be checked again for the totalling in the 5<sup>th</sup> column & also in the last column.
28. In the consent letter/undertaking, wherever scheme of mining is mentioned need to be replaced with mining plan.
29. The photographs enclosed in the annexure side must be added with name of the mine & the lessee for easy reference.

#### Part –B

30. Surface Plan (Plate No. II/a): The existing surface features, including stacks located on the NNW and the mobile screening plant at the stack yard close by main working pit are not shown in the surface plan. This plan should be prepared as per rule 28(1)(a) of MCDR, 88.
31. Geological Plan (Plate No. II/b): mobile screening plant, Waste dumps, stacks, and other infrastructure must be kept away from the UPL. During, the site visit, it was observed that the ore dipping partly on the eastern side, but the screening plant & the stacks are placed on the eastern side, which is contrary to the systematic workings. Appropriate action should be taken to move the stacks and the mobile screening plant on the conservation point of view. This should be prepared as per rule 28(1) (b) of MCDR, 88.
32. Development & Production Plan (2017-18, Plate No. III/a): The proposed workings should be proposed along the ore body/ strike length taking the width of the ore body and the depth, so that the lateral extension on east & west and depth ward extension of the development may be done to exploit the ore deposit to the optimum level. But the present workings are found to be irregular, intermittent and selective mining. The working benches shown for the year 2017-18 must be at the end of 31<sup>st</sup> March 2018. In the light of the above remarks, all the years development & production workings must be brought out at the end of 31<sup>st</sup> march 2020 respectively. Similarly, year wise build of dumps status should match to the end of each year as 31<sup>st</sup> March and in the 5<sup>th</sup> year it should be up to 31<sup>st</sup> march 2020. In the light of the above remarks, protective works should be attended. Approach road to the each bench should be marked. CCOM circular No.4/91 & 5/91 may be taken full care while preparing these plates. Modified/ updated surface geological plan to be used as base plate for preparing these plates.
33. Reclamation Plan (Plate No. IV): The plan submitted without attending to the activities planned to carry out reclamation & rehabilitations. There is no meaning in submitting without depicting in the plan.
34. Environment Plan (Plate No. V): Water monitoring station at water discharge point of ML area should also be proposed. Environment Plan should be as per rule 28(5) (b) of MCDR, 88.
35. Conceptual Plan (Plate No. VI a): The conceptual plan should be prepared in such a way to represent what would be the conceptual workings at that stage. The present workings will not be appearing at that stage.
36. Dump management Plan (Plate No. VI/b): The retaining wall and the garland drain provided as protective measures to guard against the wash off.